Golden maize: High provitamin A maize varieties

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 Technology Foundation (AATF)
Jonga Munyaradzi

This technology is TAAT1 validated.

7·7 Scaling readiness: idea maturity 7/9; level of use7/9

Project adoption 5

Technology integrated in the EFPP, ENSURE, PADCV-PTA, PUPSAN, and SAPZ-II projects.

IP

Open source / open access

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 business plan

This technology is beneficial for three main groups: manufacturers, resellers, and end users (farmers).

Golden Maize technology provides a cost-effective solution, addressing vitamin A deficiency and empowering diverse farming communities globally. Selling the product enhances user engagement, contributing to overall health and wellbeing. Utilizing Provitamin A enriched maize ensures a sustainable solution, combating vitamin A deficiency and empowering farming communities for enhanced health and wellbeing.

Inclusion assessment 4

Climate impact 4

Technology from

ProPAS

Commodities

Maize

Sustainable Development Goals

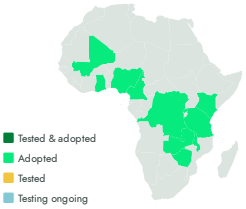
Categories

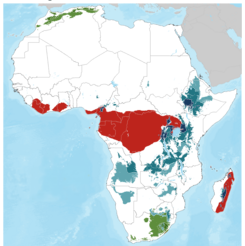
Production, Improved varieties,
Yield improvement, Quality improvement

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...
See all 3 technologies online

Tested/adopted in



Where it can be used

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