

# 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 use 7/9

Gender 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 project

To integrate this technology into your project:

- Conduct awareness campaigns on the benefits of bean flour technology.
- Collaborate with local farmers and agri-food companies for a steady bean supply.
- Establish processing plants with efficient equipment.
- Provide training programs for operators and workers on safety and quality use.
- Ensure regulatory compliance with food safety standards and licensing requirements.

Consider engaging a team of trainers for installation support, including costs for training and post-training assistance. Develop communication materials like flyers, videos, and radio broadcasts.

Additionally, consider incorporating "Biofortified beans for improved nutrition" into your project to address key challenges and contribute to a healthier, more resilient future.

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

Categories  
Transformation, Practices, Agri-food processing

Best used with

- [Biofortified Beans for Improved Nutrition >](#)

Tested/adopted in

Legend:  
■ Tested & adopted  
■ Adopted  
■ Tested

Where it can be used

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

Cost: **\$\$** **370 USD**

Small motorized bean dehullers that can process 50 kg hour-1

<b>4 USD</b>	<b>370 USD</b>	<b>1,500 USD</b>	<b>2,000 USD</b>	<b>IP</b>
Bean flour per kg	Small motorized bean dehullers that can process 50 kg hour-1	Soaking tanks of 500 liter	Mills with a capacity of 300 kg hour-1	Open source / open access

