CropLife INTERNATIONAL

Representing the Plant Science Industry

Fifth National IPM Symposium
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CropLife International Partnerships: Global Update and Keys to Building a Partnership

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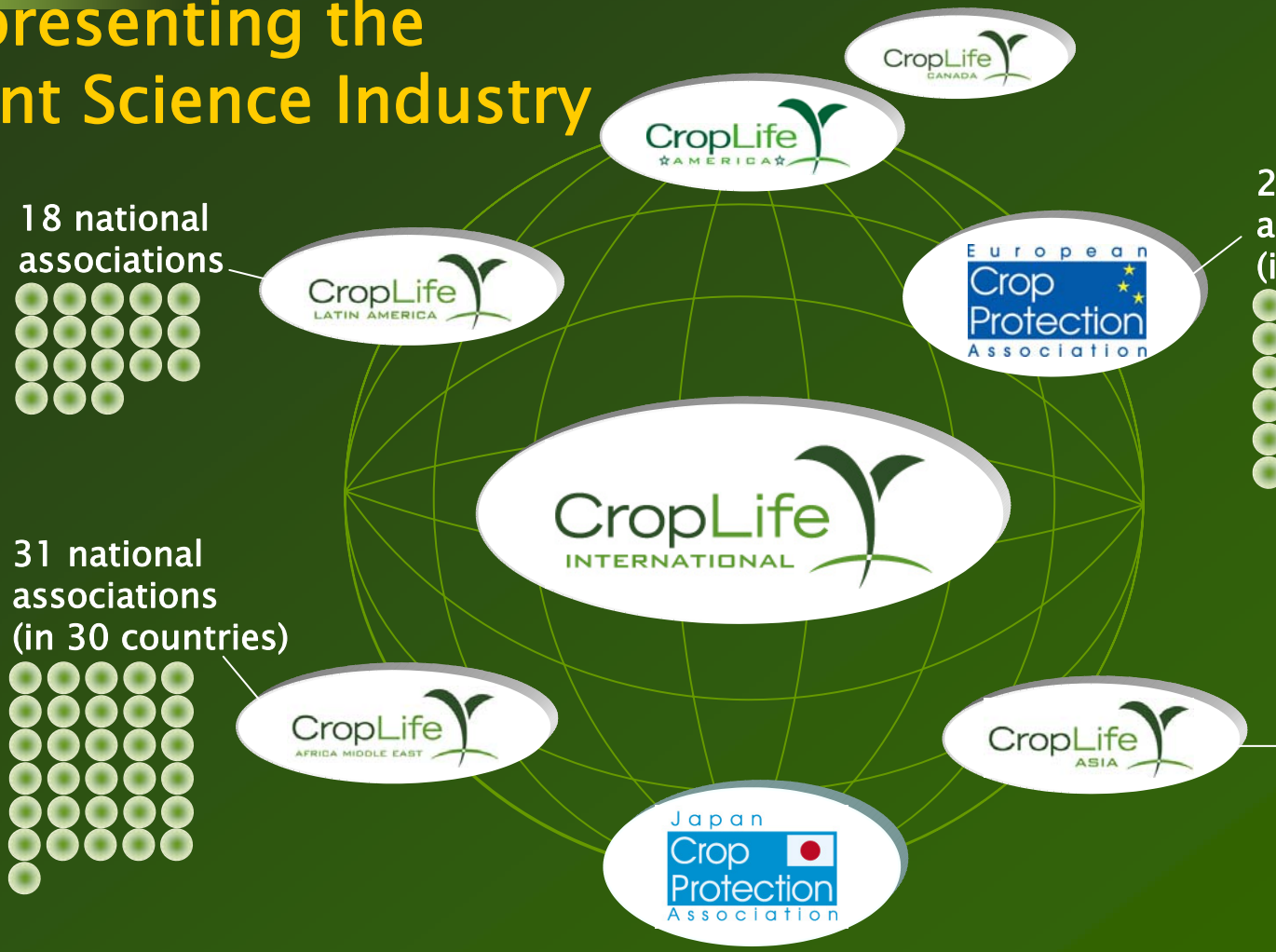
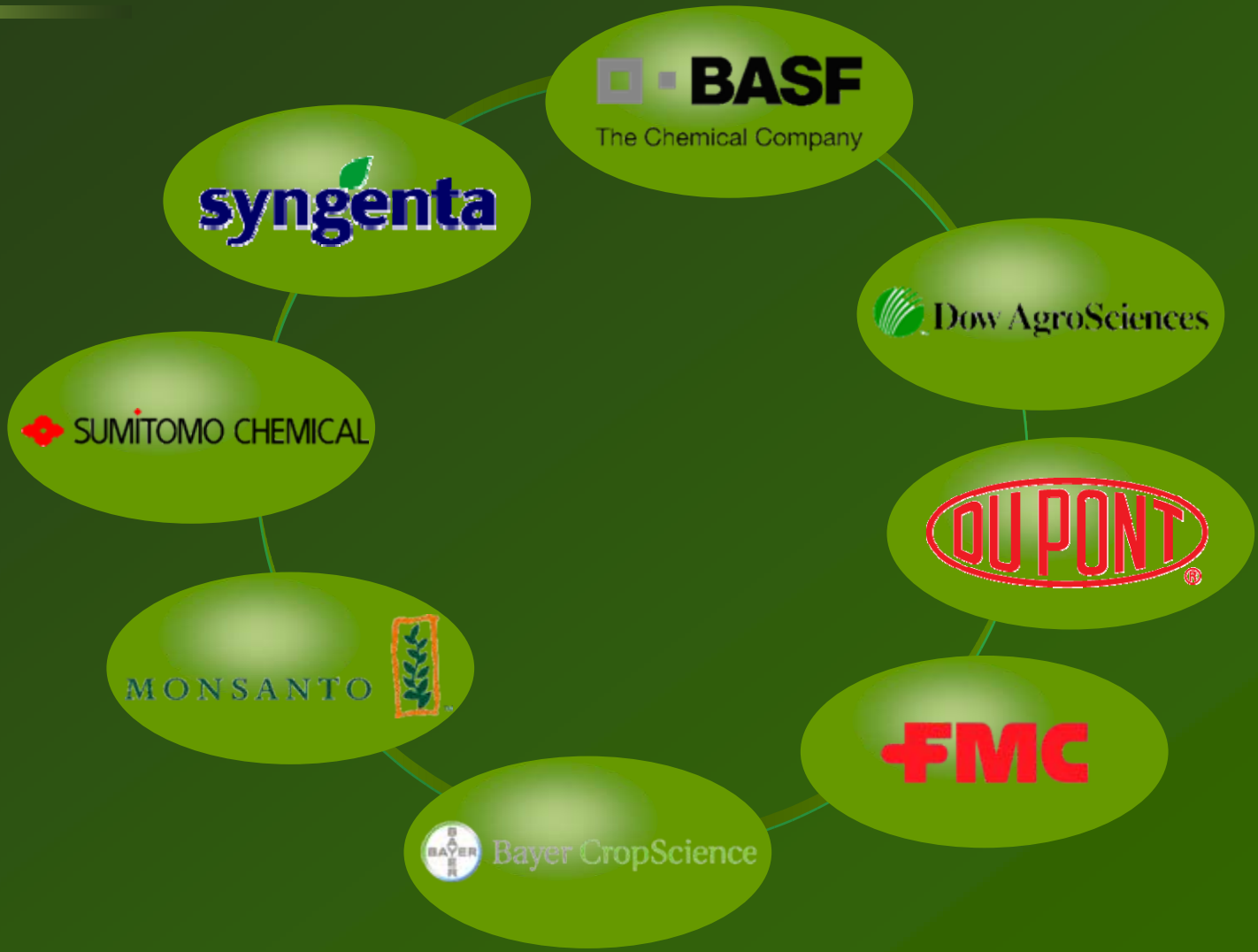
CropLife International is the global federation representing the Plant Science Industry



