

Health, Safety and Environment



International
Labour
Organization



International
Union of Food,
Agricultural, Hotel,
Restaurant,
Catering, Tobacco
and Allied Workers'
Associations

**A Series of
Trade Union
Education Manuals
for Agricultural
Workers**





Health, Safety and Environment: A Series of Trade Union Education Manuals for Agricultural Workers

Written by:
Peter Hurst • Peter Kirby

International Labour Organization

International Union of Food, Agricultural, Hotel,
Restaurant, Catering, Tobacco and Allied Workers' Associations

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HEALTH, SAFETY AND ENVIRONMENT:
A SERIES OF TRADE UNION EDUCATION
MANUALS FOR AGRICULTURAL WORKERS

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International Labour Organisation - Bureau for Workers' Activities (ACTRAV)

As the main link between the International Labour Office and workers, the Bureau for Workers' Activities (ACTRAV) co-ordinates all the activities of the Office related to workers and their organisations, both at headquarters and in the field.

The International Labour Organisation (ILO), whose executive secretariat is the International Labour Office, is the only tripartite agency of the United Nations. In it, governments, as well as employers and workers are represented on an equal footing.

■ Mission

ACTRAV's mission is to maintain close relations with the trade union movement throughout the various countries of the world, to provide it with the support of the International Labour Office in endeavours to strengthen it, enhance its influence and its activities in the defence and promotion of the interests and rights of workers. ACTRAV:

- Is the link between the International Labour Office and one of its key components: the workers
- Ensures that the concerns of trade unions are incorporated into all the activities of the International Labour Office
- Enables trade union organisation to make full use of the potential of the Office
- Enables the Office to count on the support of trade unions in promoting and attaining its goals

■ Goals

Social justice, fundamental rights at work, the defence and expansion of social protection, full employment and equality are the overarching goals of the ILO, and are encapsulated in the concept of "Decent Work". ACTRAV contributes to the attainment of these objectives by supporting trade union activities in a wide range of fields:

- Promoting the fundamental rights and principles at work
- Collective bargaining and social dialogue
- Combating the exploitation of child labour
- Improving working conditions and the environment
- Fighting unemployment and underemployment
- Worker education and training, especially through the ILO Training Centre in Turin

■ Team

Much more than a department of officials, ACTRAV likes to think of itself as a team of seasoned trade unionists representing the world's various regions and experienced in the work of international trade union solidarity. Our specialists work from the Office's Geneva headquarters, as well as from its regional bureaux in the field and in multidisciplinary teams, where they contribute "trade union sensitivity". The ACTRAV team:

- Prepares the case files that will help worker representatives put together their arguments for the Annual Conference of the ILO, the Governing Body, regional and sectoral conferences and in the Office's various activities
- Assists worker delegates as they take part in these activities
- Brings the trade union elements to all initiatives and activities carried out by other departments and sectors in the ILO
- Follows up and analyses the evolution in the field of national, regional, industry-based and international trade union movements
- Uses its resources and expertise to serve the cause of strengthening and developing workers' organisations

■ Actions

ACTRAV's work concept, which includes an active presence in the field, training or information seminars, cooperation projects, briefings, studies and publications, is an action dynamic designed to promote the fundamental rights of workers, values of social justice and concepts of equality. ACTRAV is stepping up its activities:

- International campaigns to promote the ratification of ILO conventions
- Organising colloquia and seminars on subjects of interest and topicality to workers
- Representations to ILO Member governments to secure the respect and implementation of their commitments
- Project implementation and technical co-operation and assistance in the field
- Training of trade union leaders
- Conduct of specific programmes on labour issues

■ A source of information

Thanks to its close ties with trade union organisations across the world, its presence in the field in various regions and to its training activities, ACTRAV is at the centre of a vast network for information on the trade union movement. This information is placed at the service of the International Labour Office and its constituents and of the public at large through the media, universities and NGOs. The principal vehicles for this information are:

- A quarterly review, Worker Education, published in three languages (English, Spanish and French) and devoted to analysis and forward studies. It draws on the best specialists from the world of work and deals with topics that will be tomorrow's burning issues
- The ACTRAV web pages (www.ilo.org/public/french/dialogue/actrav/index.htm) constitute a wealth of information on the activities of the International Labour Office, targeted at workers
- Human Rights at Work, a monthly online bulletin on ACTRAV activities
- ACTRAV Info, regular communiqués on positions taken by the International Labour Office affecting workers and on the positions of the Workers Group within the organisation's various forums
- A wide variety of publications, manuals, brochures and practical guides on a broad spectrum of issues of interest to workers

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Whether it is the situation regarding industrial accidents in Tonga or the arrest of a trade unionist in Latin America or actions taken by African trade unions to combat HIV/AIDS, ACTRAV will be able to put you in touch with the persons who are most knowledgeable about the matter and who can furnish you with information. The ACTRAV network spans the globe:

- The major international trade union confederations accredited to the ILO
- The major international industry-based trade union federations (construction, services, power, metal-working, transport, food, agriculture, etc.)
- Over 500 national trade union organisations
- Through ACTRAV, the other departments and specialised divisions of the International Labour Office
- ILO and ACTRAV representatives in the field
- The advisory multidisciplinary teams
- The training Centre in Turin, which plays a key role in worker education activities

The International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF)

The International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF) is a global trade (labour) union federation representing workers in agriculture; the processing and manufacture of food and drink; hotels, restaurants, tourism and catering services, and tobacco processing. With national trade unions affiliates, representing a combined membership of over 12 million workers in 120 countries, the IUF organises workers throughout the global food chain or from 'plough to plate'.

The IUF secretariat is in Geneva, Switzerland, with regional offices in Brussels, Belgium (Europe); Montevideo, Uruguay (Latin America); Barbados (the Caribbean); Nairobi, Kenya (Africa); and Sydney, Australia (Asia/Pacific).

The IUF is operated for and by its affiliated unions. Each member union can send delegates to the IUF Congress, held every five years. Congress determines policies and lays down guidelines for the work of the IUF. It elects the members of the Executive Committee, the President, eight Vice-Presidents and the General Secretary, adopts all changes in IUF Rules, and admits new affiliates.

The IUF has Regional Organisations in Africa, Latin America, the Caribbean, Asia/Pacific, Europe and North America which pursue independent activities in close collaboration with the IUF. They hold regular conferences which elect a regional secretary and regional committee, who are responsible for activities in the regions, reporting to the IUF General Secretary.

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FOREWORD

Ron Oswald, General Secretary, IUF

The International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF) is an international trade union network composed of 336 trade unions in 120 countries representing a combined membership of over 12 million workers. The IUF organises workers in the global food chain and represents a 'plough to plate' approach to food production. Affiliated unions of the IUF represent and organise waged workers in:

- agricultural production and primary processing
- food processing industries
- hotels, restaurants and catering

The IUF is committed "*to actively promote the organisation of the world's food resources for the common good of the population as a whole.*" IUF rules lay down the basic principles of IUF food policy, which include a commitment to ensure an adequate supply of safe, affordable food for all.

However, the IUF believes that much of the world's food is produced in ways that are not "sustainable" in the longer-term from a social, economic or environmental viewpoint. This is especially true of health, safety and environment. Those working in agriculture are engaged in an industry that is not sustainable as measured by the loss of human life, injury and ill health. In 2002, the International Labour Organisation (ILO) estimated that 355,000 fatal accidents take place every year. Previous ILO estimates suggest that over half these fatal accidents take place in agriculture. Agricultural workers also suffer disproportionately among the 270 million workers injured each year, and the 160 million who are suffering from work-related diseases.

Furthermore, the high levels of fatalities, accidents, and ill health have a considerable negative impact on agricultural productivity. IUF sees a safe, healthy and environmentally conscious workforce as an essential element of a profitable and sustainable agricultural industry.

For IUF, work on improving Health, Safety and Environmental (HS&E) standards has to be viewed in the context of promoting sustainable agriculture and rural development (SARD). Agricultural workplaces have to be sustainable both in terms of protecting the workers employed there, and in reducing any negative impact of production on public health, food quality, and the general environment. This is important in winning broad public and political support for union work on HS&E.

Trade unions and their members have a vested interest in promoting their industry and ensuring its long-term profitability and sustainability. To ensure the long-term future of the agricultural industry, IUF and its affiliated trade unions wish to see collective bargaining agreements extended to cover the promotion of sustainable agriculture, including clauses on workplace HS&E issues.

The IUF has developed this series of Manuals to help union affiliates to tackle health, safety and environmental problems through their training programmes.

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- the financial contribution provided by the International Labour Organisation (ILO) towards the development of these Manuals. In particular, assistance from the ILO Bureau for Workers' Activities, especially Beth Goodson and Luc Demaret
- the International Labour Office for permission to modify extracts and use the diagrams from the ILO CD Rom: *Your health and safety at work – instructor's guide*, for use in Manual 1
- Yahya Msangi, Tanzania Plantation and Agricultural Workers (TPAWU – TANZANIA); Andrews Tagoe and Samuel Brewu, General Agricultural Workers Union of TUC (GAWU-TUC – GHANA); Omara Amuko, National Union of Plantation & Agricultural Workers (NUPAW – UGANDA); Christopher Musambwa, National Union of Co-operative Movement and Allied Workers (NUCMAW – UGANDA); Hella Alikuru, Regional Coordinator, IUF Africa Regional Office; Sue Longley, IUF Agricultural Workers Trade Group Coordinator; Sven-Erik Pettersson and Ingemar Gidenstam, SLF, Sweden; and Jesper Lund Larsen, SID, Denmark who all contributed to and commented upon various drafts of this Manual
- trade union participants on numerous pilot courses in Tanzania; Uganda; Ghana; and Malawi who worked with activities and resources from the draft Manuals and commented upon them
- the authors of the Pesticide Handbook – Peter Hurst, Alastair Hay and Nigel Dudley – for their permission to use material from the Handbook for Manual 5 on pesticides
- Peter Hurst, IUF HS&E co-ordinator and Peter Kirby, trade union health and safety educator, Labour and Society International, who wrote these Manuals on behalf of the IUF and ILO

INTRODUCTION

■ About this series of Health, Safety and Environment (HS&E) Manuals

The IUF has developed this series of Manuals to help union affiliates representing agricultural workers to tackle health, safety and environmental (HS&E) problems, through their training programmes.



Aims of these Manuals

These Manuals are designed to help union educators to:

- address the key HS&E concerns of workers and their representatives
- provide essential information on HS&E to workers and their representatives
- help workers and their representatives to tackle HS&E issues
- plan and run educational activities with trade unions
- help trade unions build their organisational capacity on HS&E
- promote ratification of ILO Convention No. 184 on Safety and Health in Agriculture



A series of Manuals

This series of Manuals comprises:

- **Manual 1:** An educator's guide
- **Manual 2:** HS&E for "grassroots" members
- **Manual 3:** HS&E for worker HS&E representatives (see definition below)
- **Manual 4:** HS&E Fact Sheets
- **Manual 5:** Pesticides and Health, Safety and the Environment (HS&E)
- **Manual 6:** ILO Convention No. 184 on Safety and Health in Agriculture 2001

The Table of Contents on pages ix to xii shows the different subjects covered. Educators and participants should select which are their priorities. See Manual 1, page 1 for an explanation of the common format used in all the Manuals.

Introduction

Additional resources and ideas

These Manuals contain basic resources and materials. However:

- participants on workshops should be encouraged to bring in relevant documents from their workplace and union
- educators should ensure that other essential resources are provided. For example, HS&E laws in their own country; HS&E resources supplied by the IUF; ILO Convention No 184 on Safety and Health in Agriculture 2001
- participants and educators will contribute a wealth of their own ideas and experience to each educational activity

Who are these Manuals for?

We hope that these Manuals will have the widest possible use. However, they are primarily targeted at workers who are in some form of wage/employment relationship.

Trade union educators can use these Manuals for:

- study circles with “grassroots” groups of union members and workers
- worker HS&E representatives (see definition on page 5)
- branch/regional/national union officials
- full and part time union officials
- trade union policy makers on HS&E issues
- joint training with NGO’s and other bodies on issues of common interest

Whilst primarily aimed at waged agricultural workers, these Manuals will also be useful for:

- wage-dependent small farmers and other categories of the agricultural working population
- public interest non governmental organisations (NGOs) working on HS&E related issues in agriculture

■ **A working definition of agriculture**

The term *agriculture* covers agricultural and forestry activities carried out in agricultural undertakings including crop production, forestry activities, animal husbandry and insect raising, the primary processing of agricultural and animal products by or on behalf of the operator of the undertaking as well as the use and maintenance of machinery, equipment, appliances, tools, and agricultural installations, including any process, storage, operation or transportation in an agricultural undertaking, which are directly related to agricultural production.

Introduction

■ The global food chain and agricultural workers

The global agricultural workforce is estimated to be over 1.1 billion and comprises the largest workforce in the world. 450 million of them (over 40%), are waged agricultural workers and their numbers are growing in all regions of the world. On average, 20 to 30% of the waged workers are women (40% in Latin America and the Caribbean). Unfortunately, child labour is also used extensively in agriculture.

Waged agricultural workers are the women and men who labour in the crop fields, orchards, glasshouses, livestock units, and primary processing facilities to produce the world's food and fibres. They are employed on everything from small and medium-sized farms to large industrialised farms and plantations. They are waged workers because **they do not own or rent the land** on which they work nor the tools and equipment they use and so are a group distinct from farmers.

Such workers include the following categories: permanent agricultural workers; temporary agricultural workers; seasonal/casual agricultural workers; migrant agricultural workers, piece-rate workers; or workers receiving some form of 'in-kind' payment. There are also many indigenous agricultural workers who are part of the employed workforce. Agricultural workers work for some kind of 'wage' which can include payment in kind in an employment relationship, be it with a farmer, farming or plantation company, or agricultural contractor.

However, wage-dependent small farmers regularly form part of the waged workforce, working seasonally on farms on a regular, annual basis to supplement their subsistence farm incomes. Furthermore, the number of wage-dependent small farmers is growing as small family holdings are increasingly bought or taken over by large agricultural undertakings relying on waged labour.

Waged agricultural workers and wage-dependent small farmers form the core of the rural poor. Their poverty can contribute to increased risks of work-related ill health due to poor diet and malnutrition.

■ The changing nature of agricultural employment

The worldwide trend towards work flexibility and the pressure to reduce labour and production costs is changing the nature of agricultural employment in many parts of the world. Global trade, economic pressures and privatisation are eroding the already low levels of protection of this group of workers in terms of wage levels, employment security, and health, safety and environmental standards.

Permanent employment contracts are increasingly being replaced by temporary labour on short-term daily and seasonal contracts with lower levels of pay and poorer levels of health, safety and social protection. The employment relationship is further undermined as employers increasingly rely on labour contractors and/or sub contractors, creating uncertainty about the employer's responsibilities and contributing to a disregard for labour legislation and decent work.

A most acute problem is migrant contract labour. The agricultural workforce is already based on a large number of migrant workers, whether from different regions of a country, or hired from abroad.

Introduction

HIV/AIDS is having a major adverse impact upon both agricultural workers and small farmers, resulting in major health burdens on communities and countries and shortage of labour in many areas. Another consequence of HIV/AIDS, especially in sub-Saharan Africa, means that there are many child-headed households. Unfortunately, many of these children are obliged to become agricultural labourers, often carrying out hazardous work.

■ The importance of HS&E in agriculture: decent work in agriculture

The agricultural sector employs half of the world's labour force and is one of the three most hazardous sectors of activity (along with mining and construction), in both industrialised and developing countries.

According to the International Labour Organisation (ILO):

- huge numbers of agricultural workers and farmers are killed worldwide every year. In 2002, the International Labour Organisation (ILO) estimated that 355,000 fatal accidents take place every year. Previous ILO estimates suggest that over half these fatal accidents take place in agriculture
- agricultural mortality rates have remained consistently high in the last decade as compared with other sectors, where fatal accident rates have decreased
- millions of people working in agriculture are seriously injured in workplace accidents with agricultural machinery or poisoned by pesticides and other agrochemicals
- many millions more suffer ill-health as result of their work
- because of widespread under-reporting of deaths, injuries and occupational diseases in agriculture, the real picture of the occupational health and safety of waged agricultural workers is likely to be worse than the official statistics indicate

In addition, the agricultural workplace has a major impact upon:

- public health and food quality/safety
- the general environment, for example, the quality of soils (potential for soil erosion), water quality (often many kilometres away from the farm or plantation), air pollution (including smells), trans-boundary pollution, noise, potential to cause climate change, and destruction of the ozone layer

Although many categories of the agricultural working population are at risk, one of the most vulnerable categories is waged agricultural workers, who often have little control over their working conditions. Furthermore, they are a category which in many countries has been excluded from participation in policy and decision-making on HS&E. The right to select/elect worker HS&E representatives is often not part of national law. Even where worker HS&E representatives are allowed by law, they often cannot function because of lack of training, information and technical support.

Conditions vary greatly from country to country. But, in most countries, national legislation, employment injury benefits or insurance schemes only cover some categories of agricultural workers. A large number of agricultural workers are thus deprived of any form of social protection.

Introduction

When national regulations exist, they are infrequently applied. Effective enforcement is poor due to insufficient labour inspection. There is a lack of understanding and training on prevention of hazards and there are low levels of organisation amongst agricultural workers. Until June 2001 (see ILO Convention No. 184 below), agricultural workers were not subject to any international standard dealing comprehensively with their health and safety.

In order to guarantee sustainable agricultural development in the new millennium, rural workers and their families should have access to decent working and living conditions, health and welfare. A balance between agricultural growth and the protection of the environment is also crucial for the future of the world's food production and for its sustainability. Occupational health in agriculture must be integrated into a rural development policy. The policy should have a well-defined strategy placing an emphasis on prevention and on environmental protection.

■ Worker HS&E representatives

These Manuals provide educational material and techniques for the training of worker HS&E representatives. The term 'worker HS&E representative' needs clarifying as it can refer to different types of representative:

- worker representatives who undertake HS&E work as part of general union duties at the workplace. They have no rights under national health and safety laws, though they may perform their HS&E work as part of a collective bargaining agreement. Such representatives will be union members and elected by other union members in that workplace
- worker health and safety representatives (safety representatives for short) who have legal powers under national health and safety laws to carry out specified HS&E duties at the workplace. Such legally empowered representatives will normally be elected by their fellow workers as laid down in the health and safety laws. These worker representatives will *not* automatically be union members though in fact they generally are, as unions are the only credible and organised body representing workers in the workplace
- worker representatives on joint worker-management workplace health and safety committees (safety committees for short). Such committees may be legally constituted under national health and safety laws, or performing their work under a collective bargaining agreement. Such worker representatives will normally be elected by their fellow workers as laid down in the health and safety laws or collective bargaining agreement. These worker representatives will *not* automatically be union members though in fact they generally are, as unions are the only credible and organised body representing workers in the workplace

In summary, the term 'worker HS&E representative' will be used in these Manuals to cover all the categories listed above. The IUF believes that any worker representative should be a trade union representative selected or elected by fellow union members in their workplace.

Introduction

■ ILO Convention No. 184 on Safety and Health in Agriculture 2001

The 21st June 2001 was an historic day for the world's agricultural workers, with the agreement of a new International Labour Organisation (ILO) Convention No. 184 on Safety and Health in Agriculture 2001, along with Recommendation No. 192. For the first time waged agricultural workers, whether permanent, temporary, seasonal, migrant or indigenous, are guaranteed in international law the same rights and levels of protection as other categories of workers.

The IUF views adoption, ratification and implementation of the Convention by national governments as one of the key elements and measures of sustainable agriculture. Manual 6 aims to help trade unions and civil society organisations in their campaigns to promote speedy ratification and implementation of the Convention.

■ The IUF and the Health, Safety and Environment (HS&E)/ Global Pesticides Project (GPP)

Many IUF affiliated unions/national unions have policies, programmes and activities designed to prevent occupational fatalities, accidents, and ill health as well as the negative impact of the workplace on public health and the environment. In addition, through Conference resolutions, IUF affiliates have mandated the IUF to use its international network/organisation to take a global approach to improving HS&E standards.

In 1998, the IUF started a Global Pesticides Project (GPP) to tackle the fatalities, poisonings, ill health and pollution resulting from intensive pesticide use and exposure. The goal is to build national, regional union and IUF capacity to work on local, national, regional and international pesticide issues within the context of sustainable agriculture, and linked to integrated pest management. The GPP has now evolved into a general HS&E/GPP project.

Target groups include “grassroots” trade union members, worker HS&E representatives, union branch officials, union committee members, national union leaders and officers, pesticide policy makers, and environmental/consumer organisations.

The first phase of the HS&E/GPP project has involved the following African unions:

- General Agricultural Workers Union of Ghana (GAWU)
- Three unions in Malawi – the Tobacco Tenants & Allied Union Workers of Malawi (TOTAWUM); Plantation and Agricultural Workers Union of Malawi (PAWUM); and the Sugar Plantations and Allied Workers Union of Malawi (SPAWUM)
- Tanzania Plantation & Agricultural Workers Union (TPAWU)
- National Union of Co-operative Movement Workers (NUCMW), Uganda
- National Union of Plantation and Agricultural Workers (NUPAW), Uganda

In addition, the Kenya Plantation and Agricultural Workers Union (KPAWU), and the South African Agricultural, Plantation and Allied Workers Union (SAAPAWU) have been closely associated with the HS&E/GPP project.

Introduction

At national level, the main activities have been to extend trade union Education Study Circles (ESC) to provide training on pesticide health, safety and environment (HS&E) issues. Initially, the GPP has concentrated on training local Study Circle leaders who then facilitate on other courses and help in the setting up and running of new study circle groups.

The unions involved in GPP also aim to improve national pesticide HS&E standards and laws. For example, some GPP unions are participating in the development of country-driven National Profiles to Assess the National Infrastructure for Management of Chemicals and Pesticides. This ensures that:

- the pesticide problems faced by agricultural workers, their families, communities and environment are documented in the Profiles
- union members are involved in relevant Action programmes resulting from the Profiles. For agricultural workers, these include raising awareness, improving provision of HS&E information and training, and strengthening pesticides legislation and enforcement

GPP unions are also working to ensure that the legally-binding *Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals in International Trade, 1998* is ratified by their governments and then implemented effectively.

Through the GPP, workers and union officials are being trained to:

- collect and document information on problem pesticides using PIC criteria
- report this information to their governments

The aim is for their governments to request that these severely hazardous pesticide formulations are included on the PIC list, and subject to the Convention's notification and consent procedure.

National work is helping increase the activities of IUF at an international level. IUF is promoting:

- GPP results and policies in international pesticide and chemical bodies, for example the Intergovernmental Forum on Chemical Safety
- sustainable agriculture in meetings and working groups of the UN Commission on Sustainable Development

IUF is also working with the *Global Integrated Pest Management (IPM) Facility* to provide training for GPP trainers and union members on IPM. Union members can then promote IPM techniques as alternatives to chemical pesticides when they are negotiating or dealing with employers, pesticide companies, and government agricultural departments/extension services.

Unions are already experiencing benefits from the GPP. These benefits include:

- the training of large numbers of workers resulting in raised awareness on HS&E problems
- the inclusion of HS&E clauses in collective bargaining agreements (CBA)
- increased profile of GPP unions, some of which are now used as resource centres/centres of excellence by other organisations
- practical improvements in the workplace
- improved networking/campaigning with non governmental organisations (NGO's). A good example is the co-operation, nationally, regionally and internationally with the Pesticide Action Network (PAN)

Manual 1:

AN EDUCATOR'S GUIDE



Aims

This Manual has been developed to help union educators to plan and run educational activities on health, safety and the environment (HS&E). This Manual is designed to:

- outline the format of the series of Manuals
- encourage the use of good trade union educational methods
- assist in the preparation of educational activities



Format of each of the Manuals

With the exception of Manual 4, each Manual follows a similar format:

- **Aims:** The aims state what the Manual will help the participants to do.
- **What is in this Manual?** This outlines the contents of the Manual.
- **Pre-course questionnaire:** If possible, this should be sent to each participant before the course begins to enable them and their members to think about the key issues.
- **Introduction:** This explains the background to the issues presented in the Manual.
- **Core of the Manual:** This contains a number of sections and sub-sections containing specific information and activities.
- **Action checklist:** Sometimes you will find a checklist of action points. A review of these will help participants to develop an action plan for their workplace/union.
- **Activities:** Each Manual has numerous activities in it. The activities give the participants the opportunity to work collectively on problems and solutions. A number of different training methods are used in the activities. These methods are described below in the section on Techniques for Educators.

- **Further information:** This provides you and the participants with ideas on where you can find further information on selected topics.

Key principles

Some of the key principles upon which this series of ILO-IUF Manuals are based include:

- **learning by doing**, participants learn far more by doing something themselves
- **collective work**, unions work best by involving everyone and pooling talents and skills. Work in small groups with regular reporting back, makes this possible on a course
- **action at work**, close links between participants and their members will help them to build a working relationship. Members need to be aware of what participants are doing on the course and how it will benefit them
- **work on real problems**, hazards and problems faced by participants on the course are the best starting point to help everyone understand what is involved and what action to take
- **workplace activities**, can help to ensure that the course is relevant and based upon the actual situations that the participants are facing in the workplace
- **activities**, are specific tasks helping course participants to learn, and to be relevant to the situation they face at work
- **course reviews**, throughout any course there should be formal and informal ways of reviewing work done, and giving educators and participants the opportunity to adjust the course programme to meet identified priorities
- **course file**, during the course participants should have a chance to put together a file of materials which will be useful in the workplace after the course has finished

■ An educator's role

An educator's role includes:

- being aware of group dynamics and promoting equal participation particularly in terms of gender
- helping to organise the work, by suggesting tasks and ways of working
- helping participants to agree course guidelines
- ensuring that different opinions are respected
- organising resources, including basic information, publications, and copying facilities (where possible), to help the course work
- adapting course materials to suit the needs of the participants
- giving advice and support

- facilitating discussions
- leading some discussions and summarising key points
- arranging for external resource persons where this is felt necessary

■ Using these ILO-IUF Manuals in a course

In these Manuals we have referred to participants attending a “**course**”. A “**course**” may also be referred to by other names such as a workshop, study circle (see description below), seminar and so on. The Manuals are applicable to all types of learning experiences.

Adapt the Manuals to the needs of the participants

In order to make the course as relevant as possible, you should ensure that the needs of the participants are properly addressed. If there are too many issues to address in the time that you have available, you may be able to deal only with the participants’ priorities.

If possible, use the pre-course questionnaires that are at the beginning of Manuals 2, 3 and 5. These will help the participants to think about their specific concerns and those of their members before the course begins. Also, the early activities in each Manual will help the participants to agree what their priorities are.

Try to integrate your country’s laws/regulations, and the specific needs or problems identified by the participants, with the appropriate content of the Manuals. Here are some suggestions on ways to adapt the materials:

- use examples from the participants’ own experiences as well as those in the Manuals
- obtain information about a specific hazard that you know is present in a number of the participants’ workplaces and then devise an activity about it
- if possible, adapt the materials into the local language, prior to the course

Adapting these materials to your own country, languages and to the participants’ needs will make the information more relevant to their own jobs, unions and lives.

Literacy

Because the information and exercises in these Manuals are based on written material, it is recommended that you assess the general literacy level of the course participants. It is good practice to read aloud the instructions for activities to the group, explaining the different tasks for each activity. Since literacy is sometimes a sensitive subject for people, it is important that you do not identify to the other participants those who may have limited literacy skills. Try to make use of the variety of skills available in the whole group. This is recommended for any course and is particularly helpful if literacy is a problem in the group.

Course guidelines and a working together agreement

The starting point for activity in trade unions is a set of shared values and attitudes. These include:

- justice and fair treatment in all aspects of work
- equality of opportunity and equity of treatment which require the elimination of prejudice and procedures which openly or covertly discriminate against people on the grounds of age, gender, race, religion, sexual orientation and disability
- the greatest possible involvement in decision making at work and participation in the activities of the union by members
- maintaining cohesion between members and groups of members in working towards trade union objectives

These principles underpin the work of the ILO-IUF and should be reflected in the way that the course is run. The knowledge, experience and skills that each member brings to the course should be valued. Everyone has something to contribute and no one should feel excluded from doing so. At the beginning of the course, participants and the educator should agree course guidelines that reflect the principles outlined above. You can use the example of an agreement for working and learning together below to start the discussion off.

Example agreement for learning together (add other agreed items in the spaces below)

- listen what others have to say and avoid being dismissive of their contribution
- wait until a speaker has finished, and do not interrupt their train of thought
- use language that will not offend others
- stick to the agreed starting and finishing times
- avoid sexist language or behaviour
- try not to use "jargon" and if you do always explain what it means
-
-
-
-

Jargon sheet

During the course the educator should encourage participants to keep a jargon sheet so that they are able to refer to words, phrases and abbreviations and know what they mean or stand for. A large sheet of poster paper should be kept in the room so that the explanation of the words can be written down.

Encourage active participation

Adults learn best when they are actively involved in the learning process and when they are encouraged to discuss their own experiences in the course. This type of learning is generally called “participatory” or “student-centred learning”. Advantages of this approach include:

- the learning process starts from and builds upon the experience of course participants
- course participants learn through co-operative group activity and discussion
- course participants are given an opportunity to think out issues for themselves and develop a range of skills

Student-centred learning asks the participants to give information as well as receive it. In this way, participants are encouraged to learn from one another based upon their own experiences as workers. After all, it is the participants who know best about the health, safety and environmental problems in their own workplaces. This knowledge makes the participants an excellent source of ideas on ways to improve working conditions. Using the experiences of participants helps them to learn and retain important information.



Checklist for educators – Encouraging participation

- ✓ Give the participants regular opportunities to discuss their ideas for improving the health, safety and environmental conditions in their own workplaces
- ✓ Recognise the important contributions participants can make, based upon their personal experiences and accept that they bring valuable information with them
- ✓ Use a lecture format of teaching as little as possible. Divide the content of the Manuals into logical sections and sub-sections, creating activities and stimulating discussions as a way for participants to learn
- ✓ Text is provided in the Manuals for participants to reflect upon following a course activity
- ✓ Be democratic in your tutoring practice and be willing to give up some control of a session to allow participants to lead
- ✓ Facilitate and guide participants through the learning process by providing direction and structure
- ✓ Encourage the use of songs, dance and drama
- ✓ Use practical but structured field visits to supplement classroom activity
- ✓ Keep participants focused on the different tasks of the course
- ✓ Help participants to learn from one another
- ✓ Try to make sure that no one dominates the sessions
- ✓ Encourage quiet participants to speak up and participate in all sessions

“Learning by doing” is likely to be more effective than “learning by being told”. The collective self-reliance of participants will be encouraged by this training method. Also the skills they will be using as union activists or members will be developed at the same time. As a result, it is to be expected that the confidence participants feel in themselves will be markedly increased by the end of their training course.

ILO: Your Health and Safety at Work 2000



Checklist for educators – Planning and preparation

- ✓ Carefully read over each Manual/section/sub-section and each activity before you use it in your course
- ✓ Use the different participatory methods and try to come up with your own participatory methods as well
- ✓ Develop lesson plans or a tutoring outline for each Manual/section prior to your course. When preparing a course/session outline, decide what tutoring techniques you will use to present the core concepts. Include in your lesson plan objectives, introduction, core of the text, points to remember, summary and activities
- ✓ For some activities, it is recommended that you make copies of materials ahead of time if you have access to copying facilities. Remember items such as a flipchart, markers and paper
- ✓ Build upon the Manuals by developing new materials or by trying new ways of tutoring

SAMPLE LESSON PLANNING SHEET		
1. Name of session: 2. Target group: 3. Time available: 4. Requirements:		
CONTENT	TUTORING TECHNIQUES	TUTORING AIDS (materials, equipment, legal standards)
Aims		
Introduction		
Core points of the text		
Points to remember		
Summary		
Activities		

■ Techniques for educators

The following are some explanations and guidelines for using a variety of education techniques. All of these techniques have been demonstrated to be effective tools in workers' education.

Asking questions

Questions can be used to stimulate discussion, but should not be used in a threatening way. There are a variety of ways to ask questions and some ways are better than others. It is best to ask questions that require participants to analyse a problem, rather than asking questions that can be answered with a simple "yes", "no", or with just a few words. Questions should be addressed to the group, allowing the participants several seconds to think about their answers.

Often, there are no straightforward "right" and "wrong" answers. However, if a participant clearly provides a wrong answer to a question, ask if anyone else has a different answer rather than immediately saying that the previous answer was wrong. It is important when dealing with technical information to make sure participants get the "correct" answer to a question.

Using a checklist

A checklist is a useful prompt for participants to evaluate general or specific health, safety and environmental conditions in their own workplaces. You can provide checklists or help participants to develop their own, preferably in groups. Participants can then take the checklists back to their respective workplaces and apply them.

Instant ideas

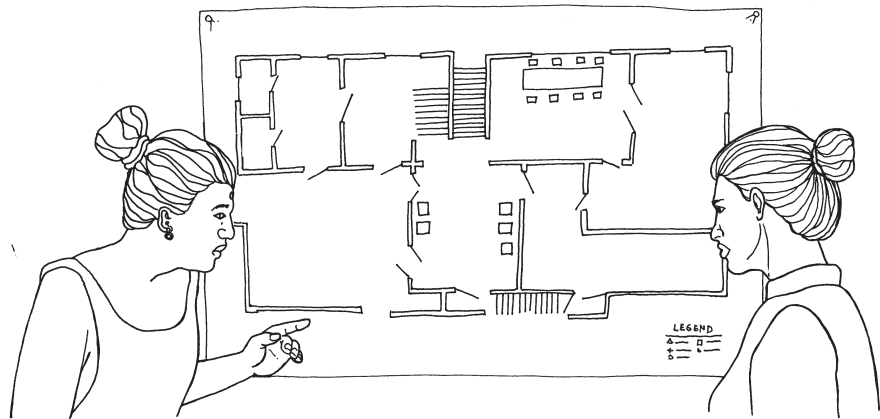
This is a technique used to encourage participants to generate a wide variety of ideas. With this technique, there are no "wrong" ideas and no idea should be criticised. To start the activity, state the problem or the topic in question. Then ask the participants to offer the first ideas that come into their head about the topic. Participants can call out their ideas randomly or write their ideas down on paper. Someone (you or one of the participants) writes down the ideas on a flipchart (or large sheet of paper) or on a chalkboard so that everyone can see. When no more ideas are offered, ask if anyone has anything else to add. If no one says anything more, summarise and discuss all the ideas that have been generated, and try to reach conclusions for action with the group.

Action planning

As a course progresses, there will be a number of matters that arise where participants will need to take some action. Action plans can be developed individually or as a group activity. Participants will need to think about and develop a strategy for taking positive action to improve working conditions, union organisation and so on. Action planning worksheets are provided in the Manuals for participants to help them to structure their work. Participants should be given the opportunity to report back to the rest of the course on progress, potential problems and next steps.

Body mapping and hazard mapping **(See Manuals 2 & 3)**

Increasingly visual techniques like body mapping and hazard mapping are being used to identify ill health and hazards at work. Techniques like this can help participants to distinguish between hazard and risk. A “hazard” is anything with the potential to do harm, whereas a “risk” is the likelihood of potential harm from that hazard being realised. Under ILO Convention No. 184 on Safety and Health in Agriculture, employers are obliged to conduct risk assessments. Identifying hazards is the first step in the risk assessment process. Once a particular hazard has been identified the risk assessment should evaluate the risk, describe and then implement the prevention and/or control measures to eliminate or minimise the risk from that hazard (See Manuals 2, 3 and 5 for more details).



Workplace activities

Where there is an opportunity to do workplace activities, they provide a link between the course, the participants' members, union and workplace. The activities will help participants to obtain information at work or from their union, and to discuss issues with their members in between different days of the course. There should be an opportunity provided on each day of the course to plan how to do the workplace activity. The more thoroughly the workplace activity is done, the more participants and their members will get from the course.

Course meetings

Course meetings are a democratic way of helping participants to influence the content and structure of the course. They also help to develop meeting skills and allow participants to share experiences from their unions and workplaces. There are numerous ways that course meetings can be introduced. For example, at the start of each day, participants elect a new chairperson and secretary, who then run a short meeting to discuss progress on the course, share new experiences from the workplace, agree the plan for the day and so on.

Small group activity

Small group work is one of the main educational methods used in workers' education. There are several good reasons for using small group work in workers' education. Small group work:

- is an active method
- encourages co-operative working
- encourages less confident participants to become involved in discussions
- allows participants to work without feeling they are always being watched by the educator
- provides an effective way of structuring discussion
- enables participants to investigate, discuss and respond to situations that they and their co-workers face at work

Ideally groups should consist of three to four participants. However, on occasions you will want to use the option of asking participants to work in pairs. This method of working can be very useful for activities that require detailed attention, such as producing a leaflet or preparing a short presentation.



Checklist for educators – Using small groups

It is essential that small group work is structured effectively. The process of setting activities, supervising group discussions, taking and summarising reports helps you to provide this structure.

Setting the activity

- ✓ Ensure that the participants are clear about the aims
- ✓ Ensure that the participants can complete the activity within the allocated time
- ✓ Ensure that everyone clearly understands what he or she is being asked to do
- ✓ Ensure that groups know that they should elect a spokesperson and that tasks should be rotated
- ✓ Make it clear how you want the groups to report back, for example, key points on a flip chart

Supervising the groups

- ✓ Allow time for groups to settle and sort themselves out before you go round to check on progress
- ✓ Try to supervise the work that is taking place in groups without dominating
- ✓ Be prepared to sit in with any group having difficulties, to help it structure its discussion and work

Taking reports from small groups

- ✓ You should be clear about the aims of reporting back
- ✓ Split up the reports back to avoid repetition and reports that are too lengthy. For example, ask if Group 2 have anything to add to Group 1's report on Task 1
- ✓ Are there key points you want the participants to draw out?
- ✓ Are there any key points that you may need to introduce if they do not come out of the reports?
- ✓ Encourage groups to give examples to illustrate their reports. This will enable links to be made between the workplace, the union experience of participants, and course activities

Summarising reports and guiding the final discussion

- ✓ It is important that you provide a summary of key points drawn from the group reports. This may be done during or at the end of the final discussion in which all the groups participate
- ✓ Sometimes you will want to write key points up on a flipchart (or large sheet of paper) or chalkboard
- ✓ You can draw out themes from the reports
- ✓ This is also an opportunity to point out the links with earlier course activities and discussions, and also with future parts of the course

Activity summary sheets

Encourage participants to keep a record of the key points raised in the activities so that they can refer back to them during and after the course. An example of a summary sheet is provided on the next page.

Practical checks of the workplace

Educators can encourage participants to undertake practical HS&E checks (in some countries these may be called inspections) as part of the course. Prior to a practical check, participants and the educator should agree where and when it can take place. There are a number of options:

- checking a local workplace
- checking a part of the establishment where the course is taking place
- checking their own workplace in between different days of the course

If a local workplace visit is arranged as part of the course, it is most important that it is used in a practical way. For example, get agreement from the employer and union at the workplace, that the participants can do a practice HS&E check. They can then discuss their findings at a meeting after the check has taken place and later write up a report. Workplace visits that involve “just looking around” are not a particularly good use of valuable training time.



Checklist for educators – Group discussions

It is most important that educators promote, stimulate and sustain group discussion as part of active learning methods. The following points will help you to use discussion successfully in courses.

- ✓ Ensure that as many participants as possible can join in the discussion
- ✓ Try to be aware of who has not spoken. Think of ways to encourage them to join in without putting them under pressure. For example, you could ask, “Is there anybody who has not spoken yet who wants to say something?”
- ✓ Do not dominate discussion with your own opinions, or allow anyone else to do so
- ✓ Part of the educator’s role is to chair and guide discussions informally. Encourage participants to listen to one another as well as to you. Keep your mind on how the discussion is progressing, and throw questions back at the group if the discussion gets stuck or starts to wander
- ✓ Do not be frightened of silences: they allow for thought, and for participants to make connections. Silence can also indicate that something is wrong, but normally there will be other signs for you to pick up on if this is the case
- ✓ Discussion can take place in large and small groups. Dividing the course into small groups allows more people to speak in the time available and helps less confident participants get involved
- ✓ Define the subject for discussion clearly for yourself and the participants. Allow for flexibility but do not let the discussion get too far off the point. If new ideas arise which require separate discussion, make a note of them and plan to come back to them later
- ✓ Discussion brings out a range of views and attitudes, but it can also bring out differences of opinion. You may therefore have to cope with strong alternative views or clashes of opinion, and you should be prepared for this
- ✓ Timekeeping is important and it is your responsibility to end discussions when you think it appropriate
- ✓ Prepare well for discussion but do not dominate it with your knowledge. Use your ideas and information to move the discussion along and help clarify points. You may also need to use your knowledge to encourage debate among the course participants
- ✓ Use participants’ names and encourage others to do the same. This will help the group to relax and build a collective approach
- ✓ Listen carefully to what participants say. Do not assume it will be what you expect them to say. Concentrate on what is actually happening, not on what you planned to happen
- ✓ Try asking participants to lead or chair discussion sometimes. Course meetings can be used to encourage this process
- ✓ If you are serious about using discussion as a training method, make sure you leave enough time for it. Discussion should be a key element of an occupational health, safety and environment programme, not an afterthought
- ✓ Make sure that discussions take place within the context of the Course Guidelines that participants should have agreed at the start of the course. For example, giving others the opportunity to complete what they are saying, using language that will not offend others and so on

Using case studies

In most cases, 'real' problems and issues from the participants' own experiences provide the best material for the development of skills and the improvement of working conditions. Occasionally however, case studies can be used effectively by tutors. Case studies involve the use of a detailed description of an event, a situation, or a problem. Part of their value lies in the fact that case studies make it possible to look at trade union issues, without participants feeling they personally have invested a lot in the outcome of the discussions. This means that sensitive issues can be introduced into a course so that nobody immediately feels he or she has a position to defend or attack.

If case studies are used, it is important that:

- they are relevant to the subject-matter and aims of the course in which they are being used
- they are not so far removed from the participants' experience that they cannot respond constructively to them

Case studies can be based upon real events or be wholly imaginary. They can be used with small group discussion where:

- the same case is given to all the small groups to consider. This can encourage the generation of a variety of solutions, ideas and opinions about the same issue
- each small group is given different case-studies but with a linking theme (for example, workplace hazards). This allows more issues to be covered in the time available



Case studies can be constructed from:

- real events, situations and problems raised by participants during courses. Develop the habit of noting down the essential points of those events which can usefully be written up as case-studies for future courses
- written information, for example, newspaper stories, reports in union journals and specialist occupational health and safety publications

Role-play

What is role-play?

Role-play is an active learning method that can generate considerable activity and interaction among course participants. Essentially, course participants are asked to act out a role in a particular workplace situation. The types of role-play most commonly used in workers' education on occupational health, safety and the environment are:

- **interviewing**, for example, a worker HS&E representative interviews a union member with a health, safety and environment problem
- **negotiating**, for example, worker HS&E representatives meet with management to negotiate about a health and safety issue
- **taking part in a meeting**, for example, a group of worker HS&E representatives meet to discuss and suggest action to tackle a health and safety problem

Why use role-play?

Educators use role-play because:

- it is an active method
- it is a way of developing the skills of course participants (for example, preparing and presenting an argument)
- it helps to build the confidence of participants
- it can be a useful way of finding out how **not** to deal with a situation!
- it can provide insights into patterns of behaviour and how people relate to each other
- it can provide the opportunity to act out a different role (for example, the role of a member with a safety problem, or the role of a manager)
- it can be used to develop co-operative working methods, particularly teamwork in negotiations with management

How is role-play set up?

The setting for a role-play and the allocation of roles will depend upon the type of exercise being set up. For example, an interviewing exercise could be set up using groups of three:

- UNION MEMBER
- UNION REPRESENTATIVE
- OBSERVER

A role-play based upon a negotiation could be set up using groups of five:

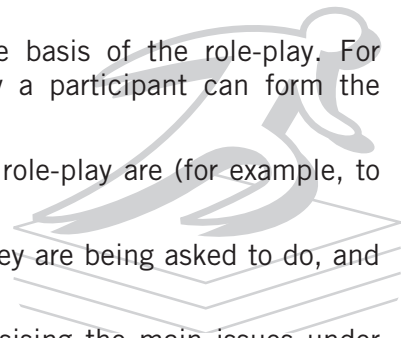
- 2 UNION MEMBERS
- 2 MANAGERS
- OBSERVER

As part of the **preparation** for role-play it is important to group together those participants given the same role. For example, all the managers, all the worker HS&E representatives and all the observers. This enables them to exchange ideas about how they will take on their role and clarify anything they are unsure of.



Checklist for educators – Effective role-play

- ✓ Use the experience of the participants as the basis of the role-play. For example, a particular problem being faced by a participant can form the substance of the role-play brief
- ✓ Participants should know what the aims of the role-play are (for example, to practise negotiating skills)
- ✓ Participants need to understand clearly what they are being asked to do, and their own particular role
- ✓ Individual roles should be kept simple, emphasising the main issues under consideration
- ✓ The role-play should build upon the experience of participants (although there will be times when participants are deliberately given a role or placed in a situation new to them)
- ✓ Adequate time must be allowed for participants to prepare their role
- ✓ Ground rules for the role-play should be established. In particular, you should emphasise that participants cannot invent new parts to the role-play. If they have any questions or difficulties, they should raise them with you
- ✓ Usually some participants will be given the role of observers, to witness and report back on the role-play as a whole. The observers need to be given enough time to present their reports, as these should form the basis for discussion after the role-play. An observer's checklist helps this process
- ✓ You should indicate clearly the point at which the role-play finishes and general discussion is to start so that the participants know when they are to “come out” of their roles



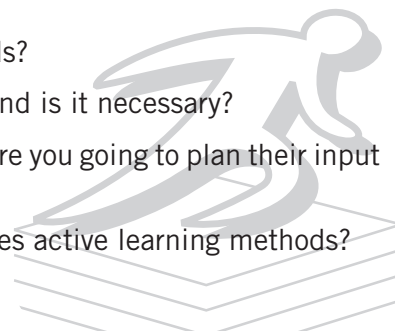
The use of resource persons

Educators should be very careful in their use of external resource persons. They should only be used if they will enhance the learning process, and should never be used to “fill in time.”



Checklist – The use of resource persons

- ✓ What is the target group and what are their needs?
- ✓ Why are you using an external resource person and is it necessary?
- ✓ If an external resource person is necessary, how are you going to plan their input with them?
- ✓ How can you ensure that the resource person uses active learning methods?



■ Study circles

Background

So far, we have been using the term “course,” but in many trade unions “study circles” are used. A study circle describes when a group of adults come together on a regular basis to learn more about a particular subject. Some use the term ‘study circle method’ to describe a form of group work, whereas others will use it to describe an overall education methodology. The ideas behind study circle education are very similar to the active learning approach that has been described above. Both are democratic models of education which are participant centred. In this Educator’s Guide we use ‘active learning’ to describe the overall approach, and study circles to describe an effective form of membership education.

Study circles date back to the period when workers in Sweden used them as a means of overcoming the lack of education and social assistance for the working class. Study circles have been increasingly used by trade unions for membership education in the workplace. Study circles rest on the training of lay facilitators who go into their workplaces and organise study circles. Study circles are a most valuable learning method for members who have had little or no experience in trade union work and for educationally disadvantaged groups.

Advantages of study circles

One advantage of a study circle approach is that a lot of members can participate in trade union education relatively quickly and at a modest cost. The skills that study circle participants learn can be adapted and used to tackle a range of issues which people face at work and in the community. Participating in a study circle gives people the self confidence and power to resolve workplace problems by building a strong trade union organisation at a local level.

Procedures

The study circle method relies upon the training of study circle facilitators, who are drawn from the workplace. They are not expected to have special qualifications, but should be motivated to want to assist union members and workers at their place of work through an education programme. Typically, trade union training of study circle facilitators is geared towards the use of active learning methods using group learning techniques.

Having completed their course, study circle facilitators return to their own workplace and establish study circle groups. The numbers in the group can vary, but typically involve around ten union members or workers. The work in a study circle usually centres around a workbook or written material prepared for and adjusted to the requirements and methods used in the circle. Study circle members jointly decide to undertake a period of study around the subjects covered in the workbook or materials. The study circle facilitator and study circle members decide upon the length of the programme and the way the hours should be arranged. Sections of these ILO-IUF Manuals can be adapted for study circle use.

Each study circle is a self learning unit which receives assistance from the study circle facilitator, who is a part of the group.

Characteristics of a study circle

- Everybody feels that she/he belongs to the group and is accepted
- Everybody actively takes part in discussions and different ideas are respected
- The facilitator is part of the group and equal with the rest
- Planning is done jointly and responsibility shared by members
- Any problems are settled between group members
- Active learning methods are used with a range of different activities
- Evaluation of the study circle is done co-operatively by circle members
- Future planning and action is agreed between the group

■ Setting up your training course

Planning the course

Below are some suggestions for setting up a training programme using these Manuals. When deciding how to set up your course, consider factors such as the time you have available, the time that participants can spend attending the course, the specific needs of the participants.

You need to think about:

- careful selection of the target group with agreed criteria
- giving advance notice to the participants and employers
- the programme and timetable
- preparing handouts and activities
- arranging the venue, stationery, snacks, and resource persons if required
- the finances for the course
- evaluation and follow up

A number of the above tasks can be shared in your union, so that it does not all fall upon the educator. You will also need to think about what might go wrong and what you will do. For example:

- the finances do not arrive in time
- the venue has to be changed
- a key resource person is no longer available
- the printing machine stops working
- the electricity might fail

Make sure that participants know in advance how much time they have in order to try to accomplish the aims for an exercise or discussion. Agree clear time limits for:

- activities
- discussions
- course meetings
- breaks for food and drinks

Setting up the 'learning space'

Wherever the course is taking place, the aim should be to maximise contact and communication between the participants. When arranging the 'learning space', consider the following:

- *Eye contact:* can everyone see one another easily?
- *Listening:* can everyone hear what is being said?
- *Seating:* make it informal and flexible

Provide the following if possible:

- movable chairs and tables so participants can group them
- enough light and ventilation
- a flipchart (or large sheets of paper taped to the walls) and markers or chalkboard and chalks

Often educators have to work in conditions that are far from ideal. But, you can certainly conduct a successful course without all of these “ideal conditions”.

■ Course evaluation

As a basic principle, evaluation should jointly involve the educator and course participants. Just as the course will have been based upon group-working, active participation and involvement, evaluation also should be a collective process. Evaluation means that collectively and individually everyone reflects upon the course in which they have been involved. They ask questions about its relevance, what has been gained from it, its weaknesses and its successes. Evaluation should take place as an ongoing feature of the course.

For an evaluation to be effective, the educator and course participants should share their views collectively. In this way:

- the educators learn about the effectiveness of the course
- the participants learn more about his or her own progress and development from their fellow participants

The main objectives of course evaluation are to:

- assess the suitability of the aims of the course programme
- identify whether the course is meeting (has met) these aims and objectives
- consider the suitability of course content and structure
- enable the participants to measure their development and progress
- judge the relevance and usefulness of materials used in the course
- assess the adequacy of the organisational and administrative arrangements
- encourage the change and adaptation of materials and methods as a routine part of the training process
- develop models of good training practice

Of these objectives the last two are relevant primarily to the educator. The key point, however, is that evaluation should be seen as part of a longer process rather than as a one-off event.

What do course participants gain from evaluation?

- A means of assessing their personal progress, learning and skills development
- The chance to identify future learning needs and interests
- The opportunity to discuss and reflect upon the training process in which they are involved
- The chance to consider whether and how the group as a whole has achieved its aims
- The chance to contribute to and influence future trade union courses

What does the educator gain from evaluation?

- Considered comments from participants on all aspects of the course
- An indication of parts of the course that run well
- Clarification about parts of the course that need to be removed or amended
- Ideas for the future development of training materials
- A means of identifying further training needs
- Encouragement from collective discussion and decision-making

Evaluation questionnaires

Questionnaires concerning the course can be distributed to participants at the end of the course. More detailed questions can be asked to supplement the discussion-based activity referred to above. However, this supplement should not take the place of collective discussion. A sample course evaluation form is provided on page 32. It is preferable if participants have the option to fill in forms anonymously.

A written follow-up evaluation can be sent to participants some weeks after finishing their course. This serves the additional purpose of:

- giving time for reflection upon the experience
- identifying what has been gained
- assessing the impact of the training activity upon the subsequent activities of the participant (see the section on 'impact' below)

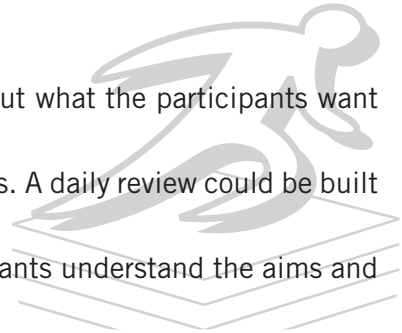
Personal action plans

As we have already described, action planning and implementation should form an integral part of any trade union course. Personal action plans are also a useful form of evaluating action which results from the course. They enable participants to set themselves targets to be achieved over a given period of time. This is important as it creates a direct link between the course and the work/union situation to which participants are returning. Putting targets down on paper allows each individual to evaluate his or her progress in achieving them.



Checklist for educators – Evaluation

- ✓ Before the start, set your course aims
- ✓ During the first or second course session, find out what the participants want from the course and agree the aims
- ✓ Use course meetings to assist the training process. A daily review could be built into the course meeting agenda
- ✓ For each session/activity, check that the participants understand the aims and what they are expected to do
- ✓ Review progress when participants are midway through the course
- ✓ During evaluation, beware of food and facilities becoming more important than course content
- ✓ Carry out a final evaluation at the end of the course
- ✓ Where possible, follow up a sample of participants a few weeks/months after the course has finished to monitor the impact of the training upon their subsequent activities



EXAMPLE OF A COURSE EVALUATION FORM

1. Did the course meet its aims?

Yes

No

2. Do you think the course adequately addressed your health and safety concerns?

Yes

No

3. Do you have any particular health and safety concerns which you feel were not adequately addressed in the course?

Yes

No

If so, please describe

.....
.....
.....
.....
.....
.....
.....

