Golden maize varieties (High provitamin A)

Nutrition-boosting, income-enhancing maize.

These maize varieties have distinctive orange kernels, a result of high beta-carotene content. They are developed through advanced breeding techniques, combining naturally provitamin A enriched lines from Central and South America with elite land races and hybrid lines with improved agronomic traits.

African Agricultural Technologies Foundation (AATF)
Jonga Munyaradzi

This technology is TAAT1 validated.

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

Gender assessment 4

Climate impact 4

Problem

- Significant population, including children and adults, faces preventable blindness and weakened immune systems due to insufficient vitamin A levels.
- Increased susceptibility to diseases such as measles, diarrhea, and respiratory infections.
- Common maize varieties lack vital vitamins and minerals, contributing to widespread malnutrition.
- 50% of children aged 0.5 to 5 years are at risk of vitamin A deficiency, leading to severe health complications and diminished quality of life

Solution

- Provitamin A enriched maize varieties provide a stable source of essential nutrients, combating deficiencies.
- Preservation of beta-carotene ensures a consistent supply of vitamin A.
- Genomic modification maintains nutrient content without compromising yield.
- Cost-effective approach for regions heavily reliant on maize.
- Tailored to meet nutritional needs, providing a significant portion of daily vitamin A requirement.
- Accessible and adaptable for diverse farming systems.

Key points to design your project

This transformative technology enhances gender inclusion, providing resilience to climate challenges and aligning with Sustainable Development Goals (SDGs) by addressing hunger and promoting well-being, especially for women and children. To integrate the technology into your project:

1. Estimate seed quantity based on a cost of 0.8 to 1.2 USD per kg and a requirement of 25 kg per ha.
2. Account for delivery costs, import clearance, and duties if applicable.
3. Include training and post-training support costs.
4. Develop communication materials for technology promotion.
5. Optimize by associating the technology with legumes, using manure, and implementing mulching.
6. Collaborate with agricultural development institutes and seed multiplication companies for effective implementation in your country.

Cost: $$$ **0.8—1.2 USD** per kg

10—20 % Revenue increased

IP Open source / open access

Technology from

ProPAS

Commodities

Maize

Sustainable Development Goals

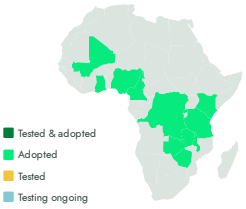
Categories

Production, Improved varieties, Yield improvement, Quality improvement

Best used with

- Drought Tolerant Maize Varieties and Water Efficient Maize Varieties ›
- Pre-plant blended fertilizers and nitrogen topdressing for maize ›
- Maize-legume rotation and intercropping ›

Tested/adopted in



Where it can be used

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