

# Biological Control of Sorghum and Millet Insect Pests with Natural Enemies



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Protect crops using natural pest allies for sustainable pest control in Africa

Biological control uses indigenous predators and parasitoids to combat pests like the Millet Head Miner and Fall Armyworm. Released into fields, these natural enemies prevent pest outbreaks and crop damage. This eco-friendly method enhances ecosystems and food security, reducing the need for chemical pesticides.

This technology is **TAAT1 validated**.
  7-7
 Scaling readiness: idea maturity 7/9; level of use 7/9

Gender assessment 4

Climate impact 7

### Problem

- Pests cause significant crop losses, threatening food security in Sub-Saharan Africa.
- Overuse of pesticides leads to environmental harm and health risks.
- Many farmers lack access to effective pest management solutions, increasing vulnerability to infestations.

### Solution

- Parasitoid wasp *Habrobracon hebetor* targets pests' caterpillars.
- Biological control techniques reduce infestations and ensure food supply.
- Parasitoid wasp *Telenomus remus* prevents Fall Armyworm outbreaks.

## Key points to design your project

Biological control aligns with SDGs 2, 12, and 15 by mitigating climate change, reducing pesticide use, and supporting biodiversity.

To integrate it into a project:

1. **Risk Assessment:** Identify pest levels and risks.
2. **Monitoring:** Establish protocols for parasitoid rearing and release.
3. **Awareness:** Run campaigns about biological control benefits.
4. **Training:** Educate agents and farmers on mass-rearing and release techniques.
5. **Resources:** Organize supply of materials for starter colonies.
6. **Evaluation:** Implement a system for project effectiveness and feedback.
7. **Partnerships:** Collaborate with local communities and organizations.
8. **Funding:** Estimate costs, secure funding, and consider long-term cost-effectiveness.

Technology from  
**ProPAS**

Commodities  
Sorghum/Millet

Sustainable Development Goals

Categories  
Production, Inputs, Natural Enemies

Tested/adopted in

Where it can be used

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

**Cost: \$\$\$ 5,000 USD**  
establishment of parasitoid colonies for 10,000 farmers

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**6,000 USD** per year for operation     
 **3—4 USD** per "ready-to-use" bag     
 **IP** Open source / open access

Target groups  
Farmers

