

TECHNOLOGY DESCRIPTION

Manual cassava chipper is made of stainless steel to avoid rusting and contamination. It has a capacity to process up to 260 kg cassava per hour and relatively low cost compared to imported and motorized machines. Products are thin (2-5mm thick) meanwhile chips from hand cutting are too thick to dry leading to long drying time and chips deteriorate. It is small in size and can be used by individual farmer at farm-gate or at household level. The chipper enables farmers in isolated areas especially women to reduce the long time input on traditional processing practices.

Prototype of manual cassava chipper



END USERS AND BENEFITS

Due to the smallholder nature of farming systems and the low density of producers in more inaccessible areas resulting to low production capacity, investment in high-capacity processing machines is often not economically justified.

Manual cassava chipper can be used close to the production site and minimize transport costs while waste is recycled.

It is easy to repair/clean, no additional fuel costs, mobile and so easy to carry and share by other farmers with optional replacement of chipping drums.

Chips is either processed into flour for added value or bulked to the market for sale to bakers.

SCALING STRATEGY

Train a network of fabricators on machine fabrication and repairs and processors on machine use.

Create a pool of well-trained processors close to production site for ease of transportation and supply of raw material.

Development of business plans to facilitate engagement with financial institutions.

Development/dissemination of communication materials and engagement with extension staff to facilitate the spreading and use of manual cassava chipper.

LEVEL OF ADOPTION OR USE

To promote high-quality cassava chips in Cameroon, PNDRT set up eighty manual chippers with over 1,500 farmers in 35 pilot villages.

The use has been successful in smallholder farming systems and in remote areas for value addition.

The availability of local artisans to fabricate and maintain the chipper is a major success factor and over 5000 farmers are using the chipper in Cameroon.

The chipper enables farmers in isolated areas especially women to reduce drudgery associated with traditional processing and access markets to increase their incomes.

Feedback from field survey indicates increasing demand and supply to Nigeria, Congo Brazzaville and DR Congo with anticipation that the chipper will reach 50,000 farmers by 2020.

CRITICAL GAPS AND NEXT STEPS

Lack of knowledge on fabrication of the manual chipper by local equipment manufacturers and lack of knowledge on the part of local processors on maintenance of the equipment including cost for smallholders. Training of fabricators and processors is necessary to produce and use cassava chippers. IITA, AATF and NGOs are willing to promote manual cassava chipper in remote/inaccessible areas with absence of electricity and overcome challenges associated with transportation of bulky cassava root.

Chipper fabrication and distribution



KEY PARTNERS FOR SCALING

- IITA for technical backstopping
- African Agricultural Technology Foundation (AATF) for training
- Fabricators to fabricate chipper locally
- Processors to assess machine quality
- Financial institutions

