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.

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...

Toothpick Project, Toothpick Company Ltd.
Claire Baker

This technology is pre-validated.

9·8 Scaling readiness: idea maturity: 9/9; level of use: 8/9

3.1 USD
Retail prices to treat 2kg of maize seed (0.2 acre)

ROI: $$$ **42—56 %**
Yield increased

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 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 business plan

The Striga bioherbicide offers a safer and more sustainable alternative to chemical pesticides, enhancing maize productivity and reducing chemical exposure.

To successfully integrate this technology into your business:

- Resellers must ensure efficient transportation and account for delivery and import costs.
- Prices are 15.50 USD for 10 kg, 7.25 USD for 5 kg, and 3.10 USD for 2 kg. Establishing partnerships with manufacturers and transport providers is essential.
- Combining this technology with other agricultural practices and improved maize varieties maximizes outcomes for users.

Gender assessment 3

Climate impact 2

Commodities

Maize, Sorghum/Millet, Rice

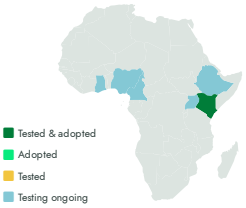
Sustainable Development Goals

+ 1 more

Categories

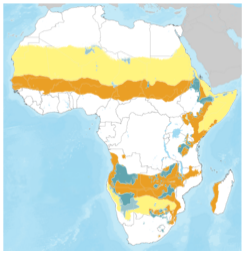
Production, Inputs, Herbicide

Tested/adopted in



Where it can be used

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



Target groups

Farmers, Seed companies