

Case Studies



Simple changes making a difference. The maize on the left is stored traditionally and is susceptible to maize weevil. The maize on the right is stored in drums.
(Photo: Nina FitzSimons)

Food for Thought

YMTM and DFAT
improving food security in
the East Nusa Tenggara
province through
market enterprise

by Nina FitzSimons

While the global community discuss how to increase access to food worldwide, Yayasan Mitra Tani Mandiri (YMTM), a local NGO on Timor Island in the East Nusa Tenggara (NTT) province, is already winning the fight against hunger. An innovative approach to improving food security using market development is showing real signs of success.

Timor is arid and mountainous and susceptible to drought, making food cultivation more difficult. This is exacerbated by poor farming techniques and lack of access by farmers to good seeds and other agricultural inputs. In 2009 a two-year drought hit Timor causing widespread failure of maize harvests. Maize is a staple in NTT and crop failure for subsistence farmers spells disaster.

Ana Oemanas from Subun Tualele village in TTU district knows the feeling of despair all too well. "I am a widow with eight children and five grandchildren," says Ana. "During the drought I only managed to get about 400 kg of maize a year from my one hectare of land. We need at least 600 kg to feed my family for the year. Things were very bad."

In 2012 YMTM partnered with the Australian Government, through the Department of Foreign Affairs and Trade (DFAT), to pilot a program to enhance food security by improving farming practices and commercialising the production of composite maize seed varieties. "Maize yields in Timor are very low at about 1.5 tonnes per hectare compared to the national average of 4 tonnes," explains YMTM Coordinator, Petrus Naibobe. "This is partly explained by the use of local seeds, which have low productivity, while the rest is caused by poor farming practices," he explains, "We established demonstration plots with open pollinated varieties of seeds and set up farmer field schools to teach farmers better cultivation and seed storage methods."

The demonstration plots were a great success. "I volunteered 0.5 hectares of my land for a demonstration plot," explains Ana. "I now know that I have to use macro-nutrients like potassium and phosphorous to get a good yield and we learned about correct crop spacing and pest management. In 2012 I got 1.3 tonnes from my plot. In 2013 this increased to 1.7 tonnes. I sold 400 kg for



Ana Oemanas tending her maize crop. She is now able to plant twice a year using the new seed variety. (Photo: Nina FitzSimons)

“We may not be rich in assets, but we are now rich in knowledge. It is this knowledge that is now feeding Timor's children.”

- Ana Oemanas, maize farmer

Rp 2 million (approximately \$200) and the rest I stored as food for my extended family and as seed for the 2014 planting season. This was the first time in my life I ever had a surplus.”

Correct storage has also improved food security. “In the past we stored our corn in the open or in thatched huts. The cobs get attacked by maize weevils (a beetle that attacks crops) and so they can’t be eaten,” says Ana, “Now we use plastic drums. We test the maize is dry enough by putting some seeds in an empty water bottle and leaving it in the sun. If there is condensation then we know the corn is not dried properly. It is a simple and effective method.” When the corn is placed in the drum it is topped with ash from the fire creating an airtight seal. “Since doing this for three years my maize has been pest free,” states Ana proudly.

With support from DFAT, YMTM has moved into commercial seed production and is sourcing seed from the farmer groups they support. “It is good for us,” says Ana, “The five farmer groups in this village are being taught the correct cultivation procedures from YMTM so we are more certain that our maize will pass certification from the Seed Control and Certification Body (BPSB),” explains Ana.

Ana is now cultivating her maize for seed production to sell to YMTM. “These new seeds are better than our local seeds because they can produce good maize

year after year. You can’t do that with local seed,” explains Ana. “And the new varieties are also sweeter. People in the market are now asking for it, and I get a better price for these seeds than I do from my normal maize.”

In 2014 Ana was one of three farmers in her village to pass the seed certification process, “I sold one tonne of seed to YMTM for Rp 5 million (approximately \$500),” she says proudly, “People in the village now come to me if they need money,” she says laughing, “That’s a big change from me asking for food from my neighbours a few years ago,” she says.

YMTM are now selling the improved seeds in small affordable packages to local agricultural kiosks and village shops. “My neighbour saw my demonstration plot and immediately asked me where he could get the seeds,” says Ana, “When people can see the results with their own eyes they are convinced to change their farming practices.”

According to YMTM figures, 21,000 farmers in Timor have adopted the new agricultural methods using the improved maize varieties. Within three short years maize productivity has increased by 35% with no one in the village going hungry. “We may not be rich in assets,” says Ana, “But we are now rich in knowledge. It is this knowledge that is now feeding Timor’s children,” says Ana with a satisfied smile.

AIP-Rural

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AIP-Rural is a suite of programs that improves smallholder farmers access new markets, better inputs, knowhow and technology, irrigation and small loans. Its goal is to achieve a sustainable 30% increase in the net incomes of 1,000,000 male and female smallholder farmers in eastern Indonesia by 2022. AIP-Rural operates in East Java, West Nusa Tenggara, East Nusa Tenggara, Papua and West Papua.

The program focuses on agricultural sectors that have strong growth potential and are the main source of income for a large number of smallholder farmers. All of this is done through co-investing in new business models with local, regional, national, and international market players to create business models that improves the agriculture sector’s competitiveness, especially smallholder farmers.