… driven by 8 core companies



A life-cycle stewardship approach

For Crop Protection Chemicals

IPM, including Responsible Use

Integrated Pest Management Definition

IPM is:

'the careful consideration of all 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'

FAO Code of Conduct on the Distribution and Use of Pesticides (2002)

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Basic components of an IPM programme

Prevention

Indirect measures:

- Location
- Crop rotation
- Cropping pattern
- Seed/variety selection
- Tillage practice
- Crop husbandry and hygiene
- Plant nutrition
- Irrigation
- Habitat management
- Inter-cropping
- Harvesting and storage

Observation

Decision tools:

- Crop monitoring
- Decision support systems
- Area-wide management

Intervention

Direct measures:

- Cultural and physical control
- Biological control
- Chemical control

How is IPM likely to help the farmer ?

- Improved consumer confidence in the quality of food and fibre products
- Improved crop profitability
- Stable, reliable and quality yields
- Reduced severity of pest infestations
- Reduced potential for problems of pest resistance
- Secure agricultural environment for future generations

How does the Plant Science Industry promote IPM ?

- IPM – compatible crop protection products
- Biotechnology research and development
- Screening programmes to monitor the effects on natural enemies
- Practical ICM/IPM crop programmes & strategies
- Effective decision-making systems
- Training & Extension

How does the Plant Science Industry promote IPM ?

- Integrating IPM awareness and principles into business plans, product development and use strategies where feasible
- Developing IPM skills and understanding
- Working in partnership

Collaboration and Partnerships – Why?

- No one group has all required skills, knowledge, experience and resources
- Promoting sustainable agricultural practices is the responsibility of many stakeholders
- Raises credibility of all
  - ⇒ Increased likelihood of success
  - ⇒ Increased impact and outreach