4. How useful was this course for you?

Very useful

Somewhat useful

Not useful

5. Do you have any suggestions to improve future courses? If so, please explain

.....
.....
.....
.....
.....
.....
.....
.....
.....

■ Impact of the training activity in the workplace/union

Training of worker HS&E representatives is an effective support for their activity. It is important for the educator to ascertain what worker HS&E representatives think a course has enabled them to achieve at their workplaces. Educators can follow up a sample of participants several weeks after the course has finished to identify the impact of the training activity.

■ Useful sources of information

Union

- Your own union's web page/written material
- International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF) <http://www.iuf.org>
- International Confederation of Free Trade Unions (ICFTU) (<http://www.icftu.org/>)

National HS&E authority or department

Intergovernmental

- ILO Safework (www.ilo.org/public/english/protection/safework/index.htm)
- International Programme on Chemical Safety (www.who.int/pcs)

Specialist institutes

- Canadian Centre of Occupational Health and Safety (www.ccohs.ca)
- International Agency for Research on Cancer (<http://www.iarc.fr/>)

Non-governmental institutions (NGO's)

- Hazards Network, UK (www.hazards.org/)
- Pesticide Action Network Pesticide Database (www.pesticideinfo.org/)

Pesticide industry

- Crop Data Management Systems: Ag Product Label and Material Safety Data Sheets Service (<http://www.cdms.net/manuf/manuf.asp>)

Manual 2:

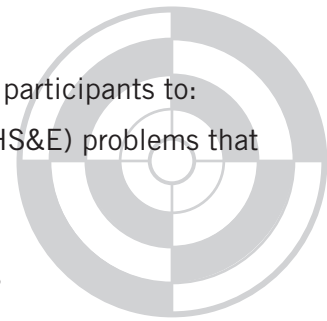
HEALTH, SAFETY & ENVIRONMENT FOR “GRASSROOTS” MEMBERS



Aims

Manual 2 comprises of course materials that will help participants to:

- identify the main health, safety and environment (HS&E) problems that they face at work
- create awareness on HS&E
- encourage workers' participation in HS&E activities
- strengthen trade union branches for HS&E
- prevent accidents, ill health and a damaged environment





Activity – Introductions

AIMS

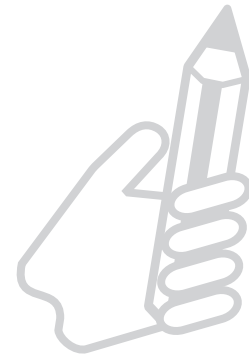
To help us to:

- find out who is on the course
- agree our aims for the course

TASK

Talk to another person and make notes, so that you can introduce her or him to the other people on the course. Your partner will introduce you. Use these headings for your discussion:

- Your name
- Your union
- Your workplace
- The number of workers at your workplace
- Your job
- Have you attended any health, safety and environment courses before?
- Why is work-related health, safety and the environment important to you?
- What would you like to do on this course?



■ Background on health, safety and the environment

Work-related health, safety and the environment involves the social, mental and physical well-being of workers, their families and the community. Achieving this requires the collaboration and participation of trade unions, workers, employers, government and other organisations.

Work-related health and environment issues are often given less attention than work-related safety issues. But there are many health and environmental hazards in our working and living places. We need to obtain knowledge and skills to protect ourselves, our families, the general public and the environment that we so much depend upon for our survival.

Work-related accidents, ill health and environmental hazards can cause death, disease and injury. This has many serious direct and indirect effects upon:

- the lives of workers and their families
- the local community
- employers
- the State

For workers some of the direct costs of an injury or illness are:

- the pain and suffering of the injury or illness
- the loss of income
- the possible loss of a job
- health-care costs

The indirect costs of an accident or illness can be far greater than the direct costs, often so great that it is difficult to measure them.

Injuries, illnesses and environmental damage are also costly for workers' families, and their local communities. Some of the costs include:

- seeing a loved and respected person suffering from an injury or disease
- worry and stress
- time and effort to care for the person
- financial losses and hardship
- loss of life

Accidents, illnesses and environmental damage are also costly for employers. Direct costs include:

- payment for work not performed
- medical and compensation payments
- repair or replacement of damaged machinery and equipment
- reduction or a temporary halt in production
- increased training expenses and administration costs
- possible reduction in the quality of work
- negative effect on morale of other workers

Again, the indirect costs of an accident or illness can be far greater than the direct costs, often so great that it is difficult to measure them.

And work-related accidents, illnesses and environmental hazards can cost the State a significant percentage of a country's gross national product.

■ Body mapping



Activity – Body mapping

AIMS

To help us to:

- use body mapping to identify symptoms of ill health

TASK

Your educator/facilitator will draw some body maps on posters, and will arrange for small groups of participants who do similar work to be formed.

In your small group:

1. Each participant should place marks (**X**) on to the body map to show any symptoms of ill health that they or others have at their places of work.
2. You can use different colours to identify different symptoms. For example:
 - X** aches and pains – **blue**
 - X** breathing difficulties, coughing – **black**
 - X** stress related disorders – **green**
 - X** any other problems such as skin rashes, runny eyes and nose, dizziness, reproductive disorders and so on – **red**
3. As you apply the **X**, explain briefly why you placed the **X** in the particular place
4. Make sure that there is someone in your small group that briefly notes down what is said around the body map and can report back your views
5. Your educator/facilitator will organise a short discussion afterwards to share your ideas



Photo: courtesy of the Union of Shop Distributive and Allied Workers, UK.

What is body mapping?

Body mapping is a way of identifying common patterns of health problems amongst workers in a particular workplace, normally doing the same or a similar job. While it isn't certain that any such common ailments are work-related, it highlights areas for further investigation.

■ Health, safety and environmental hazards



Activity – Hazards at work

AIMS

To help us to:

- discuss health, safety and environmental problems at work
- identify priority hazards

TASK

In your small group:

1. Discuss the health, safety, welfare and environmental problems that you and other workers face in your workplace
2. Make a list of the health, safety and environmental hazards that you think are the priorities

Elect a spokesperson to report back with your group’s priority hazards



Hazard and risk

A “**hazard**” is anything with the potential to do harm, whereas a “**risk**” is the likelihood of potential harm from that hazard being realised. For example, the hazard associated with power-driven agricultural machinery might be getting trapped or entangled by moving parts. The risk may be high if guards are not fitted and workers are in close proximity to the machine. If however, the machine is properly guarded, regularly maintained and repaired by competent staff, then the risk will be lower.

Different types of hazards don’t necessarily fit into neat boxes, but the headings below are given as examples.

Mechanical hazards

Poorly designed and/or guarded agricultural machinery is a major cause of fatalities and accidents. Injuries from cutting tools are another major risk.

Physical hazards

Agricultural workers face a wide range of physical hazards:

- noisy machinery, and noisy working environments such as intensive livestock houses
- excessive vibration from tractors, chainsaws and so on
- deaths and injuries from falls
- asphyxiation in grain silos, wells and so on

- solar radiation resulting in skin cancers
- extreme temperatures when working outside and inside glass houses
- deaths and injuries from working with livestock

Biological hazards

Agricultural workers are at risk from a wide range of work related diseases and disorders. These range from diseases caught from birds and animals to asthma and other lung diseases from biologically contaminated dusts.

Psycho-social hazards

These include problems that can cause ill health such as low pay, sexual and other harassment, job insecurity, poor promotion mechanisms, delay in payment of salaries.

Work organisation hazards

These include hazards that are caused by poor work organisation such as badly organised shift work and working hours, excessive overtime, lone working, lack of control over work.

Ergonomic hazards

These include hazards associated with the failure to make the job fit the worker and can cause permanent injuries and disablement. For example:

- badly designed machinery
- prolonged static working positions
- repetitive work
- unsuitable tools used by workers
- poor seating

Chemical hazards

Chemicals such as pesticides and solvents can result in health hazards ranging from poisoning to long term effects on female and male reproduction, cancers and so on.

Environmental hazards

Agricultural work can also create environmental hazards beyond the immediate workplace. For example, workers and their families, local communities, and the environment can become contaminated by pesticides in spray drift, polluted water and soil, as well as through consuming local crops, meat and fish containing pesticide residues. This additional exposure greatly increases the risks of ill health especially when this is linked to poor diet and malnutrition.

Tackling hazards**Activity – Tackling a priority hazard****AIMS**

To help us to:

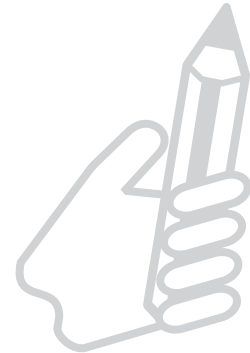
- identify priority hazards
- evaluate the risks
- develop action plans to tackle the risks

TASK

In your small group:

1. Choose a priority health, safety or environmental hazard from one of your workplaces
2. Discuss the hazard, identify the risks, and then decide what needs to be done to prevent workers getting injured or ill

Elect a spokesperson to report back

***Prevention is better than cure***

The best way of protection is to take action before occurrence of a fatality, injury, or an illness.

Steps for prevention and control

When confronted with a hazard it is important to approach prevention and control techniques in the following strict order.

1. Ask whether the hazard can be **eliminated**. For example, remove the need to use a toxic pesticide by using organic farming methods
2. If the hazard cannot be prevented or eliminated, consider **substitution** with a less risky process or substance in the case of chemicals

3. If a hazard cannot be prevented through elimination or substitution consider control options, in the following order:

Technical/engineering control

- enclosure
- isolation
- ventilation

Safe systems of work

- changing work schedules
- extending rest periods
- training and information

Issuing Personal Protective Equipment (PPE)

But only as a last resort to supplement other control measures listed above. For example:

- coveralls
- masks
- respirators
- goggles
- boots

Other Methods

- general cleanliness of the workplace
- personal hygiene and care
- medical health surveillance

■ Responsibility for HS&E

***TU approach
to HS&E***

As you have seen from the previous activity on priority hazards, the trade union focus should be upon prevention and control, through risk assessment and management. It is important to recognise that there is a step by step approach to prevention and control as listed above, which should be followed in the order laid down. Personal protective equipment is often the only measure offered by employers. It is in fact the least effective method of protection and should only be used as a last resort to supplement prevention and control measures.



Activity – Workers and HS&E

AIMS

To help us to identify:

- the responsibilities of employers and workers
- the role of the worker HS&E representative in handling discipline and HS&E

TASK

1. Read the short case study below

Workers have recently been supplied with personal protective equipment (PPE) for use when they are working with chemicals. Management did not consult the workers on the choice of PPE. Many of the women refuse to wear the equipment because it was designed for men, and so does not fit properly and is uncomfortable. A senior manager has now informed the worker HS&E representative that the workers will be disciplined if they do not wear the PPE.

2. In your small group, decide what you think the worker HS&E representative and the workers should do next. You should take account of the steps for prevention and control listed above.

Elect a spokesperson to report back using a chart



Employers and their duties

Trade unions believe that deaths, injuries and ill health are caused because employers fail to provide a safe and healthy working environment, and often over-rely upon personal protective equipment. In fact, PPE should only be used as a last resort and only then to supplement other control methods.

The employer should:

- provide a working environment that is safe and without risks to health and does not damage the environment
- identify hazards in the workplace
- carry out workplace risk assessments before exposing workers to hazards
- identify and put into place risk management prevention and/or control measures to eliminate or minimise the risk from the hazard(s) identified
- provide workplaces that are adapted to the needs of the worker
- provide safe and healthy systems of working
- provide full information to workers
- provide good health and safety training programmes
- provide opportunities for workers and their trade unions to be consulted about all aspects of HS&E

In most countries it is a criminal offence if an employer fails to abide by health, safety and environment laws and regulations.

**Workers,
trade unions
and HS&E**

Workers

It is clear from the previous section that the employer has the main responsibility for health safety and the environment at the workplace. And the employer should involve workers in decisions about health, safety and the environment. This will include prevention and control measures and suitable PPE where it is jointly agreed that this is necessary. In addition, workers are well placed at spotting potential causes of accidents or ill health and alerting management to them.

Obviously workers also have some obligations to fulfil. These include:

- observing health, safety and environmental regulations
- carrying out work safely in a manner that does not endanger themselves and others
- reporting dangerous situations
- using equipment for HS&E including *suitable* PPE where necessary

It is important that if we demand that employers meet their obligations, that workers observe reasonable obligations placed upon them. In many workplaces, refusal by workers to abide by health, safety and environment requirements may result in disciplinary action.

Trade unions

The main HS&E job of a trade union and its members at a local level is to ensure that the employer meets their HS&E responsibilities. Some of the ways to achieve this include building a strong membership, electing worker HS&E representatives and organising for health, safety and the environment. It is important to understand that:

- HS&E is no different to any other trade union issue
- it is not a trade union role to impose disciplinary action upon their members
- unions should be informing, involving, advising and educating members so that they can genuinely participate in HS&E
- employers should try to remove the hazard before resorting to personal protective equipment (PPE)
- the employer should consult workers and unions in the choice of equipment and PPE, and the PPE should be suitable for the users
- workers should be properly trained in the use of equipment and PPE
- any disciplinary procedure should be jointly agreed with the relevant trade unions

■ Health and safety law and standards



Activity – Applying the law

AIMS

To help us to:

- identify relevant national laws
- use ILO Convention No. 184 on Safety and Health in Agriculture
- apply standards to problems

TASK

In your small group, select one health and safety problem that has previously been raised during the course.

Use the worksheet on the following page to:

- identify relevant parts of your national legislation
- identify relevant parts of ILO Convention No. 184
- plan what to do next

Elect a spokesperson to report back with your key points

RESOURCES

- Copy of your national legislation
- Key text from ILO Convention No. 184



APPLYING STANDARDS WORKSHEET	
Name	Union and workplace.....
Problem: brief description	Which parts of the law or Convention can help?
What does the law or the Convention say?	Who is responsible?
How can you use the law or Convention to get things done?	What do you plan to do next?

**National
HS&E
legislation**

Government legislation should provide workers with minimum standards of health, safety and environmental protection. These minimum standards normally form part of the criminal legal system. If the laws are not complied with, it may result in the punishment of employers and other offenders through the courts.

Historically, many trade unions have been successful in pressuring governments to enact and enforce HS&E protective legislation. Today it is still important for unions to organise for protective HS&E legislation at the national or provincial levels. But HS&E legislation is only effective when supported by government enforcement. Without adequate legal enforcement, some employers do not feel motivated to take it seriously.

Currently, many governments do not have enough adequately trained Government inspectors to inspect every workplace regularly, Therefore it is up to workers and unions to be the “watchdogs” and make sure employers are complying with existing laws and standards.

You have the right to see the HS&E legislation that applies to you because it is a public document. ***Your health and safety educator/facilitator will have provided you with a short summary of your country’s HS&E laws for the purposes of the above activity.***

**International
Labour
Organisation
Convention
No. 184 on
Safety and
Health in
Agriculture**

International labour standards of the International Labour Organisation take the form of Conventions and Recommendations. They are adopted by the tripartite International Labour Conference, which meets every year in Geneva, Switzerland. Conventions are open to ratification by member States of the ILO. They are international treaties which are binding on the countries which ratify them and turn them into national law. Recommendations are not international treaties but give more details on how the provisions in the Convention can be applied.

Important articles taken from ILO Convention No. 184 on Safety and Health in Agriculture are reproduced on the next page.

ILO Convention No. 184 on Safety and Health in Agriculture**Article 7: Employers’ duties regarding risk assessment, training and stopping dangerous operations**

The employer shall:

- (a) carry out appropriate risk assessments in relation to the safety and health of workers and, on the basis of these results, adopt preventive and protective measures to ensure that under all conditions of their intended use, all agricultural activities, workplaces, machinery, equipment, chemicals, tools and processes under the control of the employer are safe and comply with prescribed safety and health standards;
- (b) ensure that adequate and appropriate training and comprehensible instructions on safety and health and any necessary guidance or supervision are provided to workers in agriculture, including information on the hazards and risks associated with their work and the action to be taken for their protection, taking into account their level of education and differences in language; and
- (c) take immediate steps to stop any operation where there is an imminent and serious danger to safety and health and to evacuate workers as appropriate.

Article 8: Workers’ rights and duties

Article 8.1. Workers in agriculture shall have the right:

- (a) to be informed and consulted on safety and health matters including risks from new technologies;
- (b) to participate in the application and review of safety and health measures and, in accordance with national law and practice, to select safety and health representatives and representatives in safety and health committees; and
- (c) to remove themselves from danger resulting from their work activity when they have reasonable justification to believe there is an imminent and serious risk to their safety and health and so inform their supervisor immediately. They shall not be placed at any disadvantage as a result of these actions.

Article 8.2. Workers in agriculture and their representatives shall have the duty to comply with the prescribed safety and health measures and to co-operate with employers in order for the latter to comply with their own duties and responsibilities.

ILO Recommendation No. 192 on Safety and Health in Agriculture**Paragraph 5.**

To give effect to Article 7 of the Convention No. 184, a set of measures on safety and health at the level of the undertaking should include:

- (a) occupational safety and health services;
- (b) risk assessment and management measures in the following order of priority:
 - (i) elimination of the risk;
 - (ii) control of the risk at the source;
 - (iii) minimisation of the risk by such means as the design of safe work systems, the introduction of technical and organisational measures and safe practices, and training; and
 - (iv) in so far as the risk remains, provision and use of personal protective equipment and clothing, at no cost to the worker;
- (c) measures to deal with accidents and emergencies, including first aid and access to appropriate transportation to medical facilities;
- (d) procedures for the recording and notification of accidents and diseases;
- (e) appropriate measures to protect persons present at an agricultural site, the population in the vicinity of it and the general environment, from risks which may arise from the agricultural activity concerned, such as those due to agrochemical waste, livestock waste, soil and water contamination, soil depletion and topographic changes; and
- (f) measures to ensure that the technology used is adapted to climate, work organisation and working practices.

■ Worker HS&E representatives



Activity – The job of worker HS&E representative

AIMS

To help us to:

- discuss the way we are represented on health, safety and environmental issues
- identify the jobs of a worker HS&E representative

TASK

In your small group:

- discuss how you and other workers are represented on health, safety and the environment
- draw up a list of what you think are the main jobs of a worker HS&E representative

Elect a spokesperson to report back



Trade union representation

Strong trade union organisation is essential to ensure that employers prevent injuries, ill health, and death of working people and others in the wider community. Workers and unions have a direct interest. It is our lives, limbs and health that are at stake, as well as those of our families and friends.

One of the main jobs of trade unions and their members at a local level is to make sure that the employer keeps to her/his responsibilities. Some of the ways to achieve this include building a strong membership, electing worker HS&E representatives and organising for health, safety and the environment.

Building a strong membership

Organising around health, safety and the environment can help to build a strong union. Members have a deep concern about the health of themselves, their fellow workers and people in the wider community. But often health, safety and environmental hazards may not have been a priority for action. Workers may have other major concerns, such as a living wage and having enough food to eat.

The job of a worker HS&E representative

The term ‘worker HS&E representative’ covers a number of different categories of representative (see the description of these categories in the Introduction to these Manuals on page 5). The IUF believes that any worker HS&E representative should be a trade union representative selected or elected by fellow union members in their workplace.

We have seen in Article 8.1 (b) of ILO Convention No. 184 that workers have a right to select safety and health representatives. Some of the main jobs that a worker HS&E representative can do include:

- talking to members, and taking up their complaints with management
- involving, informing, and consulting members
- collecting and distributing HS&E information
- carrying out HS&E checks of the workplace on a regular basis
- identifying hazards, investigating and tackling the risks
- investigating accidents, ill health and near misses
- checking that the employer is complying with health and safety requirements
- consulting and negotiating with management
- sitting on safety and health committees
- following up problems and making sure that something gets done about them
- talking to Government health and safety inspectors

■ Joint worker/union-management health, safety and environment committees



Activity – Joint health, safety and environment committee

AIMS

To help us to:

- think about the benefits of a joint health, safety and environment committee
- decide who should sit on it, and what it should do

TASK

In your small group, discuss the formation of a joint HS&E committee. Include in your discussions:

- the advantages and disadvantages of forming a committee
- who should sit on it?
- what it should do?
- how often it should meet?

Elect a spokesperson to report back, with the main points from your group discussions



Introduction

We have seen in Article 8.1 (b) of ILO Convention No. 184 that workers have the right to select representatives on safety and health committees. A joint union/management HS&E committee can be one way of acting in partnership with the employer, and solving outstanding problems.

Benefits of a joint HS&E committee

A committee that encourages discussion between workers and management on health, safety and the environment can be very helpful. But the measure of a good health and safety committee is whether or not it can secure change and improvements in working conditions. A committee that does not make decisions or where the same items appear again and again on the agenda is not helpful.

Composition

Members of this committee should be derived from management and from the union nominees. It is important that:

- the number of representatives from each side remains equal to ensure fairness
- both sides are accorded the same status in the meetings

The functions of the Committee

The decision making process should be jointly agreed when the committee is being established. The functions of the Committee could include:

- monitoring the workplace for hazards on a regular basis. Before each meeting, the committee could conduct an HS&E check of an area of the workplace to discuss at the meeting
- promoting and providing health and safety training for the workforce
- agreeing health, safety and environment policy and ensuring that it is implemented
- discussing proposed changes in the workplace and working conditions that will affect the health and safety of the workforce
- investigating injury and ill health reports, and relevant trends
- developing risk assessment procedures
- promoting the development of occupational health and safety services

Frequency of meetings

Meetings should be held frequently, at least quarterly, but preferably monthly. Meetings should not be cancelled unreasonably.

Union action on HS&E committees

Unions should ensure that:

- meeting dates are agreed in advance and only postponed by joint agreement
- a senior person with managerial health and safety responsibility is committed to being present
- named people are given the responsibility for actions and are committed to a completion date
- minutes are issued promptly, well displayed and fairly reflect discussions, decisions and agreed timetables for action



Activity – Setting up a HS&E Committee

AIMS

To help us to:

- think about the arguments for setting up a HS&E committee
- practise negotiating skills

TASK

You are a group of workers from a tea plantation. You have decided that it would be a good idea to form a joint health safety and environment committee.

1. You need to:
 - elect three workers who are going to represent you
 - agree the main arguments in favour of an HS&E committee that you will present to management
2. Three of the group will now need to volunteer to act as managers
3. The three elected workers and three managers will now meet to discuss the formation of the HS&E committee. The rest of the group will observe the negotiation

The group observing the negotiation will report back with their views on the strengths and weaknesses of the workers' presentation.



Future strategy



Activity – Your next steps

AIMS

To help us to:

- work out a plan for future activity on health, safety and the environment
- identify the steps that we can take

TASK

Identify three things that you will do in your workplace as a result of this course, and when you will do them

Prepare a report back to the rest of the course with your plan



■ Course evaluation



Activity – Evaluation

AIMS

To help us to:

- find out to what extent the aims of the course have been achieved
- decide how the course could be improved

TASK

In your small group discuss the following questions:

- Taking the course as a whole, did the different sessions meet your needs and interests?
- Which sessions or parts of the course were most valuable to you and why?
- Which sessions or parts of the course were of less or no interest to you and why?
- What suggestions would you want to make to improve future courses?
- Is there any other comment you would like to make?

Elect a spokesperson to report back



Manual 3:

HEALTH, SAFETY & ENVIRONMENT FOR WORKER HS&E REPRESENTATIVES



Aims

Manual 3 contains course materials that will help worker HS&E representatives to:

- identify problems – the main health, safety and environmental (HS&E) problems faced by their members
- involve members – by making them more aware of health, safety and environment issues and the need for union action
- improve health and safety – by proposing plans for identifying hazards, preventing risks and improving the working environment
- use information and the law – track down information and know how to use it effectively
- get things done – by working with their union organisation and negotiating effectively with their employer
- develop skills – to do an effective job as a worker HS&E representative

Introduction

About this section

This section will help us to:

- find out what our members think
- agree course aims
- discover how the course will work
- find out more about the other people on the course
- agree guidelines for the course

Worker HS&E representative

The term 'worker HS&E representative' can refer to different types of representative:

- worker representatives who undertake HS&E work as part of general union duties at the workplace. They have no rights under national health and safety laws, though they may perform their HS&E work as part of a collective bargaining agreement. Such representatives will be union members and elected by other union members in that workplace
- worker health and safety representatives (safety representatives for short) who have legal powers under national health and safety laws to carry out specified HS&E duties at the workplace. Such legally empowered representatives will normally be elected by their fellow workers as laid down in the health and safety laws. These worker representatives will *not* automatically be union members though in fact they generally are, as unions are the only credible and organised body representing workers in the workplace
- worker representatives on joint worker/union-management workplace health and safety committees (safety committees for short). Such committees may be legally constituted under national health and safety laws, or performing their work under a collective bargaining agreement. Such worker representatives will normally be elected by their fellow workers as laid down in the health and safety laws or collective bargaining agreement. These worker representatives will *not* automatically be union members though in fact they generally are, as unions are the only credible and organised body representing workers in the workplace.

The term 'worker HS&E representative' is used in this Manual to cover all the categories listed above. The IUF believes that any worker representative should be a trade union representative selected or elected by fellow union members in their workplace.

Obtaining members' views

As a worker HS&E representative, it is essential that you effectively represent the views of your members. Without their support you can become isolated and unable to improve working conditions. If you want their support, members have to be informed and involved by their worker HS&E representatives. We can do this by:

- listening to what they have to say about hazards and ill health
- convincing them of the dangers where the risks may not be obvious
- developing their awareness of the benefits of trade union action on HS&E
- identifying the employer's obligations to maintain a safe and healthy workplace
- working collectively with them to improve conditions at work

So that the course is relevant and practical for you and your members, we will need to obtain members' views before the course begins.

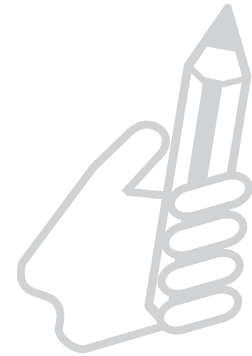


Pre-course activity – Members' survey

AIMS

To help us to:

- talk to our members
- obtain members' views and other information
- ensure that the course is relevant to our situations



TASK

1. Before you come on the course, have a short discussion with a cross-section of your members. Make a note of their answers to the following questions, and bring your notes along to the course.
 - What are the main health, safety, welfare and environmental hazards that they think that they face at work?
 - What do they feel that their employer is doing to protect the workers' health and safety and the environment?
 - What do they think that their union is doing about health, safety and the environment and could it do more?
2. Try to obtain information that you think will be helpful on the course. For example:
 - your union rulebook
 - union policies on health, safety and the environment
 - collective bargaining agreements relating to health, safety and the environment
 - documents developed by your employer, for example, safety policies, safe systems of working etc.
 - joint safety committee minutes
 - report of a government inspector's visit (letter to worker HS&E rep or copy of letter to the employer)
 - any other useful information

We will discuss what you have found out on the first day of your course.



Activity –Course introductions

AIMS

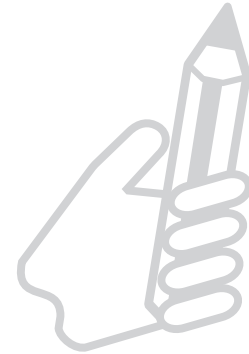
To help us to:

- find out who is on the course
- agree our aims for the course

TASK

Talk to another person and make notes on the worksheet on the next page, so that you can introduce her or him to the other people on the course. Your partner will introduce you. Use these headings for your discussion:

- Your name
- Your union position
- How long you have been a worker HS&E representative
- How you are involved in health, safety & environmental matters
- Why you became a worker HS&E representative
- Your workplace and the number of workers
- The number of members you represent and their jobs
- Your job
- Have you attended any health and safety courses before?
- What would you like to do on this course?
- Any other interesting information



PAIRED INTRODUCTION WORKSHEET

Use this sheet to keep a record of your partner’s workplace and union background. It will help you get used to taking notes on the course.

Partner’s name
Their union, union position(s) and involvement in HS&E
Their workplace, job and numbers of workers at their workplace
Information on their members
Other health and safety courses attended (if any)
Why they became a worker HS&E representative
Their aims for the course
Other interesting information
Keep a record here of your own aims for the workshop/course

About this course

Our union positions, jobs, workplaces, types of hazards and so on can vary considerably. However we are all here on this course to help protect the health, safety, welfare and environment of workers. Your union educator/facilitator will discuss and agree course aims with you and the way that the course will work. In this way, we can take full advantage of this opportunity to help our members.

■ Hazards in the workplace

About this section

This section will help us to:

- identify hazards at work, including less obvious hazards, and the impact of work upon the environment
- obtain an introduction to the concept of risk assessment and how it might help
- develop a trade union approach to HS&E based on preventing or minimising risks



Activity – Identifying hazards

AIMS

To help us to:

- discuss members' views on health and safety and the environment
- share our own views on health and safety and the environment

TASK

In your small group:

1. Discuss what your members said about health, safety and environmental hazards during the pre-course survey
2. Share your own thoughts on the main health, safety and environmental hazards in your workplaces
3. Prepare a list that combines the main health, safety and environmental hazards identified by you and your members.

Elect a spokesperson to report back about your list of hazards



***Hazard, risk
and risk
assessment***

A “**hazard**” is anything with the potential to do harm, whereas a “**risk**” is the likelihood of potential harm from that hazard being realised. For example, the hazard associated with power-driven agricultural machinery might be getting trapped or entangled by moving parts. The risk may be high if guards are not fitted and workers are in close proximity to the machine. If however, the machine is properly guarded, regularly maintained and repaired by competent staff, then the risk will be lower.

Under ILO Convention No. 184 on Safety and Health in Agriculture, employers are obliged to conduct risk assessments. Identifying hazards is the first step in the risk assessment process. Once a particular hazard has been identified the risk assessment should evaluate the risk, describe and then implement the prevention and/or control measures to eliminate or minimise the risk from that hazard.

Whilst it is the employer’s responsibility to carry out risk assessments, it is critical that workers’ HS&E reps understand risk assessments and become involved in the process. This will help to ensure that employers fulfil their responsibilities. We consider the concept of risk assessment in much more detail later on in this course.

***Obvious and
“hidden”
hazards***

The hazards identified by your members at different workplaces indicate the wide range of health, safety and welfare issues at the workplace. The workplace also has its own effect upon the environment, and the communities around it. Some hazards are obvious. For example:

- moving parts of machinery
- snakes and wild animals
- bad lighting
- obstructions
- fire
- electricity
- lifting and handling loads

Other hazards may be hidden, like the long-term damage to health from:

- noise
- stress
- pesticides and other chemicals
- dusts, substances, bacteria
- dusts and chemicals polluting the local villages and towns
- repetitive working
- shiftwork
- vibration

Also there are some important issues to be tackled that you may not have previously linked to health, safety and the environment. For example:

- the way work is organised
- monotonous or poorly designed work
- sexual and racial harassment
- the concentration of women workers in particular jobs and facing particular hazards
- child labour and the hazards that children face
- bullying
- long working hours
- violence
- staffing levels
- working alone

Agriculture is one of the main three most dangerous industries in the world and agricultural workers face a wide variety of hazards which include the following.

Hazards in crop production and protection, including on-farm/plantation storage of harvested crops

Some of the hazards in this sector of agricultural work include:

- machinery hazards such as tractors, trucks and harvesters, cutting and piercing tools
- hazardous chemicals including pesticides and fertilisers
- toxic or allergenic agents such as plants, flowers and dusts
- carcinogenic substances or agents such as certain pesticides
- infectious and parasitic diseases such as leishmaniasis, bilharziasis, fascioliasis, malaria, tetanus and mycosis
- confined spaces such as silos, pits, cellars and tanks
- noise and vibration
- ergonomic hazards involving the use of inadequate equipment and tools, unnatural body position or prolonged static postures, carrying of heavy loads, repetitive work and excessive long hours
- extreme temperatures due to weather conditions
- contact with wild and poisonous animals such as insects, spiders, scorpions, snakes and certain wild mammals

Hazards in livestock production including animal housing, and disposal of animal wastes

Some of the hazards in this sector of agricultural work include:

- machinery hazards such as tractors
- hazardous chemicals including antibiotics and other veterinary products
- transmissible animal diseases such as brucellosis, bovine tuberculosis, hydatid disease, tularaemia, rabies, Lyme disease, tinea and listerioses
- other infectious and parasitic diseases such as leishmaniasis, bilharziasis, facioliiasis, malaria, tetanus and mycocis
- confined spaces such as silos, pits, cellars and tanks
- noise and vibration
- ergonomic hazards involving the use of inadequate equipment and tools, unnatural body position or prolonged static postures, carrying of heavy loads, repetitive work, excessive long hours
- extreme temperatures due to weather conditions
- contact with wild and poisonous animals such as insects, spiders, scorpions, snakes and certain wild mammals

Hazards to the environment/community

Hazards can also affect the environment and wider community, for example:

- pesticides, animal slurry, and silage effluent which can contaminate water sources
- smells and noise which can be a problem for the surrounding community
- serious depletion of local plant, animal, fish and insect populations and a number of species

Other negative impacts include climate change, and ozone layer destruction from chemicals used in agriculture. Good HS&E management can eliminate or reduce many of these problems.

■ A trade union approach to HS&E



Activity – A trade union approach to HS&E

AIMS

To help us to:

- discuss our attitudes to health, safety and the environment
- develop a trade union approach to health, safety and the environment

TASK

In your small group discuss what your members said in the pre-course survey and your own views to help you in the task below.

Your union educator/facilitator will allocate **one** of the situations/statements below to your small group. Discuss the situation/statement, say whether you agree/disagree and list the arguments for and against.

1. Put your points for and against on a flip chart and place it on the wall.
2. When you have finished, look at the situations/statements and flip charts of the other groups. Write up any additional points that you think should be included on the other charts.
3. Your union educator will organise a discussion about all the situations/statements and flip charts to conclude this activity.
4. After the discussion, we will note down the key points of a trade union approach.
 - *On a plantation, 50kg bundles have to be regularly lifted by the workers. When the worker HS&E rep raises the problem of members suffering from bad backs, the employer suggests training courses on how to lift properly.*
 - *“Now there is a new ILO Health and Safety Convention, trade unions won't be needed, because health and safety is covered by international standards.”*
 - *The manager who chairs the health and safety committee suggests that there should be a new initiative to reduce accidents. This would involve incentives and prizes being offered to workers, if the accident rates were reduced. Disciplinary action would be taken against workers for breaches of health and safety rules.*
 - *“Environmental issues in agriculture are not as important to trade unions as health and safety conditions.”*



***Governments
and their
obligations***

Trade unions believe that Governments have a critical role to play in the protection of workers' health. They should:

- ratify ILO Convention No. 184 on Safety and Health in Agriculture 2001
- develop a coherent national policy on health, safety and the environment, in consultation with trade unions and employers
- as a minimum, pass laws based upon ILO Convention No. 184 on Safety and Health in Agriculture 2001
- create an adequately resourced inspectorate to enforce the law

***Employers
and their
obligations***

Employers have the primary legal responsibility to protect the health, safety and welfare of workers and others. In many countries, failure by employers to observe health, safety and environment regulations may attract criminal sanctions. Trade unions believe that deaths, injuries and ill health are caused because employers fail to provide a safe and healthy working environment. The employer should provide:

- a working environment where hazards are identified, risks are assessed, removed or controlled before problems occur
- a working environment where early action is taken to prevent harm
- safe systems of working
- workplaces that are adapted to the needs of the worker
- full information to and consultation with workers and their unions
- good health and safety training programmes
- opportunities for workers through their unions, to negotiate health and safety clauses in collective agreements, and participate actively in health and safety matters
- policies that address the impact of work upon the wider environment

***Unions and
health, safety
and the
environment***

The best way to improve health, safety and environmental standards is through effective trade union organisation. Unions can raise awareness, put pressure on employers, and campaign for negotiated improvements.

Comprehensive legislation based upon ILO Convention No. 184, more health and safety inspectors, and stricter enforcement would obviously greatly improve matters in many countries. But, even with these improvements, strong trade union organisation is still essential to ensure that employers prevent injuries, ill health, and death of working people and others in the wider community.

One of the main jobs of trade unions and their members at a local level is to make sure that the employer keeps to her/his responsibilities. Some of the ways to achieve this include:

- building a strong membership
- electing worker HS&E representatives
- organising for health, safety and the environment
- providing union HS&E services

(We will consider all of these issues later on in this Section).

Workers and HS&E

There may be a tendency for employers to try to blame ‘careless workers’. Trade unions have got a role in raising awareness but cannot stop accidents just by making workers more safety conscious:

- not all hazards and consequent risks are obvious – especially damage to health over a period of time
- workers may not be properly trained or informed
- stress, tiredness and poor conditions can all lead to more accidents
- workers are human – they can’t be 100% alert all of the time

As a worker HS&E representative, you are accountable to your members and your union. Part of your job is to encourage members to be more interested and support union efforts to improve health, safety and the environment. But, trade unions believe that the problem is the hazard not the worker. So employers should reduce accidents and ill health by:

- identifying hazards
- evaluating risks
- tackling the risks at source by elimination, substitution and prevention/control
- effectively managing health, safety and the environment

Article 8 1 (b) of ILO Convention No. 184 on Safety and Health in Agriculture 2001 gives workers the right to remove themselves from danger where there is a serious and imminent risk, and not be penalised for these actions. But workers also have some obligations to fulfil. These include:

- observing health, safety and environmental regulations
- carrying out work safely in a manner that does not endanger themselves and others
- attending HS&E training
- using equipment for HS&E including suitable personal protective equipment (PPE) where necessary
- reporting dangerous situations

It is important that if we demand that employers meet their obligations, that workers observe appropriate obligations placed upon them. In many workplaces, refusal by workers to observe health, safety and environment regulations may attract disciplinary action from the employer and legal sanction by the government.

Self-employed workers

In some countries, self-employed workers have duties to look after their own HS&E and also to ensure that their work activities do not create HS&E problems for other persons and for the environment.

Equal opportunities and health, safety and the environment

Fairness, justice, equality and unity form the guiding principles of trade unionism. The needs and experiences of members, whether permanent, temporary or casual workers, are influenced by many factors such as race, class, gender, age, sexual orientation, religion, nationality, language and disability. Members should be treated equally and their individual needs and problems responded to positively and objectively.

It is part of the worker HS&E representative's job to be sensitive to these needs and help promote equal opportunities at work, particularly in relation to health, safety and the environment. Discrimination divides and it can cause ill health.

The environment

Health and safety is often linked with the wider environment. For example, the agricultural worker often lives and works in the same environment, and for her/him occupational health and general health are more closely related than in the case of the factory worker. Agricultural work, and this is one of its most distinguishing characteristics, is carried out in a rural environment where there is no clear-cut distinction between working and living conditions. The many workers and their families who live where they work face extra dangers. For example, exposure to pesticides and other agrochemicals in water, air, contaminated soil and residues in the farm produce they eat.

As we have seen on page 63, hazards can also affect the environment and wider community.

**Global
economy**

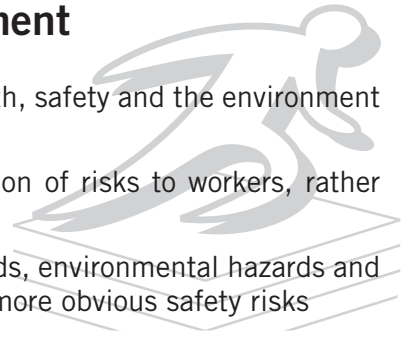
The massive growth in world markets and multinationals has major implications for health, safety and the environment. The same employer can often provide standards in one country that may be better or worse than for workers in other countries. Trade unions need to act internationally as well as nationally and locally.



Checklist – A Trade Union approach to health, safety and the environment

Some of the key principles for union action on health, safety and the environment include:

- ✓ identification of hazards, elimination or reduction of risks to workers, rather than expecting workers to adapt to the risks
- ✓ ensuring that the risks from hidden health hazards, environmental hazards and work organisation are dealt with, as well as the more obvious safety risks
- ✓ consideration of the environmental impact of work activity, and the risks created for local communities and taking appropriate action
- ✓ involving, informing and educating members to ensure that a workers' agenda for identifying hazards and tackling risks is adopted
- ✓ adopting an equal opportunities approach to HS&E
- ✓ working as a united body at all levels in the union. HS&E is no different than any other trade union issue
- ✓ pressurising the employer meet their obligations to identify hazards, avoid the risks, or combat risks at source
- ✓ pressurising Governments and employers to accept and implement core labour standards, in particular, ILO Convention No. 184 on Safety and Health in Agriculture
- ✓ using the law to help to improve standards
- ✓ improving agricultural health, safety and environmental standards to promote sustainable agriculture



■ Union organisation for HS&E

**About this
section**

This section will help us to:

- identify and practise the jobs of a worker HS&E representative
- involve trade union members in HS&E
- improve trade union organisation for HS&E

We have reviewed some of the hazards and consequential risks that we face, and we have considered a trade union approach to HS&E. We are much more likely to achieve successes and improve health and safety standards, if we are effectively organised as a trade union. This section is all about getting organised.



Activity – Organising in the workplace

AIMS

To help us to:

- share experiences about trade union organisation in the workplace
- provide ideas for improvement

TASK

In your small workplace group, discuss and provide a summary report on the points below:

- the number of people working at your workplace, and the percentage in the union
- the way the union keeps members informed and involved on HS&E
- whether worker HS&E representatives have a special responsibility for health, safety and the environment
- the way worker HS&E representatives work together and co-ordinate their approach to health, safety and the environment matters
- your employer's management structure for HS&E

Elect a spokesperson to report back



Trade unions and HS&E

Many trade unions ensure that HS&E is a fundamental part of their activities, and linked to other union activity. Numerous issues that trade unions tackle have implications for health and safety:

- discipline – employers normally treat a breach of safety procedures as a serious disciplinary offence
- equal opportunities – a whole range of concerns have a health and safety dimension to them. For example, sexual harassment causing stress and ill health
- wages – there may be a negative influence on health and safety standards through the adoption of certain payment systems, for example, payment by results
- work organisation – can have a significant effect upon the health and safety of workers. For example, the length of working time and its impact upon health and accident rates; the pace of work causing musculoskeletal problems; and stress caused by reduced staffing levels

**Trade union
organisation
for HS&E**

In fact, most aspects of terms and conditions of employment need to be looked at with health, safety and the environment in mind.

Some of the key factors necessary for good union organisation for health, safety and the environment are listed below.

Getting members' support

Without members' support, worker HS&E reps can become isolated, and it is difficult to get things done. Employers are more likely to act if they know that workers are well informed, active and fully involved in union activities.

Worker HS&E representatives

A worker HS&E representative needs to have a clear role in dealing with health, safety and the environment. She or he may be – an existing representative, who adds health and safety to their duties; or a representative specifically elected to deal with health, safety and environment issues; or a worker representative on a joint HS&E committee (as described above). In some countries, territorial or roving safety representatives have been appointed by unions to cover members in small workplaces (See Appendix 1).

Support from the Union

Senior union representatives and full time union officials are vital for the support that they can offer local worker HS&E representatives. All parties must keep each other fully informed. It is essential that the employer knows that the local worker HS&E representative has the full support of her or his union.

Liaison between worker HS&E representatives

Where there is more than one worker HS&E representative in a workplace, it is essential that they liaise closely. Experience can be shared, short and long term strategies developed, and they can support each other when dealing with management.

Getting management to act

Some employers are well organised for health and safety, but many are not. A strong union organisation can ensure that the employer will act on health, safety and the environment even if they are reluctant. Special safety procedures; safety policies, grievance procedures; CBA's with HS&E clauses; and joint safety committees all help to get things done.

Union HS&E services

In order to ensure that HS&E is a priority, many IUF affiliated unions:

- provide HS&E information to members
- provide special union HS&E committees at local, regional and national level. For example, in Tanzania, the constitution of the Tanzania Plantation and Agricultural Workers Union allows for the formation of HS&E committees at all field/workplace branches

- ensure that policy formulation includes HS&E
- use journals, press releases, videos, CD Roms, radio and television programmes to promote union HS&E policies
- run HS&E training and education programmes which can include courses for:
 - ▶ union educators/facilitators in education techniques and the technical aspects of HS&E to provide a pool of educators/facilitators who can run members' courses and study circles
 - ▶ general membership training/awareness raising
 - ▶ women workers
 - ▶ union officers, national HS&E committee members, and branch officials
 - ▶ worker HS&E representatives

We will now consider some of these organisational factors in more detail.

■ Worker HS&E representatives



Activity – The job of the worker HS&E representative

AIMS

To help us to:

- share experiences of tackling health, safety and environmental issues
- identify the jobs of a worker HS&E representative

TASK

In your small group, discuss:

- if you have specific worker HS&E representatives, or do existing union representatives take on HS&E responsibility as well as their other duties?
- what role you and other worker HS&E representatives play in the workplace
- the main jobs of the worker HS&E representative, based upon the experience of group members or your ideas of what you think a worker HS&E representative should do
- what skills you need to do the job

Elect a spokesperson to report back



Legal backing for HS&E representatives and workers

Article 8 1 (b) of ILO Convention No. 184 on Safety and Health in Agriculture 2001 gives workers several important rights to:

- be informed and consulted on safety and health matters
- participate in safety and health measures
- **select safety and health representatives** and **safety committee** members
- remove themselves from danger where there is a serious and imminent risk, and not be penalised for these actions

There is legal provision in a few countries for worker HS&E safety representatives and for safety committees. The rights can vary depending upon the way the law has been drafted, for example in some countries:

- trade unions have won the right to nominate, elect and appoint worker HS&E representatives and committee members
- trade unions have the right to appoint roving safety representatives who can visit smaller workplaces with union members, but do not have their own worker HS&E representative
- the legal powers of worker HS&E representatives and committee members have been extended to cover the impact of the workplace on the (surrounding) environment

However, many countries do not have legal rights for worker HS&E representatives and committees in agriculture. The reasons for this are varied, for example:

- there may be no laws on worker HS&E representatives or agriculture may be excluded from HS&E legislation
- the number of workers on a farm is too low for the employer to be legally required to have worker HS&E representatives and committees

In these circumstances, many IUF affiliated unions include HS&E as an integral part of Collective Bargaining Agreements (CBA's) that they negotiate with employers. CBA's can include substantial HS&E rights for trade unions and workers.

Specialised worker HS&E representatives?

Your trade union will normally have a policy about whether there should be specific worker HS&E representatives. If you do, or if union representatives deal with health, safety and the environment in addition to their other functions, the job will be much the same.

What does the job involve?

The answer to this will depend upon:

- your workplace
- the hazards in your workplace
- what your members think about health, safety and the environment
- your union organisation
- the attitude of your management to health and safety

Some of the jobs you may have discussed include:

- talking to members, and taking up their complaints with management
- involving, informing, and consulting members on their priorities, and agreeing strategies for tackling risks
- working closely with your members and other worker representatives
- collecting and distributing HS&E information
- systematically checking HS&E in the workplace on a regular basis
- finding out about health and safety problems using surveys
- identifying hazards, and investigating and tackling the risks
- investigating accidents, ill health and near misses
- checking that your employer is complying with health and safety requirements
- consulting and negotiating with management
- sitting on joint HS&E committees
- following up problems and making sure that something gets done about them
- talking to Government health and safety inspectors
- liaising with other organisations, for example, pesticides action groups

Who do you deal with?

This will depend on a variety of factors, but people that you deal with will include:

- members
- other workers
- other worker HS&E representatives
- other union representatives
- supervisors
- managers
- health and safety advisers
- union officials
- Government health and safety inspectors

Who are you responsible to?**Members**

As a worker HS&E representative, your trade union members elect you and your job is to represent them. Workers who are not union members will see the benefits of your actions and may be more inclined to join the union. Union members have a responsibility to accept decisions of the majority and to work within existing union policies.

Trade Union

Your trade union appoints you and you need to work within existing union policies. Of course, policies are constantly evolving and you have a role to play in the formulation of future policies. You also need to work closely with other union representatives.

Employer

To be able to improve health and safety for your members, you will need to build a working relationship with your employer. It is easier to achieve improvements, if you can relate to management in a constructive way and build mutual respect. But, unions have a duty to challenge employers that do not protect the health and safety of workers and the environment.

Roving safety representatives in agriculture

Small numbers of workers are often employed in many agricultural undertakings scattered over wide geographical distances. Normal arrangements for health and safety representation can be difficult to apply. In some countries, for example in Sweden, a scheme based on external worker representatives has been introduced. These roving or regional representatives visit agricultural undertakings in a given area. They are representatives or delegates of workers who have access to and visit agricultural workplaces to represent the health and safety interests of workers (See Appendix 1).

Skills

There are a number of skills that you need as a worker HS&E representative. You will probably have some of these skills already. Some of the skills that you can practise on this workshop/course are listed in the worksheet below.

Identify:

- those skills you feel confident in
- those skills you would like to develop
- any additional skills that you would like to add

SKILLS WORKSHEET		
Skills for the worker HS&E representative (Add others to the list that you identified)	Would like to develop ✓	Feel confident ✓
• Taking notes		
• Keeping files and records		
• Taking part in meetings		
• Giving verbal reports		
• Using a systematic approach		
• Checking the workplace for hazards		
• Communication skills		
• Writing letters and inspection report forms		
• Negotiating with management		
• Setting priorities and action planning		
• Using the Internet to find information		
• Research skills		
• Leadership skills		
• Lobbying skills		
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■ Joint health, safety and environment committees

Introduction

A joint union/worker-management HS&E committee can be one way of acting in partnership with the employer, and solving problems. However, it is most important that health, safety and environmental activity is not just restricted to the committee.

Worker HS&E representatives will need to decide whether they want a joint union/worker-management safety committee and how it should function, before any approach is made to the employer. In some countries, trade unions have formed trade union health and safety committees, where decisions about policy matters can be taken. For example, the constitution of the Tanzania Plantation and Agricultural Workers' Union allows for the formation of trade union HS&E committees at all field/workplace branches.

Trade unions may wish to include the membership, constitution and functions of a joint union/worker-management HS&E committee in a Collective Bargaining Agreement (CBA).



Activity – Joint health, safety and the environment committee

AIMS

To help us to:

- think about the benefits of a joint health, safety and the environment committee
- decide who should sit on it, and what it should do

TASK

In your small group, discuss the formation of a joint union/worker-management safety committee. Include in your discussions:

- the advantages and disadvantages of forming a committee
- who should sit on it?
- what it should do?
- how often it should meet?

Elect a spokesperson to report back, with the main points from your group discussions



Benefits of a joint HS&E committee

A committee that encourages discussion between worker HS&E representatives/workers and management on health, safety and the environment can be very helpful. But the measure of a good union/worker-management health and safety committee is whether or not it can secure change and improvements in working conditions. A committee that does not make decisions, or where the same items appear again and again on the agenda is not helpful.

Who should sit on the Committee?

Some of the key points you may have discussed are in the checklist. Add other important points that you have thought of.

**Checklist**

- ✓ At least equal representation of worker HS&E representatives and management
- ✓ Management representatives that have the authority to make decisions and spend money
- ✓ The use of agreed specialists on health, safety and environment
- ✓ Worker HS&E representatives elected and accountable, to report back to other union representatives and members
- ✓ The role of the chairperson should be rotated

The functions of the Committee

The decision making process should be jointly agreed when the committee is being established. The functions of the Committee will include:

- investigating injury and ill health reports, and relevant trends
- receiving reports of inspections
- developing risk assessment procedures
- determining the type of occupational health and safety services that are provided
- reviewing information, training and communication with workers
- developing new policies and safe systems of working
- developing environmental policies
- checking on the implementation of CBA's
- discussing work changes, new plans for buildings, equipment and processes
- monitoring and follow-up

Frequency of meetings

Meetings should be held frequently, at least quarterly, but preferably monthly. Meetings should not be cancelled.



Activity – Negotiating in a union/worker-management HS&E committee

AIMS

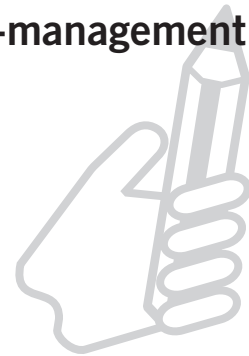
To help us to:

- practise negotiating skills
- use a HS&E committee productively

TASK

The main group will be divided into three. A role-play safety committee will be formed comprising of management, worker HS&E representatives and observers. The union side will decide on priority risks they would like to discuss with management. When they have notified management, adequate time will be given to prepare, and then a negotiation will take place.

The observers will report back on the strengths and weaknesses of the union presentation.



■ Working with our members



Activity – Members' support

AIMS

To help us to:

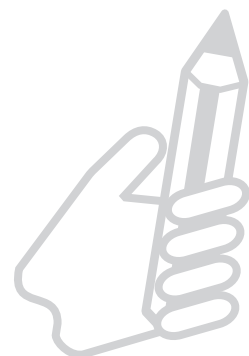
- discuss how we involve our members
- develop new ideas for increasing members' support

TASK

In your small group:

- list the ways that you currently consult, involve and inform your members, on health, safety and the environment
- identify ways you could improve communications with your members

Elect a spokesperson to report back



Involving our members

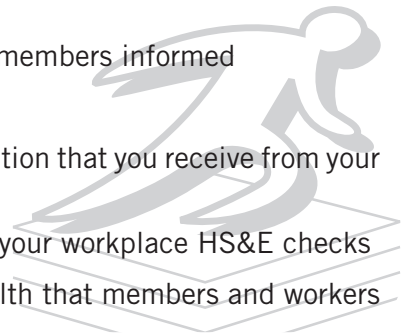
Organising our members around health, safety and the environment can help to build a strong union. Members have a deep concern about the health of themselves, their fellow workers and people in the wider community. But often health, safety and environmental hazards may not have been a priority for action. Workers may have other major concerns, such as a living wage and having enough food to eat. Others may accept hazards as part of the job; be unaware of the hidden hazards and consequent risks; feel that job security takes precedence; or are not confident that their union will effectively tackle the risks.

