

Pre-emergence herbicides for maize crops

Unlocking Maize's Full Potential

"Pre-emergence herbicides for maize crops" is an innovative technology in Sub-Saharan Africa that prevents weed seedling root development, enhancing maize crop growth and increasing grain yields cost-effectively.



African Agricultural Technology Foundation (AATF)

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✓ This technology is **TAAT1 validated**.

7-7



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

Gender assessment **4**

Climate impact **5** **1**

Problem

- High weed encroachment in Sub-Saharan Africa reduces grain yields and agricultural returns.
- Manual or mechanical weed removal is labor-intensive and costly.
- Other weed control methods may spread weed seeds, leading to long-term issues.
- Multiple herbicide applications are often needed throughout the growing season.
- Herbicide formulation and timing vary based on regional factors.

Solution

- Pre-emergence herbicides control weeds early, boosting maize yields.
- They improve fertilizer efficiency and crop resilience to drought.
- Prevent weed seed dispersal, reducing future encroachment and herbicide use.
- Combined with post-emergence herbicides, they optimize weed control.
- Adaptable to various climates with customizable formulations.

Key points to design your project

To integrate this technology into your project, follow these steps:

- Facilitate the marketing of pre-emergence herbicides by agro-input dealers in regions where prevalent weed species pose challenges.
- Conduct awareness campaigns among farmers to highlight the benefits of chemical control methods for food production and risk mitigation.
- Provide financial support to local suppliers and smallholder farmers to encourage investments in pre-emergence herbicides.
- Ensure compliance with national pesticide regulations and obtain necessary authorizations from relevant authorities.
- Estimate the required quantity of technology, considering delivery costs and potential import fees across multiple countries.
- Budget for herbicides and labor costs, with rates specified for different blends and active ingredients.
- Allocate funds for training and post-training support to ensure effective utilization of the technology.
- Develop communication materials to promote technology adoption.
- Collaborate with agricultural development institutes, fertilizer suppliers, and agricultural service companies to implement the technology nationally.

Technology from

ProPAS

Commodities

Maize

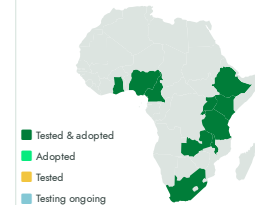
Sustainable Development Goals



Categories

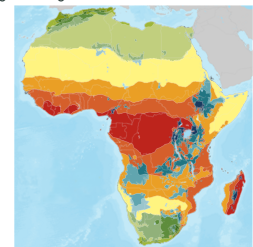
Production, Inputs, Fertilizer

Tested/adopted in



Where it can be used

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



Target groups

Farmers

Cost: \$\$\$ **27 USD**

Application of pre-emergence herbicide/Ha

ROI: \$\$\$ **61—80 %**

Reduction in weeds

0.7 - 1.6 Ton per hectare

Grain yield increase

349 USD

Gross margin per hectare



Open source / open access



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<https://taat.africa/qla>

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