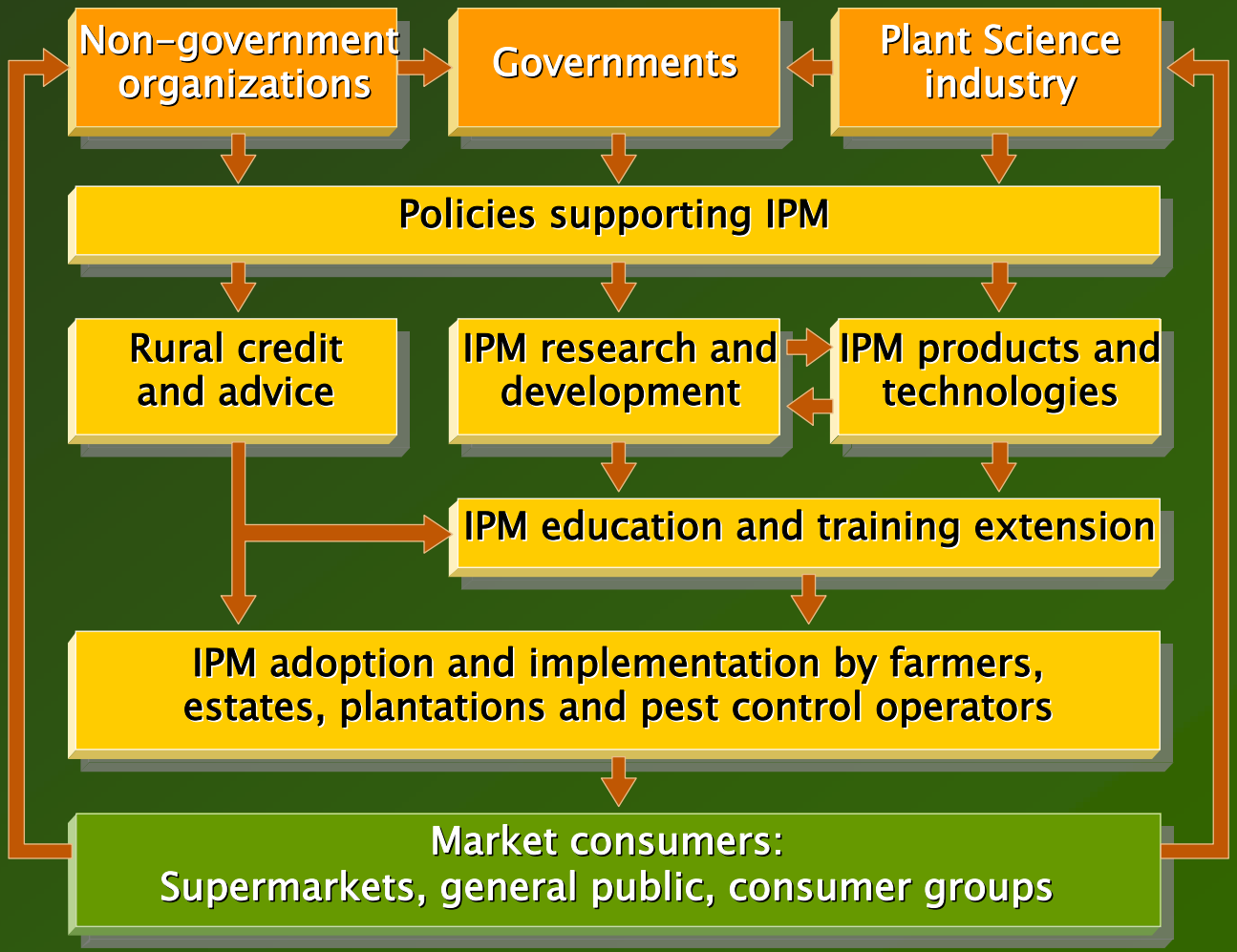
Types of partnership

No 'correct model' – different approach depending on requirements Often a mixture of partnership types

Successful Partnerships

- Complementary skills – technical, local knowledge, access to resources…
- Open and transparent – built on trust
- Well defined roles for all and understood by all
- Sound management

Who needs to collaborate in IPM Implementation ?

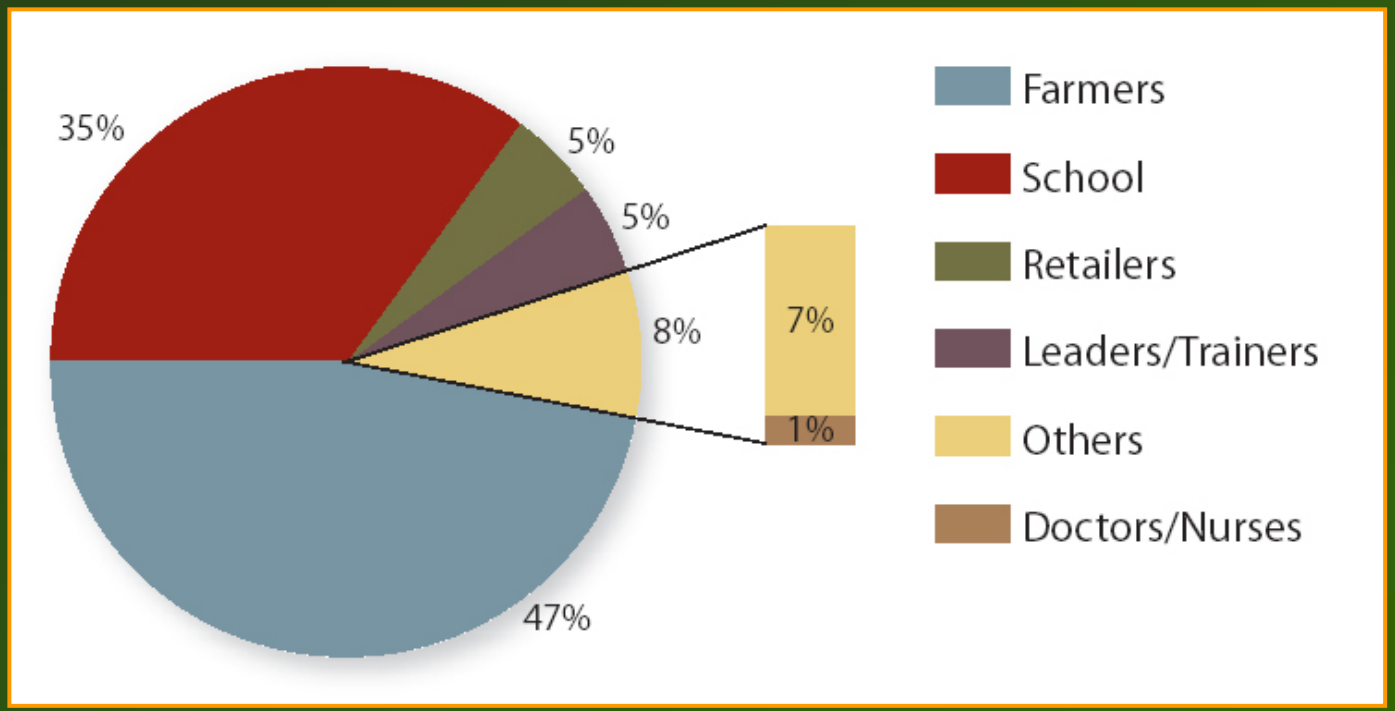


Achievements

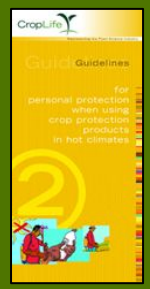
- Industry participation in 80+ countries
- In 2003 almost 100,000 people trained (including 9000 trainers) in circa 30 countries in Africa, Asia and Latin America; over 2.5 million trained since 1991
- Participation in programmes in developed countries, e.g. certification schemes
- Independent audits (e.g. Kenya) show change in attitude and behaviour amongst farmers
  - » Lesson learnt on improved training methodologies and monitoring behaviour change – will be incorporated in all programmes

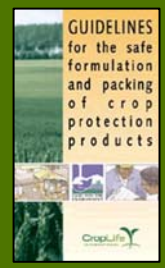
More needs to be done!