We need to build on the interest of our members where it does exist, and awaken interest where it does not. With an informed, interested and involved membership, the union can be an effective vehicle for protecting their health, safety and welfare. It is essential that we involve our members from the beginning in identifying hazards at work.

Groups will have discussed a number of ways that we try to ensure we involve our members and obtain their support. Look at the checklist below and add any other ideas that your group had.

**Checklist**

- ✓ Use notice boards and newsletters to keep your members informed
- ✓ Use local initiatives like dance, drama and song
- ✓ Pass on health, safety and environmental information that you receive from your union and the IUF
- ✓ Involve members in identifying hazards through your workplace HS&E checks
- ✓ Use body mapping (see below) to identify ill health that members and workers are experiencing
- ✓ Use hazard mapping (see below) to identify hazards that might be causing ill health to your members
- ✓ Use “Your World” mapping (see below) to identify the effects of work upon your members’ lives outside work
- ✓ Decide on priorities to tackle and strategies in consultation with members
- ✓ Take the time to talk to members, particularly if they are not convinced about the trade union approach to HS&E
- ✓ Hold regular meetings with members to keep them informed
- ✓ Make sure that members know what you have done about health, safety and environmental problems, and what the employer’s response is
- ✓ Always report back after meetings, and decide on the next steps with your members



***Finding out
more about
what
members
think***

Worker HS&E representatives can take the initiative and find new information that is specific to our workplaces and members. We can then use this information to negotiate improvements in our working conditions. There is a variety of techniques we can use in order to do this. They all involve looking at the workplace and listening to the workers, and placing value on their opinions.

■ Hazard identification techniques

Techniques include:

- body mapping (see below)
- hazard mapping (see below)
- involving members when carrying out HS&E checks
- health surveys
- “your world” mapping (see below)
- information exchange in meetings and informal discussions

Body mapping**Activity – Body mapping****AIMS**

To help us to:

- practise using body mapping to identify symptoms of ill health
- prepare to use body mapping with our members

TASK

Your educator/facilitator will draw some body maps on posters, and will arrange for small groups of participants who do similar work to be formed.

In your small group:

1. Each participant should place marks (**X**) on to the body map to show any symptoms of ill health that they or others have at their places of work.
2. You can use different colours to identify different symptoms. For example:
 - X** aches and pains – *blue*
 - X** breathing difficulties, coughing – *black*
 - X** stress related disorders – *green*
 - X** any other problems such as skin rashes, runny eyes and nose, dizziness, reproductive disorders and so on – *red*
3. As you apply the **X**, explain briefly why you placed the **X** in the particular place
4. Make sure that there is someone in your small group that briefly notes down what is said around the body map and can report back your views
5. Your educator/facilitator will organise a short discussion afterwards to share your ideas

**Introduction to body mapping**

The identification of hidden health problems in the workplace can be difficult. One technique that is being recommended for use by many trade unions around the world is “body mapping.” For example, the General Agricultural Workers Union of Ghana TUC has successfully used “body mapping” to identify health problems with study circle facilitators.

Body mapping is a way of identifying common patterns of health problems amongst workers in a particular workplace, normally doing the same or a similar job. While it isn’t certain that any such common ailments are work-related, it highlights areas for further investigation.

Body mapping:

- provides an easy and effective way to encourage workers to speak out and report symptoms of ill health that they suffer
- promotes collective action and builds trade union organisation
- identifies common patterns of health problems amongst workers in a particular workplace or doing the same job
- highlights areas for further investigation and action



Photo: courtesy of the Union of Shop, Distributive and Allied Workers, UK.

How to body map

What you will need

- Front and back body outlines – you can draw these yourself
- A small body map for each member, or a larger body map for several members to use
- Pens (different coloured pens can be helpful) so that members can mark any symptoms that they have on to the body map

Organising the session

- Get together with a group of your members who should usually be doing the same or similar jobs.
- Explain what you are proposing to do, and stress that information from individuals is confidential.
- Ask them to place marks (**X**) on to the body map to show any symptoms of ill health that they or others have at their places of work. If you have different colours, it may help to use different colours to identify different symptoms. For example:
 - X** aches and pains – **blue**
 - X** breathing difficulties, coughing – **black**
 - X** stress related disorders – **green**
 - X** any other problems such as skin rashes, runny eyes and nose, dizziness, reproductive disorders and so on – **red**

Keeping a record

As your members apply the stickers/marks, ask them to explain briefly why they placed it in the particular place. Keep notes of what they say around the body map and the numbers who say it.

Discussing the findings with members

Discuss the findings with your members and any common patterns. The more that members report the same symptoms, the more likely that the work they are doing is to blame.

Planning the next steps

Once you and your members have identified symptoms, you will then need to identify the hazards that may be causing the symptoms (see “Hazard Mapping” below).

Hazard mapping**Activity – Hazard mapping****AIMS**

To help us to:

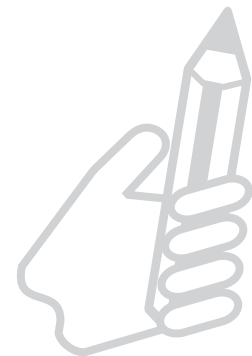
- identify priority hazards
- discuss the potential risks from these hazards
- develop plans to deal with the risks

TASK

In your small group:

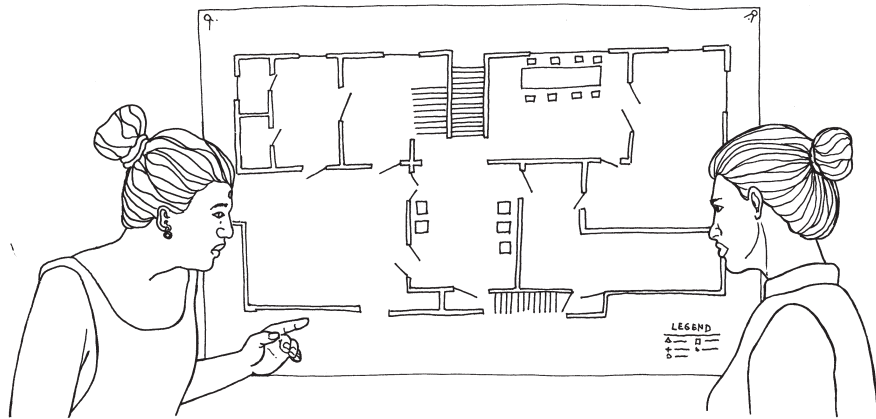
- draw a typical work activity/ workplace you are all familiar with
- place as much detail in the drawing as possible – people, tools, materials chemicals
- when the map is complete, mark hazards using pens (coloured if they are available) on the drawings
- make sure that there is someone in your small group that briefly notes down what is said around the body map

Your union educator will organise a short discussion afterwards to share your ideas on the drawings and discuss the hazards and potential risks you have identified.



Introduction to hazard mapping

Following a body mapping activity with our members, we can use further mapping techniques to investigate the problems further. One technique is called hazard mapping, which should help to identify hazards and prioritise the risks that we want to tackle. With hazard mapping, a rough map of the workplace (and the living environment if that is close to or part of the workplace, for example, on a plantation) can be used to highlight where problems are found. Like body mapping, hazard mapping is a visual way of discussing hazards and ill health in the workplace.



How to hazard map

What you will need

- A simple plan/map of the workplace on a large piece of paper. You can draw this up on the course to take back to work. (You can check with your members to see if anything needs to be added). If your members move around in their jobs, your plan should try to illustrate this
- The results of the body mapping
- Pens so that members can mark hazards on to the map

Organising the session

- Members from a particular work area gather together and are given an explanation of what you are proposing to do
- Members are now asked to pinpoint hazards using pens on the map/plan with an explanation of why they should be included and what the risks are
- The plan should also include identification of where workers are situated
- The worker HS&E representative should keep notes of what members say around the hazard map
- The findings are then discussed with members. Common patterns can be identified. A lot of marks will show that there is likely to be a problem that needs to be tackled
- *Links can be made to the symptoms of ill health from the results of body mapping*
- Members should then be given a chance to think about and influence priorities (see Worksheet below)

Examples of hazards

- Physical hazards – noise, radiation, vibration, temperature
- Chemical hazards – pesticides, dusts, diesel exhaust fumes
- Biological hazards- infectious diseases, bacteria, body fluids
- Work design hazards – ergonomic hazards, working alone
- Stress hazards – workload, harassment, discrimination, shiftwork

Planning the next steps

Once the worker HS&E representative and members have identified priorities, the causes, effects and action can be discussed.

PRIORITISING RISKS WORKSHEET: WHAT DO MEMBERS THINK?			
Hazard and risk	Cause	Effect	What can be done?

***“Your world”
mapping*****Introduction to “Your world” mapping**

“Your world” mapping looks at the way in which work affects our life outside the workplace. This tool can be used to help to identify priorities, because work-related ill health can have an enormous impact upon workers’ lives and their families and friends.

Poor working conditions can affect the environment workers live in, since the working and living environments are the same for many workers. This means that occupational hazards can have harmful effects on workers, their families, and other people in the community, as well as on the physical environment around the workplace.

Example – pesticides in agricultural work

Workers can be exposed to toxic chemicals in a number of ways when spraying pesticides:

- they can inhale the chemicals during and after spraying
- the chemicals can be absorbed through the skin and
- the workers can ingest the chemicals if they eat, drink, or smoke without first washing their hands, or if drinking water has become contaminated with the chemicals

Workers’ families can also be exposed in a number of ways:

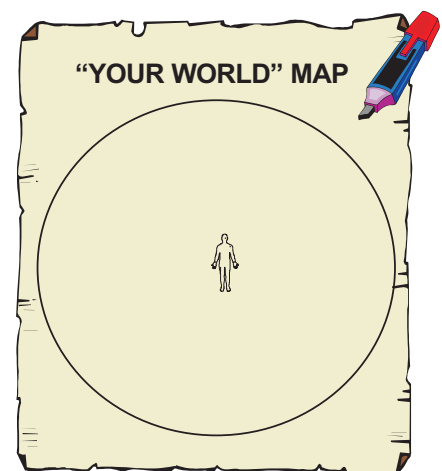
- they can inhale the pesticides which may linger in the air
- they can drink contaminated water
- they can be exposed to residues which may be on the worker’s clothes

Other people in the community can all be exposed in the same ways as well. When the chemicals get absorbed into the soil or leach into groundwater supplies, the adverse effects on the natural environment can be permanent.

How to map “your world”

You will need to provide:

- a large piece of flip chart paper with the image of a body drawn in the centre
- the results of the mapping activities conducted earlier
- pens so that members can draw simply the way that health and safety problems affects their “world” outside work



1. Gather together members from a particular work area and give an explanation of what you are proposing
2. Ask members to draw a rough picture of the person/activity that work impacts upon. For example, a river is drawn, because the pesticides have polluted it, and it is not safe to drink
3. As your members draw their picture and connect it to the image of their body, ask them to explain briefly what they are drawing and why. Keep notes around the edge of the map
4. Discuss the findings with members. Common patterns can be identified, and they may help with prioritisation of problems to tackle

If you have time, try using this technique with your members.

Checking the workplace for HS&E (sometimes called inspecting)

Introduction

A workplace check is when we take a systematic and detailed look into workplace conditions and in some cases, the living environment of the worker and perhaps their family. We might check:

- routinely to ensure that the employer is complying with the law
- following a change of working practice
- because new equipment has been purchased
- because new information is available on something used in the workplace. For example, new information suggesting a pesticide is more harmful than it was first thought



Activity – Workplace checks (inspections)

AIMS

To help us to:

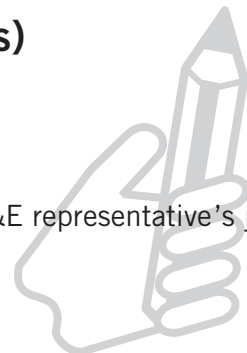
- think why HS&E checks are important for a worker HS&E representative's job
- use HS&E checks to involve members

TASK

In your small group discuss the importance of workplace HS&E checks. In particular:

- why you should do HS&E checks
- what you should check
- when you should check
- how you can involve members

Elect a spokesperson to report back



Background on workplace checks

An important part of a worker HS&E representative's job is to carry out regular HS&E checks of the workplace. It enables the worker HS&E representative to systematically monitor the health, safety and environment of workers. The HS&E check will allow the worker HS&E representative to look at the workplace, work organisation, people, and information. The worker HS&E representative then reports to the employer, outlining any deficiencies in the employer's systems for health, safety and the environment. Remember that it is the employer's job to manage health and safety. HS&E checks are one of the ways that we can monitor whether they are managing properly. If they are not, then we can bring it to their attention in writing, and make sure that they then remedy the problems.

How frequently should we check the workplace?

Depending on the type of workplace, and hazards, the worker HS&E representative should check the workplace on a regular basis. For example, every month, if there are a lot of hazards, and perhaps every three months for a lower risk workplace. If there are frequent changes to the workplace, then you may need to check daily, or weekly.

In the absence of legal rights, we should seek an agreement with the employer to carry out HS&E checks during working hours (See below for more information on Collective Bargaining Agreements).

Why do workplace checks? – Prevention is better than cure!

Here are some reasons for doing workplace checks. Add any others that you think are relevant, or which came out of your group work.

Finding hazards

A systematic check on an aspect of work or part of the workplace may reveal problems which the employer needs to remedy. For example:

- hidden health hazards
- problems with the way a particular job has to be done
- ergonomic problems
- aspects of a job that only the worker who is doing it will be aware of

Talking to members, management, and other union representatives

Workplace HS&E checks give you a chance to talk in private to members about health and safety aspects of their work, and for members and other workers to see the union in action. It is most important that we involve our members at all stages of the workplace check:

- finding out their problems and complaints before we do a HS&E check
- talking to them during the HS&E check
- reporting back to them after the HS&E check

HS&E checks may also bring you into contact with worker representatives from other unions. If managers are present during the check, you get a chance to discuss specific problems in a concrete way, in the presence of members, rather than trying to explain problems later.

Checking on compliance with standards

During a workplace check you can establish if:

- legal standards or manufacturer's recommendations are being applied
- the employer's HS&E policy is being complied with
- management have carried out agreed or planned changes or improvements
- the employer is complying with the collective bargaining agreement (CBA)
- risk assessments are being carried out properly
- risks are being avoided, prevented or controlled
- standards required by a Government health and safety inspector have been implemented

Types of HS&E check

There are several types of HS&E check that you can use. They include:

- general checks of a work area
- general checks of the home environment or community areas of the workplace
- special checks of a particular aspect of work
- accident checks
- checks of documents or information

General HS&E checks

A general HS&E check should be routine and scheduled, to look at working conditions and compare them with the standards you think should apply. You might use union guidelines, standards agreed with your employer, legal standards or standards from other sources, such as the ILO.

You should ensure that your checks address the health, safety and environmental problems experienced by all your members. In addition, you will need to give thought to those members who are not concentrated in one workplace. For example, consider the risks for lone workers on plantations. As well as identifying hazards and consequent risks, you should also think about health and safety procedures and talk to members about whether they are followed.

Try not to allow general HS&E checks to become a routine chore where you look at the same things each time. You can guard against this by:

- carefully planning different types of checks
- changing the emphasis of the check
- always talking to your members

General check of the living environment

Many agricultural workers live where they work, on plantations and on farms. Consequently, their working environment is not separated from their living conditions. Equally, workers' families often live close to or on the farms and plantations. They may be exposed to similar risks to workers without even realising it, and may become ill as a result.

It is important under these circumstances, for trade unions to be interested in:

- the conditions under which their members and members' families live
- the impact of the working environment upon their families

Unions should make sure that employers extend HS&E issues beyond the confines of work to the living places of these categories of workers and their families/communities.



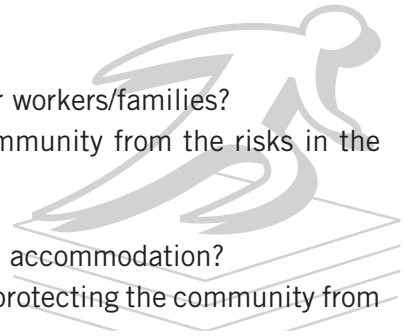
Checklist – The living environment

Here are some of the key points to check:

- ✓ what does the CBA say about accommodation for workers/families?
- ✓ what does the CBA say about protecting the community from the risks in the working environment?
- ✓ does the CBA need to be improved?
- ✓ what does the employer's HS&E policy say about accommodation?
- ✓ what does the employer's HS&E policy say about protecting the community from work hazards?
- ✓ if the policy or CBA says nothing on these issues, what is the practice?
- ✓ who is responsible for ensuring that the living conditions of workers are safe?
- ✓ are trade unions involved in decisions affecting the housing and living environment on the farm/plantation?
- ✓ what facilities are available
 - recreation/leisure facilities?
 - toilets?
 - safe drinking water?
 - schools?
 - transport?
 - hospital/clinics/first aid?
- ✓ does the employer pay for medical and school facilities?
- ✓ do families of farm workers live on the farm/plantation and are they protected against risks?
- ✓ do families experience similar ill health to workers because they are exposed to similar hazards? For example, breathing in harmful substances such as pesticides, or drinking water contaminated with pesticides.
- ✓ does your employer comply with local public health regulations?

When you check the housing and living environment consider:

- ✓ the safe supply and maintenance of electricity
- ✓ lighting
- ✓ proper ventilation
- ✓ sufficient space to prevent overcrowding
- ✓ chimneys to take away smoke from fires
- ✓ drainage
- ✓ safe flooring
- ✓ disposal of garbage
- ✓ pits that are covered
- ✓ washing facilities
- ✓ weed control
- ✓ safe and healthy sanitation
- ✓ hazardous re-use of chemical containers
- ✓ pesticides in kitchens and under beds



Special HS&E checks

You can use a special HS&E check to concentrate in more detail on a particular aspect of the workplace or process. For example, many health and safety hazards that women face have been ignored in the past. You might do a special check to concentrate on the women workers in your workplace.

The special HS&E check could be in addition to your regular general checks. Or you may decide to change one of your regular checks into a special one. For example, you may decide to do a special HS&E check because of:

- members' complaints
- a change in working conditions
- new information you have received
- the need to investigate a particular issue in more depth, for example, stress

Accident checks

A special Fact Sheet covers accident checks in Manual 4 of this series. Accident checks should take place as soon as possible after an injury, work-related ill health or a dangerous occurrence. The worker HS&E representative must be involved in accident checks to gather evidence so that:

- the causes are understood and any injuries are prevented in the future
- anyone injured can pursue claims for benefits or damages

Checking documents

As well as getting information from the workplace, you may want to check certain documents belonging to your employer, for example:

- health and safety training records
- chemical safety data sheets
- machinery maintenance records
- details of the pesticides in use

**Activity – HS&E checks (inspections)****AIMS**

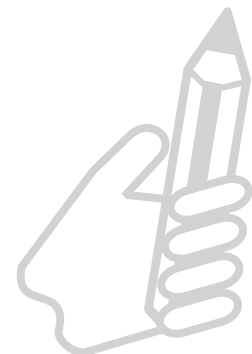
To help us to:

- prepare for HS&E checks
- develop a checklist for our workplace

TASK

In pairs, look at the examples given below of questions that could be used in an HS&E checklist.

Draw up questions for an HS&E check that are suitable for your workplace. Pass on your questions to the next pair for their comments and afterwards finalise them for use at work.



EXAMPLES OF QUESTIONS FOR AN HS&E CHECK		Yes	No	Action required
Storage and handling				
1	Are storage facilities adequate?			
2	Is there adequate equipment that prevents the need to manually handle materials?			
3	Have workers been trained in the handling of materials (e.g. lifting techniques)?			
4	Have safe procedures for the storage of materials been established?			
Dangerous substances				
5	Are there any dangerous substances used?			
6	Have hazard data sheets been provided?			
7	Are the hazards from substances prevented or controlled?			
8	Are workers trained?			
9	Is adequate information provided?			
10	Are containers clearly labelled?			
11	Are dangerous substances safely stored?			
12	Is suitable personal protective equipment provided for workers?			
Noise				
13	Are noise risks assessed and danger areas identified?			
14	Is there a programme of noise reduction/control?			
Protective equipment				
15	Is personal protective equipment necessary?			
16	If it is, is it suitable and are workers consulted about it?			
Training				
17	Have all workers been trained in the safety aspects of their job?			
18	Have workers facing particular hazards received specialised training?			
Welfare				
19	Are washing and toilet facilities provided and kept clean?			
20	Are there changing facilities and a rest room?			
21	Is clean and safe drinking water provided?			
22	Are there adequate first-aid facilities?			

■ Tackling hazards at work

Introduction

As we have seen, one of the most important jobs of the worker HS&E representative is to take up workplace health, safety and environmental problems, on behalf of the members. Each problem that is tackled will be different. However, the method of approach will be similar.

Earlier in the course you and your members identified hazards, the risks to your members, and we discussed a trade union approach towards health, safety and the environment. Now it is important to look at the practical ways of tackling some of these hazards.



Activity – Tackling a priority hazard

AIMS

To help us to:

- identify priority hazards
- discuss the risks
- develop action plans to tackle the risks

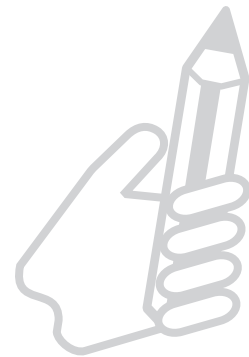
TASK

In your small group choose a priority health, safety or environmental hazard from one of your workplaces. Use the Action Planning Worksheet on the next page to decide what needs to be done.

RESOURCES

- Tackling hazards – prevention and control measures text below
- Fact Sheets in Manual 4 of this series of Manuals
- ILO Convention No. 184 on Safety and Health in Agriculture
- Relevant laws from your country
- IUF resources provided by your union educator

Elect a spokesperson to report back



ACTION PLANNING WORKSHEET

Problem

- What are the facts?
- What do my members want?.....
- What are the causes?
- Is it a one-off or a broader problem?

Investigation

- What does my union say?.....
-
- What do my agreements say?
- What do my members want?
- What does the law or the ILO Convention No. 184 say?
- What questions should I put to management?
- Should I ask a health and safety inspector?

Plan

- What are the union's aims?
- How should I involve my members?
- What pressure and arguments should I use?
- How should the risks be prevented or controlled?
- How should I take action on the issue?

Tackling hazards – prevention and control measures**Example of tackling the hazards of pesticides**

The very first step, *before use of or exposure to a pesticide*, is for the employer to carry out a risk assessment at the workplace. The workplace risk assessment should:

- identify the potential hazards before, during, and after pesticide application both for pesticide users and those working/living nearby
- evaluate the risks, and
- work out appropriate measures for the employer to implement to prevent or minimise the risks identified. (See Risk assessments and Risk management sub section below).

In order to prevent and minimise risks, the employer should follow the hierarchy of prevention and control measures *in the order that they are listed below*.

STEP 1: Elimination of the risk

The aim is to eliminate any possible risk by assessing if it is really necessary to use a pesticide? Check if:

- the weed, insect, or disease, has been correctly identified, and is the degree of economic damage caused such that it warrants pesticide use?
- any other method of dealing with the pest problem is available? For example, integrated production and pest management, use of a non-chemical biopesticide, or an organic approach?
- the pesticide is legally approved and registered for the intended use?

If elimination of the risk is not possible, consider substitution:

- with a less hazardous pesticide?
- with a less hazardous formulation by using granules instead of a liquid which can splash?

If prevention of the risks (through elimination or substitution) is not possible, and the employer's risk assessment has determined that the pest damage (actual or potential) warrants pesticide use, then the following set of risk control measures should be followed, *in the order listed*.

STEP 2: Risk Control

Risk control at source involves the use of what are known as *Technical and Engineering Controls* (see example below).

Example*The risk(s)*

Poor design of many spray containers and packets, and even sprayers, can result in pesticides splashing on to exposed skin, clothing, or into eyes during mixing and filling operations.

Technical/engineering control solutions

- Sealed mixing and filling systems for tractor-mounted sprayers. The operator simply puts the pesticide container into the system and then stands back away from danger whilst the mixing is done automatically, avoiding contact with or risk of splashing from the concentrated pesticide. The operator, wearing appropriate personal protective equipment to supplement the technical and engineering controls, then thoroughly rinses out the empty pesticide container at least three times and puts it in a secure place for disposal
- Pesticide formulations in dissolvable, water soluble plastic sachets. These sachets are simply placed whole into the knapsack or tractor spray tank. The tank cover is replaced, the mixture agitated, and the packaging dissolves inside the spray tank, releasing the pesticide. There are no containers to dispose of afterwards
- Pesticide tractor cabs fitted with approved, charcoal-based pesticide filters which absorb any pesticide before it enters into the cab. Ordinary dust filters in the tractor cab *do not* work so don't accept them!

STEP 3: Safe systems of work, the introduction of technical and organisational measures and safe practices

- Has the employer ensured that there is a safe system of work in place, as identified in the risk assessment? For example, are workers removed away from areas before spraying begins? Are re-entry periods into treated areas being observed?
- Is there effective supervision in place?
- Has the spray equipment been checked to see if it is in working order and properly calibrated?

STEP 4: Information and training*Training*

- Have workers using pesticides received specialised HS&E training? Operators on farms and holdings must have the correct training for the pesticides and equipment they handle, be well informed of the law and what constitutes good practice, and be supervised by someone who is also trained
- Have other workers exposed to pesticides received basic training on the pesticide hazards and risk prevention and control measures?

Hygiene and Health Surveillance

- Are good washing facilities provided in the farm/plantation yard and in the field/glasshouse where the pesticide is being applied? All users should wash after spraying

- Is first aid equipment available where needed, including eye washes, and are there workers/staff trained in first aid use?
- Is health surveillance available when the product used could have a serious effect on health if control measures fail (for example with organophosphorus and carbamates)?

Other information

- Does the pesticide(s) present unnecessary risks to livestock and the 'environment' (bees, fish, etc)?
- Will it damage, directly or through leaching, any streams, rivers, or other water, whether surface or underground?
- Will it damage neighbouring crops?
- Are adequate precautions established to prevent either livestock, or the public, from coming in contact with the area to be sprayed (e.g. warning notices on public footpaths, notice to beekeepers)
- In addition to specific precautions on each application, large pesticide users, particularly on farms and plantations, must prominently display their written plans for emergency procedures. Everyone on-site should be familiar with the plan and have received training in its implementation
- After pesticides have been used, are surplus pesticides disposed of safely (see label instructions) and empty containers and packets disposed of safely? Liquid containers should be rinsed thoroughly three times and then disposed of (see national regulations). Check if your pesticide supplier has a recollection scheme for empty, rinsed pesticide containers. Empty containers/drums should never be re-used either for diesel or domestic purposes! Ensure that they are squashed or punctured.

STEP 5: Provision, use and maintenance/replacement of personal protective equipment

The risk assessment should then evaluate what types of personal protective equipment should be used to supplement other control measures in place

The term Personal Protective Equipment (PPE) means any clothes, materials or devices that provide protection from pesticide exposure during handling and application. It covers items ranging from gloves, goggles/face shields, chemical respirators, rubber aprons and boots, complete protection suit for very hazardous materials, and cloth coveralls. This equipment should be provided, maintained and replaced by the employer at no cost to the worker.

As PPE is the least effective means of protecting the operator, it should always be *the LAST control measure* to be adopted. It should only be used to supplement the other control measures identified above, once these have been put into operation. Unfortunately for many workers it is usually the first – and often the only – control measure provided by the employer. Globally, PPE is the main means of operator protection from pesticides as both the pesticide industry and agricultural employers over-rely on this measure.

■ Health and safety law and standards

About this section

This section will help us to:

- identify national legislation on health, safety and the environment
- examine the role of collective bargaining in relation to the law
- identify international and other standards
- use these laws and standards to improve working conditions

Governments and HS&E

Governments have a key role to play on HS&E matters. It is the general responsibility of Governments to formulate legislation and standards to regulate HS&E. In particular, Governments should:

- formulate coherent HS&E policy
- legislate to implement this policy
- establish and equip a competent body (bodies) to enforce the law and monitor the implementation of standards
- support HS&E research and development
- actively promote HS&E through the dissemination of information
- encourage co-operation between employers, workers and their trade unions
- ratify international conventions, standards and protocols

National HS&E legislation

Introduction

Government legislation should provide workers with minimum standards of health, safety and environmental protection. These minimum standards normally form part of the criminal legal system. If the laws are not complied with, it may result in the punishment of employers and other offenders through the courts.

Historically, many trade unions have been successful in pressurising governments to enact and enforce HS&E protective legislation. Today it is still important for unions to organise for protective HS&E legislation at the national or provincial levels. But HS&E legislation is only effective when supported by government enforcement. Without adequate legal enforcement, some employers do not feel motivated to take it seriously.

Currently, many governments do not have enough adequately trained inspectors to inspect every workplace regularly. So, it is up to workers and unions to be the “watchdogs” and make sure employers are complying with existing laws and standards.

How legislation is structured

The terms used in health and safety legislation may vary in different countries. However, there are some common international terms that normally apply. For example:

Act

Most countries have Acts dealing with HS&E. For example, in Malawi the main Act is the Occupational Safety, Health and Welfare Act 1997. This Act lays down general duties and responsibilities, as well as specific standards on various hazards. The Act applies to agricultural activities. But in some countries with old Factories Act legislation, agricultural activities do not fall within the scope of HS&E laws. Ratification and implementation of ILO Convention No. 184 on Safety and Health in Agriculture is particularly important in countries with outdated HS&E laws.

Regulations

Once an HS&E Act is passed, then a minister (often the Minister of Labour), may have the power under the Act to develop detailed regulations. Regulations are part of the criminal code, so employers and others are required to comply with them in the same way as an Act.

Where to find your health and safety legislation

You have the right to see the occupational HS&E legislation that applies to you because it is a public document. Your trade union educator/facilitator will provide you with a short summary of your country's HS&E laws for the purposes of this course. But, try to obtain a copy of your country's legislation to use in your workplace. Your trade union may have a copy of the legislation. If they do not have a copy, other sources include: your employer (in some countries the law stipulates that employers must inform workers and their representatives), the local labour/health and safety inspectors, the Ministry of Labour, the local library, a lawyer, or a local college or university. When you request a copy of the legislation, ask also for a written summary of the legislation, if one exists.

Enforcement

Government inspectors are needed to inspect, monitor and enforce the law in workplaces. These inspectors are generally known as labour/health and safety inspectors and are under the authority of the Ministry of Labour or the equivalent. Inspectors should ensure that employers comply with the minimum legal HS&E standards. However, their authority can be limited by:

- the extent of the legislation. Weak and ineffective legislation gives inspectors little authority, and the result may be minimal action to improve working conditions
- the resources provided to the inspectorate. In many countries, there are small numbers of inspectors who are inadequately resourced

Ideally, an enforcement system should:

- ensure that there are sufficient trained, equipped personnel with access to sources of information and available to inspect workplaces and enforce laws
- include regular, unannounced inspections of all workplaces
- allow for penalties that are equal to the illegal action committed, including severe penalties for very serious offences
- be supported by strong, protective legislation

Whatever laws and enforcement systems you have, trade unions and union representatives are workers' first line of defence against poor working conditions.

Applying the law



Activity – Applying the law

AIMS

To help us to:

- identify relevant laws
- apply the law to problems

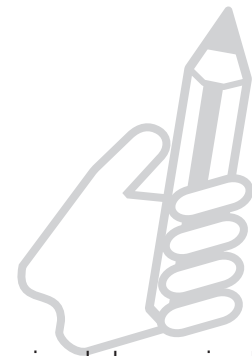
TASK

In your small group, select two HS&E problems that have previously been raised on the course.

Use the worksheet on the following page to:

- identify relevant parts national legislation
- plan what to do next

Elect a spokesperson to report back with your key points



APPLYING THE LAW WORKSHEET	
Name	Union and workplace.....
Problem: brief description	Which parts of the law can help?
What does the law say?	Who is responsible?
How can you use the law to get things done?	What do you plan to do next?

How the law helps

The law can be helpful in the following ways:

- it can help to build membership support. If the members see a clear legal standard it may encourage them to back the union case
- it may help you to put pressure on your employer to get things done, particularly if the law has been broken
- bad publicity attached to penalties awarded against employers may encourage other employers to act
- some legal standards provide good conditions if they are implemented

Points to watch

But care should be exercised because:

- the law often only sets minimum standards
- the law can be vague
- some parts of the law emphasise “the safe worker” rather than “the safe workplace”
- the law sometimes does not apply to agricultural workers
- there are not enough health and safety inspectors to effectively enforce the law
- few cases go to court, and even when they do, penalties are often extremely low

**Checklist – Using health and safety law**

Worker HS&E representatives can improve standards in the workplace by:

- ✓ using an index in reference books which will locate any standards you are looking for
- ✓ asking for advice if you get stuck - particularly about new legislation
- ✓ being prepared to turn to other sources of guidance if the legal standards you find are vague
- ✓ using your findings to help you plan how to deal with the problem
- ✓ trying to keep up-to-date with new developments by reading union and other HS&E publications
- ✓ using the standards laid down in ILO Conventions to try to improve working conditions

Collective bargaining

Your union can use collective bargaining to overcome some of the limitations in your country's health and safety legislation. Often the bargaining process can bring about improvements in the workplace much more quickly than waiting for national legislation to change. In many countries, Collective Bargaining Agreements (CBA's) can be enforced in the courts or through tribunals because they have legal status through:

- the relationship between the trade union and the employer
- the incorporation of the contents of the CBA into the individual contracts of workers

There are many HS&E topics that your union can promote through negotiations and then add to existing contract language. (See the Collective Bargaining Agreements sub section below).

ILO Conventions on safety and health in agriculture

The International Labour Organisation (ILO) is a part of the United Nations (UN) system. The ILO produces many international labour standards relating to HS&E. The most important of these for agricultural workers is Convention No. 184 on Safety and Health in Agriculture 2001 (see Manual 6 for full details). There are numerous articles in this Convention that will help agricultural workers and their unions. For example:

- workers in agriculture have the right to *select safety and health representatives and representatives in safety and health committees*
- workers have the right to “*remove themselves from danger* resulting from their work activity when they have reasonable justification to believe there is an imminent and serious risk to their safety and health and so inform their supervisor immediately. They shall not be placed at any disadvantage as a result of these actions”
- employers have to carry out workplace *risk assessments* on the farm, plantation, or agricultural undertaking before exposing workers to the hazards/risks covered by the Convention, including exposure to chemicals. We will now consider the concept of risk assessment in more detail because it has the potential to help agricultural workers and their unions.

Risk assessments and risk management

In ILO Convention No. 184, there are clear responsibilities placed upon employers to **identify** hazards, **evaluate** risks, and **implement** preventive and protective measures. It is important that worker HS&E representatives understand the process of risk assessments, so that they can make a valuable contribution to the process.

ILO Convention No. 184 on Safety and Health in Agriculture: Article 7

The employer shall

- carry out appropriate risk assessments and adopt preventive and protective measures to ensure that under all conditions of their intended use, all agricultural activities, workplaces, machinery, equipment, chemicals, tools and processes are safe

- ensure that adequate and appropriate training and comprehensible instructions on safety and health and any necessary guidance or supervision are provided, including information on hazards and risks associated with their work and the action to be taken for their protection, taking into account their level of education and differences in language
- take immediate steps to stop any operation where there is an imminent and serious danger to safety and health and to evacuate workers as appropriate

ILO Recommendation No. 192: Paragraph 5

At the level of the undertaking risk assessment and management measures should be implemented in the following order of priority:

- elimination of the risk
- control of the risk at the source
- minimisation of the risk by such means as the design of safe work systems, the introduction of technical and organisational measures and safe practices and training and
- in so far as the risk remains, provision and use of personal protective equipment and clothing, at no cost to the worker

ILO Convention No. 184 on Safety and Health in Agriculture: Article 8

Workers in agriculture have the right:

- to be informed and consulted on safety and health matters
- to participate in the application and review of safety and health measures, and in accordance with national law and practice, to select health and safety representatives and representatives in safety and health committees and
- to remove themselves from danger resulting from their work activity when they have reasonable justification to believe there is an imminent and serious risk to their safety and health and to inform their supervisor immediately. They shall not be placed at any disadvantage as a result of these actions

What is a risk assessment?

The employer must carefully assess all the risks agricultural workers may be exposed to. This process is called risk assessment and has three stages.

1. The first is identifying the *hazard* which we can define as – the potential to cause harm – which can include such things as workplaces, machinery, chemicals, tools, and processes
2. Then the employer has to assess (evaluate) the *risk* which we can define as – the likelihood that the harm from a particular hazard is realised

3. On the basis of the risk assessment, the employer should adopt preventive and protective measures to ensure safety and health, and compliance with health and safety standards. The prevention and control measures should follow the hierarchy laid down in ILO Recommendation No. 192 on Safety and Health in Agriculture: Paragraph 5 (see above)

How is a risk assessment done?

Assessments can be done by:

Subjective/qualitative assessments: based upon an individual assessor or assessment team's perception of risks and whether they are adequately controlled.

Numerical/Quantitative assessments: these have often used for complex major hazards. For example, in a chemical process, detailed statistical evidence may be used to quantify the risk. Increasingly simplified versions are being used to give a numerical value to *likelihood and severity* which provides a rating value in assisting prioritisation. An example of this is shown below.

Likelihood of Occurrence (Probability)

- LOW – remote or unlikely to occur
- MEDIUM – will occur in time of no preventive action taken
- HIGH – likely to occur immediately or in the near future

Consequence (Severity)

- LOW – may cause minor injury/illness/damage – no lost time
- MEDIUM – may cause lost time injury/illness
- HIGH – may cause serious or fatal injury/illness

Sometimes a risk matrix is drawn up to prioritise action to be taken (see table below).

Some risk assessments use ranking to produce a priority list of hazards to be controlled, on a 'worst first' basis. It takes account of the consequence (likely severity) and the probability of the event occurring. It is possible to carry out ranking using a simple formula, where $risk = severity\ estimate \times probability\ estimate$. These estimates can be given any values, as long as they are consistently used.

Worker HS&E representatives should not view these types of assessment as "scientific", because all numerical ranking systems are purely subjective in the numerical values given to each hazard. They are only given here as an example to illustrate one type of risk assessment among many methods that you may come across.

Severity Rating of Hazard	Value
Catastrophic – imminent danger exists, hazard capable of causing death and illness on a wide scale	1
Critical – Hazard can result in serious illness, severe injury, property and equipment damage	2
Marginal – Hazard can cause illness, injury or equipment damage, but the results would not be expected to be serious.	3

Probability Rating of Hazard	Value
Probable – likely to occur immediately or shortly	1
Reasonably probable – Probably will occur in time	2
Remote – may occur in time	3
Extremely Remote – unlikely to occur	4

A trade union approach to risk assessment

Risk assessment, risk prevention and risk control are sometimes seen as separate processes. Trade unions want risk assessment to include:

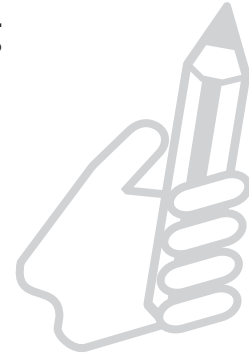
- identification of hazard
- evaluation of risk
- measures taken to prevent and control the risk
- consultation with workers and worker HS&E representatives at each stage of the process

In addition, risk assessment should be kept as simple as possible. In many cases procedures for risk assessment are over complicated, and do not change anything. For example, if there is an obvious hazard such as a damaged electrical cable. We should not wait for a risk assessment. The risk should be dealt with immediately.

The key feature of any technique of risk assessment should be worker and trade union involvement. It is not possible to obtain accurate knowledge concerning the health problems posed by working conditions, without taking account of the actual experience of workers. The experience of workers is fundamental to the risk assessment process.



Activity – Identifying hazards, assessing and preventing risks



AIMS

To help us to:

- identify hazards
- contribute to the risk assessment process
- plan prevention and control measures

TASK

In your small group:

1. Think about the jobs/tasks that agricultural workers do that involves manual handling and lifting. Select one of these jobs that members of your group are familiar with. Discuss the key elements of the job/task
2. Fill in the sample risk assessment pro-forma overleaf. You should identify the remedial steps that should be taken
3. Elect a spokesperson to report back with your main points from Task 2

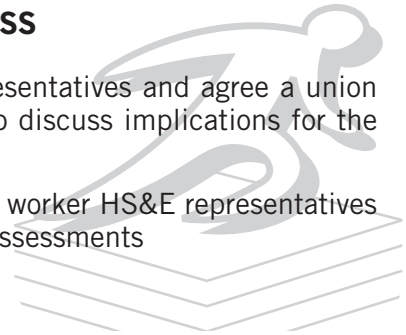
ASSESSMENT CHECKLIST					
(A) Questions to consider: (If the answer to a question is 'Yes' place a tick against it and then consider the level of risk)	Level of risk: (Tick as appropriate)				Possible remedial action: (Make rough notes in this column in preparation for completing Section B)
	Yes	Low	Med	High	
<i>The tasks – do they involve:</i> <ul style="list-style-type: none"> • holding loads away from the body? • twisting? • stooping? • reaching upwards? • large vertical movement? • long carrying distances? • strenuous pushing or pulling? • unpredictable movement of loads? • repetitive handling? • insufficient rest or recovery? • a work rate imposed by a process? 					
<i>The loads – are they:</i> <ul style="list-style-type: none"> • heavy? • bulky/unwieldy? • difficult to grasp? • unstable/unpredictable? • intrinsically harmful (e.g. sharp/hot?) 					
<i>The working environment – are there:</i> <ul style="list-style-type: none"> • constraints on posture? • poor floors? • variations in levels? • hot/cold/humid conditions? • strong air movements? • poor lighting conditions? 					
<i>Individual capability – does the job:</i> <ul style="list-style-type: none"> • require unusual capability? • hazard those with a health problem? • hazard those who are pregnant? • call for special information/training? 					
<i>Other factors – is movement or posture:</i> <ul style="list-style-type: none"> • hindered by clothing or personal protective equipment? 					
(B) Remedial action: What remedial steps should be taken in order of priority?					
i)..... ii)..... iii)..... iv)..... v)..... vi).....					



Checklist – Trade union involvement in the risk assessment process

Raise awareness amongst other worker HS&E representatives and agree a union strategy for risk assessments. Meet management to discuss implications for the workplace and seek agreement on:

- ✓ full consultation between management staff and worker HS&E representatives in the planning, carrying out and review of risk assessments
- ✓ what needs to be done?
- ✓ who will do it?
- ✓ a timetable of when it will happen
- ✓ the procedure by which worker HS&E representatives and workers' views will be taken account of in the risk assessment process
- ✓ identification of documents that may be useful. For example, accident and ill health statistics, inspection reports, workers' complaints
- ✓ all contractors, trainees, temporary workers, seasonal workers to be covered in the assessment
- ✓ competent assessors to be appointed with designated areas of responsibility
- ✓ thorough training for anyone assisting in the process
- ✓ identification of the methodology of risk assessment e.g. use of questionnaires, assessment forms, record keeping, systems for monitoring, analysis and control
- ✓ time limits for implementing prevention and control measures
- ✓ method for publicising results and informing worker HS&E representatives and workers
- ✓ timescales for review



■ Ensuring that employers manage health, safety and the environment

About this section

This section will help us to:

- identify what employers should be doing
- develop procedures for getting things done
- work effectively as trade unionists

Introduction

Greater industrialisation has increased the hazards at work. To protect the health and safety of workers and local communities, unions need to ensure that employers effectively manage occupational health, safety and the environment. As we have seen, sometimes managers are reluctant, unwilling, or unable to do this. In this section, we will look at some ways our unions can put pressure on management, to do what they should. Then we will look at some aspects of health and safety management.

**Activity – Getting things done****AIMS**

To help us to:

- share ideas on the methods available to ensure that management take action
- decide on the steps for resolving HS&E problems

TASK

In your small group:

- share experiences about the methods you have used to get management to resolve HS&E problems
- list the steps you should take and the procedures you should follow to successfully resolve an HS&E problem

Elect a spokesperson to report back

**Getting management to act**

You will have discussed several methods you have used to get management to act. Improvements to HS&E are made in the same ways as all worker gains — through education, unity, organisation and action. Worker HS&E representatives and sometimes a local trade union committee are vital parts of the mechanism for resolving HS&E concerns. It is the job of the worker HS&E representative and a local union committee to represent rank and file workers on HS&E issues.

Some of the ways that you can get your employer to act include:

Being organised

- careful preparation – prepare your case well
- encourage workers to raise problems with their supervisor and to keep you informed
- follow up their complaints if there is no action
- raise issues in writing with management, make sure that you have your members support, and a clear time limit agreed
- prepare reports that explain the problem

- use procedures, including special HS&E procedures, that deal with HS&E problems quickly
- negotiate with management
- if a manager will not resolve a problem, speak to a more senior manager
- use the grievance or disputes procedure (see below for more details)
- ensure that time limits in the procedures are adhered to
- use joint worker/union – management health and safety committees
- negotiate Collective Bargaining Agreements (CBAs), on HS&E
- build wider alliances with worker friendly networks, for example, PAN
- use the media where appropriate

Using the law

- check if there is any national legislation that will help
- use standards from ILO Conventions if the law in your country is weak
- be clear about employer's duties and your legal rights
- consider calling in Government Labour/Health and Safety Inspectors, especially where there is a clear breach of the law

Using the collective strength of members

- involve and inform workers at each stage of the process
- ensure good communication with them
- plan action and report back
- ensure that the employer knows how strongly workers feel about the issue
- ensure other union officials are kept informed, and will give you their support if it is necessary

Grievance and disputes procedures

In some workplaces, unions and management have agreed a special procedure for dealing with grievances and disputes. These can include HS&E problems that are not resolved as well as other issues.

The procedure will normally identify the steps that the union must take to raise the problem formally through the levels of the management structure. Grievance or disputes procedures normally have stages and time limits. If a question is not settled (this is sometimes called a failure to agree), or a time limit is exhausted, the problem is considered at the next stage of the procedure.

Here is an example of a typical disputes procedure:

Stage 1: member raises problem with supervisor

- if no agreement within 24 hours

Stage 2: worker HS&E representative discusses problems with supervisor

- if no agreement within two working days

Stage 3: worker HS&E representative meets departmental manager

- if no agreement within four working days

Stage 4: worker HS&E representative and senior rep meet senior managers

- if no agreement, procedure deemed to be exhausted and **action may follow**

Collective Bargaining Agreements on HS&E

Introduction

Legal standards on HS&E may be non-existent or very weak in your country. Similarly the standards that do exist may be rarely enforced. We can campaign for improved health and safety laws and ratification of ILO Convention No. 184, but we still need good union organisation and agreements at the workplace.

In some countries, HS&E is given very little prominence in collective bargaining agreements. Where it does feature in CBA's, emphasis has been placed upon personal protective equipment and compensation. But a much wider and detailed Collective Bargaining Agreement can help us to achieve a lot in the workplace.



Activity – Collective Bargaining Agreements

AIMS

To help us to:

- decide what should be in a CBA
- select priorities for a CBA

TASK

In your small group:

- quickly share ideas about all the things that you feel ought to be included in a collective bargaining agreement on HS&E
- select one priority from your list and provide an overview of the content of that aspect of the agreement

Pass the contents to the group next to you for their comments, while you comment on their work. Make any necessary amendments.

Elect a spokesperson to report back on the key contents



Contents of a CBA

A collective bargaining agreement on HS&E could include the following:

- formation of joint safety committees (including their composition)
- the rights of a worker HS&E representative, including the facilities to which they are entitled
- the rights to specified information
- formation of joint risk assessment teams
- work stoppage in case of imminent danger
- consulting Government Labour/Health and Safety Inspectors and union full time officers
- time-off to participate in training and other union functions
- inspection rights
- prior agreement on building new workplaces, work changes and the introduction of new substances and equipment
- prohibition of banned, highly toxic, or carcinogenic pesticides
- provision for working women and nursing mothers
- provision of occupational health services
- special safety procedures for resolving problems

The Organisation for African Trade Union Unity (OATUU) has produced a Charter on Health and Safety Rights, which is very helpful for ideas on the possible contents of CBA's on health, safety and the environment.

***Managing
health, safety
and the
environment***

Introduction

Trade unions should devote attention to the way that management organise themselves for health, safety and the environment. If we can influence management to improve in this area, it will have a significant impact upon our members and communities.

Organisations that manage health and safety and put in effort to improve health, safety and environmental performance:

- prevent and control risks
- demonstrate a progressive improvement in their injury and ill health records

Although there should be tripartite involvement in health, safety and the environment, HS&E is ultimately the responsibility of management.

Workplace health and safety statistics are appalling. The most common underlying cause of work-related injuries and ill health, is management failure.

Management should not be allowed to pass on their responsibilities of managing health and safety, to workers and their trade union organisations.



Activity – Managing health and safety

AIMS

To help us to:

- share experiences of the way that management manage HS&E
- explain the advantages of safe and healthy working conditions

TASK

In your small group discuss:

- the role that your management has played in avoiding, preventing, and controlling risks in your workplaces
- the advantages of healthy and safe working conditions to the employer

Elect a spokesperson to report back



Why should management manage HS&E?

There are many reasons why management should have the responsibility to effectively manage HS&E. These reasons include:

- the enterprise is owned by the employer and it is for them to secure the health and safety of their employees
- international standards and national laws require employers to manage health, safety and the environment
- management failings result in accidents and ill health which are not the fault of the worker
- recognition that the development of a culture supportive of health, safety and the environment is necessary to achieve adequate control over risks
- the employer will minimise financial losses
- effective management of health, safety and the environment is both beneficial and worthwhile

Management's Responsibilities

Management responsibilities are covered by International Conventions and often by National Laws on health, safety and the environment.

The key elements of successful management are as follows:

Policy development

Effective management demands a comprehensive health, safety and environment policy that conveys the general intentions, approach and objectives of an organisation.

Organising

Organising is the process of designing and establishing the responsibilities of managers and individuals, thus creating the necessary structures to manage health, safety and the environment effectively. Management should be able to create a culture and climate that promotes worker involvement and commitment at all levels.

Planning and implementing

Planning is essential for the effective implementation of any policy. It involves:

- setting clear objectives
- developing and maintaining performance standards and systems control
- defining, developing and maintaining policies
- placing health, safety and the environment as a factor in all business decisions

As part of planning and implementing, employers should:

- identify hazards
- evaluate risks
- identify the steps that are necessary to effectively remove or reduce the risks
- monitor performance

Measuring performance

Management can continually improve HS&E by maintaining and improving performance against pre-determined plans and standards.

Auditing and reviewing performance

These activities enable management to evaluate performance, and take appropriate measures to further develop their health, safety and environment policies.

Management Policy

A health, safety and the environment policy should be:

- subject to consultation with workers and their representatives
- in writing
- regularly revised
- properly communicated to workers
- describe arrangements for putting it into effect

It must:

- identify hazards
- assess risks
- set standards
- show management commitment to actively putting it into effect
- outline the structures set up to achieve the objectives
- establish clear procedures for serious and imminent danger at work
- provide comprehensive and relevant health and safety information to workers

Enhancing the management of health, safety and the environment

Management can go further to enhance its management of health, safety and the environment by:

- carrying out regular inspections/checks of the workplace
- establishing systems, procedures and policies
- developing risk assessment procedures
- carrying out regular monitoring and evaluation
- promoting health, safety and the environment training activities
- prompt investigation of ill health and accidents
- active control/prevention, and sanctions for breaches
- making adequate budgetary allocation
- early payments of compensation
- consulting worker HS&E representatives regularly

■ Future strategy



Activity – Your next steps

AIMS

To help us to:

- work out a plan for future activity on health, safety and the environment
- identify the steps that we can take to involve, educate and inform our members
- think about the support we will need

TASK

Draw up in outline:

- your own personal action plan for the next six months. Be realistic but try to achieve some real changes. Use the worksheet on the next page so you can refer back to it after the course
- a report back for your members identifying: the way that this course dealt with their responses to the pre-course members' survey; what you have learned from the course; and how it will help the union and members to tackle health, safety and the environment problems at work
- a report back to your local union committee, with suggestions for future action on HS&E

Prepare a report back to the rest of the course with your main points



ACTION PLANNING WORKSHEET				
What needs doing?	Your aims	What will you do?	When?	What was the outcome?
Your job as worker HS&E representative				
With your members				
Priority hazards				
With other worker reps, and your union				
With your employer				
With the Government				
Further training				
Anything else?				

■ Course evaluation

This activity is to find out how effective the course has been. It provides an opportunity for you to help educators and fellow trade unionists by providing feedback. This will help in future courses.



Activity – Evaluation

AIMS

To help us to:

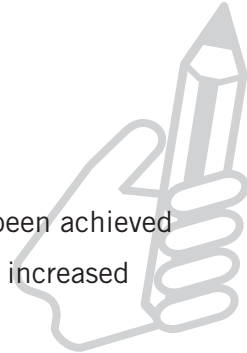
- find out to what extent the aims of the workshop have been achieved
- decide how the effectiveness of this workshop could be increased

TASK

Discuss the following questions and summarise your group's view on a chart:

- Taking the workshop as a whole, did the different sessions meet your needs and interests?
- Which sessions or parts of the workshop were most valuable to you and why?
- Which sessions or parts of the workshop were of less or no interest to you and why?
- What suggestions would you want to make for future workshops?
- Is there any other comment you would like to make?

