

Program Factsheet



Creating an Integrated Cassava Farming System to Increase Incomes of Farmers in East Java

A partnership for innovation between the University of Jember, PT. Bangkit Cassava Mandiri (PT. BCM) and farmers' cooperatives supporting 2,800 cassava and sheep farmers to improve production and processing practices of cassava and recycle waste products for sheep production

Cassava is increasingly becoming an attractive commodity in Indonesia as domestic demand increases for low gluten flour products. Prices for raw cassava have been steadily rising, more than doubling since 2012.

Cassava has the advantage of being able to tolerate low rainfall and poor soils, making it an ideal crop for farmers in drier areas of Indonesia where rice and maize cannot be easily grown. However, productivity is still generally low among farmers at about 20-25ton/ha, relative to potential productivity of 60-100 ton/ha. The main constraints to increasing productivity are farmers not using appropriate cassava varieties and having poor cultivation techniques.

One of the uses of cassava is as a raw material for making MOCAF (modified cassava flour), a product which has been developed and commercialised in East Java. The initial processing of cassava into chips is undertaken at the community level.

The project is centred on developing an integrated production and processing system for cassava and sheep production, which has multiple revenue streams for farmers. This is undertaken through a partnership between the University of Jember (UNEJ) and private sector organizations, PT Bangkit Cassava Mandiri (PT BCM), PKPU, Rumah Zakat, Infaq and Shodaqoh and with farmers' cooperatives to work with cassava and sheep farmers.

Technological innovations will assist farmers by:

- Improving production and productivity of cassava, including better cassava varieties, and better cultivation techniques such as fertilizing and planting patterns;
- Organising village level processing plants and mechanising for improved cassava chips processing;
- Using an integrated farming system where waste products from the cassava production and processing are used to produce organic fertiliser and feed for sheep;

- Improving sheep feeding and management practices;
- Developing access to both cassava and sheep markets by guaranteeing prices and purchase;
- Formulating policy support that can increase farmers' motivation and interest to grow cassava.

The cassava will be bought at a guaranteed price by PT BCM and then processed by the village processing plants into cassava chips. These plants provide employment opportunities for women in the village. Waste products from the cassava will be used to produce organic fertilizer and feed for sheep through a biomass-based fodder plant invested in by local entrepreneurs. Research from UNEJ has supported the development of the integrated farming production system and the technology for the MOCAF processing.

INNOVATION IS MORE THAN TECHNOLOGY

Organisational and institutional change in conjunction with technology transfer is key to innovation. This partnership between PT BCM, local business entrepreneurs, and UNEJ with the farmer cooperatives is driving this innovation. ARISA will support the partnership through technical research and capacity building on partnerships, market systems and innovation.

This project will result in increased cassava production, increased feed availability for sheep and the production of organic fertiliser, providing diversification in the opportunities for farmers to generate income.

This project commenced in January 2016. It aims to have a positive impact on the incomes of over 2,800 smallholder households in East Java over the next three years.



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ARISA is an Australian Government program, implemented in partnership with the Government of Indonesia and managed by CSIRO. ARISA aims to increase incomes of smallholder farmers in eastern Indonesia by piloting competitive agricultural innovation. ARISA tests ways to stimulate collaboration between the private sector and research institutes in applying new technologies to improve farmer competitiveness.