



Pesticide risk reduction

Pesticides play an important role in reducing crop losses caused by pests. However, their misuse can have serious negative impacts on both human health and the environment. It is necessary to shift towards a more sustainable way of increasing food production, one that maintains high productivity while protecting farmers, consumers and ecosystems from the negative effects of pesticides. Risk reduction measures are essential.

What we do

FAO promotes **Integrated Pest Management (IPM)** as the preferred, ecologically-based approach to growing healthy crops, which reduces pesticide use only as needed and when adhering to measures that limit the exposure of people and the environment to them. IPM enhances natural pest control mechanisms. FAO has reduced the risks from pesticide use for millions of farmers as a result of hands-on training using **Farmer Field Schools (FFS)**. They aim to build the capacity of smallholder farmers for ecological pest management.

FAO, together with the World Health Organization (WHO), developed the **International Code of Conduct on Pesticide Management**. The Code serves as a framework for government regulators, the private sector, civil society and other stakeholders on the management of pesticides throughout their lifecycle. A series of policy and technical guidelines facilitate its implementation. FAO works alongside governments to raise awareness and build capacities to implement the Code, which also includes assisting in the disposal of obsolete pesticides and preventing stockpiles from accumulating.

FAO and WHO collaborate in establishing pesticide standards that facilitate international trade including **Maximum Residue Limits (MRLs)** in food and feed crops and pesticide quality standards.



One component of Integrated Pest Management as promoted by FAO is the use of natural predators to reduce damage on crops and yield losses.

The Rotterdam Convention (RC), whose Secretariat is jointly provided by FAO and the United Nations Environment Programme (UNEP), forms **part of the global effort to share information on hazardous chemicals**. The RC, a multilateral environmental agreement, contributes to stronger social and environmental protection by raising awareness and encouraging countries to share responsibilities over the trade and use of dangerous chemicals.

The two main provisions of the RC are information exchange and the Prior Informed Consent (PIC) Procedure. The PIC procedure applies to all of the chemicals listed under the Convention, and empowers countries to make informed decisions on whether to agree to import these chemicals and to reject those substances that they cannot manage safely.

Understanding the context

The intensification of agricultural production and international trade together with the effects of climate change have increased the pressure of pests and diseases on crops. Annual crop losses caused by insects, weeds and diseases are estimated between 20 to 40 percent, similar to those of 50 years ago. Global pesticide use has expanded to about 3 billion tonnes per year. It is increasingly recognized that current levels of pesticide use are not sustainable and have considerable environmental and health costs.

Further efforts are needed to mainstream sustainable pest management approaches such as IPM and

associated practices to build resilient crop production systems and to reduce reliance on pesticides. Furthermore, farmer education and regulatory control of pesticides need to be strengthened to address pesticide misuse.

FAO's strategic framework directs efforts to increase sustainable agricultural production and its resilience to threats to achieve food security and improved livelihoods. Sound pesticide management contributes to sustainable crop production by reducing crop losses, promoting more efficient use of pesticides and reducing adverse effects on human health and the environment.



Through the Farmer Field Schools programme, FAO is supporting IPM strategies that aim at reducing pesticide use.

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