Elect a spokesperson to report back



Manual 4:

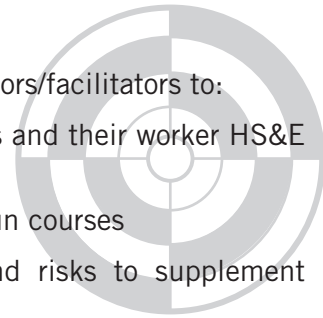
HEALTH, SAFETY & ENVIRONMENT FACT SHEETS



Aims

This Manual has been developed to help union educators/facilitators to:

- address some of the key HS&E concerns of workers and their worker HS&E representatives
- provide additional resources to help educators to run courses
- provide basic information on priority hazards and risks to supplement educational activities



Format of each of the Fact Sheets

Each of the Fact Sheets follows a similar format:

- Background – what is the problem?
- Information that is available
- Trade union action

Activities

The Fact Sheets should be used in conjunction with educational activities so that the course is run using active learning methods. There is not enough space to provide a series of activities with each Fact Sheet. However, educators are encouraged to develop their own activities to suit courses that they are running. The guidelines provided in Manual 1 of this series of ILO-IUF Manuals should be consulted for this purpose.

■ Development of further Fact Sheets

Initially, 20 Fact Sheets have been developed for the first edition of this series of ILO-IUF Manuals. It is hoped that trade union educators will develop additional Fact Sheets when they are needed to meet participants' needs.

Fact Sheet 1: Accidents, incidents and ill health

■ Background

All occupational accidents, incidents and cases of ill health have causes, they do not just happen. The causes are many, but if hazards are not identified and the risks are not removed or controlled, then injuries and ill health will happen. Employers often blame workers for occupational accidents, incidents and cases of ill health that occur at the workplace. But occupational accidents, incidents and cases of ill health are more often caused by a failure of the employer/management to take the action necessary to protect workers' health and safety.

It is important for worker HS&E representatives to investigate accidents, so that the actual cause can be established, and the appropriate corrective action taken. The human misery caused by work-related illnesses and injuries is reason enough to want to prevent them. But the financial costs for employers, workers and Governments are also well documented.

■ Information

National legislation

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of the applicable laws in your country.

Agreements

Your union may have made collective bargaining agreements with your employer regarding accidents and ill health. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture: Article 21

Workers in agriculture should be covered by an insurance or social security scheme against fatal and non-fatal occupational injuries and diseases, as well as against invalidity and other work-related health risks. This should provide coverage at least equivalent to that enjoyed by workers in other sectors.

ILO Recommendation No. 192 on Safety and Health in Agriculture: Paragraph 5

At the level of the undertaking, there should be procedures for the recording and notification of accidents and diseases.

Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements on occupational accidents, ill health and incidents.



Union checklist – Action after an injury

Immediately after

- ✓ get worker HS&E representatives to the scene of the injury
- ✓ see that the injured are being properly looked after
- ✓ make sure that nothing is moved

Investigation

- ✓ take photos, sketches and measurements
- ✓ talk to witnesses
- ✓ take down details of pesticides used, where you think that ill-health may have been caused by such a substance
- ✓ do a detailed check of the workplace

Follow up

- ✓ liaise with the government health and safety inspector
- ✓ check employer's accident and ill health records
- ✓ participate in the employer's investigation
- ✓ suggest improvements or immediate precautions
- ✓ advise injured members and contact your union
- ✓ check that the employer/management has reported the accident/incident, if the law requires this



Fact Sheet 2: HIV/AIDS

■ Background

The scale of the problem

According to a report of the International Labour Organisation in July 2004, an estimated 36.5 million people of working age have HIV. By 2005, the global labour force will have lost as many as 28 million workers due to AIDS since the start of the epidemic.

At least 26 million of those currently infected with HIV are workers aged 15 to 49, in the prime of their working lives. The epidemic strikes hard at the most vulnerable groups in society including the poorest of the poor, women and children, making worse existing problems of inadequate social protection, gender inequalities, and child labour.

The epidemic affects the world of work in many ways:

- discrimination against people with HIV threatens fundamental principles and rights at work, and undermines efforts for prevention and care
- the disease cuts the supply of labour and reduces income for many workers
- valuable skills and experience are being lost
- productivity is falling in enterprises and in agriculture, and labour costs are rising
- the double burden on women gets heavier as they have to earn a livelihood and provide care to sick family members and neighbours.

What is HIV/AIDS?

AIDS (Acquired Immuno Deficiency Syndrome) is a disease caused by destruction of the immune system by a virus called HIV (human immunodeficiency virus). This virus is principally transmitted by sexual secretions and blood. Studies throughout the world have shown that there are three modes of transmission of HIV:

- sexual intercourse (heterosexual or homosexual) and use of donated semen
- exposure to blood, blood products, or donated organs; exposure to blood is principally through the transfusion of unsterilised blood or the use of unsterilised contaminated syringes and needles by intravenous drug users
- from infected mother to foetus or infant, before, during, or shortly after birth (perinatal transmission)

HIV cannot be transmitted through casual contact. Personal contact in the workplace is casual. You cannot get HIV by any of the following activities:

- patting a co-worker on the back; sharing equipment or restrooms; shaking hands; hugging; coughing and sneezing; using the same drinking fountain; using the same telephone; eating together

Rural communities

Two types of rural area are particularly vulnerable to HIV/AIDS – those situated along truck routes and those that are sources of migrant labour to urban areas. Nomadic workers are at increased risk of contracting HIV due to their mobility, marginalisation and limited access to social services. Women remaining on farms with seasonal migrant husbands are also vulnerable to HIV infection if their husbands bring the disease back with them.

Poverty makes people increasingly vulnerable to HIV/AIDS by increasing migrant labour, family break up, landlessness, overcrowding and homelessness. This places people at greater risk of having multiple casual partners. The poor are also less likely to take seriously an infection that is fatal in years to come, if they are struggling with daily survival. The incubation period of HIV is likely to be shortened by poor standards of nutrition and repeated infections, while access to medical care is lowest among the poor.

Poverty also makes HIV/AIDS education difficult, as there are high levels of illiteracy and little access to mass media, health and education services, particularly in rural areas. Poor women are especially vulnerable as they are not likely to be able to protect themselves from infected husbands. They tend to be ill informed on health matters and have little power to control any aspect of sexual relations.

The problems of child-headed households and AIDS orphans are also growing where parents and members of the extended family are killed by this disease.

■ Information

Section 4 of the ILO Code of Practice on HIV/AIDS adopted in June 2001 outlined certain key principles for the workplace. These include:

Recognition of HIV/AIDS as a workplace issue

HIV/AIDS is a workplace issue, not only because it affects the workforce, but also because the workplace can play a vital role in limiting the spread and effects of the epidemic

Non-discrimination

There should be no discrimination or stigmatisation against workers on the basis of real or perceived HIV status

Gender equality

More equal gender relations and the empowerment of women are vital to preventing the spread of HIV infection and enabling women to cope with HIV/AIDS

Healthy work environment

The work environment should be healthy and safe, and adapted to the state of health and capabilities of workers

Social dialogue

A successful HIV/AIDS policy and programme requires co-operation, trust and dialogue between employers, workers, and governments

Screening for purposes of employment

HIV/AIDS screening should not be required of job applicants or persons in employment, and testing for HIV should not be carried out at the workplace except as specified in this code

Confidentiality

Access to personal data relating to a worker's HIV status should be bound by the rules of confidentiality consistent with existing ILO codes of practice

Continuing the employment relationship

HIV infection is not a cause for termination of employment. Persons with HIV-related illnesses should be able to work for as long as medically fit in appropriate conditions

Prevention

The social partners are in a unique position to promote prevention efforts through information and education, and support changes in attitudes and behaviour

Care and support

Solidarity, care and support should guide the response to AIDS at the workplace. All workers are entitled to affordable health services and to benefits from statutory and occupational schemes

■ Trade union action

Problems for workers

Thousands of workers are being victimised at the workplace because they are HIV positive. Unfair dismissals, mandatory pre-employment tests, harassment, lack of confidentiality and denial of promotion or vocational training are among the abuses suffered world-wide by HIV positive workers.

All over the world the labour movement has long been in the forefront of the historic struggles to eliminate prejudice and discrimination from the workplace, to establish safe and healthy working conditions, and to provide basic health care and social insurance for all workers. HIV/AIDS threatens each of these objectives.

In the workplace, trades unions can stimulate prevention and fight discrimination. Nationally and internationally, trades unions can campaign and pledge to join the fight against HIV/AIDS and to make this fight a top priority.

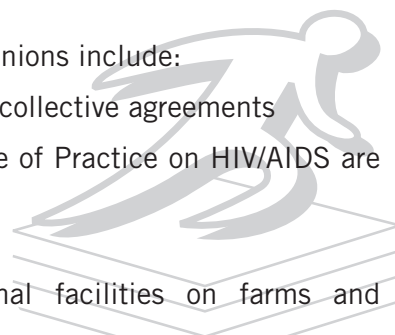
Trade unions are uniquely placed to fight HIV/AIDS as the workplace is a major "entry point" for information, prevention and rights campaigns.



Trade union action checklist

Examples of measures that can be taken by trade unions include:

- ✓ developing prevention and protective clauses in collective agreements
- ✓ ensuring that the key principles of the ILO Code of Practice on HIV/AIDS are implemented in the workplace
- ✓ introducing trade union education programmes
- ✓ bargaining for better housing and recreational facilities on farms and plantations for agricultural workers
- ✓ developing partnerships with employers to tackle HIV/AIDS



Fact Sheet 3: Biological hazards

■ Background

Biological hazards can be important sources of ill health in agriculture. Biological agents can be defined as any micro-organism, cell culture, or human endoparasite, which may cause any infection, allergy, toxicity or otherwise create a hazard to human health. These include viruses and bacteria which can cause infection and disease, dangerous plants and animals (for example parasites or insects), biologically contaminated dusts, or wastes from humans and animals.

Most biological agents are micro-organisms, among which are bacteria, viruses, fungi, microscopic parasites, and the microscopic infectious forms of larger parasites.

Agricultural workers may come into contact with these biological agents through routine exposures, such as from contact with animals, animal carcasses, working in or near livestock houses and stabling areas, or contaminated water. Examples include: anthrax, tetanus, bovine tuberculosis.

■ Information

National legislation

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of the applicable laws in your country, and use the law where applicable.

Agreements

Your union may have made collective bargaining agreements with your employer regarding biological hazards. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture: Article 14

National laws should ensure that risks such as those of infection, allergy or poisoning are prevented or kept to a minimum when biological agents are handled, and activities involving animals, livestock and stabling areas, comply with national or other recognised health and safety standards.

ILO Recommendation No. 192 on Safety and Health in Agriculture: Paragraph 8

Measures for handling biological agents and for handling animals should comprise:

- risk assessment measures to eliminate, prevent or reduce biological risks;
- control and testing of animals, in accordance with veterinary standards and national law and practice, for diseases transmissible to humans;
- protective measures for the handling of animals and, where appropriate, provision of protective equipment and clothing;
- protective measures for the handling of biological agents and, if necessary, provision of appropriate protective equipment and clothing;
- immunisation of workers handling animals, as appropriate;
- provision of disinfectants and washing facilities, and the maintenance and cleaning of personal protective equipment and clothing;
- provision of first aid, antidotes or other emergency procedures in case of contact with poisonous animals, insects or plants;
- safety measures for the handling, collection, storage and disposal of manure and waste;
- safety measures for the handling and disposal of carcasses of infected animals, including the cleaning and disinfection of contaminated premises; and
- safety information including warning signs and training for those workers handling animals.

■ Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements on biological hazards, using as a basis Article 14 of the ILO Convention No. 184 on Safety and Health in Agriculture.

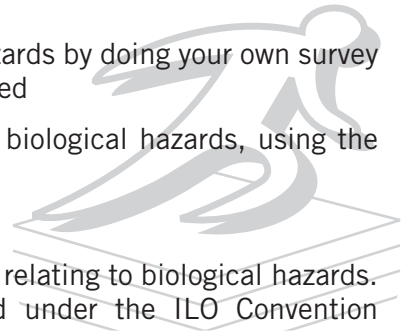
Recommendations on prevention

Worker HS&E representatives will need to ensure that they are effectively consulted about risk assessments. You want to be sure that thorough risk assessments are carried out, procedures developed, and exposure to biological agents prevented or controlled. Use Paragraph 8 of the ILO Recommendation No. 192 above as a basis for consultation with your employer.



Trade union action checklist

- ✓ Identify if you have a problem with biological hazards by doing your own survey or questionnaire with workers that may be affected
- ✓ Do a special HS&E check that concentrates on biological hazards, using the information in this Fact Sheet
- ✓ Decide on the priorities with your members
- ✓ Ask your employer for a copy of risk assessments relating to biological hazards. Remember that a risk assessment is required under the ILO Convention No. 184 on Safety and Health in Agriculture
- ✓ Ask your employer for a risk assessment to be done if one has not already been carried out on work involving biological hazards
- ✓ Make sure that you are consulted about potential work involving biological hazards
- ✓ Ensure that the employer's safety policy and systems of work address prevention of risks to workers from biological hazards



Fact Sheet 4: Chemicals

■ Background

The hazards

A large and ever-increasing number and types of chemicals are used in agriculture. Agrochemicals include:

- pesticides which are mainly synthetic (human-made) agrochemicals intended to destroy or control “pests” of all kinds. The main categories are herbicides, insecticides, fungicides and miscellaneous compounds (see Manual 5 for more details). Pesticides are the most hazardous category of agrochemicals as they are designed to kill or injure unwanted biological organisms and are deliberately spread in the environment whereas the aim with most other chemicals is to contain their use to defined areas
- veterinary products – including animal medicines – are substances used in the rearing of animals/livestock including fish. They are applied to the skin of animals, or administered orally or by injection (see Manual 5 for more details)
- artificial chemical fertilisers, such as nitrates and phosphates, applied to promote crop growth. They can irritate the skin if handled without gloves. They can be important water pollutants. Fire is a risk with all types of fertiliser with toxic fumes being released
- commodity chemicals which include caustic/corrosive substances such as sulphuric acid for straw treatment; propionic acid for silage treatment; hydrofluoric acid for cleaning glass in commercial glasshouses; as well as powerful disinfectants for bacterial control in animal houses/equipment

Prevention and control

It is important to treat all chemicals – even if they are labelled as medicines – with caution and to prevent and minimise the risks of exposure.

Chemicals can be hazardous at all stages – from use through to handling, storage, transport, spillage and disposal. As many agricultural workers and their families live where they work, they face extra dangers from, for example, exposure to pesticides and other agrochemicals in water, air, contaminated soil and residues in the farm produce they eat.

Information

National legislation

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of the applicable laws in your country.

Agreements

Your union may have made collective bargaining agreements with your employer regarding the safe use of chemicals. Check if there are any applicable agreements.

World Health Organisation: Recommended classification of pesticides by hazard

Look at the classification of pesticides by hazard in Manual 5 to see which hazard category applies to the pesticides that you are using, or are exposed to.

ILO Convention No. 184 on Safety and Health in Agriculture

Article 12

States need to ensure that:

- there is a national system for the importation, classification, packaging and labelling of chemicals used in agriculture and for their banning or restriction;
- producers, importers etc. provide adequate information;
- there is a suitable system for the safe collection, recycling and disposal

Article 13

National laws and regulations or the competent authority shall ensure that there are preventive and protective measures for the use of chemicals and handling of chemical waste at the level of the undertaking.

These measures shall cover:

- the preparation, handling, application, storage and transportation of chemicals;
- agricultural activities leading to the dispersion of chemicals;
- the maintenance, repair and cleaning of equipment and containers for chemicals; and
- the disposal of empty containers and the treatment and disposal of chemical waste and obsolete chemicals.

ILO Recommendation No. 192 on Safety and Health in Agriculture: Paragraph 7

There should be *sound management of chemicals* in accordance with the measures described in the ILO Convention No. 170 and Recommendation 1990 (see below). At the level of the undertaking, measures should include:

- adequate personal protective equipment and clothing, and washing facilities for those using chemicals and for the maintenance and cleaning of personal protective and application equipment, at no cost to the worker;
- spraying and post-spraying precautions in areas treated with chemicals, including measures to prevent pollution of food, drinking, washing and irrigation water sources;
- handling and disposal of hazardous chemicals which are no longer required, and containers which have been emptied but which may contain residues of hazardous chemicals, in a manner which eliminates or minimises the risk to safety, health and the environment;
- keeping a register of the application of pesticides;
- training agricultural workers on a continuing basis about practices and procedures, hazards and precautions.

ILO Convention No. 170 Concerning Safety in the Use of Chemicals at Work 1990: Articles 10 – 16

Employers must ensure that:

- all chemicals used at work are labelled or marked, and that chemical safety data sheets have been provided and are made available to workers and their representatives;
- a record of hazardous chemicals used at the workplace is kept, cross-referenced to the appropriate chemical safety data sheets. This record shall be accessible to all workers concerned and their representatives;
- when chemicals are transferred into other containers or equipment, the contents are indicated in a manner which will make known to workers their identity, any hazards associated with their use and any safety precautions;
- workers are not exposed to chemicals to an extent which exceeds exposure limits;
- the exposure of workers to hazardous chemicals is assessed;
- the exposure of workers to hazardous chemicals is monitored and recorded;

- the records of the monitoring of the working environment and of the exposure of workers using hazardous chemicals are kept and are accessible to the workers and their representatives;
- an assessment of the risks arising from the use of chemicals at work is made, and workers are protected by methods such as:
 - ▶ the choice of chemicals that eliminate or minimise the risk;
 - ▶ the choice of technology that eliminates or minimises the risk;
 - ▶ the use of adequate engineering control measures;
 - ▶ the adoption of working systems and practices that eliminate or minimise the risk;
 - ▶ the adoption of adequate occupational hygiene measures;
 - ▶ where recourse to the above measures does not suffice, the provision and proper maintenance of personal protective equipment and clothing at no cost to the worker, and the implementation of measures to ensure their use;
- exposure to hazardous chemicals is limited so as to protect the safety and health of workers;
- first aid is provided;
- arrangements are made to deal with emergencies;
- hazardous chemicals which are no longer required and containers which have been emptied but which may contain residues of hazardous chemicals, are disposed of in a manner which eliminates or minimises the risk to safety and health and to the environment;
- workers are informed of the hazards associated with exposure to chemicals used at the workplace;
- workers are instructed how to obtain and use the information provided on labels and chemical safety data sheets;
- chemical safety data sheets, along with information specific to the workplace, are used as a basis for the preparation of instructions to workers, which should be written if appropriate;
- workers are trained on a continuing basis in the practices and procedures to be followed for safety in the use of chemicals at work;
- they co-operate as closely as possible with workers or their representatives with respect to safety in the use of chemicals at work.

Trade union action

Collective bargaining

Your union can use collective bargaining to overcome some of the limitations in your country's health and safety legislation. Encourage your union to develop agreements on the use of chemicals, using as a basis the provisions in the ILO Convention No. 184 on Safety and Health in Agriculture and Convention No. 170 concerning Safety in the Use of Chemicals at Work.

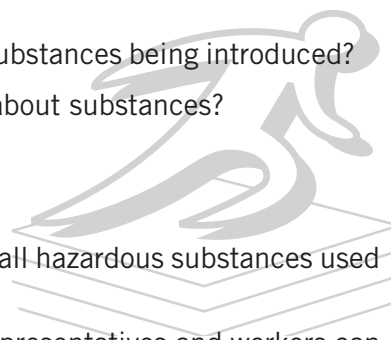
Alternatives to toxic chemicals

Your union can actively pursue alternatives to the use of toxic chemicals, such as Integrated Production and Pest Management methods (see Fact Sheet 14 below) or organic farming where chemicals are not used.



Trade union action checklist

- ✓ Are unions consulted and informed prior to new substances being introduced?
- ✓ Is management already passing on information about substances?
- ✓ Is this information kept up-to-date?
- ✓ Are all containers properly labelled?
- ✓ Are there reliable chemical safety data sheets on all hazardous substances used at work?
- ✓ Is there a central register, which worker HS&E representatives and workers can see, of all substances used at work?
- ✓ Are worker HS&E representatives checking independently on the hazards of substances?
- ✓ Has the employer agreed to keep worker HS&E representatives informed about their strategy for chemicals and pesticides and reduction in chemicals usage?
- ✓ Is there a procedure for handling disagreements about risk assessments?
- ✓ Have dates, priorities, and targets been agreed?
- ✓ Is the chemicals policy monitored through a joint safety committee?
- ✓ Are the workforce kept informed of progress?



Fact Sheet 5: Hazardous child labour

■ Background

Numbers of working children

In 2000, ILO IPEC reported that 352 million children were “economically active” worldwide. Of these 352 million, 246 million children aged 5-17 are involved in child labour, which the ILO says should be abolished. Whole generations of children are being deprived of the chance to take their rightful place in the society and economy of the 21st Century. New estimates, published in 2002 by the International Labour Organisation (ILO), suggest that the situation has been worsening, with one in every eight children in the world – some 179 million children aged 5-17 – exposed to the worst forms of child labour which endanger the child’s physical, mental or moral well-being.

It is further estimated that:

- over two-thirds (70%) of all working children are found in agriculture
- at least 90 per cent of economically active children in rural areas in developing countries are employed in agriculture

Hazards

While the health of child workers has not been well studied yet, it is known that child workers face a great many occupational health and safety hazards. Occupational hazards and work conditions can have permanent effects on the long-term development of children who have to work. Physically and emotionally, child workers are at greater risk of suffering from work-related health problems than adult workers. For example:

- children using hand tools designed for adults are said to have a higher risk of fatigue and injury
- when children find that the personal protective equipment available at the workplace does not fit them properly, they have no choice but to work without it or to use makeshift devices which have no protective value, such as putting handkerchiefs over their noses and mouths instead of using respirators
- young workers have lower tolerance to heat than adults
- children working on plantations and farms are more likely to have an unstable life as they are constantly on the move with their parents “following the crops”. The children change schools as they migrate with their parents for seasonal work; they work for long hours and do heavy and exhausting jobs

■ Information

Health and safety law

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

ILO Convention No. 184 on Safety and Health in Agriculture

Article 16

The minimum age for work likely to harm the safety and health of young persons shall not be less than 18 years. After consultation with employers and workers' organisations, national laws shall determine the types of employment or work that fit into this harmful category.

After consultation with employers and workers' organisations, national laws may authorise 16-18 year-olds to perform this work provided they are trained and fully protected.

ILO Convention No. 138 on Minimum Age

Convention No. 138 remains the bedrock of national and international action for ***the total abolition of child labour***. While the effective elimination of child labour is the ultimate objective, it is closely related to economic and social factors such as poverty and underdevelopment – and thus will take time to be accomplished. In the meantime, there are certain forms of child labour that cannot be tolerated, regardless of a country's level of development or economic situation. The aim of Convention No. 182 (see below) is therefore targeting the intolerable and calling for immediate action for the elimination of the worst forms of child labour.

ILO Convention No. 182 on the Worst Forms of Child Labour

Article 1

Each Member which ratifies this Convention shall take immediate and effective measures to secure the prohibition and elimination of the worst forms of child labour as a matter of urgency.

Article 2

For the purposes of this Convention, the term *child* shall apply to all persons under the age of 18.

Article 3

For the purposes of this Convention, the term *the worst forms of child labour* comprises:

- (a) all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict;
- (b) the use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances;
- (c) the use, procuring or offering of a child for illicit activities, in particular for the production and trafficking of drugs as defined in the relevant international treaties;
- (d) work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children.

Article 4

1. The types of work referred to under Article 3(d) shall be determined by national laws or regulations or by the competent authority, **after consultation with the organizations of employers and workers** concerned, taking into consideration relevant international standards, in particular Paragraphs 3 and 4 of the Worst Forms of Child Labour Recommendation, 1999.
2. The competent authority, **after consultation with the organizations of employers and workers** concerned, shall identify where the types of work so determined exist.
3. The list of the types of work determined under paragraph 1 of this Article shall be periodically examined and revised as necessary, in consultation with the organizations of employers and workers concerned.

Articles 5 and 6

Each Member shall, **after consultation with employers' and workers' organizations**:

- establish appropriate mechanisms to monitor the implementation of the provisions giving effect to this Convention
- design and implement programmes of action to eliminate as a priority the worst forms of child labour

Article 7

Each Member shall:

- implement and enforce the provisions giving effect to this Convention including the provision and application of penal sanctions or, as appropriate, other sanctions
- take effective measures to:
 - (a) prevent the engagement of children in the worst forms of child labour
 - (b) provide the necessary and appropriate direct assistance for the removal of children from the worst forms of child labour and for their rehabilitation and social integration
 - (c) ensure access to free basic education, and, wherever possible and appropriate, vocational training, for all children removed from the worst forms of child labour
 - (d) identify and reach out to children at special risk
 - (e) take account of the special situation of girls
- designate the competent authority responsible for the implementation of the provisions giving effect to this Convention

Agreements

Your union may have made agreements with your employer regarding the elimination of child labour. Check if there are any applicable agreements.

International Codes of Conduct

In addition, some agricultural sectors geared to export markets, are introducing their own voluntary codes of good agricultural practice which include HS&E standards. For example, a coalition of trade unions and non-governmental organisations of which IUF is a part, has drawn up the International Code of Conduct for the Production of Cut Flowers which states that:

“There shall be no use of child labour. There shall be no workers under the age of fifteen years or under the compulsory school-leaving age, whichever is higher. Children under 18 shall not work in hazardous conditions.

(ILO Convention No. 138). Adequate transitional economic assistance and appropriate educational opportunities shall be provided to any replaced child workers.”

The IUF has also:

- signed an agreement with the International Tobacco Growers Association to work together to eliminate child labour in the tobacco industry
- been instrumental in setting up a new Trust that is dedicated to the elimination of child labour in the tobacco industry

Trade union action

IUF position The IUF believes that improving conditions for waged agricultural workers will in the long term reduce child labour. However, more immediate action is required, and the IUF is working with international institutions like the ILO to eradicate the most hazardous forms of child labour in the short term.

Collective bargaining Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements on the eradication of child labour, using as a basis the provisions the ILO Conventions referred to above.



Trade union action checklist

- ✓ Lobby your government to ratify and fully apply ILO Conventions 138, 182 and 184
- ✓ Target sectors and areas where children work
- ✓ Pressure the authorities in your country to enforce laws on education
- ✓ Conduct internal trade union activities to increase awareness and set up action plans, and build community alliances to fight child labour
- ✓ Campaign to increase trade union membership and bargaining rights – strong unions are the best way to stop child labour
- ✓ Build alliances with other organisations in your country and in solidarity with unions abroad
- ✓ Make sure the trade union movement in your country is involved in the process of the development of action plans
- ✓ Until child labour can be eliminated, ensure that the working conditions of child workers are improved as a critical short-term measure

Fact Sheet 6: Dusts

■ Background

Dusts and ill health

Dust can be a problem in almost any industry. Dust at work has been one of the largest occupational killers of all time. It has shortened lives and caused misery to hundreds of thousands of people. Whenever materials are handled or broken down, dust is liable to be produced. For example:

- cereal/vegetable dust and dust from milling flour/animal feeds can damage the health of agricultural workers through occupational asthma
- wood dust can both kill and damage the health of workers

Dusts	Effect
Fibrous dusts	pneumoconiosis
Toxic dusts	poisoning
Irritant dusts	cell damage, bronchitis
Allergenic dusts	allergies, asthma, alveolitis
Carcinogenic dusts	cancer

In addition, dusts can cause explosions. Many dusts – including flour, animal feed dusts, coal, wood, grain sugar, certain metals and synthetic organic chemicals, when dispersed in air to form a cloud, can explode if an ignition source is present.

Dust can also affect productivity and cause product damage. No dust should be regarded as 'safe'. Even some alleged 'nuisance' dusts have turned out, in the light of further research, to be a real danger to health.

Work activities creating dust

Examples of work activities that can create dust include:

- filling bags or emptying them into skips or other containers
- conveying materials by mechanical means or by hand
- cleaning and maintenance work
- feeding livestock from bags or conveyor systems
- clearing up spillages

Organic dust diseases

Workers in agriculture, pharmaceuticals, furniture making and food manufacturing are exposed to dusts of animal and vegetable origin. Examples include antibiotics, cereals, flour, milk and egg powder, spores of fungi and yeast. In some cases, exposure to organic dusts such as wood dust can lead to toxic effects or can cause cancer. The biggest problem arises from the development of allergic reactions.

Extrinsic allergic alveolitis (or hypersensitivity pneumonia)

This is a lung disease caused by breathing in particles of organic dusts which penetrate into the lungs causing an allergic reaction and leading to tissue damage (fibrosis) and impairment of lung functions. Some of the better known forms are described below. Acute symptoms are usually short lived in the absence of further exposure. In the chronic form, irreversible pulmonary fibrosis may develop.

- *Farmer's Lung*: this can follow exposure of persons who have previously become sensitised to the dust generated on moving certain spoiled vegetable produce, particularly hay and corn. Spoiled hay is however, only one of the potential sources. The fungal spores are common in litter and in various stored fodders, including silage. Hardly any sample of stored grass or grain is likely to be entirely free of fungal organisms which cause the disease. When such produce is disturbed, for example, in grinding corn or feeding cattle, the dust containing the spores may be breathed in. Such an exposure may sensitise people doing this work and after this, exposure to even quite low concentrations of the spores will produce symptoms.
- *Mushroom Worker's Lung*: this is caused by exposure to fungi which grow in compost used to spawn mushrooms. Reports of degree or recovery vary considerably.
- *Maltworker's Lung*: this is caused by inhaled organic dust containing spores of the fungus, *Aspergillus clavatus*, which are released into the air in large concentrations during the turning of barley in open floor maltings. The severity of symptoms varies.
- *Bagassosis*: this is caused by exposure to spores in the handling of fibrous cellulose materials from the inner stalk of sugar cane which has been crushed and the juice extracted.
- *Other causes*: other causes of extrinsic allergic alveolitis have been reported including certain hardwood dusts, mouldy wood products, cork dust, cheese moulds, coffee bean dust, moulds on preserved meat products, fish meal, and dry rot dust.

Information

National legislation

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of the applicable laws in your country.

Agreements

Your union may have made collective bargaining agreements with your employer regarding dusts at work. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture

- See Articles 6 and 7 in Manual 6 for the employer's duties
- See Article 14 in the Biological Hazards Fact Sheet 3

Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements on preventing dust hazards, using as a basis the provisions in ILO Convention No. 184 on Safety and Health in Agriculture.

Recommendations on prevention

Worker HS&E representatives will need to ensure that they are effectively consulted about risk assessments. You want to be sure that thorough risk assessments are carried out, procedures developed, and exposure to dusts prevented or controlled.

The breathing in of harmful substances can be avoided by:

- using alternative substances where possible
- changing to low dust materials, for example, granules, pellets
- enclosing sources of dust or spray
- vacuuming spillages instead of sweeping up – with a high efficiency filter

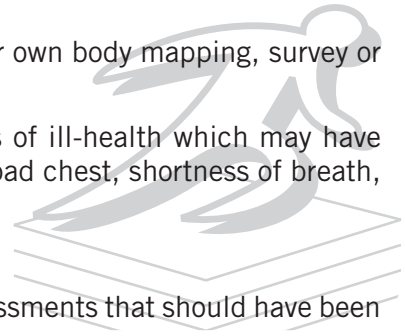
The amount breathed in can be reduced by:

- using local exhaust ventilation
- using effective filters in tractor/vehicle cabs
- maintaining filters to manufacturer's requirements
- improving ventilation in buildings
- wearing effective respiratory protective equipment. This should be the appropriate mask or respirator for dusts



Trade union action checklist

- ✓ Identify if you have a dust problem by doing your own body mapping, survey or questionnaire of workers that may be affected
- ✓ Find out if workers are suffering from any signs of ill-health which may have been caused by dust in the workplace (coughs, bad chest, shortness of breath, asthma, skin rashes and so on)
- ✓ Decide on the priorities with your members
- ✓ Ask your employer for a copy of the dust risk assessments that should have been carried out
- ✓ Ensure that your employer is implementing a planned, timetabled, dust prevention and control programme and that you and your members are consulted about it
- ✓ Consult your union officers if you think that members' health has been damaged and that they may be entitled to compensation, and advise your members about what they say



Fact Sheet 7: Electricity at work

■ Background

Hazards

Agricultural workers can be killed or badly injured through contact with electricity. Electricity travels in closed circuits, and its normal route is through a conductor. Electric shock occurs when the body becomes a part of the electric circuit. The current must enter the body at one point and leave at another. Electric shock normally occurs in one of three ways. Individuals, while in contact with the ground come in contact:

- with both wires of the electric circuit
- one wire of an energised circuit and the ground or
- a metallic part that has become “hot” by contact with an energised conductor

Severity of the shock

The severity of the shock received when a person becomes a part of an electric circuit is affected by three main factors:

- the amount of current flowing through the body (measured in amperes)
- the path of the current through the body and
- the length of time the body is in the circuit

Other factors that may affect the severity of shock are the frequency of the current, the phase of the heart cycle when shock occurs, and the general health of the person.

The effects of electric shock depend upon the type of circuit, its voltage, resistance, current, pathway through the body, and duration of the contact. Effects can range from a barely perceptible tingle to immediate cardiac arrest.

A severe shock can cause considerably more damage to the body than is visible. For example, a person may suffer internal haemorrhages and destruction of tissues, nerves, and muscles. In addition, shock is often only the beginning in a chain of events. The final injury may well be from a fall, cuts, burns, or broken bones.

Burns and other injuries

The most common shock-related injury is a burn. Burns suffered in electrical accidents may be of three types:

- electrical burns
- arc burns and
- thermal contact burns

Electrical burns are the result of the electric current flowing through tissues or bone. The heat generated by the current flow through the body causes tissue damage. Electrical burns are one of the most serious injuries you can receive and should be given immediate attention.

Arc or flash burns, on the other hand, are the result of high temperatures near the body and are produced by an electric arc or explosion. They should also be attended to promptly.

Finally, thermal contact burns are those normally experienced when the skin comes in contact with hot surfaces of overheated electric conductors, conduits, or other energised equipment. Additionally, clothing may be ignited in an electrical accident and a thermal burn will result. All three types of burns may be produced simultaneously.

■ Information

National legislation

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

Agreements

Your union may have made agreements with your employer regarding the safe use of electricity. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture

See Articles 6 and 7 in Manual 6 for the employer's duties

■ Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements on the safe use of electricity.



Trade union action checklist

- ✓ Identify if you have a problem with electrical hazards by doing your own survey or questionnaire with workers that may be affected
- ✓ Do a special HS&E check that concentrates on electricity, using the information in this Fact Sheet
- ✓ Do a special HS&E check that concentrates on the information provided and the health and safety training of workers who work with electricity
- ✓ Speak to maintenance workers to see if there are special problems that they face
- ✓ Investigate the systems of work that have been laid down in the employer's health and safety policy and discuss whether they are adequate with your members
- ✓ Decide on the priorities with your members
- ✓ Ask your employer for a copy of risk assessments relating to electrical hazards. Remember that a risk assessment is required under ILO Convention No. 184 on Safety and Health in Agriculture
- ✓ Check the employer's training policy and practice for electrical work
- ✓ Ensure that your employer has competent personnel who work with electricity
- ✓ Ensure that the employer's safety policy and systems of work include procedures for preventing dangers from electricity

Fact Sheet 8: Enclosed and confined spaces

■ Background

Hazards

A confined space is anywhere that, because it is enclosed, gives rise to a risk of serious injury or death. Some places only become 'confined spaces' when they are being built, maintained or renovated or when workers are carrying out some other form of hazardous process.

Dangers can arise because of:

- a lack of oxygen
- poisonous fumes, welding fumes, gas or vapour
- drowning
- liquids and solids (for example, grain) which can suddenly fill the space or release gases into it
- fire or explosion
- residues in tanks or vessels or impregnating internal surfaces
- dust
- heat

There have been incidents with confined spaces on farms where more than one death has occurred. One worker has got into difficulty, and a second worker tries to rescue the first worker and is also overcome in the confined space.

Where are confined spaces found?

Confined spaces on farms are found:

- in produce stores such as grain/forage silos and bins
- in controlled atmosphere fruit and vegetable stores
- during well cleaning
- in chemical stores and tanks
- in pits such as grain elevator pits, slurry pits and chambers or vehicle inspection pits

■ Information

Health and safety law

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

Agreements

Your union may have made agreements with your employer regarding work in confined spaces. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture

See Articles 6 and 7 in Manual 6 for the employer's duties

■ Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements for work in confined spaces.

Prompting employer action

Employers should organise safe systems of work based upon the following principles:

- avoiding work in confined spaces wherever possible, by doing the work from outside
- using a risk assessment as a basis for precaution-taking when working inside is unavoidable
- providing competent people
- testing the atmosphere to make sure it can support life, and does not contain dangerous levels of gases. Slurry pits may continue to give off poisonous gases after testing
- ensuring the confined space is adequately ventilated before entry
- providing personal protective equipment, including breathing apparatus
- developing adequate emergency arrangements which will also safeguard rescuers before work starts
- ensuring that at least two workers are assigned to work in a confined space and that the role of a worker remaining outside the confined space is clearly defined
- providing rescue equipment, including harnesses and safety lines
- developing systems for contact with emergency services if something goes wrong



Trade union action checklist

- ✓ Identify if you have a problem with confined spaces by doing your own survey or questionnaire with workers that may be affected
- ✓ Do a special HS&E check that concentrates on confined spaces, using the information in this Fact Sheet
- ✓ Do a special check that concentrates on the information provided and the health and safety training of workers who may have to work in confined spaces
- ✓ Investigate the systems of work that have been laid down in the employer's health and safety policy and discuss whether they are adequate with your members
- ✓ Make sure that the policy states that worker HS&E representatives will be consulted in advance of work taking place in a confined space
- ✓ Decide on the priorities with your members
- ✓ Ask your employer for a copy of risk assessments relating to confined spaces. Remember that a risk assessment is required under ILO Convention No. 184 on Safety and Health in Agriculture
- ✓ Check the employer's training policy and practice for work in confined spaces
- ✓ Ensure that your employer has competent personnel dealing with work in confined spaces
- ✓ Ensure that the employer's safety policy and systems of work include procedures for work in confined spaces

Fact Sheet 9: Ergonomics

■ Background

What is ergonomics?

Ergonomics is the study of work in relation to the environment in which it is performed (the workplace) and those who perform it (workers). It is used to determine how the workplace can be designed or adapted to the worker in order to prevent a variety of health problems and to increase efficiency; in other words, to make the job fit the worker, instead of forcing the worker to conform to the job.

Without the application of ergonomic principles, tools, machines, equipment and workstations are often designed without due consideration being given to the fact that people are of all different heights, shapes and sizes, and have different levels of strength. Women workers have suffered particularly in this regard.

Hazards, injuries and ill health

For many workers, ergonomic problems may not be high on the list of priority health, safety and environmental problems they face. However, the large and increasing numbers of agricultural workers affected by poor work design make ergonomic issues important.

Often workers are given little choice and are forced to adapt to poorly designed work conditions, which can lead to serious injury to the hands, wrists, joints and back. In particular, injuries can result from:

- repeated use over time of vibrating tools and equipment
- whole body vibration from sitting in poorly designed tractor cabs and seats
- tools and tasks which require twisting hand or joint movements
- applying force in an awkward position
- applying excessive pressure on parts of the hand, back, wrists or joints
- working with the arms outstretched or over the head
- working with a bent back
- lifting or pushing heavy loads

What does ergonomics cover?

Ergonomics is a broad science encompassing the wide variety of working conditions that can affect worker comfort and health, including factors such as:

- lighting and temperature
- noise and vibration
- tool, machine and workstation design
- footwear and protective equipment
- work organisation and job design, including factors such as shift work, rest breaks, and meals

■ Information

Health and safety law

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

Agreements

Your union may have made agreements with your employer regarding ergonomics. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture

Article 9

This places an obligation upon States to ensure that machinery, equipment, personal protective equipment, appliances and hand tools comply with safety and health standards and be appropriately installed, maintained and safeguarded.

Manufacturers, importers and suppliers must comply and:

- provide adequate and appropriate information
- hazard warning signs in the official language (s) of the user country

Employers must ensure that workers receive and understand the safety and health information supplied by manufacturers, importers and suppliers.

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 6

Measures should be taken to ensure the appropriate selection or adaptation of technology, machinery and equipment, including personal protective equipment, taking into account local conditions in user countries and, in particular, ergonomic implications and the effect of climate.

■ Trade union action

Collective bargaining

Your union can use collective bargaining to overcome some of the limitations in your country's health and safety legislation. Encourage your union to develop agreements that tackle ergonomic hazards.

Basic ergonomic principles

It is generally most effective to examine work conditions on a case-by-case basis when applying ergonomic principles to solve or prevent problems. Sometimes even minor ergonomic changes in the design of equipment, workstations or job tasks can make significant improvements in worker comfort, health, safety and productivity. For example:

Hand tools

Hand tools should be of good quality and designed according to ergonomic requirements. In order to prevent health problems, hand tools should be designed so that they fit both the individual and the task. The following list provides some ergonomic guidelines:

- choose tools that allow the worker to use the larger muscles in the shoulders, arms and legs, rather than the smaller muscles in the wrists and fingers
- avoid holding a tool continuously in a raised position or gripping a heavy tool. Properly designed tools allow the worker to keep the elbows next to the body to prevent damage to the shoulder or arm. Additionally, properly designed tools do not require the worker to bend the wrists, stoop or twist
- make sure that hand tools are designed for women as well as men
- choose handles that are long enough to fit the whole hand. This will help to reduce uncomfortable pressure on the palm of the hand or on the joints of the fingers and hand
- do not use tools with spaces where fingers and skin can get caught
- choose double-handled tools, such as scissors, pliers or clippers. These should have a span that does not overstretch the hand
- do not select tools with contoured handles; they fit only one size of hand and put pressure on hands they do not fit
- make tool handles easy to grip. Handles should also have good electrical insulation and they should not have any sharp edges or sharp corners. Put soft plastic covers on handgrips to make them less slippery
- avoid using tools that force the wrist to bend or to be in an awkward position. Redesign tools so that the tool bends and not the wrist
- choose tools with an evenly balanced weight and make sure they are used in the proper position
- make sure tools are properly maintained
- tools should be appropriate for right or left-handed workers

Job design

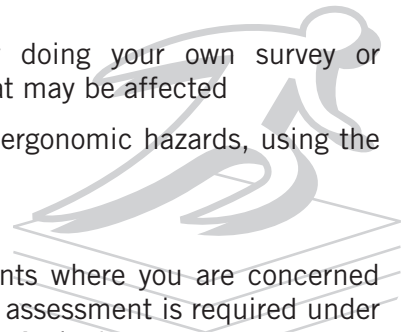
It is important to design jobs taking into consideration human factors. Well-designed jobs consider the worker's gender, mental and physical characteristics, as well as health and safety conditions. A well-designed job should do the following:

- allow the worker to vary the position of the body
- include a variety of mentally stimulating tasks
- allow the worker some decision-making latitude so she or he can vary the work activities according to personal needs, work habits and the workplace environment
- give the worker a sense of accomplishment
- provide adequate training to teach the worker what tasks are required and how to perform them
- provide adequate work/rest schedules which allow the worker enough time to complete tasks and to get sufficient rest
- allow an adjustment period for new job tasks



Trade union action checklist

- ✓ Identify if you have ergonomic problems by doing your own survey or questionnaire, or body mapping with workers that may be affected
- ✓ Do a special HS&E check that concentrates on ergonomic hazards, using the information in this Fact Sheet
- ✓ Decide on the priorities with your members
- ✓ Ask your employer for a copy of risk assessments where you are concerned about ergonomic hazards. Remember that a risk assessment is required under ILO Convention No. 184 on Safety and Health in Agriculture
- ✓ Ensure that your employer has competent personnel dealing with ergonomics
- ✓ Make sure that you and your members are consulted about any ergonomic problems and potential solutions
- ✓ Ensure that the employer's safety policy and systems of work provide a commitment to designing work on the basis of sound ergonomic principles



Fact Sheet 10: Falls

■ Background

Hazards

Falls may occur from heights or on the same level. Falls from the same level occur from slippery surfaces, uneven ground, poor lighting, tripping over objects or being pushed by a moving object.

One of the most common causes of accidents is falling from ladders or working platforms. In the case of bins, silos, barns and other storage structures, falls from heights most often occur from and in storage structures. The causes are unguarded roofs, floor openings, stairways, lofts and shafts, and climbing ladders or standing on raised work areas such as an unprotected platform. Falls from height may also result from climbing on or off the transportation unit (for example, wagons, carts and tractors).

■ Information

Health and safety law

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

Agreements

Your union may have made agreements with your employer regarding work in confined spaces. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture

See Articles 6 and 7 in Manual 6 for the employer's duties

■ Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements for the prevention of falls. Unions should be involved from the planning stage for new buildings and systems of work.

Prompting employer action

Employers should ensure that they devise safe systems of working to prevent falls at work. For example, if regular access is required, and there is a danger of falling from heights, fixed means of access should be installed. Protection against falls should include measures such as:

Buildings

- ensuring that causes of falls are eliminated at design stage
- the use of fixed means of access to heights
- installation of guard rails, toe-boards, cat-ladders or crawling boards on sloped roofs
- guarding of floor openings, lofts and shafts
- provision of secure fencing or other similarly effective measures to prevent people falling from edges
- fencing that consists of a top and lower guard rail, that is strong and stable, so that it can restrain any person liable to fall on or against it
- guarding temporary holes
- use of the standard rise and run of stairways, provision of handrails on both sides, and application of non-slip strips where necessary
- if a ladder is used as a regular means of access to a place of work, it should be replaced by fixed steps

Tanks, pits and silos

- adequate protection should be provided to prevent a person falling in
- secure covering, or fencing should be provided to a height of at least 1100mm above the highest point from which people could fall in

Bales – loading trailers and stacking

- provision of trailer floors that are in good condition with safe means of access such as hay ladders
- prohibiting workers from riding on the loads
- guarding the edges of stacks in buildings by fencing in the non-loading sides
- provision of ladders secured in place for access

Ladders

- avoiding the use of a ladder if there is a safer way of doing the job, for example, by a scaffold or working platform
- provision of permanent ladders, but preventing unauthorised use by locking off the bottom of the ladder, when it is not in use
- provision of handholds on permanent ladders, guard platforms and landings
- maintaining ladders, extensions and step ladders in good condition, with a regular inspection programme
- training programmes for workers in the use of ladders
- ensuring that ladders have firm footings and are never placed against fragile surfaces
- setting the ladder at the most stable angle, a slope of four units up to each one out at the base
- extension of at least one metre above the landing place or the highest rung in use, unless there is a suitable handhold to provide suitable support
- extending ladders should overlap by at least three rungs
- prevention of slipping, for example, by tying at the top, sides or foot
- prohibiting the use of ladders where there is danger from animals, moving vehicles, or electricity lines
- destroying home made or defective ladders

Floors and other means of access

- maintenance of floors in good condition, free from uneven surfaces, holes and accumulations of waste or slippery substances
- enclosure of processes or plant which may discharge or leak liquids and leaks to be contained or drained away



Trade union action checklist

- ✓ Identify if you have a problem with falls at work by doing your own survey or questionnaire with workers that may be affected
- ✓ Do a special HS&E check that concentrates on falls in the workplace, using the information in this Fact Sheet
- ✓ Do a special check that concentrates on the information provided and the health and safety training of workers who are at risk from falling
- ✓ Speak to maintenance workers to see if there are special problems that they face
- ✓ Investigate the systems of work that have been laid down to prevent falls at work, in the employer's health and safety policy, and discuss whether they are adequate with your members
- ✓ Decide on the priorities with your members
- ✓ Ask your employer for a copy of risk assessments relating to the hazards from falls. Remember that a risk assessment is required under ILO Convention No. 184 on Safety and Health in Agriculture
- ✓ Check the employer's training policy and practice for work that involves the risk of falling
- ✓ Make sure that you are consulted about potential work where there is a risk from falling
- ✓ Ensure that the employer's safety policy and systems of work include procedures for the prevention of falls

Fact Sheet 11: First aid

■ Background

Immediate first aid can:

- treat injuries
- reduce pain
- help injured people to make a quick recovery
- sometimes save lives

Neglecting or inefficiently treating an apparently trivial injury may lead to infection and ill health. All farms and plantations should have first aid facilities/equipment and trained providers of first aid.

■ Information

Health and safety law

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

Agreements

Your union may have made agreements with your employer regarding first aid. Check if there are any applicable agreements.

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 5

To give effect to Article 7 of the Convention, a set of measures on safety and health at the level of the undertaking should include:

- (c) measures to deal with accidents and emergencies, ***including first aid*** and access to appropriate transportation to ***medical facilities***;
- (d) procedures for the recording and notification of accidents and diseases.

Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements for first aid and medical treatment.

Prompting employer action

Employers should appoint a competent person to:

- take charge of first aid arrangements
- look after first aid equipment and facilities
- be available whenever people are at work
- provide a suitably stocked first aid container
- provide information to workers on first aid arrangements

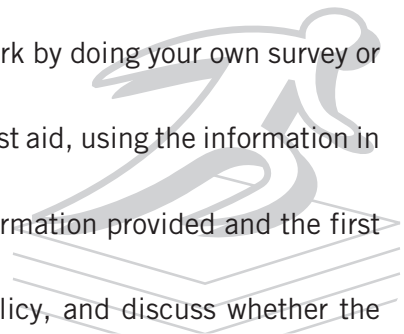
In agriculture, work may take place remote from first aid or medical services. Travelling first aid kits should be provided for remote work.

Some substances used in agriculture can have serious effects on health. All users and competent persons should be trained in the first aid measures to take in case of exposure.



Trade union action checklist

- ✓ Identify if you have a problem with first aid at work by doing your own survey or questionnaire with workers that may be affected
- ✓ Do a special HS&E check that concentrates on first aid, using the information in this Fact Sheet
- ✓ Do a special check that concentrates on the information provided and the first aid training of workers
- ✓ Investigate the employer's health and safety policy, and discuss whether the first aid provisions are adequate
- ✓ Decide on the priorities with your members
- ✓ Make sure that you are consulted about first aid provision
- ✓ Ensure that the employer's safety policy and systems of work include first aid procedures



Fact Sheet 12: Health and safety and women workers

■ Background

Why health and safety and women workers?

It is important to look at the question of women's occupational health and safety for a number of reasons:

- much less is known about the risks that women face
- in agriculture, many women are employed in precarious types of employment without adequate protection from the law or collective bargaining agreements
- legislation makes no distinction between women's and men's jobs, and many norms have been developed by men for men
- there are physical differences between men and women, that have an impact in the workplace
- most women have the major responsibility for unpaid work in the home, in addition to the paid shift in the workplace

Hazards

According to figures produced by the International Labour Organisation, 500 people die every day from work-related accidents or diseases. There are 270 million accidents, and 160 million cases of work-related diseases. Although the gender breakdown is unknown, women continue to suffer due to:

- stress
- manual handling
- repetitive strain injuries (RSI)
- violence and
- sexual harassment at work

Recently, US trade unionists organising strawberry pickers in California noted that owing to their exposure to pesticides, women are faced with:

- the risk of giving birth to disabled children
- miscarriages
- becoming sterile
- developing breast cancer

The Inter Press Service agency says that research has repeatedly proved that chemical substances and other toxins in the environment have a particularly devastating effect on women's health.

Information

Health and safety law

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

Agreements

Your union may have made agreements with your employer about the women's health and safety. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture

See Articles 6 and 7 in Manual 6 for the employer's duties

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 6

Measures should be taken to ensure the appropriate selection or adaptation of technology, machinery and equipment, including personal protective equipment, taking into account local conditions in user countries and, in particular, ***ergonomic*** implications and the effect of climate.

ILO Convention No. 184 on Safety and Health in Agriculture

Article 18

Measures shall be taken to ensure that the special needs of women agricultural workers are taken into account in relation to:

- pregnancy;
- breastfeeding; and
- reproductive health.

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraphs 10 and 11

Employers should provide:

- facilities for eating meals, and for nursing children in the workplace where practicable;
- separate sanitary and washing facilities, or separate use thereof, for men and women workers.

Measures should be taken to ensure assessment of any workplace risks related to the safety and health of pregnant or nursing women, and women's reproductive health.

ILO Convention No. 183 Maternity Protection

Article 2

1. This Convention applies to all employed women, including those in atypical forms of dependent work.

Article 3

Each Member shall, after consulting the representative organizations of employers and workers, adopt appropriate measures to ensure that pregnant or breastfeeding women are not obliged to perform work which has been determined by the competent authority to be prejudicial to the health of the mother or the child, or where an assessment has established a significant risk to the mother's health or that of her child.

Article 4

1. On production of a medical certificate or other appropriate certification, as determined by national law and practice, stating the presumed date of childbirth, a woman to whom this Convention applies shall be entitled to a period of maternity leave of not less than 14 weeks.

4. With due regard to the protection of the health of the mother and that of the child, maternity leave shall include a period of six weeks' compulsory leave after childbirth, unless otherwise agreed at the national level by the government and the representative organizations of employers and workers.

Article 5

On production of a medical certificate, leave shall be provided before or after the maternity leave period in the case of illness, complications or risk of complications arising out of pregnancy or childbirth. The nature and the maximum duration of such leave may be specified in accordance with national law and practice.

Article 8

1. It shall be unlawful for an employer to terminate the employment of a woman during her pregnancy or absence on leave referred to in Articles 4 or 5 or during a period following her return to work to be prescribed by national laws or regulations, except on grounds unrelated to the pregnancy or birth of the child and its consequences or nursing. The burden of proving that the reasons for dismissal are unrelated to pregnancy or childbirth and its consequences or nursing shall rest on the employer.

2. A woman is guaranteed the right to return to the same position or an equivalent position paid at the same rate at the end of her maternity leave.

Article 10

1. A woman shall be provided with the right to one or more daily breaks or a daily reduction of hours of work to breastfeed her child.
2. The period during which nursing breaks or the reduction of daily hours of work are allowed, their number, the duration of nursing breaks and the procedures for the reduction of daily hours of work shall be determined by national law and practice. These breaks or the reduction of daily hours of work shall be counted as working time and remunerated accordingly.

Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements to tackle women's health and safety in a gender sensitive way.

