# Climbing Bean with High Yield and N Fixation

## Growing Prosperity: Climbing Beans for Food Security & Income Growth

Climbing beans, with their long vines and high growth, are a valuable crop for small-scale farmers in Sub-Saharan Africa. Improved varieties, bred for productivity, resilience, and superior nitrogen-fixing abilities, contribute significantly to food security and income in the region. These beans are also processed into various products for local and international markets.

This technology is TAAT1 validated.

8·7 Scaling readiness: idea maturity 8/9; level of use7/9

Inclusion assessment 4

Climate impact 7

## Problem

- **Agricultural Challenges**: Limited yields and susceptibility to pests and diseases affect small-scale farmers.
- **Environmental Stresses**: Drought, poor soil quality, and nitrogen-depleted soils hinder bean cultivation.
- **Food Insecurity**: These challenges contribute to food insecurity and malnutrition in small-scale farming communities.

## Solution

- **Higher Yields**: Climbing beans yield more than bush beans.
- **Pest/Disease Resistance**: These varieties resist common pests and diseases.
- **Stress Tolerance**: They thrive in adverse conditions.
- **Nitrogen Fixation**: The technology reduces fertilizer costs.
- **Food Security**: They provide a reliable food source for small-scale farmers.

## Key points to design your program

**Climbing Bean with High Yield and N Fixation** can be integrated into bean value chain development, sustainable agriculture, food security, and women's economic empowerment programs to increase bean productivity, improve soil fertility, and reduce dependence on synthetic fertilizers. Its adoption contributes to **SDGs 2, 5, and 12**. To integrate this technology into your project, plan and budget for the following activities and prerequisites:

- **Facilitate access** to certified climbing bean seed, staking materials, rhizobia inoculants, and other essential production inputs.
- **Establish partnerships** with Alliance of Bioversity International and CIAT, agricultural development institutes, and seed multiplication companies.
- **Conduct** demonstration plots and training on climbing bean production, rhizobia inoculation, and soil fertility management, and **monitor** technology adoption, bean productivity, and nitrogen fixation.

| 4.6 t/ha | 92 kg | 28 % | IP |
|---|---|---|---|
| Potential yield | N fixed per ha | Increase in bean consumption | Trademark |

Alliance

**The Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT)**

Josey Kamanda

Technology from

ProPAS

Commodities

Common bean

Sustainable Development Goals

Categories

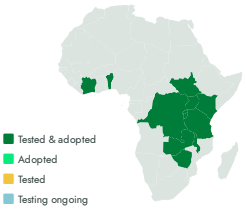
Production, Improved varieties, Disease resistance, Insect resistance

Best used with

Low-Cost Staking for Climbing Beans, Seed Inoculation with Rhizobia, Seed dressing of Seed with Fungicide and Insecticide

See all 3 technologies online

Tested/adopted in




Where it can be used

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