**ZIMBABWIAN CONTEXT**

Most smallholder farming in Zimbabwe focuses on producing staple foods for home consumption. The smallholder sector remains largely unprofitable and is characterized by low uptake of improved inputs and technologies, poor quality control, weak links to markets, high transport costs, and lack of access to finance and credit. To increase production, incomes, and employment opportunities, and to move from subsistence to commercial farming, Zimbabwe’s smallholder farmers need to address these issues effectively.

Another major factor affecting agricultural productivity is climate. Zimbabwe relies heavily on rain-fed agriculture, but has suffered from frequent droughts and high temperatures over the past 15 years, which, exacerbated by socio-economic instability, has led to a steady decline in agricultural productivity over the last decade.

Budai Mupeiwa, a 34-year-old woman from Mutema, Chipinge district in southern Manicaland, had been growing tomatoes and maize on her 0.5 hectare plot using traditional agricultural methods that led to poor harvests and limited income.

"Due to the harsh climate in Mutema, crop farming without irrigation was a huge challenge," she said.

To achieve commercial-level production, smallholders must adapt good agricultural practices that help mitigate the effects of climate change. Good agricultural practices, income, and climate change adaptation are inextricably linked. For farmers in Zimbabwe, this means that access to a reliable and efficient water supply year round is critical.

USAID’s Zimbabwe Agricultural Income and Employment Development (Zim-AIED) program is working with smallholders around the country to commercialize more than 35 irrigation schemes through the introduction of horticultural crops, which often provide the first opportunity for cash income as they are high in value, can be produced on a micro-basis, and have local, national, and export demand potential.

At the Mutema and Chibuwe-Musikavanhu irrigation schemes in Chipinge, Zim-AIED has invested in modern banana production projects in partnership with 441 farmers and the marketing company Matanuska. Also under contract with Matanuska are 950 sugar bean farmers who are growing seed for Pannar and Progene seed companies.
THE APPROACH

Zim-AIED provides training and technical assistance to improve food security and increase incomes for 150,000 rural farm households. Through its agricultural and marketing hubs, the program focuses on increasing productivity and market access for maize, paprika, banana, sugar bean, high-value horticulture, and livestock.

To invest in developing agribusinesses, Zim-AIED is establishing links with banks and microfinance institutions to provide credit and loans to farmers to purchase high-quality seeds, fertilizer, and other necessary inputs that help improve both yields and quality. Another key intervention is facilitating contracts between private sector buyers or suppliers and smallholders.

In May 2011, Zim-AIED and Matanuska partnered with 441 small-scale growers to develop a 100-hectare commercial banana production project at Mutema, Chibuwe, and Musikavanhu irrigation schemes. As a first step, Zim-AIED helped revitalize existing-but-damaged boreholes at Mutema to ensure these farmers had reliable access to water.

The farmers then received high-quality tissue-cultured banana plants from South Africa and established a nursery site with the capacity to grow batches of 75,000 plantlets at a time. The loans, which are repaid at harvesting, ranged from $1,700 to $3,000 for the seedlings, inputs, and irrigation installations.

The Mutema farmers installed a 60-hectare micro-jet irrigation system to maximize use of available water from the newly revitalized boreholes. Zim-AIED agronomists and extension agents provided hands-on training from nursery management to postharvest. Good agricultural practices adopted for bananas included mulching, irrigation scheduling, twine propping, fertilizer application, and desuckering.

At Chibuwe and Musikavanhu, Zim-AIED repaired a borehole pump and provided technical assistance in canal and pump repair and helped farmers set up irrigation operation and maintenance funds. There are 200 farmers on 40 hectares planting an average of 0.20 hectares at these two schemes.

Also critical to the project’s success is Matanuska’s investment in modern production technologies, including on-site handling facilities and packsheds, which significantly decrease the likelihood of postharvest damage. The farmers also have access to a tractor that delivers the product to packsheds and trucks that transport the product to the market.

Matanuska agreed to buy the harvested bananas at a market determined price, averaging between $0.25 to $0.31 per kilogram depending on season and quality. Elsewhere in the area, prices of bananas are less than $0.15 per kilogram. All of this is new income for these farmers, as they are growing bananas on previously underutilized land.
THE IMPACT

To date, 240 Mutema farmers have planted a total of 60 hectares of tissue-cultured bananas. With high-quality inputs and good agricultural practices, the farmers are producing up to 80 tons of bananas per hectare compared to the average national yield of 10 tons. Their net income in 2011 was $411 per household. The average net income from bananas on just 0.25 hectares is $2,825 per farmer in the first year. As a result, the household net income from all crops quickly improved to more than $4,000 per year.