A gender sensitive approach

A traditional gender-neutral health and safety approach has failed to protect women from harm. Work has to be safe for everyone. It's not acceptable to have health and safety guidance and law which works just for men or only affects men's jobs. This can lead to discrimination in the following ways:

- ergonomically, in terms of assumed limb length, reach and so on
- muscle strength, especially in the use of hand tools
- manual handling, if there is no distinction between women and men
- chemical exposure, where many of the standards are based upon male bodies, and do not take account of "double exposure" where women may be exposed to the same chemicals at work and at home
- personal protective equipment (PPE), where improperly fitting PPE can be a significant cause of workplace injuries to women
- health and safety training, with women less likely to be trained than men

Prompting employer action

Safety policies should:

- include a general statement of intent to treat men and women equally
- provide details of how the employer will listen to women's concerns
- identify any hazards to which women and men are exposed separately
- indicate what will be done about risks which are specific to women

Risk assessments

Risk assessments should address women's needs, and include pregnancy, breastfeeding and reproductive health. Hazards affecting women (some may affect men as well) should be specifically addressed in risk assessments. These include:

- back strain and repetitive strain injury
- hazardous chemicals, physical and biological agents
- reproductive health hazards
- stress
- violence and sexual harassment
- work organisation and the impact of precarious work

Action plans

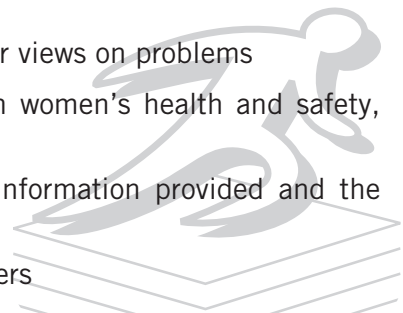
Following a risk assessment your employer must take steps to eliminate, minimise or control the risks. Unions should ensure that:

- they are consulted as well as women workers
- an action plan deals with the risks that women face
- an action plan specifies how women will be safer and healthier
- an action plan is communicated to women workers



Trade union action checklist

- ✓ Survey women at their workplace to identify their views on problems
- ✓ Do a special HS&E check that concentrates on women's health and safety, using the information in this Fact Sheet
- ✓ Do a special check that concentrates on the information provided and the health and safety training of women workers
- ✓ Decide on the priorities with your women members
- ✓ Check whether risk assessments cover the risks to women workers. Remember that a risk assessment is required under the ILO Convention No. 184
- ✓ Ensure that the employer's safety policy covers women's health and safety



Fact Sheet 13: Hours of work

■ Background

Working time There are a number of factors that are important in relation to working time. These include:

- the length of the working week
- overtime work which is very common in agriculture, especially during harvesting and other peak periods
- rest periods and breaks
- shift and night work
- holidays and leave

Hazards The number of hours at work and the way those hours are organised can significantly affect workers' health. Too much time spent at work can make workers exhausted and even increase the risk of accidents. Long working hours and the way working time is organised can result in:

- excessive strain and fatigue, both physical and mental
- increased stress
- poor quality of work and increased errors
- an increased number of accidents caused by fatigue
- sleeping difficulties
- lowering the activity of the body's immune system
- disturbance to family life and social activities

The negative effects of long hours can be made worse by:

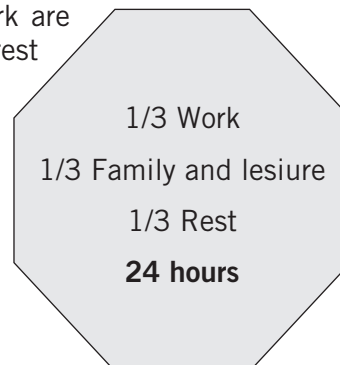
- extreme climatic conditions
- poor hygienic conditions
- malnutrition
- poor general health
- poor housing conditions
- long periods travelling to and from work

Time spent at work

It is essential that workers have free time for rest and leisure, and so excessive working hours should be resisted. Increased overtime working is at the expense of rest, family, leisure and can result in health problems.

Similarly, rest periods and breaks during work are important for a worker's health. Suitable rest periods and breaks should include:

- short breaks during working hours
- longer breaks for meals
- adequate daily or nightly rest
- adequate weekly rest
- paid holidays



■ Information

Health and safety law

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

Agreements

Your union may have made agreements with your employer about the working time and hours of work. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture

Article 20

Hours of work, night work and rest periods for workers in agriculture should be in accordance with national laws and regulations or collective agreements.

This is the first time in an ILO Convention that the connection between hours of work, rest periods, night work, and health and safety on the job has been made, reflecting new, modern thinking and research on issues which have been too often neglected in the past

ILO Convention No. 101 on Holidays with Pay

Article 1

Workers employed in agricultural undertakings and related occupations shall be granted an annual holiday with pay after a period of continuous service with the same employer.

Article 2

1. Each Member which ratifies this Convention shall be free to decide the manner in which provision shall be made for holidays with pay in agriculture.
2. Such provision may be made, where appropriate, by means of collective agreement or by entrusting the regulation of holidays with pay in agriculture to special bodies.

Article 3

The required minimum period of continuous service and the minimum duration of the annual holiday with pay shall be determined by national laws or regulations, collective agreement, or arbitration award, or by special bodies entrusted with the regulation of holidays with pay in agriculture, or in any other manner approved by the competent authority.

Other ILO standards

There are a number of ILO Conventions dealing with hours of work. For example:

- C 14 Weekly Rest (Industry) Convention, 1921
- C 47 Forty-Hour Week Convention, 1935
- C 171 Night Work Convention, 1990
- C 132 Holidays with Pay Convention (Revised), 1970

Even though some of them exclude agriculture, they can be useful for “borrowing” standards to use for bargaining.

■ Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country’s health and safety legislation. Encourage your union to develop agreements on working time and hours of work.

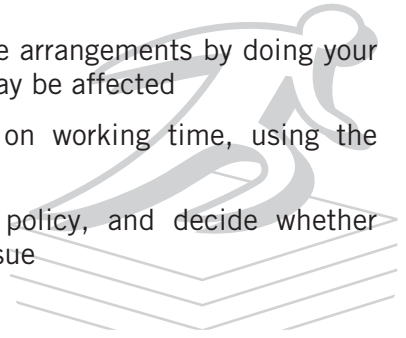
Key questions to ask

- Do daily hours of work leave enough time for rest and leisure?
- Are actual hours worked per week within a reasonable limit?
- Is a sufficient break provided for meals?
- Are there scheduled short breaks?
- Are weekly rest breaks adequate?
- Are annual holidays with pay provided and are they adequate?
- Are other forms of leave available to meet individual needs?



Trade union action checklist

- ✓ Identify if you have a problem with working time arrangements by doing your own survey or questionnaire with workers that may be affected
- ✓ Do a special HS&E check that concentrates on working time, using the information in this Fact Sheet
- ✓ Investigate the employer's health and safety policy, and decide whether working time is treated as a health and safety issue
- ✓ Decide on the priorities with your members
- ✓ Make sure that you are adequately consulted by your employer about working time
- ✓ Ensure that the employer's health and safety policy effectively address working time as a health and safety issue



Fact Sheet 14: Integrated Production and Pest Management (IPPM)

■ Background

What is Integrated Production and Pest Management (IPPM)?

IPPM is one of the main alternatives to reduce reliance on the use of synthetic chemical pesticides. IPPM emphasises the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms. IPPM is sometimes referred to by other names such as, for example, Integrated Pest Management (IPM), Integrated Pest Control (IPC), and Integrated Crop Management (ICM).

Differences between control by IPPM and control by chemicals

The attraction of chemical control by synthetic pesticides is that it seems to provide a rapid, neat and, for a very limited period, effective solution to pest problems. However problems soon build up in the form of pest resistance, secondary pests becoming major pests, and lower levels of natural biological control. This results in an increase in the number and frequency of sprays, and pesticides become a major factor in production costs. The extreme is a fall in yields and chemical costs spiralling upwards.

In contrast, an effective programme of IPPM is necessarily complex. It demands knowledge and understanding of local agro-ecosystems and functions of different organisms in fields, such as pests and natural enemies. Before any decisions on field management are taken, farmers and agricultural workers have to sample fields or orchards, counting the number of pests, and beneficial predators, parasites and pathogens (diseases) which control the pests, and measuring the development of the crop. The observations are analysed forming the basis for a decision on pest management. An intervention might be required only if major pest numbers are high and their natural enemy populations are low. IPPM is not aimed at elimination or annihilation of species, but at the reduction or maintenance of pest populations at a level below those causing economic injury and loss of money.

Unlike chemical control no two IPPM decisions to address a pest problem are likely to be identical. There can be a variety of ways to control major pests, depending on the nature of the pest and the ecological, environmental, climatic and social conditions in which it has become a problem. There is no one system of IPPM. It is a combination of techniques which can include cultivation methods, choice of cultivars, timing of planting, biological control, host plant resistance, cultural control, autocidal (sterile) insect control along with the use of chemicals such as pheromones or insect growth regulators which modify the behaviour of insect pests. The choice of which combination of techniques to use will

vary from farming system to farming system, from geographical and climatic location to location, and by socio-economic context.

Enhanced skills

IPPM requires greater levels of skill by farmers and/or agricultural workers than conventional pest control techniques such as routine pesticide application. Before any IPPM control measures are applied, growers, farmers or agricultural workers, the 'scouts', have to:

- sample fields or orchards, observing the number of pests, and natural enemies, plant development and other factors
- analyse the field situation and take decisions on what to do, based on a range of IPPM measures while avoiding chemical pesticide use wherever possible
- continue to monitor the crop regularly to assess the success of any control measures

■ Information

In the UN Food and Agriculture Organisation's (FAO) International Code of Conduct on the Distribution and Use of Pesticides (Revised Version 2003), "Integrated Pest Management (IPM) means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment. IPPM emphasises the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms".

The four key principles of IPPM, as it is now called, as laid down by the Global IPM Facility are:

1. Grow a healthy crop, and conserve a healthy soil
2. Conserve natural enemies – pests, parasites and pathogens
3. Observe the crop on a regular basis
4. Farmers, and agricultural workers, are the experts

The pesticides industry approach to IPPM

The pesticide industry says it is committed to IPPM as defined by the FAO International Code of Conduct. However the pesticide industry's approach to IPPM often constitutes a primary focus on the use of chemical pesticides. In general, industry promotes IPPM as '*integrated pesticide management*' rather than IPPM proper which aims to be an approach that reduces reliance on pesticides to the extent that is possible.

Economic, social and environmental benefits of IPPM

Some of the benefits include:

- pests are only controlled when they start to cause economic damage so overall control costs are reduced lowering production costs
- costly and harmful practices such as cosmetic or routine/calendar chemical pesticide spraying are eliminated or minimised
- pesticide use is reduced through complete elimination of chemicals ideally or through reduced frequency of spraying and/or lower dose rates
- where chemical control is used, less toxic, less persistent, and/or more selective chemicals/formulations, or even biological pesticides, replace more toxic, persistent and bio-accumulative substances
- absence of, or lower chemical pesticide residue in food crops resulting in improved food quality and safety
- natural controls by insect predators, parasites or (fungal/bacterial/viral) diseases (pathogens) and by crop competition are maximised
- elimination of, or reduced pesticide use, and use of less toxic, persistent and bio-accumulative materials means there is less risk to workers applying or exposed to chemical pesticides, as well as to nearby farming and rural communities, to watercourses, and to the environment in general
- crop damage from chemical pesticides is eliminated or reduced, including the problem of spray drift damaging neighbouring crops

■ Trade union action

Progress made

Integrated Production and Pest Management (IPPM) programmes in developing and developed countries have made significant progress towards reducing pesticide use and associated negative impact on health and the environment. It has helped make crop production more sustainable and improve overall plant protection methods, strategies and policies since the early 1980s.

What makes IPPM work?

Despite its complexity, IPPM can and does work including systems for small farmers. Farmers become better managers of their agro-ecosystems (including pest and production aspects) because of improved ecological understanding. However, there are certain prerequisites if it is to work and these include:

- government agricultural departments have to be committed to its principles and have the knowledge and capacity to advise on IPPM through their field extension services. Independent, non-pesticide industry advice is critical

- farmers and agricultural workers must somehow be convinced that IPPM can solve their pest problems. This is easier said than done, and requires that farmers and agricultural workers improve their knowledge and understanding of field ecology through training. The hardest thing to do when your crops are attacked by pests is to do nothing
- IPPM also benefits from research and high technology. For example, scientific services to research on local pest problems and how to adapt IPPM systems to local crops and conditions

Agricultural workers as IPPM 'experts'

Agricultural workers are, or could be, IPPM experts. Through work with the Global IPM Facility¹ in particular, agricultural trade unions have been accepted as stakeholders in IPPM by the Facility, both as users and promoters of this methodology. IPPM is relevant for workers as well as farmers.

Given appropriate information, training and technical support, workers can become IPPM practitioners, or further develop their skills and knowledge where they already use IPPM techniques. Workers and their trade unions can be advocates of IPPM in their workplaces through collective bargaining with their employers, in their communities, as well as nationally, regionally and internationally.

IUF Action

IUF is working with the Global IPM Facility to:

- research and put together information (for collective bargaining purposes) on IPPM systems for crops such as sugar cane, which can be used by trade unions
- train agricultural workers in IPPM techniques using Facility accredited trainers

Pilot Global IPM Facility-IUF training courses for union trainers on IPPM have been held in 2001 and 2003 with affiliated agricultural unions in Tanzania and Uganda. The union trainers are the ones running IUF's Global Pesticides Project in these countries. The Facility is adapting an IPPM training methodology which trains farmers through *Farmer Field Schools (FFS)*. In these local schools farmers, and now workers, study crop growth, learn to identify harmful pests and beneficial insects, estimate economic crop loss, and draw up their own agro-ecology plan to manage the crop in an integrated manner, ideally without pesticides.

¹ The Global Integrated Pest Management Facility is a joint programme of: the United Nations Food and Agriculture Organisation (FAO); United Nations Development Programme (UNDP); United Nations Environment Programme (UNEP); and the World Bank.

Fact Sheet 15: Manual handling

■ Background

Hazards

Manual handling includes lifting, putting down, pushing, pulling, carrying, moving or supporting a load by hand or bodily force. It is not just the weight of the load that can cause injury: the size and shape, the available grip, the way that the load is carried, where and how often it has to be carried, and over what distance, all play a part. Workers may suffer from musculoskeletal problems such as aches, strains and sprains as a result of manual handling. These can also be caused by other tasks which involve repetitive movements, force, unusual postures, prolonged pressure on a joint, badly organised working practices or work environment.

Effects on health can include:

- sprains or strains
- backache
- sciatica
- hernias
- arthritis
- swelling of the wrist, forearm, elbow and shoulder

■ Information

Health and safety law

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

Agreements

Your union may have made agreements with your employer about manual handling. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture

See Articles 6 and 7 in Manual 6 for the employer's duties

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 4. (2) (I)

This system should include the necessary risk assessment and, where appropriate, preventive and control measures with respect to the manual handling or transport of loads

ILO Convention No. 184 on Safety and Health in Agriculture

Article 11

1. The competent authority, after consulting the representative organisations of employers and workers concerned, shall establish safety and health requirements for the handling and transport of materials, particularly on manual handling. Such requirements shall be based on risk assessment, technical standards and medical opinion, taking account of all the relevant conditions under which the work is performed in accordance with national law and practice.

2. Workers shall not be required or permitted to engage in the manual handling or transport of a load which by reason of its weight or nature is likely to jeopardise their safety or health.

■ Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements for manual handling.

Prompting employer action

Employers should:

Avoid manual handling

- better work planning can remove the need for loads to be moved more than once. For example, deliver a bagged load directly on to a trailer to remove the need for handling
- carrying out tasks near the load rather than moving the load to the task
- full mechanisation of the task

Assess the risks from loads that:

- weigh over 25kg or are difficult to grip or handle
- need frequent lifting or lowering
- are difficult to manoeuvre, and/or involve twisting or lifting above shoulder height or from the floor

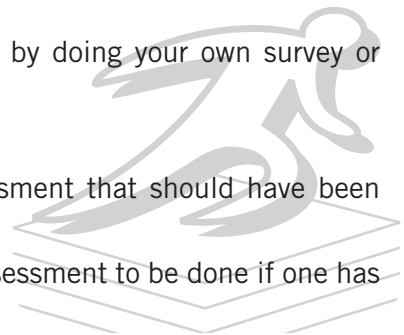
Reduce the risk of injury by:

- using mechanical assistance, for example, sack trucks
- changing the type of load, for example, 20kg bags rather than 50kg
- finding improved ways of handling, for example, reducing the risks from animal handling by properly designed cattle races and crushes
- providing training for workers where manual handling cannot be avoided



Trade union action checklist

- ✓ Identify if you have manual handling problems by doing your own survey or questionnaire of workers that may be affected
- ✓ Decide on the priorities with your members
- ✓ Ask your employer for a copy of the risk assessment that should have been carried out
- ✓ Ask your employer for a manual handling risk assessment to be done if one has not already been carried out
- ✓ Ensure that your employer is implementing a planned programme to eliminate or reduce the hazards of manual handling and that you and your members are consulted about it
- ✓ Ensure that your employer has competent personnel dealing with manual handling
- ✓ Consult your union officers if you think that members' health has been damaged and that they may be entitled to compensation



Fact Sheet 16: Noise

■ Background

Intensity

Intensity of sound provides a measure of the amount of energy that vibrating air particles deliver to the ears. The amount of sound energy can vary enormously. Painful sound is about 10 million-million times as intense as the quietest sound that can be heard. Because a scale of this magnitude would be impossible to handle, a logarithmic scale is used for measuring sound intensity, in units called decibels (dB).

When noise is measured at work, emphasis is normally given to the frequencies that have most effect on the human ear. This is done by adjusting the noise meter to take more notice of these frequencies. The scale used is called the 'A weighted decibel scale' or dB(A). Most noise meters and survey reports will be based on the dB(A) scale.

Hazards

Noise is probably the most widespread and underestimated of industrial hazards. There is a hundred years of knowledge that workplace noise can cause deafness and associated conditions such as tinnitus (ringing in the ears). Despite this, millions of agricultural workers are exposed to noise levels which can cause permanent noise-induced hearing loss. For example, noise from:

- tractors
- livestock – especially pigs, when they are indoors
- grain dryers
- guns
- machinery
- tools in a workshop
- compressors and generators

Occupational Deafness

There is a risk of hearing damage from exposures upwards of 80 dB(A). As a guide, if you cannot hear a normal conversation clearly when you are two metres away from the speaker, the noise level is likely to be around 85dB(A) or higher. If you cannot hear someone clearly when you are about one metre away, the level is likely to be around 90dB(A) or higher.

For noise that is above 80dB(A) and is continuous, the sound energy transmitted to the hair cells of the inner ear is so great that they adapt by raising their threshold of response, shifting their field of sensitivity upwards and no longer responding to very soft sounds. This phenomenon is known as temporary threshold shift and its extent depends on the intensity of noise, its duration and to some extent on its frequency composition. *Temporary hearing loss* is most noticeable when starting on a noisy job.

Recovery from temporary hearing loss usually takes a few hours or at most a couple of days if the noise exposure has been severe.

People working in conditions noisy enough to induce temporary hearing loss can expect *permanent hearing loss* to the same degree after about ten years of exposure to these conditions. Loud continuous noise rarely hurts the ear-drum of the little bones of the middle ear; but it damages the sensitive hair cells in the inner ear. This damage is irreversible and the cells cannot be replaced.

Noise not only damages hearing sensitivity but can also give rise to tinnitus, a disturbing 'ringing in the ear', which is actually the echo of our own hearing mechanism. This usually persists all the time and is especially troublesome at night when it can prevent sleep. In people with normal hearing it will get drowned out, but as deafness sets in the echo becomes tormenting.

The effects of noise

Even a slight impairment of hearing may result in a significant and irreversible reduction in the quality of life. Hearing loss cuts its victim off from other people, social interaction becomes more and more of a strain, and family life becomes difficult.

High noise levels also produce stress, which can contribute to circulatory problems, digestive problems, psychological disturbances and symptoms such as nervousness or sleeplessness.

■ Information

Health and safety law

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

Agreements

Your union may have made agreements with your employer about the prevention of noise hazards. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture

See Articles 6 and 7 in Manual 6 for the employer's duties

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 4. (2) (f)

This system should include the necessary risk assessment and, where appropriate, preventive and control measures with respect to noise and vibration

■ Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements for protection against noise at work.

Prompting employer action

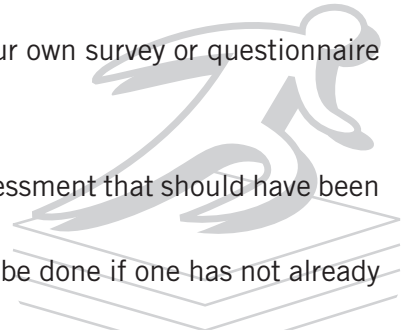
Protection against noise is best achieved by controlling it at source. To reduce exposure employers should:

- choose quiet machines or processes when selecting production methods
- enclose noisy machines or processes
- fit silencers on exhaust systems
- reduce the need to work in intensive animal housing at feeding times by changing the feeding regime or putting controls on the outside or in a protected area
- reduce the duration of exposure by job rotation
- provide personal hearing protection where prevention and control methods have not reduced workers' exposure sufficiently



Trade union action checklist

- ✓ Identify if you have a noise problem by doing your own survey or questionnaire of workers that may be affected
- ✓ Decide on the priorities with your members
- ✓ Ask your employer for a copy of the noise risk assessment that should have been carried out
- ✓ Ask your employer for a noise risk assessment to be done if one has not already been carried out
- ✓ Ensure that your employer is implementing a planned, noise prevention and reduction programme and that you and your members are consulted about it
- ✓ Seek an agreement with your employer for an 85dBA noise control level for an 8 hour working day; and a maximum noise level for new plant and machinery of 80dBA
- ✓ Ensure that your employer has competent personnel dealing with noise
- ✓ Where hearing protection is needed seek an agreement on the arrangements for selection and fitting, including a trial range of equipment and consultation with worker HS&E representatives and workers; arrangements for inspection, maintenance, cleaning, storage and replacement; information and training for workers on noise hazards; and a target date for phasing out hearing protection where possible
- ✓ Consult your union officers if you think that members' hearing has been damaged and that they may be entitled to compensation



Fact Sheet 17: Personal Protective Equipment (PPE)

■ Background

PPE – a last resort

In many other sections of this IUF manual, there have been descriptions about the ways that employers should identify and assess risks with a view to preventing and/or reducing them. There should be a hierarchy of prevention and control measures – starting with prevention of the risk, and if this is not possible, technical/engineering controls, safe systems of work and information/training should be used instead. Personal protective equipment (PPE) should only be used as a last resort.

Unfortunately, some employers encourage workers to use personal protective equipment without ever considering the introduction of prevention and control measures that could eliminate the use of PPE. This leads to a number of problems:

- PPE protects only the person wearing it, whereas measures controlling the risk at source can protect everyone at the workplace
- theoretical maximum levels of protection are seldom achieved with PPE in practice and the actual level of protection is difficult to assess
- protection is often ineffective because the PPE is not suitable, incorrectly fitted, not properly maintained, and may be used improperly
- PPE may restrict the wearer by limiting mobility or visibility, or by requiring additional weight to be carried. As well as the health and safety problems that this may cause, it can also lead to a ‘blame the worker’ culture when the PPE is discarded because of the discomfort that it can cause
- using PPE in a hot climate can be very uncomfortable for the worker. For example, using a full-face mask and body protection in full sunshine during the hot season can be almost impossible. It can result in dehydration, headaches and even fainting

Types of PPE

Different types of PPE include:

- helmet or head-protector
- hearing protectors such as ear-plugs or ear-muffs
- eye-protectors such as goggles and face shields
- breathing masks with different types of filters
- gloves of different material
- safety footwear
- protective aprons, overalls or clothing
- wet weather protective clothing
- safety belts and life-lines

Hazards

Even where technical/engineering controls, safe systems of work and other techniques have been applied, it is possible that some hazards might remain. These hazards may lead to injuries to the:

- lungs, for example, from breathing in contaminated air
- head and feet, for example, from falling materials
- eyes, for example, from flying particles or splashes of corrosive liquids
- ears and hearing from noise
- skin, for example, from contact with corrosive materials
- body, for example, from extremes of heat or cold

Sometimes, PPE is needed in these cases to reduce the risks, but only to supplement the other risk control measures already put in place.

■ Information

Health and safety law

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

Agreements

Your union may have made agreements with your employer about the provision of PPE. Check if there are any applicable agreements.

ILO Convention No. 184 Safety and Health in Agriculture

See Articles 6 and 7 in Manual 6 for the employer's duties

ILO Recommendation 192 on Safety and Health in Agriculture

Paragraph 5

To give effect to Article 7 of the Convention, a set of measures on safety and health at the level of the undertaking should include:

- (a) occupational safety and health services;
- (b) risk assessment and management measures in the following order of priority:
 - (i) elimination of the risk;
 - (ii) control of the risk at the source;
 - (iii) minimisation of the risk by such means as the design of safe work systems, the introduction of technical and organisational measures and safe practices, and training; and
 - (iv) in so far as the risk remains, provision and use of personal protective equipment and clothing, at no cost to the worker

Paragraph 7. (2)

In particular, preventive and protective measures to be taken at the level of the undertaking should include: a) adequate personal protective equipment and clothing, and washing facilities for those using chemicals and for the maintenance and cleaning of personal protective and application equipment, at no cost to the worker

■ Trade union action

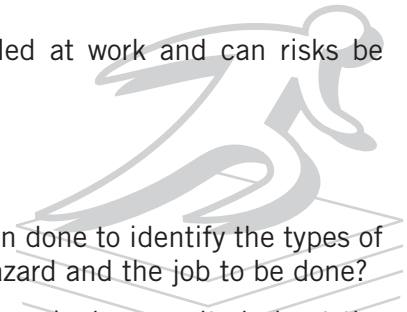
Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements for PPE.



PPE checklist

- ✓ Are health and safety risks adequately controlled at work and can risks be eliminated or reduced without using PPE?
- ✓ Is PPE used only as a last resort?
- ✓ Is PPE provided free of charge?
- ✓ Where PPE is necessary, has an assessment been done to identify the types of PPE which are suitable to protect against the hazard and the job to be done?
- ✓ Are worker HS&E representatives and workers genuinely consulted about the choice of PPE?
- ✓ Do workers have the opportunity to try out different types of PPE?
- ✓ Is the PPE suitable and provided free of charge?
- ✓ Does the PPE comply with quality standards?
- ✓ Is the PPE appropriate for the risks involved and the conditions at the place where exposure to the risk may occur?
- ✓ Does the PPE prevent or adequately control the risks involved without increasing the overall level of risk?
- ✓ Can the PPE be adjusted to fit the wearer correctly?
- ✓ Is the PPE appropriate for women workers?
- ✓ Has the state of health of those wearing the PPE been taken into account?
- ✓ Have the needs of the job and demands it places on the wearer been considered, for example, physical effort and the need to communicate?
- ✓ If more than one item of PPE is being worn, are they compatible?
- ✓ Is there a system of regular maintenance?
- ✓ Is appropriate storage provided for PPE?
- ✓ Is information, instruction and training provided for workers?
- ✓ Do workers know how to use PPE properly?
- ✓ Is there adequate supervision to ensure proper use of PPE?
- ✓ Is there a procedure for reporting loss or defects in PPE?
- ✓ Are worker HS&E representatives and members involved in decisions about the use of PPE?





Trade union action checklist

- ✓ Identify if you have a problem with PPE by doing your own survey or questionnaire with workers that may be affected
- ✓ Do a special HS&E check on PPE with the checklist above
- ✓ Do a special check that concentrates on the employer's assessments of the suitability of the PPE being used, and check whether the assessments are gender sensitive
- ✓ Do a special check that concentrates on the information provided and the health and safety training of workers who use PPE
- ✓ Investigate the systems of work that have been laid down in the employer's health and safety policy and discuss whether they are adequate with your members
- ✓ Decide on the priorities with your members
- ✓ Check the employer's training policy and practice for PPE
- ✓ Ensure that your employer has competent personnel dealing with PPE
- ✓ Make sure that you are consulted before new PPE is brought into the workplace
- ✓ Ensure that the employer's safety policy and systems of work address the use of PPE

Fact Sheet 18: Transport at work

■ Background

Hazards

In agriculture, many injuries are caused by overturning tractors/vehicles, being struck by a moving vehicle, and falling under a moving vehicle when trying to mount or dismount from this vehicle. Serious and fatal injuries are common, and the incidents involve drivers, other workers and pedestrians. Other hazards include those from lifting operations; unsuitable vehicles being used to transport workers and others; people being struck by falling objects when products are being transported; whole body vibration; ergonomic hazards; and contact and entanglement with power take off shafts. Children are particularly at risk from transport in the agricultural environment.

■ Information

Health and safety law

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

Agreements

Your union may have made agreements with your employer about the prevention of transport hazards. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture

See Articles 6 and 7 in Manual 6 for the employer's duties

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 4. (2)

This system should include the necessary risk assessment and, where appropriate, preventive and control measures with respect to:

- k) the use of machinery and equipment, including personal protective equipment;
- l) the manual handling or transport of loads

ILO Convention No. 184 on Safety and Health in Agriculture

Article 10

Agricultural machinery and equipment shall:

(a) only be used for work for which they are designed, unless a use outside of the initial design purpose has been assessed as safe in accordance with national law and practice and, in particular, shall not be used for human transportation, unless designed or adapted so as to carry persons;

(b) be operated by trained and competent persons, in accordance with national law and practice.

■ Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements for workplace transport.

Prompting employer action

Employers should ensure that:

- tractors and machines are properly equipped and maintained, especially brakes, steering and tyres
- drivers are properly trained and unauthorised people are not allowed to drive
- vehicles and pedestrians are separated where possible
- vehicles designed to carry persons are stationary when workers are mounting/dismounting from them
- loads are stable and secure
- drivers are protected from falling objects
- rollover protective structures are fitted if there is a risk of overturning
- vehicles and equipment are checked daily with faults repaired promptly, and maintained properly with particular emphasis on braking systems
- passengers are not allowed to ride in vehicle cabs unless they are sitting in a passenger seat
- all lifting equipment is thoroughly examined and tested regularly by a competent person
- safe working loads are marked on lifting equipment
- overload indicators are in working order

Power take-off shaft guards should be:

- made to a recognised standard
- the correct size and length for the shaft
- a non-rotating type
- properly used and maintained
- supported when not connected
- safe from damage by livestock etc.



Trade union action checklist

- ✓ Identify if you have a problem with workplace transport by doing your own survey or questionnaire with workers that may be affected
- ✓ Do an HS&E check on workplace transport, using the information above
- ✓ Do a special check that concentrates on the employer's risk assessments of workplace transport
- ✓ Do a special check that concentrates on the information provided and the health and safety training of workers who drive vehicles
- ✓ Investigate the systems of work that have been laid down in the employer's health and safety policy and discuss whether they are adequate with your members
- ✓ Decide on the priorities with your members
- ✓ Ensure that your employer has competent maintenance personnel for dealing with workplace transport
- ✓ Make sure that you are consulted before new workplace transport is brought into the workplace
- ✓ Ensure that the employer's safety policy and systems of work address workplace transport

Fact Sheet 19: Voluntary initiatives on health, safety and environment, including codes of conduct

■ Background

Voluntary initiatives, such as codes of conduct are designed to stimulate improvements in the performance of enterprises in respect of health safety and environment and other issues. They are increasingly seen as a new policy instrument and management tool to help tackle health safety & environment problems. Not only industry but also governments promote them. Trade unions are also taking an increased interest in these voluntary initiatives and discussing their roles within them.

What are voluntary initiatives?

They can be described as “commitments voluntarily made by companies, associations or other entities that put forth standards and principles for the conduct of business activities in the market place.” The concerned parties set their own targets and often do their own monitoring and reporting; but they cannot be effective without a sound government regulatory and policy framework and public involvement. The contents of such initiatives are based on international instruments such as International Labour Standards based upon tripartite meetings. The voluntary initiatives are dependent upon:

- a market-based approach to encourage behavioural change that is not dependent on regulation
- providing opportunities to stakeholders to have access to information on health safety and the environment
- improving partnership, dialogue and cooperation among the parties
- changing the attitude of the public towards the chemical industry

The limitations of voluntary initiatives

Limitations include:

- they have no disciplinary measures for non-compliance
- they are only successful when the producers are convinced to change their actions
- they lack transparency and may fail to protect the third party rights
- the credibility of self monitoring and reporting is doubtful

Why voluntary Initiatives or codes of conduct?

The chemical industry has been a leader in promoting codes of conduct due to its need to improve public perception of its performance on occupational health & safety, and pollution control and protection of the environment. The industry suffers from a poor public image and low levels of public confidence owing to increased chemical pollution in many parts of the world.

Also poor legislation, non-enforcement or non-existence of laws and regulatory bodies on health safety and environment in many of the developing countries has prompted civil society, especially in the north, to make companies accountable for social and environmental impact of their activities. As a consequence, industry fears increased government and civil society complaints, which costs industry both financial and market loss.

■ Information

The implementation process

The implementation of codes depends on the participation of stakeholders including workers (trade unions), employers, the chemical industry and other associations. To function effectively, codes will require co-operation and flexibility within the supply chain based on networks of different actors. The relative position of power between these groups will also play an important part in how codes operate in reality. The concerned stakeholders should be full partners at the relevant decision making levels, that is, companies, trade unions and NGOs.

Monitoring and verification

Codes are broad statements of commitment rather than operational documents. Within the framework of codes, enterprises commit themselves to assess codes through monitoring and verification. This will involve various stakeholders linking the commercial & social, international & local. It is carried out by technical persons through data collection, site visits and interviews. The process also needs to ensure impartiality, accountability and transparency, which companies or auditors alone cannot provide. Without the involvement of stakeholders, the poor conditions are unlikely to be exposed. So far, different methods of monitoring and independent verification are being used. These include:

- internal monitoring of the relevant company
- external monitoring by conventional audit firms
- verification by academics
- verification by Trade Unions and NGOs

Monitoring can be announced or unannounced. Trade unions monitor workplaces to bring benefit to workers. It is not the responsibility of trade unions to monitor or verify, but they should be regularly consulted as part of the monitoring and verification process.

■ Trade union action

Codes of conduct are often about labour practices and therefore cannot be ignored by trade unions. Trade unions have demanded for a long time that companies, and especially transnational corporations (TNCs) assume responsibility for their international activities. Therefore, codes can be used by trade unions to:

- promote international labour standards and frameworks for responsible corporate behaviour
- improve collective bargaining
- improve health, safety and environmental conditions
- help workers form or join trade unions
- support organising activities
- commit companies publicly to respect the right to organise and collectively bargaining
- build a system of international social justice and industrial relations

The challenge for trade unions is to ensure that codes promote freedom of association and the right to collective bargaining, but are not substitute codes for these basic rights. The contents of codes should always contain provisions respecting the right of the workers to form or join trade unions and collective bargaining. These rights enable the workers to protect their other rights and interests including health, safety and the environment.

An example of a code of conduct

The IUF has been involved in the International Code of Conduct for the Cut Flower Industry. The contents are based on ILO standards, human rights and environmental standards. These include:

- Freedom of Association and Right to Collective Bargaining
- Equality of Treatment
- Living Wage
- Working Hours
- Health and Safety
- Pesticides and Chemicals
- Protection of the Environment
- Security of Employment
- No Child Labour
- No Forced Labour

Fact Sheet 20: Welfare and accommodation

■ Background

Welfare facilities and accommodation are particularly important for agricultural workers. In addition, many agricultural workers live where they work, on plantations and on farms. Consequently, their working environment is not separated from their living conditions. Equally, workers' families often live close to or on the farms and plantations. They may be exposed to similar risks to workers without even realising it, and may become ill as a result.

It is important under these circumstances, for trade unions to be interested in:

- the conditions under which their members and members' families live
- the impact of the working environment and welfare facilities upon workers and their families

Unions should make sure that employers extend HS&E issues beyond the confines of work to the living places of these categories of workers and their families/communities.

■ Information

Health and safety law

There is a wide diversity of approaches in national legislation. Check the summaries provided by your union educator of applicable laws in your country.

Agreements

Your union may have made agreements with your employer about welfare and accommodation. Check if there are any applicable agreements.

ILO Convention No. 184 on Safety and Health in Agriculture

Article 19

National laws and regulations or the competent authority shall prescribe, after consultation with the representative organisations of employers and workers concerned:

- (a) the provision of adequate welfare facilities at no cost to the worker; and
- (b) the minimum accommodation standards for workers who are required by the nature of the work to live temporarily or permanently in the undertaking.

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 10

To give effect to Article 19 of the Convention, employers should provide, as appropriate and in accordance with national law and practice, to workers in agriculture:

- (a) an adequate supply of safe drinking water;
- (b) facilities for the storage and washing of protective clothing;
- (c) facilities for eating meals, and for nursing children in the workplace where practicable;
- (d) separate sanitary and washing facilities, or separate use thereof, for men and women workers; and
- (e) work-related transportation.

■ Trade union action

Collective bargaining

Your union can use collective bargaining to overcome any limitations in your country's health and safety legislation. Encourage your union to develop agreements welfare and accommodation.

Checking the housing and living environment

When you check the working, housing and living environment consider:

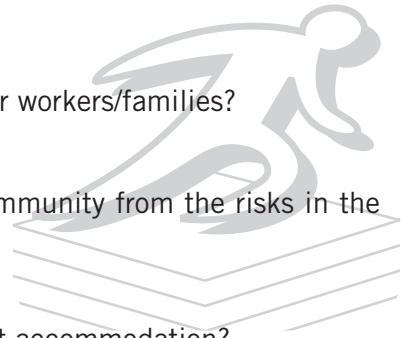
- the safe supply and maintenance of electricity
- safe drinking water
- lighting
- proper ventilation
- sufficient space to prevent overcrowding
- chimneys to take away smoke from fires
- eating facilities
- drainage
- safe flooring
- disposal of garbage
- pits that are covered
- washing facilities
- weed control
- safe and healthy sanitation
- hazardous re-use of chemical containers
- pesticides in kitchens and under beds
- work related transport



Trade union action checklist

Here are some of the key points to check:

- ✓ what does the CBA say about accommodation for workers/families?
- ✓ what does the CBA say about welfare facilities?
- ✓ what does the CBA say about protecting the community from the risks in the working environment?
- ✓ does the CBA need to be improved?
- ✓ what does the employer's HS&E policy say about accommodation?
- ✓ what does the employer's HS&E policy say about protecting the community from work hazards?
- ✓ if the policy or CBA says nothing on these issues, what is the practice?
- ✓ who is responsible for ensuring that the living conditions of workers are safe?
- ✓ are trade unions involved in decisions affecting the housing and living environment on the farm/plantation?
- ✓ what facilities are available
 - recreation/leisure facilities?
 - toilets?
 - safe drinking water?
 - schools?
 - transport?
 - hospital/clinics/first aid?
- ✓ does the employer pay for medical and school facilities?
- ✓ do families of farm workers live on the farm/plantation and are they protected against risks?
- ✓ do families experience similar ill health to workers because they are exposed to similar hazards? For example, breathing in harmful substances such as pesticides, or drinking water contaminated with pesticides.
- ✓ does your employer comply with local public health regulations?





Manual 5:

PESTICIDES AND HEALTH, SAFETY AND THE ENVIRONMENT



Introduction

Working with pesticides is dangerous. The chemicals chosen to kill pests are selected because their toxic properties make them efficient at poisoning unwanted plants, insects, rodents and so on. These same properties make them potentially harmful to humans as we share many of the same chemical pathways as other natural organisms. All chemicals can be poisonous and cause injury or death – there are no safe substances. Like most other chemicals, pesticides which can enter the body directly or indirectly have the potential to cause both acute and chronic injury to human health. They can harm worker and public health as well as wildlife and the general environment.

Although employers, pesticide industry sellers and advisors, and even government advisors may tell you the opposite, in practice, there will always be a degree of risk attached to the use or other exposure to pesticides.

The reality is that many agricultural workers are still forced to use, or are exposed to, pesticides as an everyday part of their job. Pesticides present their greatest danger when being used or there is close exposure to them. So in this section, we look at the hazards that can occur before, during, and after pesticide use, and what practical precautions should be taken. Always remember to look for alternatives to pesticide use to prevent risks.



Aims

Manual 5 consists of course materials that will help participants to:

- identify health, safety and environmental problems (HS&E) caused by pesticides
- involve members and develop their awareness about pesticides
- develop a trade union approach to pesticides
- use information and the law to track down information about pesticides and know how to use it effectively
- improve health and safety – by proposing plans for identifying the hazards of pesticides, preventing pesticide risks and proposing alternatives
- develop the skills needed to tackle pesticide hazards and risks including collective bargaining agreements on HS&E and using the law

About this section

This section will help us to:

- find out what our members think about pesticides
- identify pesticides that are used in our workplaces
- ensure that our work on pesticides is relevant to our workplaces

■ Obtaining members' views

It is essential that we effectively represent the views of our members. Without their support we can become isolated and unable to tackle the hazards from pesticides. To win their support, members have to be informed and involved by worker HS&E representatives. We can do this by:

- listening to what they have to say about pesticide hazards
- convincing them of the dangers where the risks may not be obvious
- developing their awareness about pesticides and alternatives
- identifying the employer's obligations to prevent or control the hazards and risks from pesticides
- working collectively with them to ensure that employers implement high standards



Activity – Members' survey

AIMS

To help us to:

- talk to our members
- obtain members' views and other information about pesticides
- ensure that the course is relevant to our workplaces



TASK

1. Before you come on the course, have a short discussion with a cross-section of your members. Make a note of their answers to the following questions, and bring your notes along to the course.
 - What pesticides do they work with, or what pesticides are they exposed to?
 - Do they have any concerns about the way pesticides are used?
 - Do they think that pesticides cause them ill health? If so what are the symptoms?
 - Do they think that pesticides are necessary?
 - What training and information have they received about pesticides?
2. Try to obtain information that you think will be helpful on the course. For example:
 - labels and data sheets for pesticides that are being used at the workplace
 - any collective bargaining agreements relating to pesticide use
 - documents relating to pesticides that have been developed by your employer, for example, risk assessments, safe systems of working, prevention or control strategies and so on
 - joint worker/union – management safety committee minutes where the use of pesticides have been discussed
 - records of ill health caused by pesticide exposure
 - any other useful information

We will discuss what you have found out on the first session of your course.

■ Pesticide hazards and risks in the workplace and environment

About this section

This section will help us to:

- share our views and members' views about pesticide hazards and risks
- develop a trade union approach to pesticides
- consider the impact of pesticides upon our health and the environment



Activity – What do you and your members think?

AIMS

To help us to:

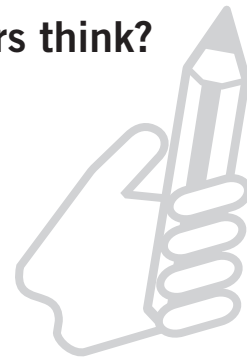
- discuss members' views on pesticides
- share our own views on pesticides

TASK

In your small group:

1. Discuss what your members said about pesticides in the members' survey, and any similarities and differences in your own views
2. Prepare a list of information that you obtained from the workplace

Elect a spokesperson to report back



What are pesticides?

“Pesticide means any substance or mixture of substances intended for preventing, destroying or controlling any pest, including vectors of human or animal disease, unwanted species of plants or animals causing harm during or otherwise interfering with the production, processing, storage, transport, or marketing of food, agricultural commodities, wood and wood products or animal feedstuffs, or substances which may be administered to animals for the control of insects, arachnids or other pests in or on their bodies. The term includes substances intended for use as a plant growth regulator, defoliant, desiccant, or agent for thinning fruit or preventing the premature fall of fruit, and substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport”.

Source: FAO International Code of Conduct on the Distribution and Use of Pesticides, Revised Version 2003

The term 'pests' is used in a broad sense to include animals, plants, fish, as well as insects and insect-type pests, fungi and micro-organisms. Many leaflets and books talk of fungicides, herbicides, insecticides, and the other classes of pesticides as though they were separate categories of chemicals when, in fact, they are *all types of pesticides*. Pesticides are often referred to by other names such as agrochemicals, crop protection products or plant protection products.

The vast majority of pesticides used today are synthetic, manufactured chemicals specifically developed for their poisonous toxic qualities and properties to kill unwanted forms of life. A small number of pesticides, referred to as biopesticides, are based on naturally occurring micro-organisms (bacteria, fungi, viruses and mycoplasmas) and chemical extracts from plants, such as pyrethrum and derris (rotenone). These can be used as alternatives to chemical pesticides.

Pesticides based on genetically modifying natural micro-organisms (GMOs) are now being rapidly developed along with genetically modified crops and animals. The need for GMO pesticides and their safety to humans and the environment are surrounded by controversy. In this ILO-IUF Manual, GMO pesticides are *not* treated as a safer alternative to chemical pesticides.

Classification of pesticides

The World Health Organisation's (WHO) Recommended Classification of Pesticides by Hazard is widely recognised and used by governments worldwide. It classifies pesticides as follows:

AC	Acaricide (for mite control)
AP	Aphicide
B	Bacteriostat (soil)
FM	Fumigant
F	Fungicide, other than for seed treatment
FST	Fungicide, for seed treatment
H	Herbicide
I	Insecticide
IGR	Insecticide growth regulator
Ix	Ixodicide (for tick control)
L	Larvicide
M	Molluscicide (for slug control)
MT	Miticide
N	Nematocide (for eelworm control)
O	Other use for plant pathogens
PGR	Plant growth regulator
R	Rodenticide
RP()	Repellant (species)
-S	Applied to soil – not used with herbicides/PGRS
SY	Synergist

Pesticides kill

Pesticides (the suffix ‘-icide’ means *killer*) are poisons designed to kill or control “pests”. In addition to their inherent toxicity, many pesticides have other undesirable properties. As the vast majority of pesticides are manufactured, synthetic compounds – which do not exist naturally – there are often no natural organisms which have evolved to break down these poisons into less harmful substances.

As a result, many pesticides are also persistent in the human body, soils and water, and bioaccumulative in food chains and the environment. They are one of the few groups of chemicals deliberately spread in the agricultural workplace and the general environment. These pesticides cross national boundaries, being transported through both air and sea, and accumulate in the environment, particularly in colder climates, as they break down more slowly at lower temperatures. Their persistence and ability to accumulate in body fat also means there are traces in most human beings and all manner of wildlife, even in isolated parts of the globe (far away from their original point of use). For example, levels of persistent organochlorine pesticides (e.g. DDT) – in excess of World Health Organisation safety limits – are found in the breast milk of Inuit women in the Arctic.

There is no such thing as ‘safe use’ of pesticides, only sound management.

Information on pesticides

Workers often have difficulty in finding out about the pesticides they use or are exposed to and the prevention and control measures needed. The range of pesticide products can be bewildering and the same chemical is often referred to by a variety of terms which can be very confusing.

Later in this Manual, there are specific materials that are designed to help you and your members find out and understand the information that you need to track a pesticide in order to prevent or minimise the risks. We will look at:

- the main ways of classifying pesticides in more detail
- what is in a can or packet
- formulation, labelling, product safety data sheets, risk assessments, and other sources of information which are vital for workers to find out about a pesticide

Where are pesticides used?**Agriculture**

Commercial agriculture/horticulture is the main area of use of pesticides. The more intensive the agricultural production, the greater the use of pesticides. The control of diseases, insects and weeds in agricultural crops is the prime objective, but pesticides also play an important role in livestock, poultry and fish farm production, as well as crop and fibre storage.

In horticulture, high value produce, combined with the need for quality, often means intensive, programmed pesticide use and it is no accident that pesticide resistance problems develop most rapidly in glasshouses and polythene tunnels. The use of persistent, systemic pesticides can

cause pesticide residue problems in fruit, salad and vegetables. Pesticides however are also being increasingly used in smaller-scale, even subsistence-type, agriculture.

Pesticides play a central role in livestock and poultry production to help:

- control of flies, lice, mice, rats, mice etc. in and around livestock houses/areas
- control of external parasitic pests (ectoparasites) on livestock including fish/shrimps. Pesticides used for this purpose are applied externally to the animals' skin (including fish), and are often legally re-classified as 'animal/veterinary medicines'

Huge areas of forest land may be routinely treated with pesticides, often from the air. Insecticides are often routinely sprayed from the air for control of caterpillar pests.

Preventing *crop losses in storage* and during shipment/transport is another important area of agricultural pesticide use. Insecticides, rodenticides and pesticide fumigants are widely used to control fungal and insect pests in bulk crop/commodity storage warehouses/silos, as well as ship and aircraft holds and container lorries.

Public Health Programmes

Pesticides are routinely used in public health programmes for control of human diseases, especially in rural areas. A wide range of 'animals' (a term which also covers insects and insect-type pests in this instance) act as carriers (vectors) in the transmission of disease from humans to humans and from animals to humans.

Common examples of diseases spread by vectors from human to human include malaria (mosquitoes), trypanosomiasis or sleeping sickness (tsetse fly), river blindness and bilharzia.

Diseases capable of being transferred from animals to humans are referred to as 'zoonoses'. Examples of insect/rodent diseases transmitted from animals to humans include leptospirosis or Weil's disease), salmonellosis, plague, typhus and haemorrhagic fever.

Vector control often involves large-scale, compulsory pesticide application programmes in and around agricultural workplaces including housing/living quarters and food stores. DDT, a toxic and persistent insecticide, is still widely used, for example, for control of malaria-carrying mosquitoes. Pesticide-treated bed-nets are also used.

Other uses

Pesticides are also used for preservation purposes, such as wood preservatives, for example against termites. Amenity and industrial weed control is also another major area of pesticide use. Some pesticides are also approved, on a country by country basis, for aquatic use to control harmful species of fish, aquatic weeds and on the banks of lakes, rivers and canals.

**Concerns
about
pesticides****The scale of ill health**

The exact scale of the problem of acute human ill health from pesticides is still largely unknown. The precise number of fatalities, poisonings and incidents is not known due to chronic under-reporting in all parts of the world. Accident and disease reporting systems, and incentives to report them, are generally inadequate for all sectors of industry. Exposure to pesticides constitutes a major occupational hazard that can result in poisoning and death and, in certain cases, work-related cancers and reproductive problems. The World Health Organisation (WHO) estimates that, at a minimum, 40,000 people die annually from pesticides and a further 3-4 million are severely poisoned, especially in developing countries where the more toxic materials continue to be widely used and easily available.

Pesticide use in developing countries

Developing countries use 20% of the pesticides, but have 80% of the fatalities and poisonings. In these countries, and countries with economies in transition (ex-Soviet bloc countries in Central and Eastern Europe, Central Asia), many highly toxic pesticides are used on farms and in plantation crops and new export crops like cut flowers and fresh vegetables. Some industrialised countries often continue to export pesticides which have been *banned or severely restricted in their own countries*, to poorer parts of the world. For example, an estimated 70% of the gross tonnage of pesticides used in agricultural applications in India consists of formulations which are banned or severely restricted in Northern countries.

Developing countries, and many countries with economies in transition, often lack the regulatory and enforcement infrastructure and resources for the sound management of pesticides. It will be impossible to reduce poisonings and contamination unless many highly toxic materials and formulations are eliminated from world trade, and less hazardous substitute pesticides used and/or alternative methods of pest control introduced.

Some pesticide control problems faced by developing countries

1. Lack of facilities for disposal of waste pesticides (66% of all responding developing countries)
2. Export difficulties caused by pesticide residues in food (65%)
3. Pesticides available through distribution outlets that also deal with food, medicines and other products for internal consumption (65%)
4. Unavailability of an appropriate size range of pesticide packages, suitable for end use (to reduce handling and other hazards) (62%)
5. Pesticide labels sometimes or generally not clear and concise (44%)
6. No regulations in force to restrict the availability of pesticides (43%)
7. Lack of a national pesticide registration and control scheme (20%)
8. The government and responsible authorities are not in a position to effectively enforce prohibition of importation, sale and purchase of an extremely toxic product in their territory (19%)

Source: FAO. 1996. Analysis of Government Responses to the Second Questionnaire on the State of Implementation of the International Code of Conduct on the Distribution and Use of Pesticides.

High risks for agricultural workers and their families

Agricultural workers and small farmers use or are exposed to toxic pesticides from a variety of sources including the crops they grow, harvest and store, the soil they cultivate, from spray drift, and the livestock, poultry and fish they handle. Pesticide applicators have the highest exposures but other workers and farmers are contaminated from spray drift, by working in or walking through treated areas, and handling sprayed vegetation and produce.

Lack of information on hazards and the absence of workplace risk prevention and control measures means that personal protective equipment (PPE) is often the first line of defence for workers and farmers. In reality it should be the last resort and only to supplement other control measures already in place. Furthermore, the PPE is often unsuitable for use in tropical conditions, is often poorly maintained, or changed too infrequently, and often stored in the same area as personal clothing. These factors combined with poor hygiene conditions, such as lack of water in the field to treat skin and eye contamination, result in high levels of fatalities and poisonings.

Women workers are especially vulnerable to ill health from pesticides because of the agricultural context in which they work. They are often/usually part-time or seasonal workers, and do not receive the same levels of information, training and protection as full-time workers. They work in areas treated with pesticides, including commercial glasshouses, or handle plants or harvested crops treated with pesticide. Many of them along with their families live where they work and use pesticide-contaminated water for drinking, bathing and washing, and eat pesticide-contaminated farm food. Furthermore, many small farmers are women. The impact of HIV/AIDS in many parts of the world means that women-headed households – sometimes even child-headed households – are more and more the norm.

Children are a vulnerable group to suffer ill health from exposure to pesticides either because they live on farms or plantations as part of a family; or work as cheap and exploited agricultural child labourers.