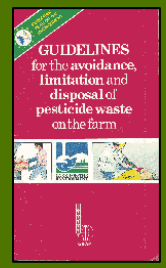
IPM & Responsible Use training numbers – 2003



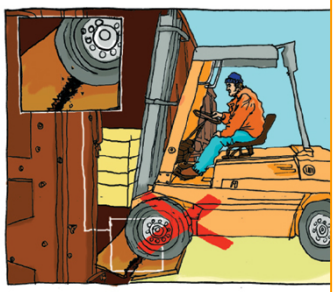
Training Guidelines

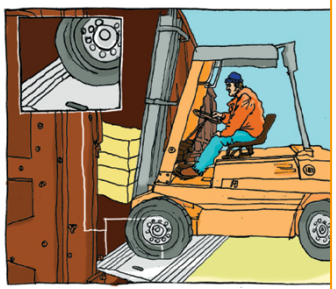






Handling Methods and Equipment





Loading equipment such as a bridge-plate mu
properly constructed

Care **must** be taken to ensure that packages are correctly handled during loading and unloading. In general, the use of suitable mechanical handling equipment is recommended, as it can reduce the risk of damage.

Conversely, the use of unsuitable equipment or poor handling techniques can seriously damage packages and increase the risk of spillage.

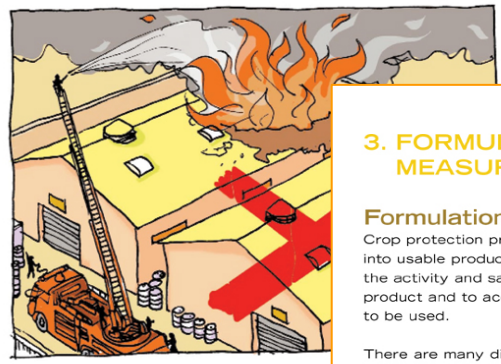
For large quantities of crop protection products, a detached, enclosed store is preferred. Where this is not practicable, crop protection products may be kept in a segregated, dedicated storeroom which is part of a larger building provided the building does not contain a staff room, vehicle store, workshop, office or area used in any way for food.

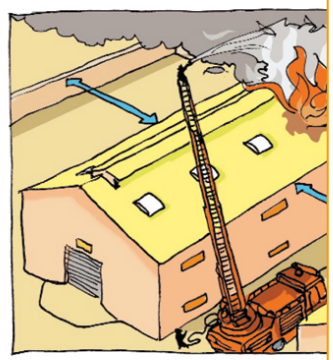
Site access

The site **must** provide suitable access for safe delivery and collection with a reasonable working area for loading and unloading of delivery vehicles. Ideally, the building should stand alone with a space of at least 10 metres between it and the surrounding property. The distance depends on the applicable building codes and fire protection codes and on local legislation, e.g., if the warehouse contains flammables, the amount of material stored and the rating of the fire wall can determine how far away other structures **must** be. As a consequence, more buffers to the neighbouring property line may be needed.

Access for emergency vehicles should preferably be available from two sides. The emergency response vehicles (e.g. fire fighters) should be able to take a route that cannot be blocked.

The response to an emergency should be planned in advance, especially it is known that the approach to the building might be restricted for any reason.





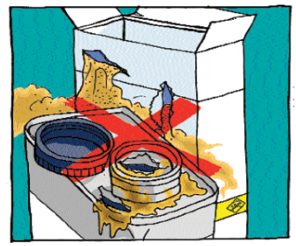
Provide suitable access for fire figh

3. FORMULATIONS, PACKS, MEASURING AND MIXING

Formulations

Crop protection products are formulated (made up into usable products) by manufacturers to optimise the activity and safety of each crop protection product and to accommodate the ways in which it is to be used.

