

# Advanced equipment for Bean processing: Bean Flour and Flour Products



## 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**.



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

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

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

**4 USD**

Bean flour per kg

**370 USD**

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

**1,500 USD**

Soaking tanks of 500 liter

**2,000 USD**

Mills with a capacity of 300 kg hour-1



Open source / open access

## 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 business plan

### For Manufacturers:

- Identify reliable suppliers for machines and raw materials, and enter the market smoothly with minimal licensing.
- Target small-scale farmers, agro-manufacturers, and development projects.
- Collaborate with local farmers for a reliable bean supply, ensuring sustainable sourcing.
- Cost-effective equipment ranges from small dehullers (\$370) to larger automated systems (\$3,000+).

### For Resellers:

- Emphasize versatility, collaborate for a steady supply, and navigate licensing smoothly.
- Target health-conscious urbanites and budget-conscious rural communities.
- Partner with local processors and farmers, exploring strategic partnerships.
- Implement flexible procurement to maximize profit margins.

### For Users:

- Target health-conscious individuals seeking gluten-free alternatives.
- Highlight time and cost savings in meal preparation for busy urbanites and homemakers.

Alliance



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

Technology from

ProPAS

Commodities

Common bean

Sustainable Development Goals



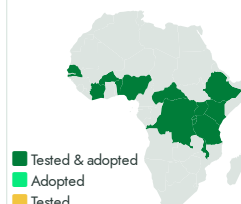
Categories

Transformation, Practices,  
Agri-food processing

Best used with

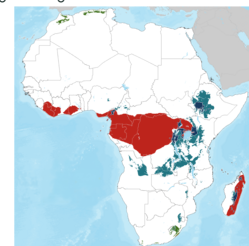
- [Biofortified Beans for Improved Nutrition >](#)

Tested/adopted in



Where it can be used

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



- Source bean flour and products from local businesses.

Gender assessment



Climate impact



### Advanced equipment for Bean processing

<https://e-catalogs.taatafrica.org/com/technologies/advanced-equipment-for-bean-processing-bean-flour-and-flour-products>

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