Deteriorating labour standards and working conditions, often resulting from the negative aspects of globalisation of trade are eroding the already low levels of protection for agricultural workers in terms of wage levels, employment security and health and safety standards. The worldwide trend towards work flexibility and the pressure to reduce labour and production costs is leading to an increase in daily and seasonal contracts. Hiring of labour through agricultural contractors or 'gangmasters' is increasing, and often results in more precarious employment, lower wages, poorer working conditions and reduced levels of health and safety.

Pesticides, wildlife and the environment

Pesticides can also harm wildlife and contaminate the environment (soil, air and water quality). The wildlife affected by pesticides includes plants and trees; vertebrate species (with a skeleton) such as fish, reptiles, birds, and mammals; and invertebrate species, ranging from insects and their close relatives (arthropods), soil and aquatic organisms, to micro-organisms such as fungi, bacteria and viruses.

The effects of pesticides on wildlife are closely bound up with the type of agriculture practised. The spread and intensification of agriculture, involving increased use of pesticides and artificial fertilisers, has had major negative impacts on the abundance and diversity of wildlife species and the quality of the environment.

Illegal use of pesticides as poison baits are directly responsible for deaths of many fish, wild birds, mammals, farm livestock, pets, and honeybees. Poison is laid in carcasses and in eggs. Pesticides are also widely used as fishing baits.

Are pesticides necessary?

The pesticide industry

The pesticide industry, supported by some governments and intergovernmental agencies, argue that the use of "crop protection chemicals" – the industry name for pesticides – is vital to ensure that food and commodity production is maximised by helping prevent losses during growth, harvest, transport, distribution and storage. And that the quality of food and commodities is maintained and improved at an economic price.

The need to achieve world food security and to eliminate poverty and malnutrition is a major international issue. Governments and other stakeholders at the World Food Summit (WFS) 1996 agreed the Rome Declaration and a Plan of Action with the aim of reducing by 50% the number of hungry persons in the world by 2015. To achieve this target, the United Nations Food and Agriculture Organisation (FAO) argues that major increases in world food production, involving the use of chemical pesticides and artificial fertilisers are needed to feed the world's growing population.

IUF

Many trade unions, including the IUF and non-governmental organisations (NGOs) disagree with the analysis of the pesticide industry. IUF argues that currently enough food is produced globally to feed the world but that poverty and malnutrition exist because many poor people – an estimated 800 million globally – do not have the money to buy food, and/or access to land to produce it. There is also large over-production of cereals and other foodstuffs in North America and the European Union (EU) countries. This can result in ‘food mountains’, which are then exported with subsidies, resulting in dumping at artificially low prices in other countries, ruining their local agricultural markets and economies.

The IUF believes that pesticide use should only be justified where there are ***no alternative methods of pest control available*** and where the benefits outweigh the costs of using these hazardous chemicals.

Precautionary and substitution principles

In case of scientific doubt and uncertainty, it is important to apply the precautionary principle. This principle, as enshrined in Principle 15 of the Rio Declaration on Environment and Development (adopted at the UN Conference on Environment and Development 1992) states, “In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation”.

The substitution principle – replacing hazardous products by less hazardous equivalents – can also be emphasised to support changes in pesticide product registration. Using this principle can reduce both the number of active ingredients and formulated pesticide products on the market.

**Activity – The use of pesticides in your workplace****AIMS**

To help us to:

- identify the pesticides used in your workplace
- identify what they are used for and how they are classified
- find out who manufactures pesticides

TASK

In your small group:

1. Discuss and list what pesticides are used in your workplace and who manufactures them
2. Identify where the pesticides are used and what for

Elect a spokesperson to report back



**Who makes
and sells
pesticides?**

Pesticides are big business and the industry is dominated by 10 transnational manufacturing companies in the United States of America, Europe and Japan who control 84 per cent of all pesticide sales worldwide. Global pesticide sales were valued at nearly \$30,000 million (US dollars) in 2000.

Manufacturer's top ten

The following chart shows Company name followed by pesticide sales in 2000, in US\$ millions; followed by percent share of world market:

Other countries such as, India, China, Brazil, Russia and other ex-Soviet bloc nations are important pesticide producers with national companies generally producing off-patent pesticides, including for the export market. Their production often includes pesticides banned or severely restricted in other parts of the world.

1. Syngenta (Novartis + AstraZeneca): pro forma, \$6,100; **20%**
2. Pharmacia (Monsanto): \$4,100; **14%**
3. Aventis (AgrEvo + Rhone Poulenc): \$3,400; **11%**
4. BASF (+ Cyanamid): pro forma, \$3,400; **11%**
5. DuPont: \$2,500; **8%**
6. Bayer: \$2,100; **7%**
7. Dow AgroSciences: \$2,100; **7%**
8. Makhteshim-Agan: \$675; **2%**
9. Sumitomo: \$625; **2%**
10. FMC: \$575; **2%**

Source: ETC Group, based on data provided by Allan Woodburn Associates cited in Agrow magazine.

**Activity – Pesticides quiz****AIMS**

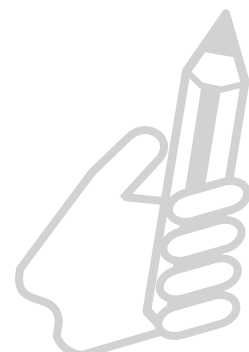
To help us to:

- use some of the terms associated with pesticides
- have some fun

TASK

You will be divided into pairs. In your pair, look at the multiple-choice quiz and the statements/words/terms relating to pesticides. Use the preceding pages to help you with anything you are not familiar with. Tick the boxes that you feel are the most appropriate.

When you have finished, the whole group will discuss their answers together. You can count up your scores for a bit of fun!



MULTIPLE CHOICE QUIZ – PESTICIDES

Tick one box per question

1. The vast majority of pesticides used today are:
 - biopesticides
 - pesticides based on genetically modified natural micro-organisms (GMOs)
 - synthetic, manufactured chemicals
2. The suffix “icide” (as in pesticide) means:
 - crop protection
 - killer
 - harmless if used properly
3. The World Health Organisation estimates that each year as a minimum:
 - 40,000 people die from pesticides and a further 3-4 million are severely poisoned
 - 2,000 people die from pesticides and a further 1 million are severely poisoned
 - 20,000 people die from pesticides and a further 2 million are severely poisoned
4. Developing countries use:
 - 20% of pesticides and have 30% of the world’s fatalities and poisonings from pesticides
 - 20% of pesticides and have 80% of the world’s fatalities and poisonings from pesticides
 - 70% of pesticides and have 70% of the world’s fatalities and poisonings from pesticides
5. One of the main reasons why the number of fatalities and poisonings from pesticides is so high in developing countries is because:
 - some industrialised countries often continuing to produce banned or severely restricted pesticides solely for export to poorer parts of the world
 - of the climatic conditions
 - of their greater use of pesticides
6. The IUF believes that pesticide use should only be justified where:
 - there are no alternative methods of pest control available and where the benefits outweigh the costs of using these hazardous chemicals
 - the World Trade Organisation says it is important for chemical manufacturers
 - poverty and malnutrition exists
7. A vector is:
 - a new form of pesticide
 - a group of chemical companies which manufactures pesticides
 - a carrier in the transmission of disease
8. Diseases capable of being transferred from animals to humans are collectively referred to as:
 - arthropods
 - zoonoses
 - respiratory diseases
9. 10 transnational companies control:
 - 51% of all pesticide sales worldwide
 - 84% of all pesticide sales worldwide
 - 95% of all pesticide sales worldwide

Information on pesticides

One of the most difficult tasks for worker HS&E representatives is to find out about the pesticides harming their members at the workplace, and how to prevent and minimise risk to health and the environment.

The main sources of information available are the manufacturer's pesticide label, the manufacturer's product safety data sheet, employer workplace risk assessments, and scientific literature/databases.

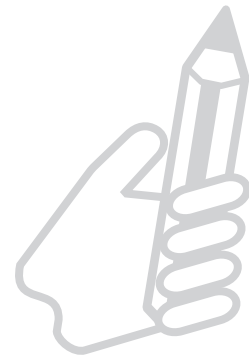


Activity – Reading labels

AIMS

To help us to:

- interpret labels
- decide whether labels provide adequate information
- decide where to find further information



TASK

Either: Use a pesticides label that you brought from your workplace

Or: Following a complaint about a pesticide from your members, you have managed to find the label. The information provided on the label is as follows:

Product name: Ambush

Hazard warning: hazard by inhalation; avoid breathing in; keep container closed; use with adequate ventilation and PPE

First Aid: Ensure plenty of fresh air and call a doctor

Further information: contact your supplier for details of the manufacturer

In your small group, look at the information below and:

- identify what further information should be provided on the label
- list other sources of information that would help

Elect a spokesperson to report back

What's in and on a container or packet?

Most formulated pesticide products are a cocktail of chemicals, many of which are toxic in their own right. The type of formulation can also be important in determining the toxicity of a product.

Formulation

Most pesticides come as formulated products which are ready-to-use. The variety of formulations depends on factors such as the nature of the target species, the persistence desired, ease of application, and even lessening the toxicity of a product. Formulations include:

- dry dusts — granules dry baits — e.g. slug pellets, rodent killers
- wettable powders – diluted with water to use in a sprayer
- emulsions – liquids ready to be diluted
- emulsifiable concentrate (ec)
- suspension concentrate (sc)
- ultra low volume (ULV) – formulations for spraying in a concentrated form in small droplets using specialised equipment
- smokes – pesticides which are burnt in a confined space (slow release strips and papers -- used in livestock houses, food stores and for fly control)
- aerosols

The make up of a formulated pesticide product

Active ingredient

The active ingredient (ai) is the most important part of any product as it is this toxic chemical which kills/controls the target pest. All the other chemicals in the formulation are there to help it do this. It is **very important** to identify the active ingredient(s) in order to be able to track and find out about a pesticide.

The pesticide ai is known by a chemical name. It is important to learn to identify the chemical name (s) on the label. Do not confuse the chemical name with the product brand or trade name on the label. Brand/trade names can be hard to trace as there are hundreds of thousands of them. To complicate matters further, the companies often change product names to help sales.

Pesticide labels are not standardised so it takes some practice to be able to identify the chemical name of the ai, and to distinguish it from names of other chemicals in the formulation which may be given on the label.

The ai may also be identified by a chemical number as well as a chemical name. Identifying the chemical number makes it much easier to obtain further information on the ai including prevention and control measures. Different types of chemical number may be present on the label. Look out for the CAS number, UN registration number, EU number, or EPA number. If you are not sure which is which, note the different numbers on the label.

Solvent

- A chemical used to dissolve the ai(s) to make it up into liquids
- Can itself be toxic, with its own hazard classification, for example, toluene and xylene

Surfactant

- Short for surface active agent also called a wetter, spreader and sticker
- Reduces surface tension, increasing the emulsifying, spreading and wetting properties of liquid product formulations to enable the pesticide to stick to the pest or spread more evenly on plant leaves and surfaces

Safener

- A chemical which reduces the potential of a pesticide to damage a crop

Adjuvant

- A chemical added to a pesticide to increase its efficacy
- Only active in the presence of the pesticide ai, for example, piperonyl butoxide, which is added to synthetic pyrethroid insecticides to boost their activity

Carrier

- An inert solid used to dilute the pesticide ai to facilitate application

Colouring & stenching agent

- Give the formulated pesticide product an unpleasant smell and/or taste to reduce the risks of accident from swallowing the chemical
- Colouring agents are also used in seed dressings to distinguish between treated and untreated seed
- Granules are sometimes coloured to make them visible on the soil allowing application rates and correct spread to be checked

Example 1

Pesticide active ingredient – carbosulfan (using the chemical name)

CAS No – 55285-14-8

Brand/trade name – Marshall 10G

Formulation – granular, ready to use

Classification – insecticide

Example 2

Pesticide active ingredient – glyphosate (using the chemical name)

CAS No – 38641-94-0

Brand/trade name – Roundup

Formulation – liquid

Classification – herbicide

***What should
be on a
pesticide
label?***

Label information is usually stuck directly on to the container but supplementary label information may also be attached in a sealed plastic envelope. It is the responsibility of the manufacturer, formulator, importer or exporter to label the pesticide product as required by national law. The label should be in the appropriate local language(s). The quality of information on chemical labels is highly variable, particularly on prevention and control measures. Generally, the label includes the following categories of information:

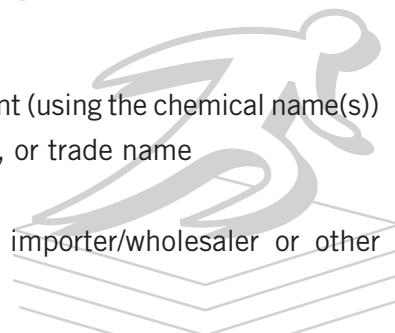
- Product information: trade/brand name, manufacturer/suppliers names and addresses, and emergency phone numbers, type of formulation
- Hazardous ingredients – the active ingredient(s) plus other chemicals in the formulation, all identified by a chemical name(s)
- Toxicological properties: health and environmental effects, including hazard warning symbols
- User information
- Crop/pest information
- Precautions/preventative measures/operator protection
- First aid measures

In most countries, every pesticide packet or container must, by law, have a label containing some or all of the information set out below.



Checklist – Information required on pesticide labels

- ✓ Product information
 - Name and concentration of each active ingredient (using the chemical name(s))
 - Commercial name of the product – the brand, or trade name
 - Type of formulation
 - Name and address of the manufacturer or importer/wholesaler or other supplier of the substance
 - Emergency phone numbers
 - Hazardous ingredients
- ✓ Name and concentration of each active ingredient (using the chemical name(s))
- ✓ Name and concentration of other ingredients, such as solvents, which could be harmful or toxic
- ✓ Toxicological properties
 - risk/safety phrases – e.g. wash concentrate from skin and eyes immediately, or wear rubber gloves, hazardous to fish etc
 - hazard warning symbol(s) – more than one symbols may be on the label; not all pesticides carry a hazard warning symbol
 - information on health effects and/or environmental impacts
- ✓ User information including:
 - directions for use
 - dose rates and mixing instructions
 - application rates
 - approved tank mixes
- ✓ Precautions/preventive & control measures/operator protection, including:
 - technical/engineering controls
 - other safety information – including re-entry periods
 - medical advice/warnings
 - washing and disposal of containers
 - personal protective equipment
 - first aid information including where to obtain medical help
- ✓ environmental protection/crop/pest information, including:
 - range of crops on which it can be used, or types of livestock
 - pest range or spectrum controlled
 - tolerant or resistant species
 - warnings on possible crop damage
 - harvest intervals



**Material
Safety Data
Sheets
(MSDS)**

Labels only give you basic health and safety information, they are not standardised, and crucial HS&E information may be missing. More comprehensive information on a formulated pesticide product can be obtained from a (product) material safety data sheet (MSDS) provided by the manufacturer directly, or through the local supplier or importer of the chemical.

A Material Safety Data Sheet (MSDS) is a document that contains information on the potential health and environmental effects of exposure and how to work in the safest manner with the chemical product. The MSDS contains much more information than the label and is prepared and provided by the pesticide manufacturer/supplier.

The main categories of information in an MSDS include:

1. Product information: trade/brand name, manufacturer/suppliers names and addresses, and emergency phone numbers
2. Hazardous ingredients active ingredient(s) etc by chemical name(s)
3. Physical Data
4. Fire or Explosion Data
5. Reactivity Data: information on the chemical instability of the product and substances it may react with
6. Toxicological Properties: health and environmental effects
7. Preventative/Control Measures
8. First Aid Measures
9. Preparation Information: who is responsible for preparation and date of preparation of the MSDS

MSDS are *not* automatically supplied with the formulated product. You will have to ask for them, often through your employer, who in turn can obtain them – free of charge – from the manufacturer, importer or supplier of the product. It is important to ask your employer for copies of MSDS to establish the principle that you have the right to receive them. In some countries, the law guarantees the right of workers to have access to – sometimes to even directly receive from companies – manufacturers' MSDS.

Organisations like the World Health Organisation (WHO), for example, also produce 'pesticide safety data sheets', but it is important to distinguish them from manufacturers' MSDS which provide information on specific, formulated products. WHO-type 'data sheets' can be very useful but usually give general information on active ingredients and *not* on specific products, and should really be considered under literature/database information.

Manufacturers' safety data sheets and product labels are now often available on web sites and can be accessed by anyone with a computer with internet access. Two key webpage addresses are:

- Crop Data Management Systems : Ag Product Label and Material Safety Data Sheets Service <http://www.cdms.net/manuf/manuf.asp>
- The MSDS-SEARCH National Repository www.msdssearch.com provides free access to over 1 million Material Safety Data Sheets and over 1600 links to manufacturers



Activity – Finding out about pesticides

AIMS

To help us to:

- use sources of information on pesticides
- find out more about pesticides

TASK

The following are Brand/Trade Names of commercially available, ready formulated pesticide products:

- **Furadan** (see carbamates under health effects below)
- **Dursban** (see organophosphorous (ops) under health effects below)
- **Ambush** (see synthetic pyrethroid insecticides under health effects below)
- **Gramoxone** (see paraquat under health effects below)
- **Roundup** (see glyphosate under health effects below)

One brand/trade named pesticide product will be assigned to a small group

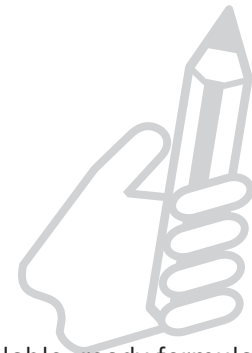
In your small group, use the sources of information below to find out the answers to the questions listed. Indicate the source(s) of the information for each item. Gaps in information, or information which is not easily understandable, should also be highlighted.

1. Pesticide classification – herbicide, fungicide, insecticide, other – and type of formulation?
2. Country of origin & name & address of manufacturer?
3. Active ingredient(s) – by chemical name(s), in the formulated product?
4. Any other chemical ingredient(s) in the formulated product?
5. Chemical registration number(s)?
6. Hazard warning signs?
7. Approved crops on which the pesticide can be used?
8. Types of “pests” controlled – weeds, diseases, insects etc?
9. Prevention/control & safety measures, operator protection information etc?
10. Environmental protection information?

Each group should elect a spokesperson to report back what they have found.

Sources of information

1. Manufacturer’s product label
2. Manufacturer’s material safety data sheet
3. International Labour Organisation (ILO): international chemical safety cards on pesticides
4. World Health Organisation recommended classification of pesticides by hazard (current year)



Manufacturers Product/Material Safety Data Sheets

Section I: Identification of product and manufacturer

The name of the product is listed here by chemical name or by trade name. The name listed should be the same as the name that appears on the label. Material safety data sheets must also list synonyms for the product or substance. Synonyms are other names by which the substance is known.

Manufacturer identification: Includes manufacturer's (or supplier's) name, address, telephone number, the date the MSDS was prepared and an emergency telephone number to call after business hours.

Section II: Hazardous ingredients

For products which are mixtures, only those ingredients that appear on specified lists of hazardous chemicals and which make up one per cent (1%) or more of the product need to be listed. Cancer causing substances are an exception and must be listed if they make up one-tenth of one per cent (0.1%) of the mixture. The hazardous ingredients must be listed by their chemical names. For each listed ingredient, the concentration limit to which you may be exposed must be indicated.

Section III: Physical data

This section lists boiling point, vapour pressure, vapour density, melting point, appearance, odour, etc. The information in Section III helps you to understand how a chemical behaves and the kind of hazard it presents.

Section IV: Fire and explosion data

Section IV lists the flashpoint and flammable or explosive limits, and tells you how to extinguish a fire. The information in this section is needed to prevent, plan for and respond to chemical fires and explosions.

Section V: Reactivity data

Section V tells you whether or not the substance is stable and, if it is not, what hazards the instability presents. Section V lists incompatibles (substances which must not be placed or used together). This information is important for proper storage and handling of the product.

Section VI: Health hazard data

Routes of entry (inhalation, skin absorption or ingestion), acute and chronic health effects, signs and symptoms of exposure, whether the product causes cancer, medical problems made worse by exposure, and recommended first-aid/emergency procedures are all supposed to be listed under Section VI.

Section VII: Precautions for handling

Information needed to devise emergency response plans, clean-up procedures, safe disposal methods and necessary storage and handling precautions must be detailed in Section VII. Frequently, however, manufacturers sum up this information with simple (and inadequate) statements such as "Avoid breathing vapour" or "Avoid skin contact".

Section VIII: Control measures

Recommended methods of risk control including ventilation, work practices and personal protective equipment (PPE) are detailed in Section VIII. The type of respirator and the most resistant protective clothing and glove material for the product should be named. However, this information is often incomplete. Rather than recommend the most resistant protective material, the MSDS may simply state that "impermeable" gloves and clothing should be used.

**Risk
Assessments**

In many countries a new source of information available to workers exposed to pesticides is the workplace risk assessment. The employer has to carry out a risk assessment before workers use or are exposed to pesticides, and which sets down the risk prevention and/or control measures the employer should put in place to protect workers and the environment (See the section 'Improving pesticide health and safety below).

■ Pesticides and ill health

**About this
section**

This section will help us to:

- identify the ways that pesticides get into our bodies
- find out about the ill health effects of pesticides



Activity – Pesticides and ill health

AIMS

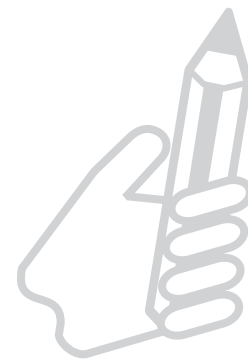
To help us to:

- identify the way that pesticides enter our bodies
- identify ill health effects
- practise the skills of communicating with workers

TASK

1. The group will be split into groups of worker HS&E representatives, workers and observers. Using the ill health information pages below:
 - the worker HS&E representatives will be asked to prepare to discuss and answer questions about: the way pesticides get into the body; the ill health effects of pesticides; how workers can support their trade unions to tackle problems
 - the workers will think about questions that they would like to ask the worker HS&E representatives
 - the observers will prepare a checklist of points they will watch out for during the interview
2. You will then be divided into groups of three, one worker representative, one worker, and one observer. The worker HS&E representative will discuss and answer questions from the worker about the way pesticides get into the body, and the ill health effects. And also try to convince the worker that with their support, the union can tackle some of the problems.
3. The observer should watch and listen, and note down the main points of the conversation.

Observers will report back, giving the key points to the larger group.



Introduction

Working with pesticides is dangerous. There are no safe substances, all chemicals can be poisonous and cause injury or death. Preventing pesticides entering the body is the key to avoiding acute or chronic injury to health.

How pesticides can enter the body

The main routes of *direct entry* are:

- inhalation through the respiratory tract (nose, larynx, trachea, bronchi, lungs and pleura)
- dermal absorption through the skin
- ingestion through the digestive tract (stomach, intestines)

Inhalation (respiratory)

Breathing in pesticides either in the form of spray droplets, fine dust, fumes, smoke and gases is a common route of entry. Larger droplets or particles are filtered off in the nose. Smaller ones, or those breathed in through the mouth, settle on the walls of the upper respiratory tract or throat and are coughed up and either spat out or swallowed (ingested). The smallest droplets or particles – which are so small or well dispersed that they cannot be seen – can be inhaled down into the lungs where they can cause local damage or can be absorbed into the blood stream and circulated to other parts of the body.

Skin absorption (dermal)

Dermal exposure is one of the most common poisoning routes with pesticides which can easily penetrate the intact human skin if allowed to do so, causing local damage or being absorbed into the blood stream. Some formulations are especially hazardous if they are both toxic and contain penetrative solvents. These may pass through personal protective equipment including clothing, unnoticed by the worker. Hot working conditions which open the pores on the skin, and skin damaged by cuts, abrasions or skin disease add further risks of more rapid skin absorption.

Ingestion (oral)

The swallowing of chemicals can have very serious, often fatal consequences. Also inhaled particles may be coughed up and then swallowed. Ingestion can happen in a variety of ways:

- when contaminated fingers are placed in the mouth, or used to handle food or cigarettes
- cleaning a blocked sprayer nozzle by putting it between the lips and blowing through it
- pesticides are decanted from large and properly labelled containers into unlabelled bottles and sold. These could subsequently be mistaken for soft drinks and consumed

The main routes of *indirect entry* are:

Transfer from the mother to the unborn child

Entry into the body is possible through transfer of pesticide(s) across the placenta of a pregnant woman to the unborn baby.

Pesticides entering the body from pesticide residues in food and water

Consumption of unwanted pesticide residues in food and water is another route of entry. Pesticides residues, both natural and synthetic, can be found in all the things we eat – fruit, vegetables, rice, bread, meat, poultry, fish and the processed foods made from them. Drinking and/or bathing/washing water may be unhealthy due to pollution of ground and/or surface waters. Irrigation water can also be contaminated resulting in excess pesticide residues in growing crops. Commercial farmed fish and shrimp may also contain excessive residue levels from pesticide-polluted water.

Some contamination from residues is often legally allowed in food and even water, but this does not mean that it is “safe”. However, much of it is illegal, with residues in excess of legal, maximum residue limits/concentrations. Where banned chemicals are used, food imported into a country may contain pesticides banned or restricted in that country.

Concentrations of pesticide residues are often low but there is little evidence or research on their long term health effects, especially on vulnerable groups such as young children and babies.

The health effects of pesticides

Acute effects

Acute or ‘immediate’ effects generally develop during or shortly after exposure, usually within minutes to hours after exposure to a single dose of a pesticide (in some cases though the effects may only become apparent after some days). Poisoned victims usually have visible symptoms and, even if not, the cause can usually be identified, though symptoms will vary according to the pesticide being used. Specific effects include:

Irritation

- Respiratory – pesticides can irritate the nose and upper lung passages causing sneezing and coughing, and in some cases, bronchitis. They may also irritate the surface of the respiratory system and may damage lung tissue
- Skin and eyes – dermatitis (a rash) is a common reaction from skin contact. The skin becomes dry, rough and sore due to removal of protective oils. The eye is extremely vulnerable and pesticide damage may vary from mild, temporary discomfort to permanent (chronic) damage.

Sensitisation

- Respiratory – some pesticides can cause sensitisation leading to asthma or other allergic reactions. Once a worker is sensitised, any further exposure even minimal, may result in an allergic response. The effect is not always immediate and can occur several hours after exposure
- Skin – sensitisation can occur and further skin contact to even minute quantities of a chemical may cause itching, rashes and other discomfort

Poisoning

Poisoning results in a wide range of reactions, from minor effects such as eye or local skin irritations, to more severe effects such as headaches, nausea, tiredness, dizzy spells, vomiting, and breathing difficulties, which can lead to death. However, some acute effects produce symptoms like a cold or hay fever and the cause of these is often overlooked.

With the exception of fatalities, the effects of acute poisoning are generally 'reversible', that is, curable if properly treated. Less severe acute reactions often only last a short time, and most victims recover completely. However, there is growing evidence that repeated exposure to even low doses of pesticides may result in permanent damage to health of some kind.

Chronic effects

Chronic, longer-term health effects are not curable. The victim will suffer permanent ill health and may even die. The onset of the illness may only occur many years after the original exposure to the substance(s). The victim may in fact not even be the one who was originally exposed to the pesticide(s). In the case of reproductive health, the victim may be the baby born with birth defects due to the exposure of the mother or father to the pesticide(s).

Establishing the cause of a chronic effect, and linking it to the ill health problem many years later, is always difficult. It can be difficult to prove that the health problem the victim is suffering from, or died from, was due to exposure to a pesticide(s) many years earlier.

Chronic effects are more difficult to recognise as symptoms may take years to appear and are not necessarily severe at first. There is a risk that they will be put down simply to someone 'feeling unwell', 'being constantly tired because of the heat', or 'just getting old'.

Types of chronic effects include:

Reproductive health

Reproductive disorders due to exposure to pesticides can affect both women and men resulting in, for example, infertility, and loss of sex drive. Exposure to *mutagens* (substances which induce genetic mutations) and *teratogens* (substances which induce birth defects) pass the problem on to the next generation, damaging the foetus, and pose particular risks to women of child-bearing age.

Occupational cancer

The time between exposure to a *carcinogen* (cancer-inducing substance) and cancer occurring can be anything from 10-40 years. This delay is known as the 'latency period'.

Due to this 'latency period' and the fact that individuals affected have been exposed to a wide variety of other substances, including viruses, during this period, linking exposure to cancer can be difficult. Different methods and study populations have been used to investigate the relationship between pesticide exposure and cancer.

Immunity

Many people exposed to pesticides describe their symptoms as similar to those caused by viruses or influenza. The runny noses, muscle aches, runny eyes and tiredness suggest exposure to pesticides. If these symptoms develop after using pesticides it is important that a doctor, nurse or other medical practitioner is contacted and made aware of the problem.

Endocrine-disrupting pesticides (hormonal pollutants)

Over recent years, scientists have also discovered that many synthetic pesticides are capable of disrupting the endocrine system in humans and animals, resulting in a mixture of acute and chronic health effects. The endocrine system and the hormones it generates and controls play a key role in growth and development, and especially sexual differentiation in human beings and animals. Exposure to endocrine-disrupting pesticides/chemicals can result in:

- birth defects
- immune system damage
- sexual change – masculinisation or effeminisation
- reduced sperm count
- reduced intelligence and
- behavioural changes

Contamination by endocrine disruptors may not be visible and yet may cause population-threatening changes in the way an organism functions and survives. The damaging health effects may also not show up until the following generation, to the as yet unconceived child. Endocrine disrupting substances are sometimes referred to as hormonal pollutants.

The health effects of common pesticides**Activity – Common pesticides – finding out more****AIMS**

To help us to:

- discuss the information on pesticides we found from our workplaces
- compare that information with “official” information
- identify improvements that are needed to the information that we receive at our workplaces

**TASK**

In your small group:

1. Discuss the labels and data sheets that you found on pesticides from each of your workplaces. Choose one pesticide to investigate further.
2. Decide whether it is an herbicide, insecticide or fungicide.
3. For the category that you have chosen, look at the examples of the health effects of some common pesticides below.
4. Compare this information to the information that you have about the pesticide from your workplace.
5. List improvements that are needed to the pesticide information that you receive at your workplace.

Elect a spokesperson to report back

The tables below give a sample of health effects associated with selected pesticides, based on the USA Environmental Protection Agency's Recognition and Management of Pesticide Poisonings 5th Edition 1999. The list of health effects has been edited and is not exhaustive.

EXAMPLES OF HEALTH EFFECTS OF SPECIFIC PESTICIDES**Herbicides****Paraquat**

Paraquat is a total, contact herbicide used for the control of both broadleaved plants and grasses, and is one of the most widely used pesticides globally. This pesticide active ingredient is acutely toxic and with no effective antidote in case of poisoning.

Highlights

- Life-threatening effects on the gastro-intestinal (GI) tract, kidney, liver, heart and other organs. The LD 50 in humans is approximately 3-5 mg/kg, which translates into as little as 10-15 millilitres (mL) of a 20% solution
- The usual cause of death is pulmonary fibrosis which is a thickening and stiffening of the lining of the air sacs (alveoli) of the lungs, causing progressive breathlessness.

Signs and symptoms

- Ingestion: burning pain in the mouth, throat, chest, upper abdomen; pulmonary oedema (excessive accumulation of body fluid in the lungs); pancreatitis (inflammation of the pancreas); other renal, and central nervous system (CNS) effects
- Dermal: dry and fissured hands, horizontal ridging or loss of fingernails, skin ulceration and abrasion. Dermal signs are common among agricultural workers with acute paraquat toxicity. Fatal poisonings are reported to have occurred as a result of protracted dermal contamination by paraquat, but this is likely to occur only when the skin is abraded, eroded or diseased
- Inhalation: toxicity from breathing in paraquat is rare, though some agricultural workers can be exposed through prolonged inhalation of spray droplets, and develop nosebleeds due to local damage.

Glyphosate

The pesticide active ingredient, glyphosate, is one of the most widely used herbicides globally. Its use is expanding with the introduction of genetically modified, Roundup Ready (Roundup is a commercial name for glyphosate) seeds.

Because of its low acute toxicity rating, glyphosate competes effectively with paraquat which is more acutely toxic. However, the toxicity of the pesticide product depends on its formulation and several glyphosate formulations are more toxic than the glyphosate itself. There is substantial evidence of human poisonings from the use of this pesticide.

Since glyphosate is absorbed by plants it cannot be completely removed by washing or peeling produce nor by milling, baking or brewing. It can persist in food products for up to two years. Its use as a pre-harvest desiccant and growth regulator is particularly problematic with respect to residues as there is insufficient time after use for the chemical to degrade before harvest.

Acute toxicity

Glyphosate is listed in the WHO classification in Class IV (Table 5) – Unlikely to present an acute hazard in normal use, and by the US Environmental Protection Agency in Toxicity Class III – Mild irritant. However, several of its formulations are often more toxic depending on the ingredients in the formulation.

Glyphosate (continued)

- The commonly-used chemical component of glyphosate products, POEA, is two to three times more toxic than glyphosate. POEA and glyphosate appear to have synergistic effects, with the toxicity of the product much greater than that of each ingredient
- Effects of exposure to glyphosate formulations include skin and eye irritation, respiratory problems, effects on the heart, altered blood pressure, and gastro-intestinal problems
- Toxicity studies of glyphosate have shown the following effects: diarrhoea, increased blood glucose, red nasal discharge, pancreatic lesions, salivary gland lesions, growth retardation, and changes in the relative weights of organs
- Eye and skin irritation, cardiac depression, gastro-intestinal pain vomiting and accumulation of excess fluid in the lungs are symptoms of glyphosate poisoning. Glyphosate and formulated products can be slightly to severely irritating to eyes and skin

Chronic toxicity

- Lifetime studies on animals have shown excess growth and death of liver cells, cataracts and eye lens degeneration.
- Studies have shown various reproductive effects in males: lowered libido, ejaculate volume and sperm count, with an increase in abnormal or dead sperm.
- Other studies have shown effects on mother and offspring: lengthened reproductive cycle, decrease in number of viable foetuses, reduced birth weight, increased number of miscarriages; and reduced ossification of the breast bone.

There is still considerable controversy over the cancer-causing (carcinogenic) potential of glyphosate. The conclusion generally reached by regulators is that glyphosate, and glyphosate-containing products, are not carcinogenic to humans. However, a Swedish study published in 1999 maintains that exposure to glyphosate can increase the risk of contracting non-Hodgkin's lymphoma, a form of cancer.

Insecticides

Cholinesterase inhibiting insecticides

Cholinesterase inhibiting insecticides are nerve poisons which consist of two distinct chemical groups of compounds: **organophosphorus** (OP) derivatives (sometimes called, organophosphates); and **carbamate** derivatives. They are the most widely used insecticides today. In both groups there are widely varying toxicities between individual compounds. Symptoms of acute OP or carbamate poisoning develop during or after exposure, within minutes to hours, depending on the method of contact. Exposure by inhalation results in the fastest development of toxic symptoms, followed by the gastrointestinal route and finally the dermal route.

Organophosphorus (OP) cholinesterase-inhibiting insecticides

Highlights

- act through locking up (phosphorylation) of the acetylcholinesterase enzyme at nerve endings.
- acetylcholinesterase (AcTe) is the chemical in the body which breaks down acetylcholine, a chemical in the body which helps send messages through the nervous system
- when the AcTe is no longer available, acetylcholine is overproduced and starts to poison organs and biological processes in the body
- absorbed by inhalation, ingestion, and skin penetration
- muscarinic, nicotinic, and central nervous system (CNS) effects
- AcTe has to regenerate naturally for a patient to fully recover

Signs and symptoms

- headache, over-salivation, muscle twitching, nausea, diarrhoea
- respiratory depression (lowered breathing), seizure, loss of consciousness
- constriction of the pupil (miosis) is often a helpful diagnostic sign

The following symptoms and signs, listed in approximate order of appearance, begin within 30-60 minutes and are at a maximum in 2-8 hours (Source:Dreisbach, Poisoning 1987):

- Mild poisoning – anorexia, headache, dizziness, weakness, (cramps, and discomfort in the chest), tremors of the tongue and eyelid, constriction of the pupil (miosis), visual impairment
- Moderate poisoning – Nausea, salivation, tearing, abdominal cramps, vomiting, sweating, slow pulse and muscular spasms (fasciculations)
- Severe poisoning (which can result in fatalities) – Diarrhoea, pinpoint and non-reactive pupils, respiratory difficulty, pulmonary oedema (accumulation of fluid in the lungs), bluish discolouration of the skin and mucous membranes resulting from an inadequate amount of oxygen in the blood (cyanosis), loss of sphincter control, convulsions, coma, and heart block.

Carbamate cholinesterase-inhibiting insecticides

Symptoms of acute carbamate poisoning are similar to those for OP pesticides and can be as severe.

Highlights

- cause reversible locking up (carbamylation) of the acetylcholinesterase enzyme at nerve endings
- absorbed by inhalation, ingestion, and skin penetration
- muscarinic, nicotinic, and CNS effects
- antidotes can help free ('reverse') some of the locked up AcTe which can then act to reduce levels of acetylcholine to normal

Signs and symptoms

- headache, salivation, muscle twitching, nausea, abdominal pain, diarrhoea
- malaise, muscle weakness, dizziness, sweating, seizure, loss of consciousness
- CNS depression, pulmonary oedema in serious cases

Synthetic pyrethroid insecticides

Synthetic pyrethroid insecticides (SPIs) are similar chemically to the natural pesticide, pyrethrum, but have been modified to increase stability to light and heat in the natural environment. SPIs were introduced because of the health problems associated with OP and carbamate pesticides, as they are generally less toxic to mammals than the previous two groups of chemicals.

Acute poisoning

- Central nervous system toxicity is the most severe although more uncommon than the forms described below. Seizures have been reported in cases of severe SPI intoxication. Seizures are more common with exposure to the more toxic cyano-SPIs, which include fenvalerate, flucythrinate, cypermethrin, deltamethrin, and fluvalinate
- Other signs and symptoms of toxicity include abnormal facial sensation, dizziness, salivation, headache, fatigue, vomiting, diarrhoea, and irritability to sound and touch. In more severe cases, pulmonary edema and fasciculations can develop

Irritant effects

SPIs can cause distressing symptoms when liquid or volatilised materials contact human skin.

- Sensations are described as stinging, burning, itching, and tingling, progressing to numbness. The skin of the face seems to be most commonly affected but the face, hands, forearms and neck are involved
- Sweating, exposure to sun or heat, and application of water enhance the disagreeable sensations. Sometimes the effect is noted within minutes of exposure but a 1-2 hour delay in appearance of symptoms is common. Sensations rarely persist more than 24 hours
- Little or no inflammatory reaction is apparent where such symptoms are reported; the effect is presumed to result from pyrethroid contact with sensory nerve ending in the skin. This is not allergic in nature

Synthetic pyrethroid insecticides (continued)*Sensitisation and allergic reactions*

Such effects due to exposure to SPIs have been reported. SPIs are *not* cholinesterase inhibitors. However, there have been some cases in which pyrethroid poisoning has been misdiagnosed as OP poisoning, due to some of the similar symptoms, and some patients have died from atropine toxicity when this antidote was mistakenly over-administered.

Organochlorine insecticides (OC)

This group contains many persistent and bioaccumulative substances, resulting in chronic health problems, but only the acutely toxic effects are dealt with here

Signs and symptoms

- absorbed dose is stored in fat tissue in the body
- sensory disturbances, excessive sensibility, especially of the skin, headache, dizziness, nausea, hyperexcitable state
- convulsions

A significant part of an absorbed OC dose, especially DDT, is stored in fat tissue as the unchanged parent compound. Some OCs or their breakdown products (notably DDE, dieldrin, mirex, heptachlor, epoxide, chlordane) persist in tissues and blood for weeks or months after absorption.

Fungicides

Fungicides vary enormously in their potential for causing harmful effects in humans. Fungicides have been responsible for some of the most tragic epidemics of pesticide poisoning because of mistaken consumption of seed treated with organic mercury or hexachlorobenzene fungicides. Fungicides can however cause a variety of chronic health problems.

Acute toxicity

Highlights

- numerous fungicides in use with varying levels of toxicity
- other than organomercury fungicides, most fungicides are unlikely to be absorbed enough to cause systemic acute poisoning
- fungicides as a class are probably responsible, however, for a disproportionate number of irritant injuries to skin, mucous membranes, and eyes as well as dermal sensitisation

Thiocarbamate fungicides

Example: Thiram

The active ingredient, Thiram, as a dust is moderately irritating to human skin, eyes, and respiratory mucous membranes. Contact dermatitis has occurred in occupationally exposed workers. A few individuals have experienced sensitisation to thiram. Systemic poisonings have been few. The reaction includes symptoms of nausea, vomiting, pounding headache, dizziness, faintness, mental confusion, dyspnoea, chest and abdominal pain, profuse sweating, and skin rash.

Example: Ethylene bis dithiocarbamates (EBDC compounds)

The active ingredients, **Maneb**, **Zineb**, **Nabam** and **Mancozeb** may cause irritation of the skin, mucous membranes and eyes. Both maneb and zineb have been responsible for cases of chronic skin disease in occupationally exposed workers, possibly by sensitisation. Systemic poisonings with these compounds have been extremely rare.

■ Laws and international standards on pesticides

About this section

This section will help us to:

- identify national legislation on pesticides
- identify international and other standards on pesticides
- use these laws and standards to tackle problems
- track information on pesticides

Introduction

National laws

Because pesticides are toxic chemicals, and therefore hazardous, public policy dictates that their approval and registration, classification, labelling, packaging, manufacture, formulation, import, export, marketing, advertising, sale, supply, transport, storage, availability, use, and disposal should be regulated by law.

Regulation varies from country to country. Some aspects of regulation are made the subject of laws, with sanctions if they are broken. Other aspects are the subject of Codes of Practice, or even voluntary agreements.

Agriculture often tends to be omitted or specifically excluded from the general labour laws and the occupational health and safety regulations of many countries. However, most countries now have legislation on pesticide registration and control (albeit basic and under-resourced in many cases), because:

- in addition to the risks of farmer and agricultural worker exposure, pesticides also affect public health, food safety (pesticides residues), air and water quality, soil health, wildlife
- pesticides can even be transported in the air or by sea/water between countries and regions/hemispheres

International regulation/instruments

International laws or even voluntary standards are now increasingly driving and/or influencing the development of national laws and standards on pesticides. Hence it is important that we learn about international laws and standards which we can use to create our own national laws or to expand and/or strengthen existing national laws and standards.

An important instrument is the voluntary *United Nations Food and Agriculture's (FAO) International Code of Conduct on the Distribution and Use of Pesticides*, Revised 2003 (see below). The Code attempts to establish a minimum international standard for monitoring the standards of governments and the pesticide industry. Though voluntary, the international pesticide industry, as represented by transnational manufacturing companies, has stated that it will seek to ensure that companies abide by the standards laid down in the Code.

Much international regulation tends to be by means of conventions or agreements. Most international conventions, such as conventions of the International Labour Organisation (ILO), have first to be ratified by countries and then translated by them into national law when they become enforceable nationally. However, in the case of non-compliance there are generally no effective international sanctions which can be applied. (See Manual 6 for more details).

By contrast, an increasing number of new, legally-binding international Conventions on chemicals management, have now been adopted and are in the process of ratification. These new type of Conventions, such as the Rotterdam and Stockholm Conventions discussed below, include articles which potentially allow for international sanctions to be applied and enforced in the case of non-compliance via an international court/tribunal.

Enforcement

The monitoring and enforcement of regulations, in whatever form it may take, is a problem everywhere in industrialised and developing countries, and those with economies in transition. Government labour/health and safety inspectorates the world over are generally understaffed and under-resourced – even where they have sufficient legal powers in the first place to enforce health, safety and environmental standards in the workplace.

Similarly, worker HS&E representative schemes, or worker HS&E reps on joint worker-management health and safety committees, often do not exist. Or, where the legal right for worker HS&E representatives exists, they are poorly organised, trained and under-funded.

Trade unions and workers HS&E representatives

Where they exist, legally recognised worker HS&E representatives can save needless deaths and poisonings from pesticides.

But action by worker HS&E representatives on HS&E laws in agriculture poses special difficulties. Small numbers of workers are often employed in many agricultural undertakings scattered over wide geographical distances. Normal, legal arrangements for health and safety representation are difficult to apply. This is why the IUF wants to see schemes based on external worker representatives who will visit agricultural undertakings in a given area. The IUF refers to these as *'roving'* health and safety representatives meaning that these representatives would visit farms and plantations where they themselves are not employed. See Appendix 1 of this series of Manuals for a fuller discussion of IUF's call for roving safety representative schemes in agriculture.

Shortcomings in the law

In general, the system of regulations and enforcement that exist in developed countries do not properly represent the interests of trade unions, community, consumer, or environmental groups. The problem is far worse in developing countries and countries in transition.

Often laws, where they exist, are shrouded in secrecy. Basic toxicity data on pesticides and evaluation criteria are protected by 'commercial confidentiality/trade secrets'. Manufacturers or governments often have no legal obligation to make public such data for independent reviews. In countries such as the USA, Canada, Sweden and Denmark, Freedom of Information laws enable citizens to find out what has been decided and on what basis.

Applying pesticides laws



Activity – Applying pesticides laws

AIMS

To help us to:

- identify relevant laws on pesticides in our country
- apply the law to problems

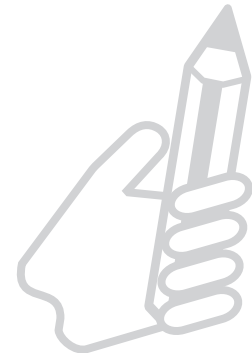
TASK

In your small group, select two health and safety problems related to pesticides that have previously been raised during the course.

Use the worksheet on the following page to:

- identify relevant parts of your national legislation (your educator will supply you with a summary)
- plan what to do next

Elect a spokesperson to report back with your key points



APPLYING THE LAW WORKSHEET	
Name	Union and workplace.....
Problem: brief description	Which parts of the law can help?
What does the law say?	Who is responsible?
How can you use the law to get things done?	What do you plan to do next?

Collective bargaining

Your union can use collective bargaining to overcome some of the limitations in your country's pesticides health and safety legislation. Often the bargaining process can bring about improvements in the workplace much more quickly than waiting for national legislation to change. In many countries, Collective Bargaining Agreements (CBA's) can be enforced in the courts or through tribunals because they have legal status through:

- the relationship between the trade union and the employer
- the incorporation of the contents of the CBA into the individual contracts of workers

Using standards from International Labour Organisation Conventions**Activity – Applying the ILO Conventions to pesticides****AIMS**

To help us to:

- identify relevant Conventions
- apply the Conventions to problems with pesticides

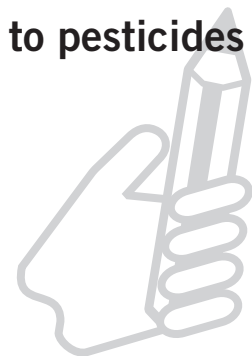
TASK

In your small group, select two health and safety problems that have previously been raised on the course.

Use the worksheet on the following page to:

- identify relevant ILO Conventions (see summaries below)
- identify how the standards help to tackle problems with pesticides
- plan what to do next

Elect a spokesperson to report back with your key points



APPLYING ILO STANDARDS WORKSHEET	
Name	Union and workplace.....
Problem: brief description of the problem with a pesticide	Which parts of the Convention can help?
What does the Convention say?	Who is responsible?
How can you use the standards in the Convention to get things done?	What do you plan to do next?

International Conventions, Standards and Instruments

International conventions, standards and instruments which you can use to strengthen your own national laws include:
(see also Manuals 3 & 6)

International Labour Organisation (ILO)

The main Conventions, along with their non-binding Recommendations, relevant to pesticides health and safety are:

- Convention No. 184 on Safety and Health in Agriculture plus Recommendation No. 192
- Convention No. 155 concerning occupational safety and health and the working environment (the framework ILO convention on safety and health) plus Recommendation No. 164
- Convention No. 161 concerning occupational health services plus Recommendation No. 171

ILO Convention No. 184 on Safety & Health in Agriculture

For a full explanation of this new legal instrument, see Manual 6. Convention No. 184 lays down the following requirements in respect of pesticides and chemicals management:

Article 12: Sound management of chemicals

The competent authority shall take measures, in accordance with national laws and practice, to ensure that:

- (a) there is an appropriate national system establishing specific criteria for the importation, classification, packaging and labelling of chemicals used in agriculture and for their banning or restriction;
- (b) those who produce, import, provide, sell, transfer, store or dispose of chemicals used in agriculture comply with national or other recognized safety and health standards, and provide adequate and appropriate information to the users in the appropriate official language or languages of the country and, on request, to the competent authority; and
- (c) there is a suitable system for the safe collection, recycling and disposal of chemical waste, obsolete chemicals and empty containers of chemicals so as to avoid their use for other purposes and to eliminate or minimize the risks to safety and health and to the environment.

Article 13

1. National laws and regulations or the competent authority shall ensure that there are preventive and protective measures for the use of chemicals and handling of chemical waste at the level of the undertaking.
2. These measures shall cover, inter alia:
 - (a) the preparation, handling, application, storage and transportation of chemicals;
 - (b) agricultural activities leading to the dispersion of chemicals;

(c) the maintenance, repair and cleaning of equipment and containers for chemicals; and

(d) the disposal of empty containers and the treatment and disposal of chemical waste and obsolete chemicals.

In addition, Recommendation No. 192 provides the following guidance:

Sound management of chemicals

Paragraph 7. (1) The measures prescribed concerning the sound management of chemicals in agriculture should be taken in the light of the principles of the Chemicals Convention and Recommendation, 1990, and other relevant international technical standards.

(2) In particular, preventive and protective measures to be taken at the level of the undertaking should include:

(a) adequate personal protective equipment and clothing, and washing facilities for those using chemicals and for the maintenance and cleaning of personal protective and application equipment, at no cost to the worker;

(b) spraying and post--spraying precautions in areas treated with chemicals including measures to prevent pollution of food, drinking, washing and irrigation water sources;

(c) handling or disposal of hazardous chemicals which are no longer required, and containers which have been emptied but which may contain residues of hazardous chemicals, in a manner which eliminates or minimizes the risk to safety and health and to the environment, in accordance with national law and practice;

(d) keeping a register of the application of pesticides used in agriculture;

(e) training of agricultural workers on a continuing basis to include, as appropriate, training in the practices and procedures or about hazards and on the precautions to be followed in connection with the use of chemicals at work.

For other HS&E information provided by the ILO see the following webpage: <http://www.ilo.org/public/english/protection/safework/index.htm>

UN Food and Agriculture Organisation (FAO)

The *FAO International Code of Conduct on the Distribution and Use of Pesticides*, which was updated in 2003, is intended to be used by countries as a set of guiding principles for the distribution, handling and effective use of pesticides. It is voluntary but establishes a minimum international standard for monitoring the standards of governments and the pesticide industry. It lays down the responsibilities of governments, manufacturers and distributors. The issues covered by the Code include the regulation, availability, distribution, and health aspects of pesticide use, as well as advertising, labelling, packaging, storage, disposal and the principle of Prior Informed Consent (see below).

The Code is designed to assist countries in introducing necessary improvements in national capacities and capabilities in the effective management of pesticides, as well as to establish standards for industries manufacturing and trading in pesticides.

The FAO Code is a key reference document which trade unions and non-governmental organisations have regularly used to help improve national standards on pesticides HS&E and to ensure that pesticide companies meet high standards.

Experience with the Code has shown that its use has been instrumental in assisting many countries to initiate and/or strengthen pesticide management activities.

UN FAO/UNEP and the Prior Informed Consent Convention

The legally-binding *Rotterdam Convention on the Prior Informed Consent Procedure (PIC) for Certain Hazardous Chemicals and Pesticides in International Trade* 1998 is administered through a joint secretariat. The UN Food and Agriculture Organisation (FAO) is responsible for pesticides, and the United Nations Programme for the Environment (UNEP) for industrial chemicals.

The PIC Convention is an information exchange, notification and consent procedure. It aims to ensure that international shipment of a *chemical that has been banned or severely restricted* in any country in order to protect human health or the environment, or, *severely hazardous pesticide formulations causing health or environmental problems under conditions of use in developing countries*, do not proceed without the *prior consent* of the government of the importing country, based on *prior information* on the hazards of the chemical, and prevention and control measures etc, from the exporter (or via the importer) of that substance.

Exporting countries are required to give *prior* notification to importing countries of the intended export of a PIC list chemical, and the exporter has to supply *prior information* to the importing country government on the nature of the chemical, its hazards, prevention measures etc (including notifying their own national government). The importing country evaluates this information. It then either gives or refuses its *consent* as to whether to allow import, or sets conditions on the import. The exporter is bound to abide by the consent decision even if it does *not* permit import. Exporting country governments then have a duty to ensure that their exporters abide by the consent decision and do *not* export where consent has been refused.

Chemicals and pesticides included in the PIC procedure are put on a PIC list, at the request of governments provided they meet the criteria laid down in the Convention. Trade unions and NGOs can play an important role in collecting information/reports of poisonings and incidents from specific pesticides with a view to their Governments using such data to request that the pesticides causing these problems are put on the PIC list and subject to the PIC procedure. *Severely hazardous pesticide formulations* currently on the PIC list include: 2,4,5-T, aldrin, captafol, chlordane, chlordimeform, chlorobenzilate, DDT, 1,2-dibromoethane (EDB), dieldrin,

dinoseb, fluoroacetamide, HCH, heptachlor, hexachlorobenzene, lindane, mercury compounds, and pentachlorophenol, plus certain formulations of methamidophos, methyl-parathion, monocrotophos, parathion, and phosphamidon. Since September 1998 six additional pesticides (binapacryl, toxaphene, ethylene oxide, ethylene dichloride, monocrotophos and DNOC) and one additional severely hazardous pesticide formulation (dustable powder formulations containing a combination of benomyl, at or above 7 per cent; carbofuran, at or above 10 per cent; and thiram, at or above 15 per cent have been added to the interim PIC procedure.

