

Module 2: Best practice on farm to factory handling of grains

Best practices to handle traditional grains at factory level -
Processing equipment and regulations



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Steps to process grains and corresponding equipment

Process	Equipment
Receiving and weighing	Grain moisture meter, aflatoxin test kits, weighing scales, lifting equipment
Cleaning	Manual, Sieves, destoner, grain sorter
Pre-cooking	Extruder
Milling	Hammer mill, disc mill, roller mill
Mixing	Ribbon blender
Packing	Impulse sealer, semi/fully automated packing machine
Hydrothermal treatment	Hydrothermal treatment line

Receiving and weighing



Aflatoxin test kits



Grain Moisture Meter



Weighing scale

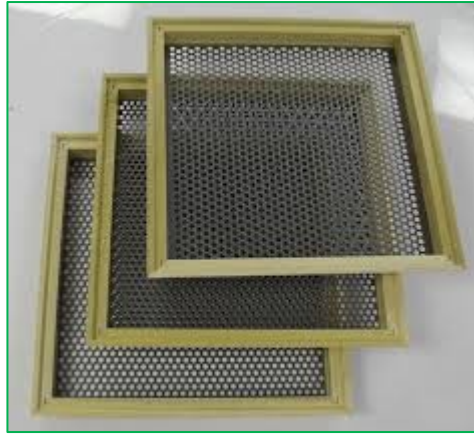


Load lifter

Cleaning and sorting



Manual grain cleaning



Grain cleaning screens



Grain destoner

Precooking



Grain roaster



Grain twin extruder

Milling



Hammer mill



Disc mill



Roller mill

Mixing



Powder mixer

Packing



Impulse sealer



Continuous Plastic Bag
Sealing Machine



Bag sewing machine

Common manufacturing facilities

To avoid high start-up costs, food innovators can have access to common manufacturing facilities:

Public Universities

e.g. Makerere University, Uganda

Public Research Centers

e.g. Kenya Industrial Research and Development Institute


Private Manufacturers

providing contract manufacturing services



Regulations in grain processing

- National Bureau of Standards e.g. UBS, KEBS
- Environment regulations on waste, noise, packaging e.g. NEMA
- Occupational Health and Safety
- Business permit
- Business registration
- Tax compliance
- Food handlers permits
- Building code
- COVID-19 Business Guidelines (Social/physical distancing floor markings, temperature guns, hand wash stations, sanitizers, masks, disinfecting processing/sanitary facilities, safety protocol for emergencies, contact tracing mechanism).

A wide-angle photograph of a field of tall, golden-yellow grass. Scattered throughout the field are numerous red poppies, some in full bloom and others as buds. The background shows a distant treeline under a clear blue sky with a few wispy clouds. The overall scene is bright and sunny.

To learn more about how to safely manage raw materials and equipment, please read
the next chapter