

Maize-legume rotation and intercropping

Maize-legume: Savings in Soil, Growth in Profit

This practice utilizes legumes' biological nitrogen fixation to boost maize productivity. It enhances soil fertility, reduces weed infestation, and mitigates soil erosion. Certain legumes also combat parasitic weeds in maize, while tall maize crops regulate soil temperature and improve water efficiency.



AATF
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Technology from

ProPAS

Commodities

Maize

Sustainable Development Goals



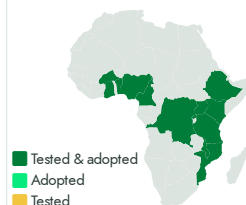
Categories

Production, Practices, Soil fertility

Best used with

- [Drought Tolerant Maize Varieties and Water Efficient Maize Varieties >](#)
- [Pre-plant blended fertilizers and nitrogen topdressing for maize >](#)

Tested/adopted in



Where it can be used

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



✓ This technology is **TAAT1 validated**.

7-8



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

ROI: \$\$\$ **0.5—1 tons**

maize grain yields increase in yield/ha

30—70 kilograms

of nitrogen carried over from soybean to maize crops



Unknown

Problem

- Subsistence farming faces soil nutrient deficiencies, such as nitrogen, hampering crop growth and yields.
- Commercial farmers grapple with high costs associated with nitrogen-based fertilizers, impacting profitability.
- Weed infestation competes with crops for resources, reducing overall yields.
- Pest and disease outbreaks can cause significant damage to crops, affecting both quality and quantity, leading to financial losses.
- Crop failures due to factors like drought or pest attacks can result in food scarcity, impacting household nutrition and well-being.

Solution

- Utilizes biological nitrogen fixation in legumes to enrich soil and promote healthier plant growth.
- Reduces dependency on expensive synthetic fertilizers through maize-legume rotation and intercropping.
- Effectively manages weed growth, minimizing infestation and enhancing overall crop productivity.
- Reduces harmful Striga weed infestations in maize crops through intercropping with specific legumes.
- Cultivating two complementary crops on the same land ensures a more reliable food supply and enhances food security for subsistence farmers.

Key points to design your business plan

Using the maize-legume rotation and intercropping technology enhances crop productivity, promotes sustainable agriculture, and contributes to food security and economic sustainability.

In order to use the technology efficiently, you should :

- Evaluate your farm's compatibility for mixed cultivation and choose suitable varieties tailored to local conditions.
- Obtain high-quality maize and legume seeds.
- Secure mineral fertilizers and legume inoculants if needed.
- Enhance outcomes by forging partnerships with agricultural development organizations, fertilizer providers, and agricultural service firms to offer assistance and facilitate distribution.

Gender assessment



Climate impact



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<https://e-catalogs.taatafrica.org/com/technologies/maize-legume-rotation-and-intercropping>

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