Note

Banned pesticide means a pesticide for which all uses have been prohibited by final regulatory action, in order to protect human health or the environment. It includes a pesticide that has been refused approval for first-time use or has been withdrawn by industry either from the domestic market or for further consideration in the domestic approval process and where there is clear evidence that such action has been taken in order to protect human health or the environment. (FAO International Code of Conduct on the Distribution and Use of Pesticides, Revised Version 2003)

Severely restricted pesticide means a pesticide for which virtually all use has been prohibited by final regulatory action in order to protect human health or the environment, but for which certain specific uses remain allowed. It includes a pesticide that has, for virtually all use, been refused for approval or been withdrawn by industry either from the domestic market or from further consideration in the domestic approval process, and where there is clear evidence that such action has been taken in order to protect human health or the environment. (FAO International Code of Conduct on the Distribution and Use of Pesticides, Revised Version 2003)

UNEP Stockholm Convention on Persistent Organic Pollutants 2000

The legally-binding Stockholm Convention on Persistent Organic Pollutants (POPs) introduces bans, phase outs, clean production, or other actions to eliminate POPs. Nine pesticides are currently included in the Convention: aldrin, dieldrin, DDT, endrin, chlordane, hexachlorobenzene, mirex, toxaphene, and heptachlor.

UN World Health Organisation (WHO)

The International Programme on Chemical Safety (IPCS) is a joint programme of three UN organisations – ILO, UNEP and WHO each dealing with different aspects of chemical safety. The IPCS's main roles are to:

- establish the scientific basis for the sound management of chemicals
- strengthen national capabilities and capacities for chemical safety

WHO Recommended Classification of Pesticides by Hazards and Guidelines to Classification

The Classification and guidelines have gained widespread acceptance by national governments. The document is arranged as follows:

Part I: The Classification of Pesticides by Hazard as recommended by the WHO. This part is not subject to periodic review and the classification table and text can only be changed by resolution of the World Health Assembly of the WHO:

- Class 1a: Extremely Hazardous
- Class 1b: Highly Hazardous
- Class II: Moderately Hazardous
- Class III: Slightly Hazardous
- Category IV: List of technical products unlikely to present acute hazard in normal use.

Part II: Guidelines to Classification, which are revised at two yearly intervals. Individual products are classified in a series of tables, according to the oral or dermal toxicity of the technical product, and its physical state. The tables are subject to review periodically.

Other useful IPCS publications

- *International Chemical Safety Cards (ICSCs)* summarise essential product identity data and health and safety information on chemicals; they are designed for use at workplace level <http://www.cdc.gov/niosh/ipcs/icstart.html>
- *Data Sheets on Pesticides (PDS)* contain health and safety information on pesticides that are widely used in agriculture and/or public health programmes, and that have high or unusual toxicity records
- *Health and Safety Guides (HSGs)* provide concise information on risks from exposure to chemicals, with practical advice on medical and administrative issues; they are designed for a wide range of administrators, managers, and decision-makers
- *Environmental Health Criteria* provide assessments of the effects of chemicals on human health and the environment; they are designed for scientific experts responsible for risk evaluation, enabling relevant authorities to establish policies for the sound use of these chemicals

All this information is now available – free of charge – on compact disks and web pages <http://www.inchem.org>

UN Codex Alimentarius Commission

The Codex Alimentarius Commission (CAC) is a joint programme of FAO and WHO. Through the CAC, governments agree on international minimum standards for pesticide and chemical residues in food. The Commission publishes the Codex Alimentarius List which forms the basis of international Maximum Residue Limits (MRLs) set by the FAO.

Intergovernmental Forum on Chemical Safety (IFCS)

The IFCS is a political forum where governments, intergovernmental organisations, trade unions, industry, scientific bodies, and public-interest non-governmental organisations (NGOs) meet to:

- develop and coordinate policies on the environmentally sound management of toxic chemicals
- provide advice and make recommendations to governments, intergovernmental organisations, industry, trade unions, scientific bodies, and public-interest NGOs

The IFCS oversees and coordinates the implementation of Agenda 21, Chapter 19 on the *Environmentally-Sound Management of Toxic Chemicals*. Agenda 21 is the programme of action on environment and sustainable development agreed on by governments and other stakeholders at the United Nations Conference on Environment and Development (UNCED) 1992. Governments and other stakeholders reaffirmed their commitment to the effective implementation of Agenda 21 in paragraph 27 of the Declaration of the World Summit on Sustainable Development 2002

The IFCS works on all six programme areas of Chapter 19:

- Programme A: Expanding and accelerating international assessment of chemical risks
- Programme B: Harmonisation of classification and labelling
- Programme C: Information exchange on toxic chemicals and chemical risks
- Programme D: Establishing of risk reduction programmes
- Programme E: Strengthening of national capabilities for management of chemicals
- Programme F: Prevention of illegal international traffic in toxic and dangerous products

The IFCS has a system of national focal points in member countries, an up-to-date list of which can be obtained from the IFCS website <http://www.who.int/ifcs/>

(Check if you have a an IFCS national point in your country and make contact, and discuss your work and activities with them)

*National Profile to Assess the National Infrastructure
for Management of Chemicals*

Through the IFCS, all countries have been encouraged to assess their existing infrastructure and capabilities for managing chemicals through preparation of a *National Profile to Assess the National Infrastructure for Management of Chemicals*. It should involve and reflect the views and concerns of the different stakeholders (interested parties) including trade unions.

A standardised format and guidance on how to prepare the Profiles has been developed by the United Nations Institute for Training and Research (UNITAR).

The preparation of a National Profile, which highlights chemical management priorities and areas of need as identified at the country level, can provide a good starting point for the development of a national action programme for integrated chemical management – linking occupational health and safety with public/community health and environmental concerns. A participatory, multi-stakeholder process can set the stage for collaborative action among all concerned parties to strengthen chemicals management.

As part of the IUF's HS&E/Global Pesticides Project, IUF affiliated agricultural trade unions in Ghana, Tanzania and Uganda have been participating in the preparation of National Profiles in their own countries. The unions want to ensure that the Profiles reflect the problems faced by agricultural workers using or exposed to pesticides, and set priorities and develop action programmes to deal with the problems identified.

National Profiles are publicly available on the UNITAR web page, plus on compact disk, allowing comparison of chemical management systems in different countries <http://www.unitar.org/cwm/nationalprofiles>

***Collective
bargaining***

Often the bargaining process can bring about improvements in the workplace much more quickly than waiting for national legislation to change, which can be a very slow process. Encourage your union to develop agreements on the use of chemicals, using as a basis the provisions in the ILO Conventions No. 184 on Safety and Health in Agriculture and No. 170 Concerning Safety in the Use of Chemicals at Work 1990.



Activity – ILO Conventions and other standards

AIMS

To help us to:

- identify the key ILO Conventions and other standards
- practise the skills of presenting information

BACKGROUND

A union general secretary has been asked to attend a tripartite meeting by the Government, which is concerned about the problem of banned pesticides being used in their country. Currently the national laws are very weak in all aspects relating to pesticides. The union general secretary wants to be briefed by the union health and safety adviser prior to the tripartite meeting on the type of international standards that are relevant to pesticides.

TASK

The group will be split into groups of union general secretaries, union health and safety advisers and observers. Using the pages above on ILO Conventions and other standards:

- the union health and safety advisers will be asked to prepare to brief the union general secretary and answer questions
- the union general secretaries will think about questions that they would like to ask
- the observers will prepare a checklist of points they will watch out for during the interview

You will then be divided into groups of three, one union general secretary, one union health and safety adviser, and one observer. The union health and safety adviser will brief the union general secretary and answer questions. The observer should watch and listen, and note down the main points of the conversation.

Observers will report back, giving the key points to the larger group.



■ Improving pesticide health and safety

About this section

This section will help us to:

- identify prevention and control measures for pesticide use/exposure
- think about alternatives to pesticides
- develop trade union action plans

No such thing as the “safe use of pesticides”

Although employers, pesticide industry sellers and advisors, and even government advisors may tell you the opposite, in practice, there will always be a degree of risk attached to pesticide use. Always remember to look for alternatives to pesticide use to prevent risks. (See below regarding IPPM and organic farming).

However, the reality is that many agricultural workers are still forced to use, or are exposed to, pesticides as an everyday part of their job. Pesticides present their greatest danger when being used. So in this section, we look at the hazards that can occur before, during, and after pesticide use, and what practical precautions should be taken.



Activity – Prevention and control

AIMS

To help us to:

- investigate key problems with pesticides
- use prevention and control guidance
- take up problems with management

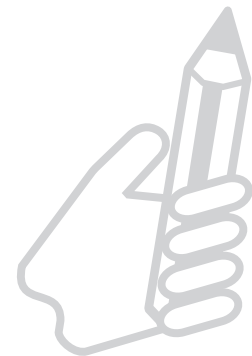
TASK

*In your small group, select a priority problem concerning the use of pesticides at one of your workplaces. Look at the guidance materials below on **prevention, control and alternatives**.*

Use the worksheet on the next page to prepare:

- what the hazard is
- how the risks should be prevented or controlled
- how to take up the problem, and the arguments to use with management

Elect a spokesperson to report back with your group's ideas



WORKSHEET: PREVENTION AND CONTROL	
Hazard	
Description	
Causes	
Information	
Legal standards	
ILO Conventions	
How should the risks be prevented or controlled? (see guidance below)	
Alternatives (see guidance below)	
Plan	
Trade union aims	
Involving members	
Points to put to management	
Action needed	

**Risk
assessment
and
prevention
and control
measures****Risk assessment**

The very first step, *before use of or exposure to a pesticide*, is for the employer to carry out a risk assessment at the workplace. The workplace risk assessment should identify the potential hazards before, during, and after pesticide application both for pesticide users and those working/living nearby, evaluate the risks, and work out appropriate measures for the employer to implement to prevent, control or minimise the risks identified.

ILO Convention No. 184 on Safety and Health in Agriculture: Article 7

“The employer shall:

- (a) carry out appropriate risk assessments in relation to the safety and health of workers and, on the basis of these results, adopt preventive and protective measures to ensure that under all conditions of their intended use, all agricultural activities, workplaces, machinery, equipment, chemicals, tools and processes under the control of the employer are safe and comply with prescribed safety and health standards;
- (b) ensure that adequate and appropriate training and comprehensible instructions on safety and health and any necessary guidance or supervision are provided, including information on hazards and risks associated with their work and the action to be taken for their protection, taking into account their level of education and differences in language”.

**ILO Recommendation No. 192 on Safety and Health in Agriculture:
Paragraph 5**

“At the level of the undertaking risk assessment and management measures should be implemented in the following order of priority:

- elimination of the risk;
- control of the risk at the source;
- minimisation of the risk by such means as the design of safe work systems, the introduction of technical and organisational measures and safe practices, and training; and
- in so far as the risk remains, provision and use of personal protective equipment and clothing, at no cost to the worker”.

The hierarchy of prevention and control measures should be followed in the order that they are listed.

STEP 1: Elimination of the risk

The aim is to eliminate any possible risk by assessing if it is really necessary to use a pesticide? Check if:

- the weed, insect, or disease, been correctly identified, and is the degree of economic damage caused such that it warrants pesticide use?
- any other method of dealing with the pest problem is available? For example, integrated production and pest management, use of a non-chemical biopesticide, or an organic approach?
- the pesticide is legally approved and registered for the intended use?

If elimination of the risk is not possible, consider substitution:

- with a less hazardous pesticide?
- with a less hazardous formulation by using, for example, granules instead of a liquid which can splash?

If prevention of the risks (through elimination or substitution) is not possible, and the employer's risk assessment has determined that the pest damage (actual or potential) warrants pesticide use, then the following set of risk control measures should be followed, *in the order listed*.

STEP 2: Risk Control

Risk control at source involves the use of what are known as *Technical and Engineering Controls*.

Example:***The risk(s)***

Poor design of many spray containers and packets, and even sprayers, can result in pesticides splashing on to exposed skin, clothing, or into eyes during mixing and filling operations.

Technical/engineering control solutions, such as use of:

- Sealed mixing and filling systems for tractor-mounted sprayers The operator simply puts the pesticide container into the system and then stands back away from danger whilst the mixing is done automatically, avoiding and contact with or risk of splashing from the concentrated pesticide. The operator, wearing appropriate personal protective equipment to supplement the technical and engineering controls, then thoroughly rinses out the empty pesticide container at least three times and puts it in a secure place for disposal
- Pesticide formulations in dissolvable, water soluble plastic sachets. These sachets are simply placed whole into the knapsack or tractor spray tank. The tank cover is replaced, the mixture agitated, and the packaging dissolves inside the spray tank, releasing the pesticide. There are no containers to dispose of afterwards
- Pesticide tractor cabs fitted with approved, charcoal-based pesticide filters which absorb any pesticide before it enters into the cab. Ordinary dust filters in the tractor cab *do not* work so don't accept them!

STEP 3: Safe systems of work, the introduction of technical and organisational measures and safe practices, and training

- Has the employer ensured that there is a safe system of work in place, as identified in the risk assessment? For example, are workers removed away from areas before spraying begins? Are re-entry periods into treated areas being observed?
- Is there effective supervision in place?
- Has the spray equipment been checked to see if it is in working order and properly calibrated?

STEP 4: Information and training

- Have workers using pesticides received specialised HS&E training? Operators on farms and holdings must have the correct training for the pesticides and equipment they handle, be well informed of the law and what constitutes good practice, and be supervised by someone who is also trained
- Have other workers exposed to pesticides received basic training on the pesticide hazards and risk prevention and control measures?

Hygiene and Health Surveillance

- Are good washing facilities provided both in the farm/plantation yard and in the field/glasshouse where the pesticide is being applied? All users should wash after spraying
- Is first aid equipment available where needed, including eye washes, and are there workers/staff trained in first aid use?
- Is health surveillance available when the product used could have a serious effect on health if control measures fail (for example, with organophosphorus and carbamates)?

Other information

- Does the pesticide(s) present unnecessary risks to livestock and the 'environment' (bees, fish, etc)?
- Will it damage, directly or through leaching, any streams, rivers, or other water, whether surface or underground?
- Will it damage neighbouring crops?
- Are adequate precautions established to prevent either livestock, or the public, from coming in contact with the area to be sprayed (e.g. warning notices on public footpaths, notice to beekeepers)
- In addition to specific precautions on each application, large pesticide users, particularly on farms and plantations, must prominently display their written plans for emergency procedures. Everyone on-site should be familiar with the plan and have received training in its implementation

- After pesticides have been used, any surplus pesticide must be disposed of safely (see label instructions) and empty containers and packets disposed of safely. Liquid containers should be rinsed thoroughly three times and then disposed of (see national regulations). Check if your pesticide supplier has a recollection scheme for empty, rinsed pesticide containers. Empty containers/drums should never be re-used either for diesel or domestic purposes! Ensure that they are squashed or punctured.

STEP 5: Provision, use and maintenance/replacement of personal protective equipment

The risk assessment should then evaluate what types of personal protective equipment should be used to supplement other control measures in place

The term Personal Protective Equipment (PPE) means any clothes, materials or devices that provide protection from pesticide exposure during handling and application. It covers items ranging from gloves, goggles/face shields, chemical respirators, rubber aprons and boots, complete protection suit for very hazardous materials, and cloth coveralls. This equipment should be provided, maintained and replaced by the employer at no cost to the worker.

As PPE is the least effective means of protecting the operator, it should always be *the LAST control measure* to be adopted. It should only be used to supplement the other control measures identified above, once these have been put into operation. Unfortunately for many workers it is usually the first – and often the only – control measure provided by the employer. Globally, PPE is the main means of operator protection from pesticides as both the pesticide industry and agricultural employers over-rely on this control measure.

Types of personal protective equipment for workers on farms and plantations

Gloves: Protective, unlined rubber or neoprene gloves, which should be at least 0.4mm thick whilst retaining flexibility in all weather, should always be worn when handling pesticides. They should protect the whole hand and wrist – being not less than 300 millimetres in length measured from the tip of the second finger to the edge of the cuff. Sleeves of coveralls should be worn under the gloves at all times. Gloves should be designed for use with pesticides (General industrial gloves which often have a cloth cuff are *not* suitable as they will absorb pesticide). Some pesticides like methyl bromide penetrate rubber gloves, and also natural rubber gloves may not prevent contamination from solvents like xylene.

Torn or damaged gloves should not be worn and should be replaced immediately. The gloves should be washed daily after work with water and detergent, rinsed and dried. Regular replacement is also important.

Apron: A protective rubber/neoprene apron covering the front and sides of the body from immediately below the shoulders to at least 70 millimetres below the tops of any boots that are being worn (it should extend to at least below the knees).

Coverall: A protective garment, or combination of garments (offering no less protection than a single garment), close fitting at the neck and wrist and which:

- covers the whole body and all clothing other than that which is covered by a good, face-shield, respiratory protective equipment, footwear and gloves, and which minimises heat stress to the operator when worn
- when required to be worn in connection with the use of a pesticide in the form of a granule, dust or powder, has all its external pockets covered and has its sleeves over the tops of gloves being worn
- is white or of a colour which produces a clearly noticeable contrast if contaminated with pesticide
- is regularly washed to avoid contamination with pesticide

Boots: Protective (gum or wellington) boots made of rubber or neoprene extending to at least immediately below the knees. Coveralls should be worn over the top of boot. Leather or canvas boots are NOT suitable as they readily absorb pesticide

Face shield: A transparent shield covering the whole of the forehead and face designed so as to protect the forehead and face from being splashed. These are better than goggles which only protect the eyes. (If goggles are used, the eye lenses must be chemically resistant and the straps plastic or rubber, NOT cloth)

Head gear: A hood or waterproof, wide brimmed hat, or other covering to the head so designed as to protect the forehead, neck, and back and sides of the head from contamination by pesticide in the circumstances in which is being used

Respiratory protective equipment (RPE): Respirators, breathing apparatus, cartridges (filters), and masks should be of a type approved by, or conforming to a standard approved by, the pesticide registration or health and safety authority in a country. RPE is recommended for use with more hazardous pesticides (see the label or data sheet). The chemical cartridges should be the one approved for a particular pesticide(s) and they should be changed regularly when odours are detected through them, when breathing is restricted or according to manufacturer's instructions or the law – whichever comes first.

The cartridges should be removed and respirators washed after use with water and detergent, and rinsed and dried. When not in use, the respirator and cartridges should be stored in a sealed plastic bag to prevent contamination.

If disposable masks are used, then these must be approved and registered for use with the particular pesticide(s) and contain an activated charcoal filter. Disposable dust masks – ‘nuisance’ dust or even higher quality ones – will **NOT** protect against spray droplets getting into the lungs



Checklist – Shortcomings of PPE

- ✓ PPE can be uncomfortable, and users – quite understandably – often resist wearing it for long periods especially in hot climates/working conditions. There is evidence to show that wearing PPE in hot climates/working conditions can expose the operator to heat exhaustion
- ✓ PPE is often poorly designed, and only offers limited protection. Poor design does not take into account for example, different sizes and build of people, nor their different facial characteristics in the case of masks, or the differences between women and men
- ✓ Pesticide labels and even material safety data sheets give little concrete information on what types of PPE should be worn and what degree of protection they offer. For many types of PPE there is no standardisation of equipment, and vital safety information such as protection factors and durability is not given. Gloves, for example come in a confusing array of types and materials. The purchaser has little or no safety information on which to make a rational choice
- ✓ PPE is often unsuitable for the task in hand. It is common to see spray operators wearing ‘nuisance’ dust masks in the mistaken belief that these will prevent them breathing in the fine spray droplets. They will not. Only disposable masks or respirators which contain a charcoal filter will stop fine pesticide droplets reaching the lungs
- ✓ PPE should be kept in good condition, uncontaminated from previous use, and provided at no cost to the worker. In practice, clothing and respirators are often poorly maintained, frequently stored with private clothing, and not cleaned or replaced often enough. So negotiating for proper storage and maintenance of PPE, and regular replacement at no cost to the worker is important.



Activity – Workers and PPE

AIMS

To help us to:

- identify the responsibilities of employers and workers
- identify the role of the worker HS&E representative in handling discipline and HS&E
- tackle problems of unsuitable PPE



TASK

1. Read the short case study below

Workers have recently been supplied with personal protective equipment (PPE) for use when they are working with chemicals. Management did not consult the workers on the choice of PPE. Many of the workers (who are mostly women) refuse to wear the equipment because it was designed for men, and so does not fit properly and is uncomfortable. A senior manager has now informed the worker HS&E representative that the workers will be disciplined if they do not wear the PPE.

2. In your small group, decide what you think the worker HS&E representative and the workers should do next.

Elect a spokesperson to report back using a chart

Applying the risk assessment

Once the employer has carried out the risk assessment and discussed the findings with the workforce, the appropriate prevention and control measures should be put in place.

Packaging and containers

The employer should ensure that pesticides are supplied in packaging and containers which comply with national standards and regulations, and with labels in the appropriate local language(s). Packages may vary greatly in size, from a small plastic container, packet or box to a large metal or plastic drum. Repackaging of pesticides should NOT be attempted under any circumstances!

Transfer/Decanting

Only in very exceptional circumstances should pesticides be transferred from one container to another and then only be trained staff with appropriate supervision. The new container must then be appropriately labelled.

Unfortunately, on many farms/plantations it is common practice to take a pesticide out its original packet/container and:

- either put it into smaller unmarked packets such as a paper bag
- or, in the case of a liquid, decant it into smaller unmarked containers or used, empty pesticide containers from other products.

These smaller packets or containers are then taken to place where the product is to be applied. A reason given for this practice is to stop theft of pesticides. Transfer or decanting is however a bad practice and one that should be discouraged.

Transport

On the farm or plantation, safe transport to the fields where the substances are to be used is important as they may be a long way from the pesticide store. Ensure that:

- random stacking is avoided
- pesticides are separated from other materials and persons transported on/in the same vehicle, and
- pesticides are NOT carried alongside the driver in a vehicle/ tractor cab

Storage

Employers who have to store pesticides should know how to construct and maintain a storage shed, and to have a safe system of work for the staff working in the store and those with regular access to it. Ideally a special store for pesticides should be constructed and be:

- properly sited to allow easy access for delivery and loading on to vehicles
- built well away from houses, livestock areas, flammable materials, and water or areas liable to flooding (to prevent the risk of contaminating underground water supply sources)
- separated from other stocks such as fertilisers, flammable materials and crops/food (if the store/storage area is within a general-purpose building)
- of sound construction, have walls, floor and roof which are fire and corrosion resistant, impervious to liquids and insulated, and the floor should be slatted to avoid contamination from spills and provided with a raised sill so that the building can contain any spillage prior to mopping up. Have an external watertight tank to store spilled liquids. Have material, to mop up spillages, e.g. sawdust
- provided with suitable entrances and exits with fire resistant doors opening outwards wherever possible
- fitted with strong and durable shelving
- provided with natural ventilation or extractor fans to avoid build-up of fumes

- provided with sufficient lighting so that all labels can be read, whilst avoiding direct sunlight because of the risk of spontaneous combustion if chemicals become too warm
- heated well in colder climates, enough to avoid frosts, especially when storing liquids
- secure against theft, vandals and animals with a clear sign displayed giving warning that poisons are stocked within
- provided with washing facilities and a place to put used PPE

In addition, care must be taken to:

- store items carefully, and categorise them where possible into poisons, corrosive, flammable materials and so on
- store single steel drums no more than three high and single plastic drums no more than two high
- keep a record of pesticides in the store

Poorly stored pesticides can cause a number of problems, including:

- lack of warning signs so that people are at risk
- no ventilation allowing build up of toxic fumes
- increased health risk for the storeperson if there is inadequate space between storage shelves and that person's seat/desk
- lack of PPE for use in the store
- spillage, or leaking containers resulting in pesticide seeping into bare ground and watercourses
- packets catching fire
- deterioration after being exposed to weather damage
- poorly constructed stores that are vulnerable to theft or vandalism

Training

Pesticide applicators/operators and helpers should receive proper training covering:

- emergency/first aid measures in the event of malfunction or accident
- correct choice of spray equipment
- checking of spray equipment to ensure correct calibration and functioning, and fault finding
- checking and maintenance of PPE
- mixing, filling and application
- attending to simple repairs including nozzle blockages in the field
- cleaning, maintenance of application equipment, and PPE

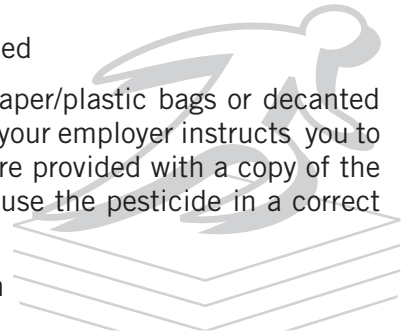
***Pesticide
application***

Pesticides are sold in many forms – liquids, granules, dusts, fogs, smokes, vapours – and all require handling differently to stop pesticides being inhaled, ingested, absorbed by skin, or contaminating the environment. Contamination can arise during handling, mixing, and loading of spraying machines and knapsack sprayers from:

- inhaling vapour, droplets, or even dust, from the concentrated pesticide
- splashing liquid pesticide on skin or into eyes
- getting liquid or powder pesticide onto the hands and exposed parts of the body and clothing. From there it can get into the mouth, be in contact with the skin, or be absorbed through the skin into the bloodstream

**Checklist – Pre-spraying precautions**

- ✓ Read the label plus any other information provided
- ✓ Avoid using pesticides provided in unlabelled paper/plastic bags or decanted into unlabelled or wrongly labelled containers. If your employer instructs you to use pesticides in this way, make sure that you are provided with a copy of the proper label and written instructions on how to use the pesticide in a correct manner
- ✓ Check the spray equipment including calibration
- ✓ Check and wear any PPE
- ✓ Check the first aid equipment
- ✓ Check that weather conditions are satisfactory
- ✓ Put any warning signs in position





Checklist – Precautions during mixing and filling/loading

- ✓ Use PPE as per the label instructions, but in the absence of clear advice on PPE, wear a coverall and gloves and use a face shield to ensure minimum protection
- ✓ Take care that gloves do not tear on jagged metal or plastic edges when unscrewing the cap
- ✓ NEVER mix a pesticide with your bare hands. Only open one container at a time, and replace the cap/close the container if there is chemical left
- ✓ Do *not* mix two or more concentrates before loading them into the tank
- ✓ Do *not* decant pesticides between containers and spray equipment
- ✓ Measure out pesticides only in an appropriate vessel and rinse it immediately; use scales dedicated to the task for powders
- ✓ Avoid lifting containers above shoulder height as they can splash
- ✓ Do *not* climb up a sprayer with an open container
- ✓ Make sure of good foothold if you have to pour directly into a tank, preferably on the ground on a platform at the right height
- ✓ Pour slowly with the container opening positioned so that air can enter, so avoiding glugging and splashing
- ✓ Use filling attachments such as chemical induction probes and low level filling and mixing tanks, or sealed mixing and filling systems
- ✓ Avoid causing foaming by sucking air into the tank when using an induction probe
- ✓ Rinse empty containers – at least three times – and store in a secure place prior to disposal
- ✓ Use a probe to rinse containers if you can
- ✓ Ensure there can be no run-back of pesticide into the water supply

- **DO NOT** return a probe to its holster without washing it; likewise for a knapsack lance
- **DO NOT** make a direct connection between a domestic water supply and a spray tank
- **DO NOT** take water from a stream without preventing run-back
- **DO NOT** smoke, eat or even drink when handling pesticides as this may result in pesticides getting into the mouth and being swallowed. Anyone smoking whilst handling pesticides inhales the chemical vapour through a mini-furnace inside the cigarette or pipe



Checklist – Precautions during application

- ✓ Spray correctly either walking or driving at the correct speed to ensure correct dosing on to the ground or crops
- ✓ Take notice of changing weather conditions and stop if it gets too windy
- ✓ Watch out for fellow workers nearby or members of the public passing on footpaths
- ✓ NEVER spray too near to water courses – respect buffer zones around crops
- ✓ Make sure you have some water and first aid equipment with you
- ✓ Avoid bad practices like trying to clear a blocked nozzle by putting it to your mouth and blowing the obstruction clear. Clean the nozzle with water or a soft probe such as a grass stem. Wear gloves when doing this
- ✓ Look out for overhead electricity cables and make sure any spray boom does not come into contact with them. Many fatal electrocutions have been caused in this way



Checklist – Post-spraying precautions

- Have a preliminary wash of hands, face and neck or other parts of the body which may have become contaminated. Wash gloves before removing them
- Return unused pesticides to the store, and empty, three times rinsed containers to a secure storage area prior to disposal
- Remove any warning signs
- Decontaminate/clean application equipment by washing it thoroughly, and make sure that you wear PPE whilst doing this. The washings should be drained into a soak-away or similar chamber to be confined safely and without risks to the environment.

NEVER clean spray equipment in a stream or watercourse

- Decontaminate/clean PPE by washing down items such as gloves, aprons, boots and face shield. Gloves should be washed inside and out and allowed to dry. Respiratory protective equipment should be wiped clean prior to thorough washing (remove the chemical cartridge)
- Bathe or wash thoroughly after completing the above actions
- For items such as coveralls ensure there are special arrangements at work for washing/laundrying them properly. The person doing the laundrying must also be properly protected whilst cleaning them

NEVER take pesticide-contaminated clothing or equipment to be washed at home as you put your family at risk

- Complete a record of use. It is good management practice to know which pesticides worked best in which field, and it is also source of reference in the event of pesticide-related illness
- Observe re-entry times to treated areas

**Record
keeping**

It is essential that employers keep good records about employee exposure and all operations involving the storage, application and disposal of pesticides. Exposure records must be kept for at least five years, and 30 years in the case of health surveillance records. Records aid both stock control, and be usable as a reference in the event of the accidental contamination of workers, the public, honey bees, other creatures or non-target crops. Recommendations for records suggest the following headings: operator; date; application site; crop; material or structure treated; reason for treatment; product used, dilution and application rate; hours pesticide used; weather conditions; and any other relevant detail.

**Re-entry
period**

The time interval that should elapse between pesticide application and entering the treated field, glasshouse/plastic tunnel, livestock shed for safety reasons is known as the re-entry period/interval. It should not be confused with the harvest interval which is the time between pesticide application and the harvesting of the crop in order to avoid or minimise the problem of pesticide residues. Re-entry periods are designed to allow residues to decay to a point where the exposure is insufficient to cause harmful effects.

Re-entry periods will vary according to the type of pesticide used, the dose applied, the surface area of crop treated, weather conditions. The minimum re-entry times as stated on the label, the safety data sheet, or in a written instruction must always be respected. It may need to be increased if vulnerable populations are exposed to danger, for example, members of the public coming to buy produce on a farm.

If entry is required to a treated area before the re-entry period, then PPE must be worn.

**Precautions
during
disposal of
surplus
pesticide and
containers**

Mixed pesticide, surplus to requirements, should be safely disposed of (as per label/MSDS) The work area must be cleared up; any chemical packets/containers put back in the store; and containers disposed of safely. All these stages can result in contamination if they are not carried out properly. They can also have catastrophic effects on livestock, pets and wildlife, and contaminate water sources.

**Checklist – Disposal of mixed, surplus pesticides**

- ✓ Drainings/washings should run into a specially constructed and maintained soil soakaway or other special container
- ✓ Pesticides washed from the sprayer must never be allowed to run into public sewers or where there is a danger of seepage into any form of watercourse
- ✓ If possible, use a flushing device (rather than filling the spray tank with water and pumping it through) to clean out equipment and containers as this will reduce the volume of washings



Checklist – Disposal of unwanted, obsolete pesticides

- ✓ Large quantities of unwanted pesticide should be disposed of after consultation with the local official agricultural adviser/official or after consultation with the manufacturer
- ✓ Many local authorities operate special landfill sites for disposal of hazardous waste. There may also be reputable, specialist waste disposal contractors who can be hired

Disposal of pesticide containers

All too often pesticide containers are left in fields, or dumped in watercourses. Ideally, containers should be returned to the manufacturer for disposal, and in some cases this is possible. The international pesticide industry has pilot schemes in some countries where empty, rinsed pesticide containers can be returned to the local agrochemical distributor or special depots.

- All containers (including paper packages) should be rinsed out – at least three times – and the washings disposed of as for tank washings described above. PPE, especially gloves, coverall and a face shield, should be worn
- Storage of containers prior to disposal must be in a well defined and marked area, preferably under cover or with a special waterproof container provided for empty paper sacks if these are stored outside
- Containers should NEVER BE REUSED whether for storing, drinking water, diesel fuel, or for any other purpose. Paper, plastic and metal should be punctured or crushed to make it unusable
- On the premises owned or occupied by the employer, disposal should be carried out carefully depending on the container material
- Glass and metal (not aerosols) should be either crushed in a sack (for glass) or flattened, and buried at a depth of at least 1 metre, below the level of any land drains, in an isolated place. The area should be fenced or marked with warning signs. A record should be kept of dates and the material buried
- Labels should NOT be disfigured. Containers can be buried, with the same precautions as glass or metal. In some cases it may be permissible to burn lightly contaminated packaging. The local authority should be consulted beforehand and if necessary, the manufacturer

■ Alternatives to pesticides

About this section

This section will help us to:

- find out about alternatives to pesticides
- prepare us to argue for alternatives in our workplaces especially as part of collective bargaining agreements

Introduction

In agriculture, especially where the same crop is grown repeatedly on the same land (monocultures), the indiscriminate use of pesticides has led to problems of pesticide dependence, pesticide resistance, and pest resurgence. The overuse of chemicals has meant that pests have evolved resistance to certain pesticides, i.e. they are no longer killed or controlled by certain pesticides. Calendar application of pesticides has also harmed non-target, beneficial predators, parasites and pathogens which help naturally control pests. As a result there has often been a resurgence of the surviving pest which the pesticide was unable to control, leading to new crop losses. Indeed, there is growing evidence to show that far from solving pest problems, pesticides may aggravate existing ones and even create new pests.

Regular pesticide use can lead to dependence where more and more pesticide or newer and newer active ingredients have to be used to maintain pest control levels. Farmers, who were dependent upon yields made possible by pesticides, need to apply more and more powerful pesticides to sustain yields. These problems have prompted the search for alternatives to chemical pesticides, which can be broadly categorised as:

- Integrated Production and Pest Management
- Organic Agriculture

Note: The pesticide/biotechnology industry claims that use of biotechnology, based on genetically modified organisms (GMOs), could provide alternatives to chemical pesticides. This claim however needs careful discussion and examination as there are many areas of uncertainty and many powerful counter-arguments to this industry claim. For this reason, the subject of genetically modified organism biotechnology and pesticides is not dealt with here as an alternative.



Activity – Integrated Production and Pest Management (IPPM)

AIMS

To help us to:

- identify the key aspects of IPPM
- practise the skills of presenting information

BACKGROUND

A union general secretary has been asked to attend a tripartite meeting to discuss the potential use of IPPM. The union general secretary wants to be briefed by the union health and safety adviser prior to the tripartite meeting on key aspects of IPPM.

TASK

The group will be split into groups of union general secretaries, union health and safety advisers and observers. Using the pages below on IPPM and Fact Sheet 14 in Manual 4:

- the union health and safety advisers will be asked to prepare to brief the union general secretary and answer questions
- the union general secretaries will think about questions that they would like to ask
- the observers will prepare a checklist of points they will watch out for during the interview

You will then be divided into groups of three, one union general secretary, one union health and safety adviser, and one observer. The union health and safety adviser will brief the union general secretary and answer questions. The observer should watch and listen, and note down the main points of the conversation.

Observers will report back, giving the key points to the larger group.



Integrated production and pest management

IPPM progress

Integrated Production and Pest Management (IPPM) is one of the main alternatives to the use of synthetic chemical pesticides. IPPM programmes in both developing and developed countries have made significant progress towards reducing pesticide use and associated negative impact on health and the environment. Numerous field cases have shown that it is possible to reduce the negative impact of pesticides through better pest management and better selection of pest management inputs, while maintaining yields, profitability and quality. Large scale examples include rice in Southeast Asia and Africa, protected production of vegetables in Northern Europe, cotton globally, and various other crops such as maize, wheat and open field vegetables.

IPPM can be used by workers and trade unions to avoid use of/exposure to toxic, synthetic pesticides.

What is Integrated Production and Pest Management (IPPM)?

In the FAO International Code of Conduct on the Distribution and Use of Pesticides (Revised Version 2003), “Integrated Pest Management means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment. IPM emphasises the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms”.

Put simply, IPPM, as it is now called, involves training waged agricultural workers and farmers to recognise both 'pests' – insects, diseases etc – and the natural enemies which control them. This includes the importance of maintaining the plants, natural habitats and eco-systems on and in which natural enemies feed, live and breed. The IUF is working with an international agency, the Global IPM Facility, to train agricultural workers in IPPM techniques and to supply them with appropriate technical information. The workers can then use the training and information to include IPPM clauses in collective bargaining agreements with employers as alternatives to the use of toxic pesticides. IPPM is better for the workers and managerial staff, and less damaging to the crops.

For full details about IPPM, see Fact Sheet 14 in Manual 4.

Organic agriculture

Introduction

In many countries pesticides are an essential, if for many a sometimes unwelcome, part of modern agriculture, horticulture and land management, and even small-scale farming. For a growing number of organic farmers this is no longer the case. There is increasing interest in the practice of organic agriculture, farming and gardening worldwide, and growing consumer demand for organic produce, often sold at premium prices. Organic cultivation avoids the use of both soluble nitrate fertiliser and synthetic chemical pesticides. Many farmers are converting to organic agriculture, and there is growing State support in many countries to help them move to organic agriculture or less intensive, more sustainable agricultural production methods.

Research on conversion from conventional to organic production suggests that increasingly organic farming and other types of sustainable agriculture are viable options.

National associations of organic farmers and even gardeners have sprung up in many countries. In addition, international networks have been created such as, for example, the International Federation of Organic Agricultural Movements (IFOAM).

Advantages of organic agriculture

Organic methods have many advantages, including:

- elimination of chemical pesticide use
- reduced leaching of nitrate fertilisers into rivers and watercourses
- reduced soil erosion

Organic agricultural methods

Organic growing does not just mean going back to traditional methods, which were in use before the advent of artificial pesticides. Used professionally, it is a sophisticated technique which relies on a detailed understanding of ecology, soil science and crop breeding. At the same time, the basic steps can be used by any gardener.

Important elements of organic growing are:

- Crop rotation to build up soil fertility and break the life cycle of crop-specific pests. One element in the rotation is a leguminous plant (i.e. a member of the pea and bean family); these plants have bacteria in their root nodules that can 'fix' nitrogen from the air and store it in plant tissues. Ploughing in the remains of the legume allows nitrate levels to be maintained in the soil
- Recycling nutrients through composting and careful use of animal manure. These methods top up nitrate levels where necessary, and also increase the amounts of trace elements in the soil. Manure is usually composted before application, to make sure that it is not leached away by rain
- Non-chemical pest and weed control. This includes IPPM, biological control; cultural control (through planting strategies, etc); and use of mechanical weeders, flamers and so on
- Mixed farming or gardening practised in an extensive system. Ideally, organic farms have fairly small fields and a mixture of crops and livestock
- Care for wildlife and the countryside whilst producing food. Humane treatment of animals, allowing them access to pasture and no unnecessary exposure to drugs or hormones. Animal welfare organisations back organic farming because of its improved treatment of livestock

Controlling pests on an organic farm

Insect and disease control in organic agriculture is primarily preventative rather than curative. In addition to good husbandry and hygiene, the key factors of insect and disease control are:

- balanced rotational cropping to break the pest and disease cycles
- balanced supply of plant nutrients
- the creation of an ecosystem in and around the crop which encourages predators, utilising, where appropriate, hedgerows or mixed plant breaks within fields, companion planting, undersowing and mixed cropping
- the use of resistant varieties and strategic planting dates

In addition, permitted methods of pest and disease control include mechanical controls using traps, barriers and sound; herbal, homoeopathic and biodynamic sprays; waterglass (sodium silicate); bicarbonate of soda; soft soap; steam sterilisation; biological control with naturally occurring organisms; and conventionally grown seed.

If these do not provide sufficient protection, some organic standards also contain a number of 'restricted' methods. These include use of a number of plant-based insecticides and fungicides, including natural pyrethrum and rotenone.

The key to pest control on organic farms is the system as a whole, rather than any individual steps. Chemical farmers say, quite rightly, that if they cut out all chemicals overnight, they would be over-run by pests. The conversion period needed to qualify for organic food standards is not just set to 'detoxify' the soil of any agrochemicals, but is also necessary to allow the growing area to come into nutrient balance again, build up predators, parasites and pathogens of pests, and so on.

This does not mean that organic farmers never have problems with pests. They do, and then they resort to methods of pest control, which sometimes include the use of the small number of plant-based pesticides cleared for use by certified organic producers. But organic farmers vastly reduce the need for pest control, and thus also reduce the need for pesticides:

- organic farmers do not control pests where none occur. They do not practise insurance, calendar spraying, which means spraying in case a pest or disease should occur, (and which sometimes does more harm than good by killing off the beneficial natural enemies of pests as well)
- they do not use cosmetic spraying, that is applying pesticide to make produce look better. People buying organic food would rather have say, harmless skin scabs on apples than synthetic pesticide residues within the apples
- organic farmers use non-chemical methods of pest control wherever possible. This means that when they do have to resort to pesticides, such as pyrethrum and derris, in a genuine emergency, the pesticides have a proportionately greater effect than when the land is routinely soaked in agrochemicals

■ Future strategy

**Activity – Your next steps on pesticides at work****AIMS**

To help us to:

- work out a plan for tackling pesticide hazards and risks
- identify the steps that we can take to involve, educate and inform our members

TASK

Use the worksheet on the next page to draw up in outline your own personal action plan on pesticides. Be realistic but try to achieve some real changes.

Prepare a report back to the rest of the course with your main points



ACTION PLANNING WORKSHEET				
What needs doing?	Your aims	What will you do?	When?	What was the outcome?
Pesticide hazards and risks				
Finding out about workers' ill health				
Information on pesticides – labels, data sheets, risk assessments				
Legal standards				
Training of workers				
Prevention and control measures				
Alternatives to pesticides				
Anything else?				


Manual 6:**HOW TO RATIFY & USE
ILO CONVENTION No. 184 ON
SAFETY & HEALTH IN AGRICULTURE**
Foreword

The 21 June 2001 was an historic day for the world's agricultural workers, with the adoption by the International Labour Conference of the International Labour Organisation (ILO) Convention No. 184 and Recommendation No. 192 on Safety and Health in Agriculture. This is the first time that waged agricultural workers¹ – whether permanent, temporary or seasonal – are guaranteed in international law the same rights and levels of protection as other categories of workers, despite the fact that the agricultural industry is one of the three most dangerous in the world and has the largest workforce of any. There are an estimated 450 million waged agricultural workers worldwide, and their numbers are growing in most regions of the world. They account for 40% of the global agricultural workforce of over 1.1 billion. Twenty to thirty per cent of the waged workers are women. Unfortunately, child workers also form part of the agricultural labour force.

In June 2001, governments, employers and worker trade unions participating in the 89th International Labour Conference (ILC) in Geneva decisively adopted the new instruments despite the fierce resistance of the employers' group at the ILC in 2000. There were only two opposing votes,

¹ Waged agricultural workers are the women and men who labour in the crop fields, orchards, glasshouses, livestock units, and primary processing facilities to produce the world's food and fibres. They are employed on everything from small- and medium-sized farms to large industrialised farms and plantations. They are waged workers because they do not own or rent the land on which they work nor the tools and equipment they use and so are a group distinct from farmers. Such workers include the following categories: permanent agricultural workers; temporary agricultural workers; seasonal/casual agricultural workers; migrant agricultural workers, piece-rate workers; or workers receiving some form of 'in-kind' payment. There are also many indigenous agricultural workers who are part of the employed workforce. Agricultural workers work for some kind of 'wage' which can include payment in kind in an employment relationship, be it with a farmer, farming or plantation company, or agricultural contractor. (IUF 2002)

the employers' delegations of Indonesia and Malaysia, and 41 abstentions (28 employers and 13 governments).

The need to improve safety and health standards in agriculture is paramount as it is one of the three most dangerous industries along with construction and mining. Agricultural workers labour in an industry that is not sustainable as measured by the loss of human life, injury and ill health. Furthermore, agricultural workers and small farmers form the core of the rural poor. Their poverty can contribute to increased risks of work-related ill health due to poor diet and malnutrition.

One of the most distinguishing characteristics of agricultural work is that it is carried out in a rural environment where there is no clear distinction between working and living conditions, unlike for factory or office workers. As a result, agricultural workers and their families face extra dangers such as exposure to pesticides. However, agricultural workers – who continue to register among the highest levels of global poverty – are generally excluded from effective forms of health, safety and social protection.

The International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF) views adoption, ratification and implementation of the Convention, supported by the Recommendation, as one of the key elements and measures of sustainable agriculture. Agriculture cannot be sustainable if it continues to kill, maim, and make ill huge numbers of workers and farmers producing the world's food and commodities, nor if it continues to harm the environment. A safe and healthy agricultural workforce organised in strong trade unions is also a key element in helping ensure world food security and promoting food safety. For example, giving workers both the right and the means to wash their hands not only protects them, it also protects the quality of the food. Food should not only be ecologically labelled but socially labelled to say that those producing it did so in safe and healthy working conditions.

It is hoped that this ILO-IUF Manual will help to promote ratification and implementation of the International Labour Organisation Convention No. 184.

■ Aims

This Manual aims to help agricultural workers and their trade unions, plus civil society organisations, in their campaign(s) to promote speedy ratification and implementation of the International Labour Organisation Convention No. 184 on Safety and Health in Agriculture, along with the supporting Recommendation No. 192. It should also provide a useful general reference to the Convention and what it contains.

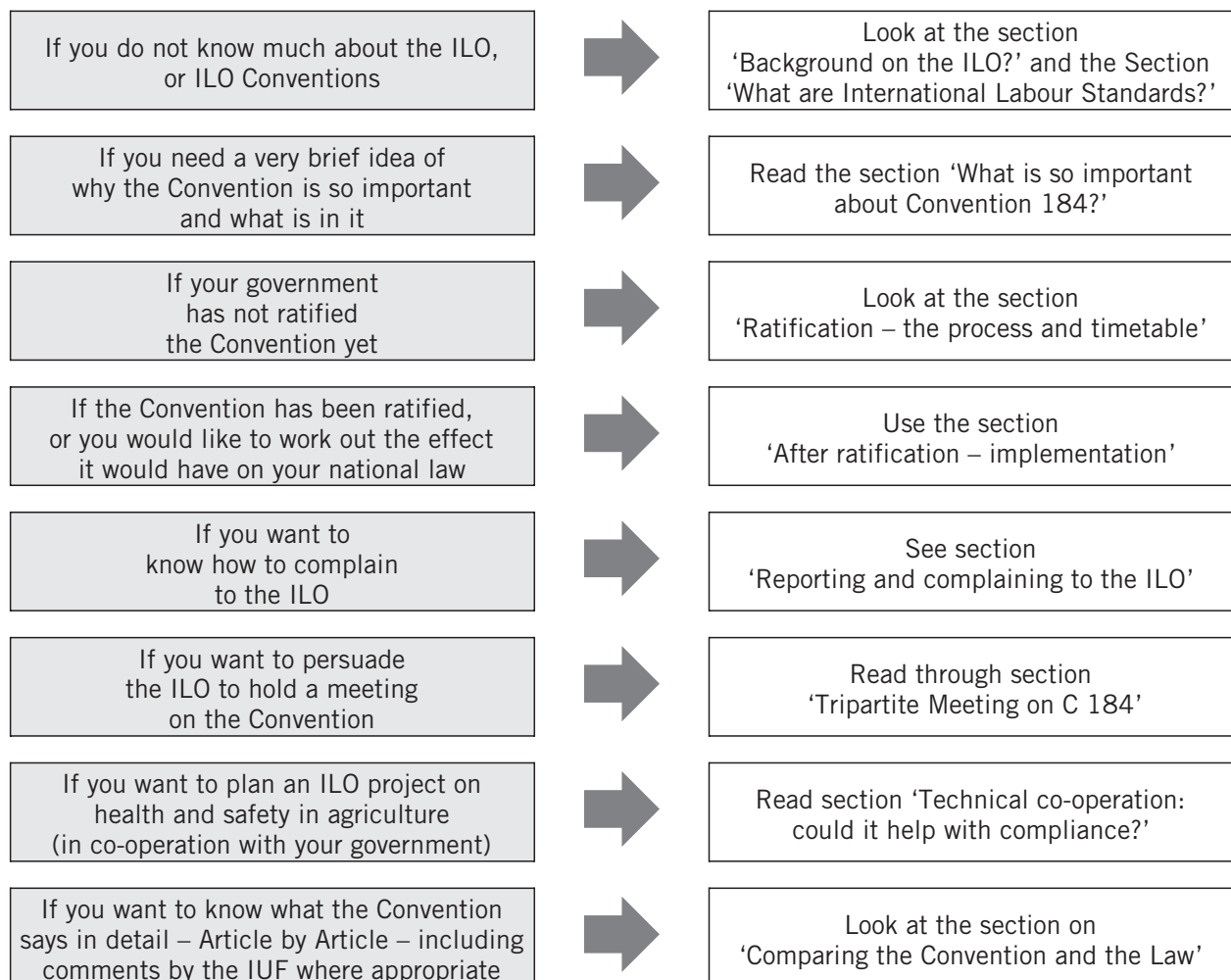
■ How to use this Manual

You can use this section alone, but it is best used:

- as a tool on courses for active union members
- in workshops for Executive Committee members of the union, to draw up plans for ratification
- by worker HS&E representatives including meetings of joint worker-management workplace health and safety committees
- at education events, either regular courses or as part of the IUF HSE/Global Pesticides Project
- as a basis for tripartite meetings on ratification with governments and agricultural employers' associations

You do not need to read through the guide from start to finish. You only need to refer to those sections which apply to your situation at the time.

■ Choosing the right section



■ Background on the International Labour Organisation

Introduction

The International Labour Organisation (ILO) is a part of the United Nations (UN) system. It is called a ‘specialised agency’ of the UN. Each part of the UN system is responsible for a particular area – its ‘mandate’, in UN jargon. The ILO’s mandate is social questions – especially the world of work and employment. So industrial relations, child labour, vocational training, policy on employment creation and health and safety at work – these are the ILO’s issues.

Like all UN organisations, the ILO is financed by member states. Countries have to join the ILO separately. Thus for a while the USA was a member of the UN but not the ILO.

The ILO is actually older than the United Nations. It was set up by the Treaty of Versailles, which marked the end of the First World War, at the same time as the League of Nations, which was a weaker, earlier version of the UN.

In 1919, the leaders of the countries which had ‘won’ the war met to make a treaty to decide the new boundaries, and to give the colonies of the ‘losing’ countries to the victorious powers (basically, France, Britain and the USA).

Those politicians met in the shadow of a huge wave of strikes, revolutions and uprisings all over the world. The Russian Revolution was only two years old. Workers were demanding that one outcome of the suffering caused by the war should be social justice. So the ILO constitution states:

***“universal and lasting peace can be established
only if it based upon social justice”***

The demand for social justice was one reason for the ILO. But the idea of international legal action for workers was not something completely new. There had been movements for such an organisation for many years.

What makes the ILO unique among international organisations is its tripartite nature. Other UN organisations are run only by governments. But in the ILO, governments, trade unions and employers are all represented at the International Labour Conference, on the ILO Governing Body and on specialised committees. Unions speak and **vote** at ILO meetings.

What is tripartism?

Tripartism is the essence of the ILO, which has defined it as ‘sharing of power’. Quite simply, it is the idea that trade unions, employers and governments should work together and seek consensus on issues which affect them. It is an extension of collective bargaining, or bipartism, when just unions and employers are involved.

At the International Labour Conference, each member state sends four delegates. Two represent the government; one represents employers and one represents trade unions. The Governing Body of the ILO is composed in the same way.

***Trade Unions
and the ILO***

The ILO has as its central aim the protection of workers and promotion of social justice. Although it has many shortcomings, just imagine if it did not exist and unions were to demand the setting up of a new UN agency composed the way that the ILO is now. It is also very unlikely that unions would be able to make governments hold a conference every year to agree international treaties on health and safety.

So unions can use the ILO – and the IUF, which started the campaign for a Convention on agricultural workers' health and safety – showed how it can be done.

■ What are International Labour Standards – Conventions and Recommendations?

The system of international labour standards takes the form of Conventions and Recommendations. They are negotiated at and adopted by the tripartite International Labour Conference, which meets every year in Geneva, Switzerland.

***International
Labour
Conventions***

Conventions are open to ratification by member States of the ILO. They are international treaties which are binding on the countries which ratify them.

Once these countries voluntarily ratify Conventions, they undertake to apply them, to ensure that their national law and practice comply with the requirements of the Conventions, and to accept international supervision.

Complaints about alleged non-compliance may be made by:

- the governments of other ratifying States or
- employers or
- *workers' organisations*

Procedures exist for investigation and action upon such complaints. A later section describes those procedures in more detail.

There are already many ILO Conventions on safety and health. They fall into four categories:

1. This category provides for protection against specific risks. For example, safety in the use of chemicals at work, asbestos and guarding of machinery
2. This category provides for protection in given branches of economic activity, for example, construction. Convention 184 is of this type
3. This category highlights measures of protection. For example, medical examination of young workers and prevention of occupational cancer
4. This category sets out framework of guiding policies for action. For example, the Occupational Safety and Health Convention (155) and Recommendation, and the Occupational Health Service Convention (161) and Recommendation

***International
Labour
Recommendations***

Recommendations are not international treaties. They set non-binding guidelines which may orient national policy and practice. Governments do NOT ratify Recommendations. Recommendations give more detailed measures on how the provisions in the Convention can be applied.

The distinction between Conventions and Recommendations is important. Member states have certain important **procedural** obligations in respect of Recommendations:

- to submit the texts to their legislative bodies
- to report on the action resulting and
- to report occasionally at the request of the Governing Body of ILO on the measures taken or envisaged to give effect to the provisions

Conventions that have not been ratified have the same value as Recommendations, that is, as guidance.

