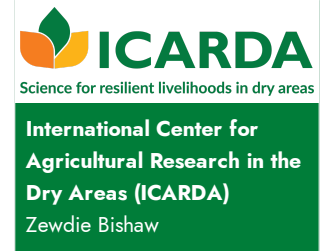


# IPM: Integrated Management of Insects, Diseases and Weeds in Wheat

Balanced Protection for Sustainable Harvests

IPM in wheat combines biological and cultural techniques, releasing beneficial organisms through gradual or immediate methods to control pests and reduce chemical reliance. Key practices like crop rotation, adjusted planting times, increased crop density, and mass trapping target aphids, weeds, whiteflies, and thrips effectively.



This technology is **TAAT1 validated**.
 
**8-9**
 Scaling readiness: idea maturity 8/9; level of use 9/9

Gender assessment **5**

Climate impact **6**

### Problem

- Emergence of Pesticide-Resistant Pests:** Frequent pesticide use leads to resistant pest biotypes, risking crop damage and reducing yields.
- Distorted Natural Pest Control:** Excessive pesticide application disrupts natural pest predators, leading to uncontrolled pest populations.
- Environmental Risks with Chemicals:** Overuse of pesticides can harm soil, water, and ecosystems, posing environmental risks.

### Solution

- Preventing Pesticide Resistance:** IPM employs diverse biological and agronomic methods to reduce reliance on chemical agents, preventing the emergence of pesticide-resistant pests.
- Restoring Natural Pest Control:** IPM balances populations of beneficial and harmful organisms using biological, mechanical/physical, and cultural techniques, restoring natural pest control mechanisms.
- Sustainable Crop Protection:** IPM minimizes the use of chemical pesticides, promoting sustainable crop protection and safeguarding food safety and environmental health.

### Key points to design your project

Integrated Pest Management (IPM) improves crop productivity and food security while minimizing health risks associated with pesticides. To effectively implement IPM, it is essential:

- To identify pests and beneficial organisms, understand the benefits and costs, access control agents, estimate their required quantities, and provide necessary training.
- To develop communication materials and collaborate with agricultural development institutes for successful integration of IPM into agricultural practices.

Technology from  
**ProPAS**

Commodities  
Wheat

Sustainable Development Goals

Categories

Production, Practices,  
Pest control (excluding weeds),  
Weed management

Best used with

- [Yellow Rust and Stem Rust Resistant wheat >](#)
- [Hessian Fly Resistant Wheat Varieties >](#)
- [Heat and Drought Tolerant Wheat Varieties >](#)

Tested/adopted in

■ Tested & adopted  
■ Adopted  
■ Tested

Where it can be used

This technology can be used in the colored agro-ecological zones.

Cost: \$\$\$ <b>515 USD</b>	ROI: \$\$\$ <b>30—70 %</b>
Full IPM package	Yield increased
<b>17—33 %</b>	<b>&lt;10 %</b>
Reduction in beetle damage	Rust infestation reduction
<b>35 USD per hectare</b>	<b>IP</b>
Profit generated by IPM	Open source / open access

