

# Kichawi Kill: Striga Bioherbicide

Mitigating Africa's worst pest threat to food security by revolutionizing crop protection with a biological and sustainable weed control alternative.



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The Toothpick Project uses a specific strain of Kenyan fungus, *Fusarium oxysporum* f.sp. *strigae*, to protect crops from Striga. Applied as a seed coating, this innovative bioherbicide kills Striga without harming maize, effectively increasing crop yields. It is one of the first bioherbicides to be commercialized, combining amino acid inhibition with fungal pathogens for optimal crop protection.

This technology is **validated**.
 
 9x8
 
 Scaling readiness: idea maturity 9/9; level of use 8/9

Inclusion assessment 3

Climate impact 2

Commodities  
Maize, Sorghum/Millet, Rice

Sustainable Development Goals

+ 1 more

Categories  
Production, Inputs, Herbicide

Tested/adopted in

Where it can be used

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

Target groups  
Farmers, Seed companies

### Problem

- Striga, an invasive parasitic weed, reduce crop yield by 20–100%.
- 50 million hectares of croplands (40 million farms) in sub-Saharan Africa show Striga infestation, causing 9+ billion USD in crop loss annually.
- Striga plants produce over 50,000 seeds per season, adding to the soil seed bank.

### Solution

- Using this herbicide, has resulted in a 42-56% increase in crop yields.
- The fungi seed coating product was approved, significantly reducing the price and increasing the shelf life.
- Kichawi Kill is a safe, effective, affordable alternative to traditional chemical herbicides.

## Key points to design your program

Kichawi Kill can be integrated into cereal value chain development, food security, integrated pest management, and climate-smart agriculture programs to reduce *Striga* infestation, improve crop productivity, and promote sustainable weed management. Its adoption contributes to **SDGs 1, 2, 5, 8, 9, and 15**.

**To integrate this technology into your project, plan and budget for the following activities and prerequisites:**

- **Facilitate access** to Kichawi Kill through certified distributors and quality seed systems.
- **Establish partnerships** with **The Toothpick Company**, national agricultural research and extension services, seed companies, and agrodealers.
- **Conduct** demonstrations and training on seed treatment and integrated *Striga* management, and **monitor** technology adoption, *Striga* control, and crop productivity.



**Kichawi Kill**  
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