Meanwhile, the 200 farmers at Chibuwe-Musikavanhu are averaging yields of 60 tons per hectare with net returns per plot of $3,600 in the first year and up to $4,000 in subsequent years. Their starting net income per household of around $500 per year rose to nearly $4,000 as a result of Zim-AIED intervention. Here the project’s intervention was not limited to reviving the scheme’s infrastructure and introducing a banana plantation, but also extended to the introduction of high-yielding sugar bean varieties, among other crops, and linking farmers to profitable and sustainable markets.

Harvesting of the second crop of bananas is now underway at both schemes, and yields and income continue to steadily rise. Product quality remains superior and Matanuska is able to sell all produce to high-value markets in the country’s major cities and towns. With improved quality, higher yields, and better prices, the farmers are seeing transformational increases in income.

For Budai Mupeiwia, involvement in the banana program has drastically changed her life. She planted her first crop in February 2012 and as of June 2014 she had harvested 12 tons of bananas worth $3,000. After paying down her input loan, Budai had enough money to pay school fees for her two children and buy food for her family. By early 2015, her loan will be fully paid off and all this new income will be entirely at her disposal.

She expects to earn $4,000 from the whole crop, which is more than 14 times her previous annual income. She is also diversifying into other high-value crops such as sugar bean to further augment her income.

“My income level has increased significantly as a result of using new technologies and access to markets, but most importantly from access to loans,” she said. “This new knowledge to look at farming as a business has changed my farming enterprise.”

And she is not alone. As of June 2014, the Chipinge banana farmers had cumulatively sold almost 6,000 tons of bananas worth more than $1.5 million.

The success of contract banana farming is extending to other crops. Sugar bean production in the area is also thriving thanks to Zim-AIED’s training in crop agronomy, irrigation management, and business skills. In 2012, the program provided training and technical assistance to more than 1,400 farmers to improve their sugar bean production systems. A partnership with multiple stakeholders brought in good quality seed and improved access to fertilizers and agrochemicals. The contract also provided valuable finance to the farmers who were previously unable to adequately fund sugar bean production on their own.

Using good agricultural practices, farmers more than doubled their average yields per hectare from 700 to 1,700 kilograms in just one season. Total sales of sugar beans exceeded 1,000 tons worth $1.1 million, a 162 percent increase over 2011 production. Pannar Seed Company, in conjunction with Matanuska, contracted 950 farmers to produce sugar bean seed and in 2013, the seed crop yielded more than 1,500 tons.

Ngwariranai Mlambo, a 63-year-old farmer at the Chibuwe-Musikavanhu scheme, was struggling to feed his family of 12 with proceeds from a small tomato plot. He began working with Zim-AIED in 2011. In 2012, he planted his first crop of sugar bean early following the good agricultural practices promoted by the program’s field trainers and agronomists.
He harvested 3,700 kilograms of sugar bean worth $4,440 in his first season. Zim-AIED also helped link Ngwariranai to Matanuska where he received a competitive price of $1.20 per kilogram compared to prices of $1.00 per kilogram in other parts of the country.

With the increased income, Ngwariranai paid school fees for his seven school-age children, purchased four cows, and built two modest houses for his family. He also bought fertilizer, maize seed, and other inputs to further improve his production.

“Sugar bean farming has really pulled me out of poverty,” he said.

The injection of cash into the local economy from banana and sugar bean farming is revitalizing these rural communities. Road improvement projects and new construction dot the landscape of these formerly sleepy villages. Job creation is also on the rise: Matanuska created 100 new jobs on the banana plantations and half of these employees are women.

THE FUTURE

The success of Zim-AIED’s work at the Mutema and Chibuwe-Musikavanhu irrigation schemes is sustainable, although the concerted effort and continued training of government extension workers, local agrodealers, and banks and microfinance institutions is critical to its long-term growth. More exchanges visits with peer farmers are still needed to enhance farmer-to-farmer participation and information sharing.

Smallholders have learned to look at farming as a business, which has led to increased employment opportunities, higher yields, more money, and better food security.

The partnership with Matanuska created a lasting and productive market built on trust and accountability. The farmers have delivered quality product to Matanuska and have always received payments on time.

Matanuska expects to increase the land area by at least another 20 hectares at Mutema in the coming years. Matanuska and farmers have an eight-year contract, which will continue uninterrupted after Zim-AIED ends.

In a bid to ensure the sustainability of the banana project, an arrangement has been successfully finalized with local bank CABS, which has taken over the financing of the project through granting loans to farmers for all banana inputs and other farming requirements. All 441 banana farmers contracted by Matanuska have opened accounts with the bank and the facility is now running.

The Mutema and Chibuwe-Musikavanhu projects are a resounding success. Zim-AIED helped create employment in the project sites, injected sustainable income into the lifeblood of the local rural economy, and increased household incomes. Through partnerships with commercial companies, the program established a sustainable and viable market for the local farmers.