

GRAIN PROCESSING TOOLS • EMERGING TECHNOLOGY



SUBSISTENCE GRAIN PROCESSING

Subsistence farmers typically thresh grain by beating the crop against the ground or by breaking it apart with a mortar and pestle.

Women separate the grain from the chaff by winnowing in the wind, followed by grinding grain into flour with a mortar and pestle or stone.

One of the most effective ways of reducing hunger and poverty in the developing world is to help subsistence farmers reduce the amount of food wasted after harvest.



Compatible Technology International (CTI) has developed a set of hand-operated devices that can double the amount of grain a farmer can produce—with reduced effort and without planting additional crops.

GRAIN PROCESSING WITH CTI STRIPPER, THRESHER, & WINNOWER

CTI's grain stripper, thresher, and winnower manually processes pearl millet and sorghum. The equipment is being tested with additional types of grains.

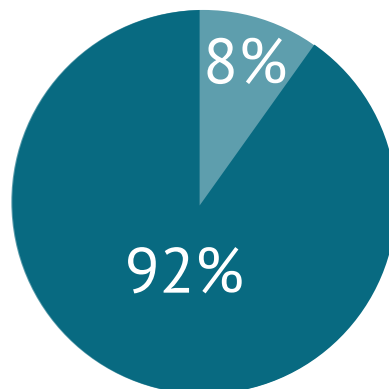
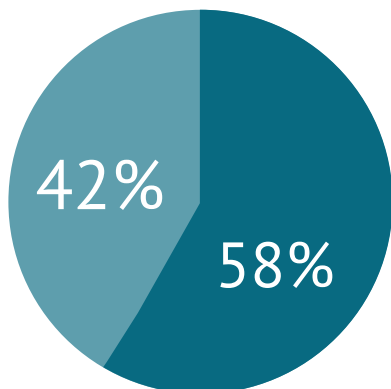
- Captures 92% of the grain
- Increases production rate
- Produces clean, unbroken grain of higher value

CTI's equipment can significantly increase the yield of subsistence farmers' grain and reduce processing time and effort—improving the nutrition and income of rural households.

PEARL MILLET GRAIN YIELDS

Traditional Grain Processing

Processing Grain w/CTI Prototypes



The Impact:

Double the grain, more time available, improved quality, higher incomes, and better nutrition.

- Harvested Grain Saved
- Harvested Grain Lost

For 30 years, Compatible Technology International (CTI) has been creating practical food and water tools for the developing world.

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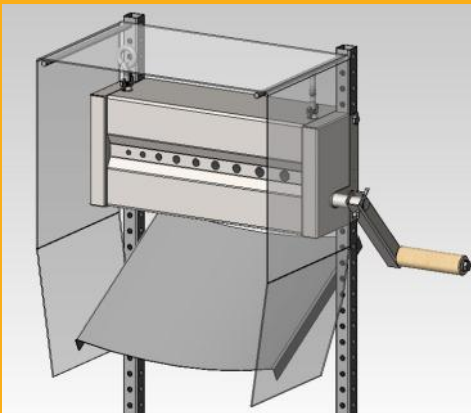
Subsistence farmers in developing countries struggle to produce enough food to feed their families. These farmers typically rely on inefficient rudimentary processing “tools” to bring their harvest from the field to the table. As a result, rural farming families can lose 15-50% of their crops after harvest—a staggering, yet preventable, waste of food.

CTI has developed a set of manually-operated devices for processing grain. The equipment can double the yield of subsistence farmers’ grain and significantly reduces processing time and effort – improving nutrition and income of rural households.

The equipment easily processes harvested pearl millet and sorghum – and are currently being tested with additional grains. CTI estimates the three-piece set will cost about \$600. CTI is seeking funding to fabricate the equipment and conduct pilot tests with African farmers.



GRAIN STRIPPER



With a simple turn of the handle, the Grain Stripper can easily strip pearl millet or sorghum from its stalk or panicle. Farmers traditionally perform this function with their hands or a mortar & pestle.

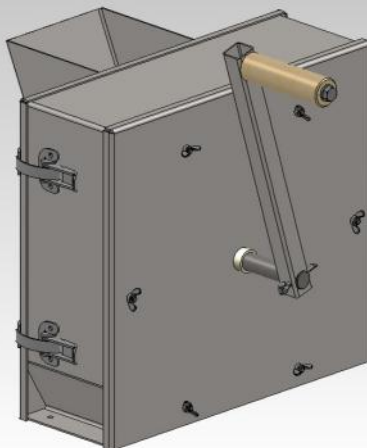
OUTPUT

- Pearl Millet: 43 Kg/hr.

TECHNICAL SPECIFICATIONS

- Size: 5.5”L x 23.5” W x 31” H
- Housing: Plain carbon steel
- Stand: 30-36” H
- Crank: 6”
- Rollers material: Neoprene Spring Rubber

GRAIN THRESHER



The Grain Thresher separates the chaff from the grain.

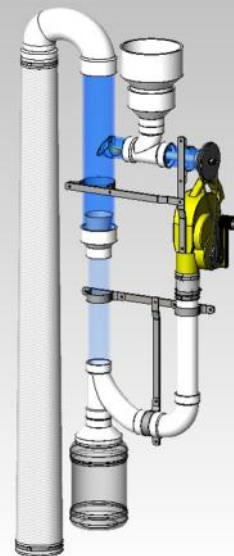
OUTPUT

- Pearl Millet: 60 Kg/hr.

TECHNICAL SPECIFICATIONS

- Size: 19.5”L x 16.5”W x 14” H
- Housing: Plain carbon steel
- Stand: 30-36” H
- Crank: 8”
- Paddles material; Vinyl round-rib

GRAIN WINNOWER



The Grain Winnower removes the chaff from the grain.

OUTPUT

- Pearl Millet: 44 Kg/hr.

TECHNICAL SPECIFICATIONS

- Size: 10.5”L x 25”W x 57” H
- Housing: Plain carbon steel
- Stand: 30-36” H
- Crank: 4”
- Pipes material PVC