Low-dose pest control: Seed dressing of Seed with Fungicide and Insecticide

Fungal wilting of seedling (left) and damage to bean sprout by stem maggots (right)

Pest control for optimum yields

The "Seed Dressing with Fungicide and Insecticide" technology applies chemical agents to common bean seeds to combat fungal diseases and pests, boosting yields. This cost-effective and environmentally friendly method enhances crop protection making it widely applicable in agriculture.

This technology is TAAT1 validated.

7·8 Scaling readiness: idea maturity 7/9; level of use8/9

Project adoption 1

Technology integrated in the ENSURE project.

Inclusion assessment 4

Climate impact 7

Problem

- Common beans affected by fungal diseases (anthracnose, root rots) and insect pests (stem maggots), causing significant yield losses.
- Risk to profitability of improved crop varieties and farmers' investments in fertilizers.
- Diseases and pests harbored by seeds endanger the integrity of planting material stocks, jeopardizing future crops.
- Soil-borne diseases and insect pests pose severe risks, potentially leading to sparse plant density and crop failure, exacerbating food insecurity and economic instability.

Solution

- Dressing common bean seeds with chemical control agents presents an economical and eco-friendly method to prevent losses and boost production.
- This seed treatment approach leads to superior seedling emergence, reinforcing crop resilience throughout the growing season.
- Seed dressing ensures highly effective crop protection by uniformly applying control agents.
- Seed dressing offers a simple and adaptable solution that doesn't necessitate specialized equipment, making it easily implementable at farms and factories.

Key points to design your project

Identify and develop effective pesticides for seed treatment.

Estimate the quantity of pesticide needed.

Account for delivery costs to project sites and import clearance and duties if relevant, as the technology is available in various African countries.

Enhance the technology by associating it with other practices and technologies.

Collaborate with agricultural development institutes and seed multiplication companies to implement the technology effectively in your country.

50 USD	500 USD	2,000 USD	IP
Equipment for manual application	Equipment for mechanized application for a small unit	Equipment for mechanized application for a large unit	Open source / open access

Alliance

The Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT)

Justin Mabeya Machini

Technology from

ProPAS

Commodities

Common bean

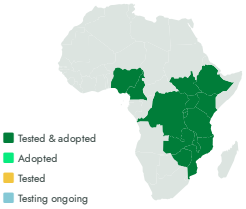
Sustainable Development Goals

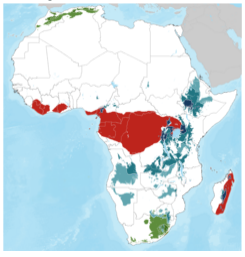
Categories

Production, Practices,

Pest control (excluding weeds)

Tested/adopted in



Where it can be used

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