

IPM: Fall Armyworm Integrated Pest Management

Prevent—Monitor—Act

A practical, field-level management package that combines prevention, close observation, and timely action. **Prevent:** plant certified seed; keep plants vigorous with good spacing, soil and nutrition; avoid late or staggered planting; increase plant diversity (for example, push—pull and intercropping with non-grasses like cassava, cowpea, bean, pigeon pea); and use conservation agriculture (no-tillage, residue retention, rotations, cover crops such as Mucuna and Lablab) to favor natural enemies. **Monitor:** walk fields frequently from one week after planting; check whorls for fresh damage and frass; note natural enemies; remember some leaf damage does not reduce yield. **Act:** handpick and crush eggs and small larvae; remove volunteers, weeds, and infested residues; “recycle” pathogens by spraying a filtered slurry made from naturally killed larvae; favor predators and parasitoids; apply locally used substances (for example, soil, ash, neem, hot pepper) into whorls; use registered pesticides only as a last resort with rotation of modes of action, a maximum of 2–3 sprays per season, protective gear, and whorl-directed spraying at dawn or dusk.



IITA
Transforming African Agriculture

International Institute of Tropical Agriculture (IITA)
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Technology from

ProPAS

Commodities

Maize

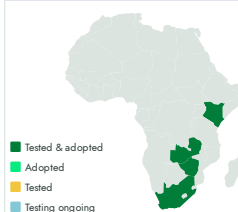
Sustainable Development Goals



Categories

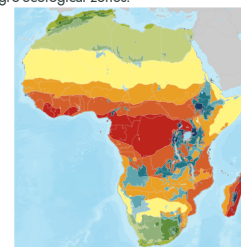
Production, Inputs, Pesticide

Tested/adopted in



Where it can be used

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



Target groups

Farmers

✓ This technology is **TAAT1 validated**.



Scaling readiness: idea maturity unknown; level of use unknown

Inclusion assessment



Climate impact



Problem

- **Crop Damage and Economic Impact:** FAW inflicts significant damage on various crops, especially maize, leading to annual yield losses valued at USD 9.4 billion in Africa alone. Without proper management, up to 17.7 million tonnes of maize could be lost annually.
- **High Mobility and Rapid Spread:** FAW exhibits high mobility and polyphagous feeding habits, making it challenging to manage. This characteristic has contributed to its rapid invasion of multiple continents, including Africa, Asia, and Australia, with concerns of potential entry into Europe.
- **Resistance to Control Measures:** FAW poses a unique challenge with its resistance to insecticides and plant toxins. Its highly effective detoxification system enables the development of resistance, rendering conventional control methods less effective.
- **Inadequate Management Practices:** The current management practices are insufficient to address sudden outbreaks of FAW. The pest's high reproductive rate and established populations make eradication virtually impossible once it has taken hold.
- **Food Security and Pest Control:** Beyond economic losses, FAW jeopardizes food security, particularly in regions where maize is a staple food. Its high reproductive rate and resistance make effective pest control a pressing concern.

Solution

1. **Crop Protection:** FORTENZA™ Duo offers systemic protection of the crop, using seed coating that keeps maize free of FAW during the early stages of cultivation¹. This reduces crop damage and mitigates the economic impact¹.
2. **Control of Mobility and Spread:** By providing early-stage protection, FORTENZA™ Duo helps manage the high mobility and rapid spread of FAW.
3. **Overcoming Resistance to Control Measures:** FORTENZA™ Duo is a powerful control agent for FAW, offering an effective solution against the pest's resistance to insecticides and plant toxins¹.
4. **Enhanced Management Practices:** FORTENZA™ Duo enhances seed survival, germination rates, and initial growth stages after planting, addressing the inadequacy of current management practices¹.
5. **Food Security and Pest Control:** FORTENZA™ Duo contributes to food security by protecting maize crops, a staple food in many regions, from FAW¹. It also provides an effective means of controlling FAW, a pest that is otherwise difficult to eradicate¹.
6. **Environmental Impact:** As a seed treatment, FORTENZA™ Duo allows for the application of smaller amounts of the control agent compared to foliar applications, reducing the environmental impact¹.

- **Environmental Impact:** The use of chemical pesticides for FAW control, while a common practice, can have negative environmental consequences. Balancing effective pest control with environmental sustainability is a critical consideration in managing the Fall Armyworm threat.



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