

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

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.



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



This technology is **TAAT1 validated**.

7•8



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

0.5—1 USD

Fungicides and pesticides for 1-2 kg seed dressing

50 USD

Equipment for manual application

500 USD

Equipment for mechanized application for a small unit

2,000 USD

Equipment for mechanized application for a large unit



Open source / open access

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 business plan

- Technology addresses fungal diseases and pests in common beans, reducing yield losses.
- Cost-effective solution for preventing propagation and contamination issues.
- Chemicals: US \$0.5 to \$1 for treating one or two kilograms of seed.
- Manual application equipment: <\$50.
- Rotary drums: Small unit \$500, large unit \$2,000.
- Training crucial for safe and proper seed treatment.
- Agro dealers essential as key partners.
- Profit estimation necessary for implementation.

Alliance



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

Technology from

ProPAS

Commodities

Common bean

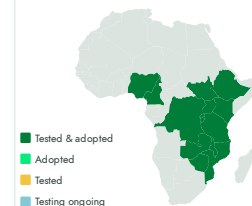
Sustainable Development Goals



Categories

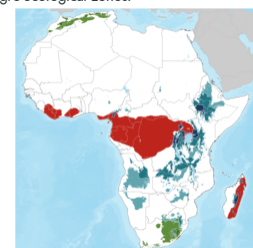
Production, Practices,
Pest control (excluding weeds)

Tested/adopted in



Where it can be used

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



Gender assessment

4

Climate impact

7



Low-dose pest control

<https://taat.africa/njk>

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