■ What is so important about ILO Convention No. 184 on Safety and Health in Agriculture?

***Health and
safety
protection for
agricultural
workers***

This is the first time that waged agricultural workers – whether permanent, temporary or seasonal – are guaranteed in international law the same health and safety rights and levels of protection as other categories of worker. The Convention adopts a refreshing new approach to health and safety in agriculture by:

- placing responsibility firmly on employers
- strengthening workers' rights and
- placing clear obligations on governments

***Workers'
rights***

The Convention gives workers several important rights to:

- be informed and consulted on the application and review of safety and health matters
- participate in safety and health measures
- select health and safety representatives and representatives on joint worker-management health and safety committees
- remove themselves from danger where there is a serious and imminent risk, and not be penalised for these actions

The Convention also imposes certain duties on workers to comply with health and safety measures and co-operate with employers.

Employers' duties

There are many specific duties placed on employers by the Convention. The most important include:

Risk assessment

The employer must carefully assess all the risks agricultural workers may be exposed to. This process is called risk assessment and has three stages:

1. Identifying the **hazard** (the potential to cause harm)
2. Assessing the **risk** (the likelihood that the harm from a particular hazard is realised)
3. On the basis of the assessment, the employer should adopt preventive and protective measures to ensure safety and health, and compliance with health and safety standards

Training and information

The employer must ensure that agricultural workers are:

- trained
- provided with instructions and information that they understand
- supervised

Stopping work

The employer must stop work immediately if there is serious and imminent danger to workers

Government obligations

The Convention imposes five key tasks upon governments:

1. Develop and review a coherent national policy on safety and health in agriculture. They need to do this in consultation with employers and trade unions
2. Establish a competent authority to implement the policy and to enforce national laws and regulations on occupational safety and health in agriculture
3. Specify employers and workers' rights and duties
4. Ensure that there is a system of inspection with adequate means for agricultural workplaces with provision for corrective measures and appropriate penalties
5. Establish mechanisms for inter-sectoral co-ordination amongst authorities

The standards in the Convention are very high and applying them in many countries would almost certainly make a difference. And the first stage in applying them is getting your government to agree to ratify the Convention. That is the subject of the next section.

Convention No. 184 is also complemented by other ILO Conventions on safety and health:

- Convention No. 155 concerning Occupational Safety and Health and the Working Environment (plus Recommendation No. 164),
- Convention No. 161 concerning Occupational Health Services (plus Recommendation No. 171)
- Convention No. 170 concerning Safety in the Use of Chemicals at Work (plus Recommendation No. 177)

■ Ratification – the process and timetable

Procedure

Two countries need to ratify a Convention for it to enter into force. Ratification of a Convention is a free act by a country. However, if a country decides to ratify, the Convention acquires a binding force at the national level and must be applied by legislative or other means.

Soon after the International Labour Conference adopted the Convention and Recommendation in June 2001, the ILO secretariat wrote to every member state enclosing the final texts of the Convention and Recommendation and copies of the same documents were also sent to national organisations of employers and workers. Governments then had one year (18 months in exceptional circumstances) to submit the Convention and recommendation to the appropriate body – this is almost always the parliament or National Assembly. This is an obligation under the ILO Constitution (Article 19).

When placing the text before the parliament, the Government must indicate what action it considers desirable. It is good practice (and an obligation under ILO Convention 144 if that has been adopted) to consult unions before making its suggestions.

Governments then have to report back to the ILO indicating:

- the measures they have taken to bring the Convention and the Recommendation to the attention of the competent authorities
- who or what is the “competent authority” concerned
- the action taken by this authority

In practice, Governments really have four options:

1. If national law or practice are already of a very high standard, and are as good as those of those of the Convention, then the government could recommend ratification

2. If as is likely in many countries – national law or practice falls short of the Convention, then the government could recommend amendments to the law, or developing completely new law
3. The government can recommend deferring a decision to allow time for more consultations or research
4. To recommend no action, no ratification

Again, according to the ILO constitution, governments must inform the ILO of the measures they have taken to submit the texts. This report to the ILO must also be sent to the trade unions and employers, which can comment on them.

Ratifications to date

By 14 July 2003, three countries had ratified Convention No. 184. The Convention entered into force on 20 September 2003. Many other countries have announced their intention to ratify.

Trade union intervention

There are several possibilities in the procedure outlined above for unions to intervene:

- If the government has still not even tabled the texts, then the campaign starts for that to be done. It is possible that less experienced officials in the relevant ministry are unaware of the obligation -in which case you can help them by drawing their attention to the procedure. You can use the opportunity to ensure that the ministry consults with agricultural unions. The ILO Governing Body has produced a memorandum giving detailed guidance on this process of placing texts before parliament. A copy is available from the IUF.
- If the text has been tabled quietly, with no consultation with unions, then you can at least demand a copy of the report sent to the ILO. Again it is possible that Ministry officials are unaware of the obligations under the ILO constitution. You can help them by showing them the memorandum. What IUF affiliates will want is for a good discussion in parliament, with the chance to lobby members of the parliament, and to influence the debate.
- If the government has recommended no action, and the Convention remains unratified, then you need to launch a campaign to have that decision reconsidered. The most probable grounds you could argue would be that the Convention has not been properly discussed by those most involved – agricultural workers – through their unions.

It is likely that governments who have recommended no action have not consulted employers either. The employers may be happy that the Convention is not be ratified, but they might not be happy that they were not consulted.

What can your union do?

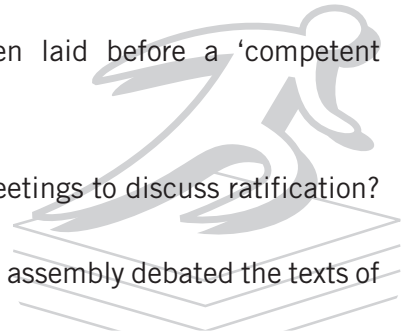
- Contact the ministry (it could be Ministry of Labour or perhaps the Ministry of Agriculture) and ask for a report on the submission process. You may need to give them a copy of the ILO memorandum to remind them of the process
- Contact friendly Members of Parliament (MPs) and discuss the matter with them
- Talk to other unions (if any) and non-governmental organisations (NGO's) and civil society organisations (CSOs) to see if there is any scope for co-operation on this issue
- Talk to the employers and see if their organisation has a view on ratification of the Convention. Even if their answer is negative, then at least you are prepared.

Lobbying and campaigning to ensure speedy ratification and comprehensive implementation will be needed from trade unions working in co-operation with NGOs/CSOs including raising awareness of the new standard in farming communities everywhere.

Speedy ratification and comprehensive implementation are clearly the ideals but even where a country is slow to ratify, or does not ratify, the Convention and Recommendation can be used as standards on which a progressive national agricultural safety and health policy/programme can be based.

**Checklist on ratification**

- ✓ Have the Convention & Recommendation been laid before a 'competent authority' (almost always Parliament)?
- ✓ If not, campaign for it to be tabled
- ✓ Has the relevant Ministry called any tripartite meetings to discuss ratification? If not, raise that demand
- ✓ If your country has a federal system, has the local assembly debated the texts of Convention and Recommendation?
- ✓ If the texts have been laid before Parliament, and no decision to ratify was taken, seek to get the issue re-opened. Call for an ILO tripartite workshop as a first step



■ After ratification – implementation

It is a great victory for agricultural workers when a country ratifies the Convention. But the task will not be over. The government now has to make sure that legislation or practice conforms to the Convention and is implemented. Thus discussions must be held on amendments to any national health and safety laws or legal codes.

Ratification means building on your country's safety and health laws, using the Articles of the Convention to introduce, expand and/or strengthen them where necessary. If a particular element of your country's law already provides an equivalent, or higher standard, than the Convention, then your country simply maintains its existing standards with regard to that specific element.

At this point, the following exercise should be useful. It will show what improvements can be made. It looks long and complicated. In fact, it is simple, though it may take some time. Divide up the work amongst several groups. This exercise should also be done in the tripartite workshop, if you are successful in getting one organised (see the section Tripartite meeting on C 184).

■ Comparing the Convention and the law in your country



Activity – Comparing the convention and the law

AIMS

To help us to compare the standards in Convention 184 and the present law

TASK

1. Each small group will be asked to scrutinise one part of the Convention. The main provisions are restated in the first column of the boxes below, but you can refer to the actual text in the Convention if you wish.
2. Compare what the Convention demands with the current law in your country in the second column of the box.
3. Quote the exact section or part of the law which corresponds, *if any*. It is possible that there will be no corresponding part of the your national law.
4. In the third column of the box, identify amendments that need to be made in your national law.

Elect a spokesperson to report back

***The
Convention:
Article by
Article***

The section below looks at the Convention in detail, giving comments/explanations from the IUF where appropriate. Where an Article in the Convention is supported by guidance in the Recommendation, the appropriate paragraph(s) or sub-paragraph(s) of the Recommendation are quoted.

THE PREAMBLE

The General Conference of the International Labour Organisation,
Having been convened at Geneva by the Governing Body of the International Labour Office, and having met in its 89th Session on 5 June 2001, and
Noting the principles embodied in the relevant international labour Conventions and Recommendations, in particular the Plantations Convention and Recommendation, 1958, the Employment Injury Benefits Convention and Recommendation, 1964, the Labour Inspection (Agriculture) Convention and Recommendation, 1969, the Occupational Safety and Health Convention and Recommendation, 1981, the Occupational Health Services Convention and Recommendation, 1985, and the Chemicals Convention and Recommendation, 1990, and
Stressing the need for a coherent approach to agriculture and taking into consideration the wider framework of the principles embodied in other ILO instruments applicable to the sector, in particular the Freedom of Association and Protection of the Right to Organise Convention, 1948, the Right to Organise and Collective Bargaining Convention, 1949, the Minimum Age Convention, 1973, and the Worst Forms of Child Labour Convention, 1999, and Noting the Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy as well as the relevant codes of practice, in particular the code of practice on recording and notification of occupational accidents and diseases, 1996, and the code of practice on safety and health in forestry work, 1998, and
Having decided upon the adoption of certain proposals with regard to safety and health in agriculture, which is the fourth item on the agenda of the session, and
Having determined that these proposals shall take the form of an international Convention;
adopts this twenty-first day of June of the year two thousand and one the following Convention, which may be cited as the Safety and Health in Agriculture Convention, 2001.

PART I – SCOPE

Article 1: Definitions. Agriculture means....

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>Agricultural and forestry activities carried out in agricultural undertakings including:</p> <ul style="list-style-type: none"> • crop production, • forestry activities, • animal husbandry and insect raising, • the primary processing of agricultural and animal products by or on behalf of the operator of the undertaking, as well as the use and maintenance of machinery, equipment, appliances, tools, agricultural installations, including any process, storage, operation or transportation in an agricultural undertaking which are directly related to agricultural production. 		

IUF Comment on Article 1

This Article gives a broad definition of agriculture. After considerable debate, forestry activities in agricultural undertakings were included in preference to the term agro-forestry. Note that the word ‘undertaking’ which is used has a wider sense than the word ‘workplace’. An undertaking may have more than one workplace. A workplace may also be an agricultural field or a more permanent installation, for example, a packing shed or barn.

Article 2: For the purpose of this Convention the term agriculture:

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
(a) does not cover subsistence farming;		
(b) does not cover industrial processes that use agricultural products as raw material and the related services; and		
(c) does not cover the industrial exploitation of forests.		

IUF comment on Article 2

The vast majority of governments were firmly opposed to including subsistence farming as they felt it would make the Convention impractical to enforce as well as too costly.

Article 3: (1). The competent authority of a Member which ratifies the Convention, after consulting the representative organisations of employers and workers concerned:

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
(a) may exclude certain agricultural undertakings or limited categories of workers from the application of this Convention or certain provisions thereof, when special problems of a substantial nature arise; and		
(b) shall, in the case of such exclusions, make plans to cover progressively all undertakings and all categories of workers.		

IUF Comment on Article 3

Article 3 (2) states that *“Each Member shall list, in the first report on the application of the Convention submitted under article 22 of the Constitution of the International Labour Organisation, any exclusions made in pursuance of paragraph 1(a) of this Article giving the reasons for such exclusion. In subsequent reports, it shall describe the measures taken with a view to extending progressively the provisions of the Convention to the workers concerned.”*

The Convention was designed to allow for maximum flexibility (like Convention 182 on elimination of the worst forms of child labour). This means governments can exclude certain types of workers and undertakings from the Convention and can also exclude certain provisions of the Convention as per Article 3.1 (a). If they do any of these, they have to present to the ILO a plan to bring the excluded workers and undertakings into the cover of the Convention. Governments should of course be encouraged to include all workers, all undertakings and all parts of the Convention.

Article 3.1 (b) and 3.2 are important clauses as they allow for categories of workers who have been excluded to be progressively covered.

At the insistence of the employers, and many governments, all references in the Convention (except the one in Article 6.2), to various categories of self employed farmers, were moved to paragraphs 12-15 (see below) of the non-binding Recommendation. This still means that categories of self employed farmers like small-tenants, share-croppers are covered by the Convention, unless they are subsistence farmers (excluded by Article 2(a) of the Convention), or unless excluded by the ratifying country under Article 3(a) of the Convention.

ILO Recommendation No. 192 on Safety and Health in Agriculture**Self-employed farmers**

Paragraph 12. (1) Taking into consideration the views of representative organisations of self-employed farmers, Members should make plans to extend progressively to self-employed farmers the protection afforded by the Convention, as appropriate.

(2) To this end, national laws and regulations should specify the rights and duties of self-employed farmers with respect to safety and health in agriculture.

(3) In the light of national conditions and practice, the views of representative organisations of self-employed farmers should be taken into consideration, as appropriate, in the formulation, implementation and periodic review of the national policy referred to in Article 4 of the Convention.

Paragraph 13. (1) In accordance with national law and practice, measures should be taken by the competent authority to ensure that self-employed farmers enjoy safety and health protection afforded by the Convention.

(2) These measures should include:

- (a) provisions for the progressive extension of appropriate occupational health services for self-employed farmers;
- (b) progressive development of procedures for including self-employed farmers in the recording and notification of occupational accidents and diseases; and
- (c) development of guidelines, educational programmes and materials and appropriate advice and training for self-employed farmers covering, inter alia:
 - (i) their safety and health and the safety and health of those working with them concerning work-related hazards, including the risk of musculoskeletal disorders, the selection and use of chemicals and of biological agents, the design of safe work systems and the selection, use and maintenance of personal protective equipment, machinery, tools and appliances; and
 - (ii) the prevention of children from engaging in hazardous activities.

Paragraph 14. Where economic, social and administrative conditions do not permit the inclusion of self-employed farmers and their families in a national or voluntary insurance scheme, measures should be taken by Members for their progressive coverage to the level provided for in Article 21 of the Convention. This could be achieved by means of:

- (a) developing special insurance schemes or funds; or
- (b) adapting existing social security schemes.

Paragraph 15. In giving effect to the above measures concerning self-employed farmers, account should be taken of the special situation of:

- (a) small tenants and sharecroppers;
- (b) small owner-operators;
- (c) persons participating in agricultural collective enterprises, such as members of farmers' cooperatives;
- (d) members of the family as defined in accordance with national law and practice;
- (e) subsistence farmers; and
- (f) other self-employed workers in agriculture, according to national law and practice.

PART II – GENERAL PROVISIONS

Article 4: Coherent national policy

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>1. In the light of national conditions and practice and after consulting the representative organisations of employers and workers concerned, Members shall formulate, carry out and periodically review a coherent national policy on safety and health in agriculture. This policy shall have the aim of preventing accidents and injury to health arising out of, linked with, or occurring in the course of work, by eliminating, minimising or controlling hazards in the agricultural working environment.</p>		
<p>2. To this end, national laws and regulations shall:</p> <p>(a) designate the competent authority responsible for the implementation of the policy and for the enforcement of national laws and regulations on occupational safety and health in agriculture;</p>		

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>(b) specify the rights and duties of employers and workers with respect to occupational safety and health in agriculture; and</p>		
<p>(c) establish mechanisms of inter-sectoral coordination among relevant authorities and bodies for the agricultural sector and define their functions and responsibilities, taking into account their complementarity and national conditions and practices.</p>		
<p>3. The designated competent authority shall provide for corrective measures and appropriate penalties in accordance with national laws and regulations, including, where appropriate, the suspension or restriction of those agricultural activities which pose an imminent risk to the safety and health of workers, until the conditions giving rise to the suspension or restriction have been corrected.</p>		

IUF Comment on Article 4

Article 4 represents a step forward in many countries as it means a national strategy and programme on safety and health in agriculture has to be drawn up and with adequate resources.

Under Article 4.1, a Government has to develop a national policy on agricultural safety and health, and define the 'competent authority' as per Article 4.2. The proviso in Article 4.1 for, "*after consulting with the representative organisations of employers and workers concerned*", offers workers and their trade unions the possibility to express their views regarding the drawing up, implementation, and monitoring of that national policy and associated standards.

The call in Article 4.2 (c) for governments to, "*establish mechanisms of inter-sectoral co-ordination among relevant authorities and bodies for the agricultural sector and define their functions and responsibilities.....*". can be important, for example, in ensuring that Ministries of Labour, Agriculture, Health etc. co-operate to protect workers' health.

Article 5: Systems of inspection

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>1. Members must ensure an adequate and appropriate system of inspection for agricultural workplaces is in place and provided with adequate means.</p>		
<p>2. In accordance with national legislation, the competent authority may entrust certain inspection functions at the regional or local level, on an auxiliary basis, to appropriate government services, public institutions, or private institutions under government control, or may associate these services or institutions with the exercise of such functions.</p>		

IUF Comment on Article 5

It is important that a government establishes a system of independent, government health and safety inspectors, with full legal powers, who are well resourced to help ensure effective enforcement of regulations. In many parts of the world this is not the case and as a result, agricultural health and safety laws are not enforced.

Where a non-government agency is used for enforcement it must be a reputable body whose activities need to be monitored and evaluated by the government in co-operation with trade unions and employers' organisations.

PART III – PREVENTIVE AND PROTECTIVE MEASURES – GENERAL

Article 6: Employers’ general duties

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>1. In so far as is compatible with national laws and regulations, the employer shall have a duty to ensure the safety and health of workers in every aspect related to the work.</p>		
<p>2. National laws and regulations or the competent authority shall provide that whenever in an agricultural workplace two or more employers undertake activities, or whenever one or more employers and one or more self-employed persons undertake activities, they shall co-operate in applying the safety and health requirements. Where appropriate, the competent authority shall prescribe general procedures for this collaboration.</p>		

IUF Comment on Article 6

This Article lays down the general duty of employers in respect of workers, and is a key piece of text. More details about what this means in practice are contained in later Articles.

Article 7: Employers' duties regarding risk assessment, training and stopping dangerous operations.

In order to comply with the national policy referred to in Article 4 of the Convention, national laws and regulations or the competent authority shall provide, taking into account the size of the undertaking and the nature of its activity, that the employer shall:

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>(a) carry out appropriate risk assessments in relation to the safety and health of workers and, on the basis of these results, adopt preventive and protective measures to ensure that under all conditions of their intended use, all agricultural activities, workplaces, machinery, equipment, chemicals, tools and processes under the control of the employer are safe and comply with prescribed safety and health standards;</p>		
<p>(b) ensure that adequate and appropriate training and comprehensible instructions on safety and health and any necessary guidance or supervision are provided to workers in agriculture, including information on the hazards and risks associated with their work and the action to be taken for their protection, taking into account their level of education and differences in language; and</p>		

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>(c) take immediate steps to stop any operation where there is an imminent and serious danger to safety and health and to evacuate workers as appropriate.</p>		

IUF Comment on Article 7

The requirement in Article 7.1 for employers to “carry out appropriate risk assessments in relation to the safety and health of workers” and then to then to “adopt preventive and protective measures”, is an important step forward in ensuring greater worker protection.

This requirement is supplemented by paragraphs 4 (1) & (2) of the Recommendation (see below) which gives the government a role in ensuring that a system for risk assessment is set up and provides a non-exhaustive list – which can be added to – of the potential topics to be covered in an employer’s risk assessment. Paragraph 5 (below) spells out in detail, the hierarchy of elimination/prevention and control measures to be followed in the order that they are written.

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 4. (1) To give effect to Article 7 of the Convention, the competent authority should establish a national system for occupational safety and health surveillance which should include both workers' health surveillance and the surveillance of the working environment.

(2) This system should include the necessary risk assessment and, where appropriate, preventive and control measures with respect to, inter alia:

- (a) hazardous chemicals and waste;
- (b) toxic, infectious or allergenic biological agents and waste;
- (c) irritant or toxic vapours;
- (d) hazardous dusts;
- (e) carcinogenic substances or agents;
- (f) noise and vibration;
- (g) extreme temperatures;
- (h) solar ultraviolet radiations;
- (i) transmissible animal diseases;
- (j) contact with wild or poisonous animals;
- (k) the use of machinery and equipment, including personal protective equipment;
- (l) the manual handling or transport of loads;
- (m) intense or sustained physical and mental efforts, work-related stress and inadequate working postures; and
- (n) risks from new technologies.

Paragraph 5. To give effect to Article 7 of the Convention, a set of measures on safety and health at the level of the undertaking should include:

- (a) occupational safety and health services;
- (b) risk assessment and management measures in the following order of priority:
 - (i) elimination of the risk;
 - (ii) control of the risk at the source;
 - (iii) minimisation of the risk by such means as the design of safe work systems, the introduction of technical and organisational measures and safe practices, and training; and
 - (iv) in so far as the risk remains, provision and use of personal protective equipment and clothing, at no cost to the worker;
- (c) measures to deal with accidents and emergencies, including first aid and access to appropriate transportation to medical facilities;
- (d) procedures for the recording and notification of accidents and diseases;
- (e) appropriate measures to protect persons present at an agricultural site, the population in the vicinity of it and the general environment, from risks which may arise from the agricultural activity concerned, such as those due to agrochemical waste, livestock waste, soil and water contamination, soil depletion and topographic changes; and
- (f) measures to ensure that the technology used is adapted to climate, work organisation and working practices.

Article 8: Workers' rights and duties

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>Article 8.1. Workers in agriculture shall have the right:</p> <p>(a) to be informed and consulted on safety and health matters including risks from new technologies;</p>		
<p>(b) to participate in the application and review of safety and health measures and, in accordance with national law and practice, to select safety and health representatives and representatives in safety and health committees; and</p>		
<p>(c) to remove themselves from danger resulting from their work activity when they have reasonable justification to believe there is an imminent and serious risk to their safety and health and so inform their supervisor immediately. They shall not be placed at any disadvantage as a result of these actions.</p>		

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>2. Workers in agriculture and their representatives shall have the duty to comply with the prescribed safety and health measures and to co-operate with employers in order for the latter to comply with their own duties and responsibilities.</p>		
<p>3. The procedures for the exercise of the rights and duties referred to in paragraphs 1 and 2 shall be established by national laws and regulations, the competent authority, collective agreements or other appropriate means.</p>		
<p>4. Where the provisions of this Convention are implemented as provided for by paragraph 3, there shall be prior consultation with the representative organisations of employers and workers concerned.</p>		

IUF Comment on Article 8

This is a most important Article dealing with the rights and duties of workers in agriculture.

Article 8.1 (b) establishes the right for workers to select safety representatives and representatives in safety committees. Worker HS&E representatives and worker safety committee members are the backbone of trade union organisation on health and safety at work. They are the eyes and the ears of trade unions and workers on workplace health and safety issues and play crucial roles in reducing fatalities, accidents and ill health at work. Many deal with workplace environmental issues as well. These representatives and committees help protect worker and public health, and the general environment.

But in practice, few countries have legal worker HS&E representatives and safety committees in agriculture. Therefore, the IUF wanted governments to set up and finance roving safety representative schemes in agriculture as explained in **Appendix 1**. Although the IUF did not succeed in securing requirements for roving safety representatives in this ILO instrument, the IUF is continuing to promote the introduction of such schemes as part of its campaign for ratification and implementation of the Convention.

The safety and health committees referred to in Article 8.1(b) are joint union-employer/management committees. The important point is that this Article establishes the right of workers to select their own representatives to these committees, and not to have “worker representatives” nominated by the employer/management as is unfortunately often the case.

There is now a right in Article 8.1 (c) for workers, to remove themselves from danger resulting from their work activity when they have reasonable justification to believe there is an imminent and serious risk to their safety and health. This is an important new right and in line with protection already granted to other groups of vulnerable workers.

As well as legal rights, workers also have legal duties as laid down in Article 8.2.

**PART III – PREVENTIVE AND PROTECTIVE MEASURES –
MACHINERY SAFETY AND ERGONOMICS**

Article 9

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>1. National laws and regulations or the competent authority shall prescribe that machinery, equipment, including personal protective equipment, appliances and hand tools used in agriculture comply with national or other recognised safety and health standards and be appropriately installed, maintained and safeguarded.</p>		
<p>2. The competent authority shall take measures to ensure that manufacturers, importers and suppliers comply with the standards referred to in paragraph 1 and provide adequate and appropriate information, including hazard warning signs, in the official language or languages of the user country, to the users and, on request, to the competent authority.</p>		
<p>3. Employers shall ensure that workers receive and understand the safety and health information supplied by manufacturers, importers and suppliers.</p>		

IUF comment on Article 9

Article 9.2 imposes legal duties on manufacturers, importers and suppliers which benefit employers as well as workers by ensuring that adequate, appropriate and understandable information is supplied with machinery and equipment including personal protective equipment.

Article 10: National laws and regulations shall prescribe that agricultural machinery and equipment shall:

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>(a) only be used for work for which they are designed, unless a use outside of the initial design purpose has been assessed as safe in accordance with national law and practice and, in particular, shall not be used for human transportation, unless designed or adapted so as to carry persons;</p>		
<p>(b) be operated by trained and competent persons, in accordance with national law and practice.</p>		

**PART III – PREVENTIVE AND PROTECTIVE MEASURES –
HANDLING AND TRANSPORT OF MATERIALS**

Article 11

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>1. The competent authority, after consulting the representative organisations of employers and workers concerned, shall establish safety and health requirements for the handling and transport of materials, particularly on manual handling. Such requirements shall be based on risk assessment, technical standards and medical opinion, taking account of all the relevant conditions under which the work is performed in accordance with national law and practice.</p>		
<p>2. Workers shall not be required or permitted to engage in the manual handling or transport of a load which by reason of its weight or nature is likely to jeopardise their safety or health.</p>		

**PART III – PREVENTIVE AND PROTECTIVE MEASURES –
SOUND MANAGEMENT OF CHEMICALS**

Article 12: The competent authority shall take measures, in accordance with national law and practice, to ensure that:

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
(a) there is an appropriate national system or any other system approved by the competent authority establishing specific criteria for the importation, classification, packaging and labelling of chemicals used in agriculture and for their banning or restriction;		
(b) those who produce, import, provide, sell, transfer, store or dispose of chemicals used in agriculture comply with national or other recognised safety and health standards, and provide adequate and appropriate information to the users in the appropriate official language or languages of the country and, on request, to the competent authority; and		
(c) there is a suitable system for the safe collection, recycling and disposal of chemical waste, obsolete chemicals and empty containers of chemicals so as to avoid their use for other purposes and to eliminate or minimise the risks to safety and health and to the environment.		

IUF Comment on Article 12

Article 12 represents a step forward for many countries in improving chemicals management at the national level. Article 12 (a) prescribes measures to be taken before chemicals are sold. Importantly, Article 12 (b) places duties on chemical producers, importers, providers, sellers, and those who transfer, store or dispose of chemicals to conform with recognised safety and health standards. Article 12 (c) refers to the need to protect the general environment in respect of disposal of empty containers and wastes.

Article 13

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>1. National laws and regulations or the competent authority shall ensure that there are preventive and protective measures for the use of chemicals and handling of chemical waste at the level of the undertaking.</p>		
<p>2. These measures shall cover, amongst other things:</p> <p>(a) the preparation, handling, application, storage and transportation of chemicals;</p>		
<p>(b) agricultural activities leading to the dispersion of chemicals;</p>		

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
(c) the maintenance, repair and cleaning of equipment and containers for chemicals; and		
(d) the disposal of empty containers and the treatment and disposal of chemical waste and obsolete chemicals.		

IUF Comment on Article 13

Complementing Article 12, this Article places an obligation on governments to ensure that measures are established for the sound management of chemicals at the level of the undertaking.

Paragraph 7 of the Recommendation (**see below**) complements Articles 12 & 13, and in paragraph 7 (1), clear reference is made to the need to consult ILO Convention No. 170 Concerning Safety in the Use of Chemicals at Work, which is the main ILO instrument dealing with all aspects of chemicals management.

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 7. (1) The measures prescribed concerning the sound management of chemicals in agriculture should be taken in the light of the principles of the Chemicals Convention and Recommendation, 1990, and other relevant international technical standards.

7. (2) In particular, preventive and protective measures to be taken at the level of the undertaking should include:

- (a) adequate personal protective equipment and clothing, and washing facilities for those using chemicals and for the maintenance and cleaning of personal protective and application equipment, at no cost to the worker;
- (b) spraying and post-spraying precautions in areas treated with chemicals, including measures to prevent pollution of food, drinking, washing and irrigation water sources;
- (c) handling and disposal of hazardous chemicals which are no longer required, and containers which have been emptied but which may contain residues of hazardous chemicals, in a manner which eliminates or minimises the risk to safety and health and to the environment, in accordance with national law and practice;
- (d) keeping a register of the application of pesticides used in agriculture; and
- (e) training of agricultural workers on a continuing basis to include, as appropriate, training in the practices and procedures or about hazards and on the precautions to be followed in connection with the use of chemicals at work.

**PART III – PREVENTIVE AND PROTECTIVE MEASURES –
ANIMAL HANDLING AND PROTECTION AGAINST BIOLOGICAL RISKS**

Article 14

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>National laws and regulations shall ensure that risks such as those of infection, allergy or poisoning are prevented or kept to a minimum when biological agents are handled, and activities involving animals, livestock and stabling areas, comply with national or other recognised health and safety standards.</p>		

IUF Comment on Article 14

There was strong government support for strengthening the requirements for protection against biological risks which resulted in this Article.

Biological agents refer to, for example, diseases caught from livestock such as brucellosis, or contact with organic dusts. This Article could also be used, for example, to prevent worker exposure to cattle infected with “mad cow” disease.

Paragraph 8 of the Recommendation gives more details of what is required under Article 14 (see below).

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 8. For the purpose of implementing Article 14 of the Convention, the measures for the handling of biological agents giving rise to risks of infection, allergy or poisoning, and for the handling of animals should comprise the following:

- (a) risk assessment measures in accordance with Paragraph 5, in order to eliminate, prevent or reduce biological risks;
- (b) control and testing of animals, in accordance with veterinary standards and national law and practice, for diseases transmissible to humans;
- (c) protective measures for the handling of animals and, where appropriate, provision of protective equipment and clothing;
- (d) protective measures for the handling of biological agents and, if necessary, provision of appropriate protective equipment and clothing;
- (e) immunisation of workers handling animals, as appropriate;
- (f) provision of disinfectants and washing facilities, and the maintenance and cleaning of personal protective equipment and clothing;
- (g) provision of first aid, antidotes or other emergency procedures in case of contact with poisonous animals, insects or plants;
- (h) safety measures for the handling, collection, storage and disposal of manure and waste;
- (i) safety measures for the handling and disposal of carcasses of infected animals, including the cleaning and disinfection of contaminated premises; and
- (j) safety information including warning signs and training for those workers handling animals.

**PART III – PREVENTIVE AND PROTECTIVE MEASURES –
AGRICULTURAL INSTALLATIONS**

Article 15

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>The construction, maintenance and repairing of agricultural installations shall be in conformity with national laws, regulations and safety and health requirements.</p>		

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 9. To give effect to Article 15 of the Convention, the safety and health requirements concerning agricultural installations should specify technical standards for buildings, structures, guardrails, fences and confined spaces.

PART IV – OTHER PROVISIONS – YOUNG WORKERS AND HAZARDOUS WORK

Article 16

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>1. The minimum age for assignment to work in agriculture which by its nature or the circumstances in which it is carried out is likely to harm the safety and health of young persons <i>shall not be less than 18 years.</i></p>		
<p>2. The types of employment or work to which paragraph 1 applies shall be determined by national laws and regulations or by the competent authority, after consultation with the representative organisations of employers and workers concerned.</p>		

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>3. Notwithstanding paragraph 1, national laws or regulations or the competent authority may, after consultation with the representative organisations of employers and workers concerned, authorise the performance of work referred to in that paragraph as from 16 years of age on condition that appropriate prior training is given and the safety and health of the young workers are fully protected.</p>		

IUF Comment on Article 16

This Article represents an important step forward in protection of young workers. It will require changes in national laws in many countries as, currently, some countries allow children as young as 11-13 years old to carry out all types of agricultural work. Article 16 sets the minimum age for such work at 18 years. National authorities may however permit persons as young as 16 years of age to carry out hazardous work “on condition that appropriate prior training is given and the safety and health of the young workers are fully protected”.

Paragraph 4.3 of the Recommendation also states that, “health surveillance measures for young workers, pregnant and nursing women and aged workers should be taken, where appropriate”.

PART IV – OTHER PROVISIONS – TEMPORARY AND SEASONAL WORKERS

Article 17

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>Measures shall be taken to ensure that temporary and seasonal workers receive the same safety and health protection as that accorded to comparable permanent workers in agriculture.</p>		

IUF Comment on Article 17

This is a most important breakthrough as there are fewer and fewer permanent workers employed in agriculture and more contract labour. It is vital that temporary and seasonal workers have the same safety and health standards as permanent workers.

PART IV – OTHER PROVISIONS – WOMEN WORKERS

Article 18

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>Measures shall be taken to ensure that the special needs of women agricultural workers are taken into account in relation to pregnancy, breastfeeding and reproductive health.</p>		

IUF Comment on Article 18

This important new standard aims to ensure that the special needs of women workers are fully addressed. Paragraph 11 of the Recommendation goes into more details about what is required (see below) and includes the need for assessment of risks for pregnant women and women’s reproductive health. Paragraph 4.3 of the Recommendation also states that, “health surveillance measures for young workers, pregnant and nursing women and aged workers should be taken, where appropriate”.

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 11. To give effect to Article 18, measures should be taken to ensure assessment of any workplace risks related to the safety and health of pregnant or nursing women, and women’s reproductive health.

Paragraph 4.3. Health surveillance measures for young workers, pregnant and nursing women and aged workers should be taken, where appropriate.

**PART IV – OTHER PROVISIONS – WELFARE AND
ACCOMMODATION FACILITIES**

Article 19: National laws and regulations or the competent authority shall prescribe, after consultation with the representative organisations of employers and workers concerned:

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
(a) the provision of adequate welfare facilities at no cost to the worker; and		
(b) the minimum accommodation standards for workers who are required by the nature of the work to live temporarily or permanently in the undertaking.		

IUF Comment on Article 19

The provision of adequate welfare facilities in Article 19.1 (a) now has the important qualification, *“at no cost to the worker”*. Paragraph 10 of the Recommendation goes into more details about what is required (see below)

ILO Recommendation No. 192 on Safety and Health in Agriculture

Paragraph 10. To give effect to Article 19 of the Convention, employers should provide, as appropriate and in accordance with national law and practice, to workers in agriculture:

- (a) an adequate supply of safe drinking water;
- (b) facilities for the storage and washing of protective clothing;
- (c) facilities for eating meals, and for nursing children in the workplace where practicable;
- (d) separate sanitary and washing facilities, or separate use thereof, for men and women workers; and
- (e) work-related transportation.

PART IV – OTHER PROVISIONS – WORKING TIME

Article 20

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>Hours of work, night work and rest periods for workers in agriculture shall be in accordance with national laws and regulations or collective agreements.</p>		

IUF Comment on Article 20

This represents another important breakthrough. It is the first time in an ILO Convention that the connection between hours of work, rest periods, night work, and health and safety on the job has been made, reflecting new, modern thinking and research on issues which have been too often neglected in the past.

**PART IV – OTHER PROVISIONS – COVERAGE AGAINST
OCCUPATIONAL INJURIES AND DISEASES**

Article 21

WHAT THE CONVENTION SAYS	WHAT YOUR LAWS SAY	AMENDMENTS NEEDED TO YOUR NATIONAL LAW
<p>1. In accordance with national law and practice, workers in agriculture shall be covered by an insurance or social security scheme against fatal and non-fatal occupational injuries and diseases, as well as against invalidity and other work-related health risks, providing coverage at least equivalent to that enjoyed by workers in other sectors.</p>		
<p>2. Such schemes may either be part of a national scheme or take any other appropriate form consistent with national law and practice.</p>		

IUF Comment on Article 21

This is another significant breakthrough as, currently, many agricultural workers are not covered by this form of social protection. In many countries, agricultural workers are excluded from any employment injury benefit or insurance scheme. This is either because:

- no such insurance scheme exists for them or
- directly or indirectly, agricultural workers are excluded from general schemes

■ Implementation – including reporting to the ILO and compliance

Introduction

Once ratified, the Convention has to be turned into national law and implementation measures and programmes put in place. Trade unions have a key role in promoting effective implementation and monitoring that governments and employers meet the obligations and duties laid down for them. In ensuring effective implementation and compliance, ILO processes and procedures can again be made use of.

The reporting process – using ILO standards to improve safety and health standards

Supervision and Complaints

Once a member State has ratified a Convention, it is binding on the State to put the Convention into effect. There is a procedure, laid down in the ILO Constitution, for supervising and monitoring the actions of States once they have ratified.

In supervising how a country applies Conventions, the ILO depends mainly on two types of procedure:

1. Regular supervision in the form of reporting, and examination of these reports by a committee of experts.
2. Examination of specific allegations, through:
 - a. representations and
 - b. complaints.

Reporting

In this case, governments must submit reports to the ILO on each ratified Convention, according to the list prepared by the Governing Body, describing:

- the arrangements made to achieve the goals of a Convention;
- how to overcome any obstacles in the way of its full application;
- how it is applied in practice.

Trade unions are entitled to receive copies of these reports and to comment on them.

At the ILO, the reports are examined by the Committee of Experts on the Application of Conventions and Recommendations. This committee is not limited to the information supplied by governments. Information on a country's legislation can also be found in official gazettes and similar publications where laws and regulations are printed. Other sources are the observations which can be submitted directly to the ILO by the trade unions. These observations by trade unions are of great importance in that they let workers participate fully in the supervisory system of the ILO at any time. These comments by trade unions are also important because they give complementary views on the conditions in a certain country, and help to give the real picture of the situation.

If the committee finds that a government is not fully applying a ratified Convention, it can formulate either:

- a “direct request”, usually made in the case of minor failures;
- an “observation” -- usually used for more serious or long--standing offences.

Each year, the Committee of Experts then publishes a report entitled the “Report of the Committee of Experts on the Application of Conventions and Recommendations”, which is examined during the International Labour Conference by the Tripartite Committee on the Application of Conventions and Recommendations. Many problems concerning individual cases can be sorted out at this forum, and it is here that trade union representatives can play what is perhaps their major role.

Another stage of the reporting process is a general survey on a special topic decided by the Governing Body, and describing the situation in all the countries whether they have ratified the Conventions concerned or not. This survey is based on information received from members according to Articles 19 (5)(c) and (6)(d) of the ILO Constitution.

Representations

Any trade union -- national or international -- can make a representation to the ILO to the effect that a member State has violated a particular ratified Convention. Representations are receivable by the Governing Body if they are presented by:

- a national union directly interested in the matter;
- an international workers’ organization having consultative status with the ILO; or
- an international federation where the allegations relate to matters directly affecting its affiliates.

The submission must be in writing, signed, and be as fully documented as possible with proofs in support of the allegations.

The representation is examined by a committee of three members of the Governing Body, one from each of the three groups. The Governing Body presents the representation to the government concerned. If the Governing Body is not satisfied with their response, or if no reply is forthcoming, then the Governing Body publishes the representation along with the government’s reply, if any, and its own conclusions concerning further action.

Complaints

Making a complaint to the ILO is a more formal procedure and can be taken by one member State against another if the former is not satisfied that the latter is observing a Convention they have both ratified. A complaint can also come from the Governing Body on its own, or from a delegate to the International Labour Conference.

When a complaint has been received, the Governing Body may appoint a commission of inquiry to examine the case. It may call for statements and documents from all parties concerned, hear witnesses and call on member States for relevant information.

After fully considering the complaint, the commission prepares a report of its findings and recommendations which is communicated to the Governing Body and to the governments concerned in the complaint. The report is also published. The governments concerned are allowed three months in which to indicate whether or not they accept the commission's recommendations.

If a government does not accept the recommendations, it may, within three months, refer the complaint to the International Court of Justice, whose decision on the matter is binding. No country has yet found it necessary to take this final step.

Governments do not like the process of public exposure involved in the complaints and take them very seriously.

■ Technical co-operation: could it help with implementation and compliance?

Arguments that the government may use for **not** ratifying the Convention are that it would be 'too difficult', that it would take too much time of inspectors or ministry staff to draft the legislation, to do all the necessary training, to buy equipment.

This may be a genuine concern on the part of the government. One answer to this is that the procedure does give governments some time to comply. The Convention comes into force only one year after ratification by two member states. So this allows time for the process of changing law. Another point is that the union can help with the drafting.

To help with both ratification and implementation, the ILO will consider offering help to member states to assist them in meeting the standards laid down in the Convention. This is called technical co-operation in the ILO (and United Nations system as a whole). Technical co-operation can take several forms, for example:

- a short term assignment (say a few months) of an experienced inspector or ILO consultant to help with drafting national laws or regulations
- a longer term project which would help with training or equipment
- finance to run workshops on the Convention/new national laws
- finance to send a team from your country to others to study the operation of the Convention/laws there

To get ILO support, the government will have to apply to the ILO. The ILO is always interested in providing technical co-operation if it may lead to ratification. There is a danger in such a process. The government may draw up its application and implement the project, *without involving the union*. This should not happen but it can.



Checklist

- ✓ A tripartite committee should draw up and approve any project proposal to the ILO
- ✓ Get agreement that the proposal will only be submitted once the union has approved
- ✓ Send a copy of the proposal to IUF in Geneva for advice
- ✓ Ask the nearest ILO Specialist on Workers Activities to look over the draft proposal (these specialists are in ILO Multi-Disciplinary teams which cover sub-regions). A list is available from the IUF if you cannot get the information easily from your ILO Area office
- ✓ Make sure the project has a proper tripartite committee to administer it. The committee must meet regularly. Appoint people to the committee from the union who will attend and play an active part in the proceedings. They have to be someone who fights for the union
- ✓ The project should include a component for training for worker HS&E representatives. Demand that there is a clear agreement that a trade union specialist will carry this out and that the union will have to approve the person asked to do this work. (What will happen otherwise is that a person who is not a trade union educator will be appointed to train the worker HS&E representatives)
- ✓ The project should have as a clear aim the ratification of the Convention or, as second best, the modification of laws to comply with the Convention²
- ✓ The project should not involve sending large numbers of Ministry official or senior members of the agricultural inspectorate abroad

There should be no visits to countries which have not ratified the Convention. Again, you can check with the IUF about which countries might be suitable for a study visit.

² Remember that sometimes, for technical reasons, member states may have a problem ratifying a Convention. This should be for a genuine reason, perhaps to do with a federal constitution.



Activity – Planning a technical co-operation project

AIMS

To help us to design a project to meet the standards of Convention 184.

TASK

In your small group, decide what should be the main components of a project in your country which would help the agricultural industry conform to Convention 184.

Think about:

1. Assistance in drafting new law
2. Training for inspectors, employers' safety officers, worker HS&E representatives
3. Equipment for testing. What already exists, what more is needed?
4. Building up institutions and capacity – for example, agricultural research

Elect a spokesperson to report back

■ Tripartism and Convention No. 184

Organising an ILO tripartite workshop

A useful part of your campaign could be a tripartite workshop on the Convention. This should be attended by equal numbers of representatives from government, employers and unions.

If the ILO has not already organised such a workshop, you can take the initiative, and offer to do the organising. Although the ILO will have to provide the funds, and would normally be responsible for sending out the invitations. You should try to get the ILO to agree that an IUF resource person will run the workshop. The ILO's prestige will help to ensure that government and employers will respond.

A sample letter is provided below to the ILO Director for your country requesting such a workshop. (Not every country has an ILO office. If you are not sure where your ILO office is, contact IUF HQ or your regional IUF co-ordinator).

Sample letter on a tripartite workshop

xxxxx,
Director,
ILO zzz Area Office

Dear xxxxx,

Our country has a substantial agricultural industry, and our union represents **x** thousand agricultural workers. We consider that ratification of ILO Convention No. 184 on Safety and Health in Agriculture (2001) to be a high priority.

So far, there has not been a detailed discussion of the new standards on a tripartite basis. *(You can mention what action, if any, the government has taken).* We consider that it would be helpful if there was a tripartite workshop to:

- to inform all social partners, through the participants, of the provisions of Convention No. 184 and Recommendation No. 192;
- to identify the areas where national legislation would need to be changed to conform to the standards;
- to discuss the possibility of ratification;
- to identify what Technical Co-operation might be required to help comply with the standards following ratification.

Our union is affiliated to the International Union of Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF), which is one of the global union federations having consultative status with the ILO. The IUF was deeply involved in the discussions leading to the adoption of the Convention. The IUF has drawn up a model programme for tripartite workshops such as we propose and it is attached. *(You should attach the model programme which the IUF has prepared).* We propose that an IUF consultant could run the workshop.

Our union would be happy to make the practical arrangements for the workshop and request that the ILO meet the costs of the workshop out of RBTC.³ Our estimate for the budget would be:

(You should give your estimate here. It should include costs of accommodation and food for all participants, hire of a hall, photocopying, and whatever else is appropriate. You need to think about whether government and employer representatives should pay for their own transport. You should include transport costs for union delegates. Remember that if there is more than one union involved, the ILO would expect them to attend as well. You may also need to include travel and other costs of an IUF officer or consultant to run the workshop).

We would not expect the workshop to try to make decisions on ratification, which is, of course, the responsibility of the competent authority. It is designed to give all concerned a chance to discuss the issues.

I look forward to your reply.

Yours sincerely,
General Secretary/President

³ This is an ILO jargon term and stands for Regular Budget for Technical Co-operation. Every ILO office is allocated a sum of money for local activities.

**Draft programme for a tripartite workshop on ILO Convention No. 184
on Safety and Health in Agriculture (2001)****Day 1**

- Introduction of participants
- The contents of the Convention; an overview
- The process of ratification (ILO speaker on International Labour Standards)
- Initial views: one contribution, for no more than 15 minutes each, from:
 - Government
 - Employers
 - Workers

Day 2

- Working groups on different areas of the Convention such as
 - Obligations on Governments
 - Employers duties
 - Workers rights

NOTE: Workers, employers and government will be mixed for the group work and asked to identify how far the existing law matches the standards in the Convention and where there are gaps)

- Reports from working groups

Day 3

- Consolidation of reports. How practical is compliance with the Convention standards?
- Working Groups: What technical assistance would be required for each of the tripartite partners to facilitate compliance with the standards?
- Reports from working groups
- Future plans
- Evaluation of the workshop

■ Future plans

You should now be ready to start planning for a campaign of ratification.



Activity – Planning your campaign: the next steps

AIMS

To help us to plan a ratification campaign.

TASK

In your small group, draw up a report on how the union can campaign for ratification.

It should cover these stages:

1. The situation now: has the government taken any steps, as obliged under the ILO Constitution? Has the ILO in your country taken any action?
2. What action should the union now take? What allies exist who may join in the demands for ratification?
3. What about other unions in agriculture, or NGO's in your country? Has there been any co-operation on this question? If not, is it possible? A joint campaign will be much more effective
4. If the ILO has not organised any action yet, can you approach them and ask for a tripartite workshop on the Convention?

Elect a spokesperson to report back



■ Further information

ILO Reports

ILO Reports which formed the basis of the Convention and Recommendation, including a questionnaire to governments and the analysis of their replies:

- Report VI (1): Safety and health in agriculture (1999)
- Report VI (2): Safety and health in agriculture (2000)
- Report IV (2A) Safety and health in agriculture (2001)

ILO Books

ILO Labour Education 2000/1-2, No. 118/119: Top on the agenda – health and safety in agriculture. Specially produced for the Convention and includes articles by IUF.

For more detailed information on International Labour Standards, read *International Labour Standards – a workers' education manual* (Geneva 1990). The Workers' Education Branch of the ILO has also produced materials on the subject, called simply, ILO Standards. Two sections are especially useful:

- Trade Union participation in shaping and adopting international labour standards
- Trade union participation in implementing international labour standards

ILO standards relevant to agricultural workers

The main standards are:

International Labour Standards Covered in the Declaration on Fundamental Principles and Rights at Work (adopted by the International Labour Conference at its 86th session, Geneva 1998):

- Convention No. 87: Freedom of Association and Protection of the Right to Organise Convention, 1948
- Convention No. 98: Right to Organise and Collective Bargaining, 1949
- Convention No. 29: Forced Labour, 1930
- Convention No. 105: Abolition of Forced Labour, 1957
- Convention No. 100: Equal Remuneration, 1951
- Convention No. 111: Discrimination (Employment and Occupation), 1958
- Convention No. 138: Minimum Age, 1973

Health and Safety Conventions:

- Convention No. 184: Safety and Health in Agriculture, 2001
- Convention No. 155: Occupational Safety and Health, 1981
- Convention No. 161: Occupational Health Services, 1985
- Convention No. 170: Safety in the Use of Chemicals at Work, 1990 plus Recommendation 177
- Convention No. 129: Labour Inspection in Agriculture 1969, plus Recommendation 133

*Agriculture-specific Conventions**Freedom of association*

- Convention No. 11: Right of Association (Agriculture), 1921
- Convention No. 141: Rural Workers' Organisations, 1975

Conditions of work

- Convention No. 99: Minimum Wage Fixing Machinery (Agriculture), 1951
- Convention No. 101: Holidays with Pay (Agriculture), 1952

Social security

- Convention No. 25: Sickness Insurance (Agriculture), 1927
- Convention No. 36: Old-Age Insurance (Agriculture), 1933
- Convention No. 38: Invalidity Insurance (Agriculture), 1933
- Convention No. 40: Survivors' Insurance (Agriculture), 1933
- Convention No. 12: Workmen's Compensation (Agriculture), 1921

Employment of children

- Convention No. 10: Minimum Age (Agriculture), 1921

Plantations

- Convention No. 110: Plantations, 1958.

**Codes of
Practice**

Although they are not international labour standards, it is useful to know about codes of practice. The ILO Governing Body can decide to set up a team of experts to develop a code of practice in certain fields. The Governing Body approves the texts of codes of practice, so they carry great weight, but they are not binding. Codes provide guidance for government, employers and workers in the field of occupational safety and health. They frequently cover the same topic as a Convention.

Appendix 1:

IUF Briefing

Roving safety representatives in agriculture

Worker HS&E representatives (safety representatives for short) are the backbone of trade union organisation on health and safety at the workplace and in the undertaking. However, because of the special nature of the agriculture, special measures may be needed to ensure effective systems of safety representatives in the workplace and undertaking.

To ensure effective implementation of workers' rights in this area, the IUF is promoting the establishment of roving safety representative schemes. (Be aware that there is *no* text on roving safety representatives in the Convention so hence the need to use the Briefing below to make your case).

Why are roving safety representatives important?

Small numbers of workers are often employed in many agricultural undertakings scattered over wide geographical distances. Normal arrangements for health and safety representation are difficult to apply. It is therefore necessary to introduce a scheme based on external worker representatives who will visit agricultural undertakings in a given area.

What is a roving safety representative?

She/he is a representative/delegate of workers who has access to and visits agricultural workplaces to represent the health and safety interests/concerns of workers.

What is their relationship to the workplaces they visit?

They are appointed from outside the workplaces. In Sweden, for example, they can be safety reps working in larger undertakings who assume responsibility for neighbouring, smaller enterprises. Alternatively they might work full-time for a trade union. In Sweden, they are referred to as regional representatives.

Who chooses them?

They are appointed by trade unions.

What do they do?

Their overall objective is to stimulate and support local health and safety activity with a view to reducing hazards, accidents, ill health and fatalities in agriculture. Typically both roving and ordinary, safety representatives will:

- Represent workers' interests by improving consultation procedures and promoting worker participation
- Inspect/check workplaces and identify hazards
- Try to improve occupational health and safety management

Do they have legal rights?

If legal rights have been introduced by a member country, for example, Sweden.

Do any roving safety representative systems already exist?

Yes, statutory provisions for roving (regional) safety representatives exist in:

- all industries in Sweden
- the construction industry in Norway
- certain sectors in Italy

Experimental systems are being implemented in:

- the UK
- Spain

Which agricultural workplaces would roving safety representatives visit?

Agricultural workplaces with small numbers of workers.

How does the system of roving safety representatives function?

Experience shows that they work informally and co-operatively, and maintain a good relationship with workers and employers. They stimulate worker participation in health and safety and assist in improving health and safety management.

What are the benefits?

To government: studies show that all types of safety representatives save lives. They are intermediaries who complement and support the work of labour inspectors at a local level in a cost-effective manner.

To employers: evidence shows that roving safety representatives stimulate and improve occupational health and safety management through worker participation. This in turn leads to qualitative improvement in the management of business performance overall, not only in individual small enterprises but that of other organisations with which they have economic relationships.

To workers: workers will benefit directly because of improved health, safety and welfare conditions. They will be encouraged to participate in health and safety at the workplace and will have health and safety support from an experienced workers' representative.

What will a roving safety representative cost?

Any roving safety representative scheme requires resources. However, evidence from other countries shows that the schemes are not a costly way of improving health and safety in the workplace. Indeed, the benefits from reduced accidents and ill health will outweigh the costs of such a scheme.

