

# HIB varieties: Biofortified Beans for Improved Nutrition

Fueling Health with Iron-Rich Beans



"Biofortified Beans for Improved Nutrition" technology develops high-iron bean varieties via biofortification to combat deficiencies in Sub-Saharan Africa. With 31 released varieties, it enhances regional food security and nutrition.

✓ This technology is **TAAT1 validated**.

8·7



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

📄 Project adoption **2**

Technology integrated in the ENSURE, and FIP projects, in Rwanda.

Inclusion assessment **4**

Climate impact **7**

## Problem

- Iron and zinc deficiencies leading to: Anemia, Impaired motor and cognitive development, Increased risk of maternal death and premature births, Low birth weight
- Weakened immune systems
- Increased susceptibility to infections
- Stunted growth

## Solution

- Development of high-iron bean varieties through biofortification
- Crossbreeding local elite lines with American bean varieties naturally rich in iron
- Resulting in High-Iron Beans (HIB) with traits including: High productivity, Drought and disease tolerance, Preferred culinary characteristics, Quick cooking
- Release of 31 HIB varieties in key production areas across Sub-Saharan Africa
- Enhanced food security and nutrition in the region.

## Key points to design your program

**HIB Varieties** can be integrated into bean value chain development, nutrition, food security, and climate-smart agriculture programs to improve bean productivity, enhance dietary iron intake, and strengthen household food and nutrition security. Its adoption contributes to **SDGs 2 and 3**. To integrate this technology into your project, plan and budget for the following activities and prerequisites:

- **Facilitate access** to certified HIB seed through sustainable seed systems.
- **Establish partnerships** with Alliance of Bioversity International and CIAT, national agricultural research and extension services, seed companies, and nutrition organizations.
- **Conduct** demonstration plots and training on biofortified bean production and seed multiplication, and **monitor** technology adoption, bean productivity, and household nutrition outcomes.



Open source / open access

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



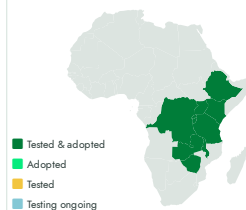
Categories

Production, Improved varieties, Quality improvement

Best used with

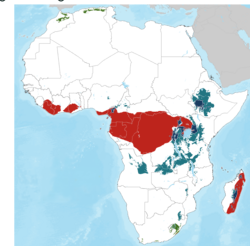
Seed dressing of Seed with Fungicide and Insecticide, Seed Inoculation with Rhizobia, Specialty Fertilizer Blends for Common Bean  
See all 3 technologies online

Tested/adopted in



Where it can be used

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



HIB varieties

<https://taat.africa/auh>

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