Bean Flour and Flour Products: Bean processing process

Bean Flour Made Easy

The "Bean flour and flour-based products" technology processes common beans into flour, enhancing their nutrition and shelf life. It offers economic opportunities for farmers and businesses, with scalable equipment suitable for various production scales in both rural and urban settings.

✓ This technology is TAAT1 validated.

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

Project adoption

Technology integrated in the **ENSURE project** in 7 regions of the East African Community

Inclusion assessment 👍 4

Climate impact 👍 5 👎 2

Problem

- Whole beans require significant time and energy for preparation, reducing appeal to urban consumers.
- Traditional bean preparation methods remain unattractive despite pre-cooked options due to time and energy constraints.
- Common beans contain substances that hinder protein, starch, and mineral absorption in the gut, affecting nutrition and digestibility.
- Processing newly harvested and tough-to-cook beans presents challenges in both palatability and preparation efficiency.

Solution

- Technology produces popular bean products in Sub-Saharan Africa.
- Begins with high-quality flour, reducing cooking time and costs.
- Processing boosts vitamin and nutrient availability.
- Methods like soaking and pressure cooking enhance bean digestibility.
- Bean flour prolongs product freshness.
- Provides lucrative markets for farmers and entrepreneurs.
- Opens new markets, reduces transportation costs, and enables new products.

Key points to design your program

Bean Flour and Flour Products can be integrated into nutrition, food processing, agribusiness development, and food security programs to increase the value of common beans, improve nutrition, expand market opportunities, and strengthen local agro-processing enterprises. Its adoption contributes to **SDGs 2, 3, and 13**. To integrate this technology into your project, plan and budget for the following activities and prerequisites:

- **Facilitate access** to bean processing equipment and support the establishment of efficient processing facilities.
- **Establish partnerships** with **Alliance of Bioversity International and CIAT**, bean producers, food processors, farmer organizations, and other bean value chain stakeholders to support technology deployment.
- **Conduct** training on bean flour processing, quality assurance, and product development, and **monitor** technology adoption, production volumes, product quality, market uptake, and income generated from bean-based products.

4 USD	**1,500** USD	**2,000** USD	IP
Bean flour per kg	Soaking tanks of 500 liter	Mills with a capacity of 300 kg hour-1	Open source / open access

Alliance

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

Technology from

ProPAS

Commodities

Common bean

Sustainable Development Goals

2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
13 CLIMATE ACTION

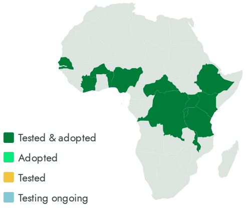
Categories

Postharvest, Practices, Agri-food processing

Best used with

Biofortified Beans for Improved Nutrition
See all 1 technologies online

Tested/adopted in



Where it can be used

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

Target groups

Processors