There are many different types of formulation - liquids and solids - most requiring to be diluted, usually with water, before use, although some are used without dilution. The most common are shown in Appendix 2 (pages 56-57), which also gives a general indication of the associated problems and hazards of which users **must** be aware.



Do not buy packs with broken seals

Do not re-pack crop protection products into other containers

NETWORK FOR SUSTAINABLE AGRICULTURE

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RESOURCES

VEGETABLE IPM

1 - PEST & DISEASE | 2 - PREVENTION... | 3 - LOOK... | 4 - TAKING ACTION.. | 5 - PROMOTING IPM...

Vegetable IPM

The past decade has seen a movement of people from rural to urban environments in Asia and, indeed, in most developing countries. The migration is fuelled by the increased economic opportunities offered by an urban lifestyle. Improvements in the economic status of urban populations have resulted in an increased demand for a wider diversity of foodstuffs and in particular high quality vegetables. To meet this demand smallholder, peri-urban, vegetable production has expanded rapidly. This production provides nutrition, income and employment and in some cases generates foreign exchange through exports to other countries. Currently such vegetable farmers rely mainly on pesticides to control a wide range of devastating pests and diseases - a strategy which, unless they are used wisely, threatens the health of smallholders and the peri-urban ecosystems on which they depend.

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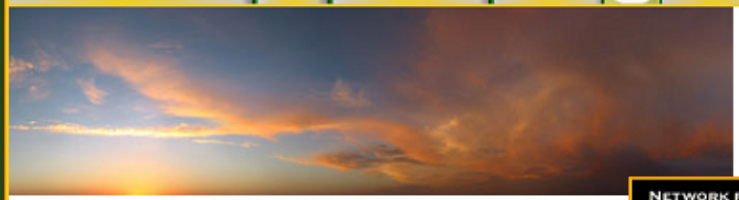
COURSES

RESPONSIBLE PESTICIDE USE | IPM 101 | VEGETABLE IPM | COTTON IPM | RICE IPM | SOIL F



agLearn.net - A Network for Sustainable Agri

agLearn.net, the **Network for Sustainable Agriculture**, is dedicated t
the knowledge, attitudes, and working practices of farmers through the pr
sustainable agriculture practices.

agLearn.net is an Internet based series of courses aiming to support farme
communities through the sharing of knowledge and positive experiences,
stakeholders together via partnership and constructive dialogue. The key
of agLearn.net cover three key areas:

1. Responsible Pesticide Use,
2. Integrated Pest Management (IPM), and
3. Integrated Soil Fertility Management.

In line with the Plant Science Industry's commitment to the principles and
IPM, four courses are offered in the field of IPM:

- Introduction to IPM,
- Cotton IPM,
- Rice IPM, and
- Vegetable IPM.

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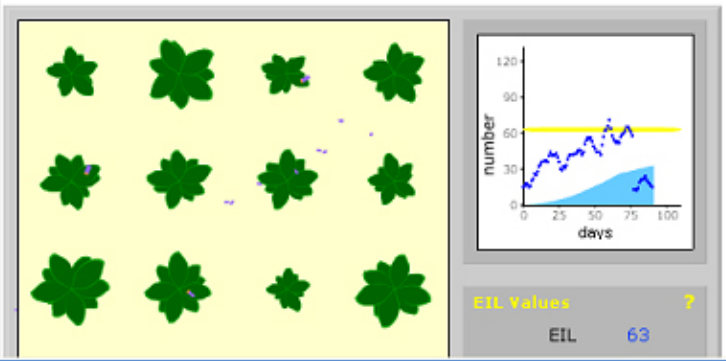
INTRODUCTION TO IPM

Economic Injury Simulator

Use the EIL simulator below to see how EILs work. This EIL simulator allows you to adjust the parameters discussed on the previous in order to see how they affect the Economic Injury Level. You can use the arrow buttons to adjust the values up and down. When you have set the EIL at the desired level, press play. When (or if) the pest population reaches the EIL level, press the spray button to knock the population back below economically damaging levels.

To see the effects of the pests on your harvest, you can adjust the number of pests to zero in the population bar and run the simulation. This will give you an idea of how much crop you can harvest in a completely pest-free environment. You may also want to test the effect of numerous or particularly damaging pests. Setting the initial pest population to a high number (e.g. 50) or setting the injury per pest or damage per injury levels high will certainly reduce harvests.



Thank you