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ZIMBABWE AGRICULTURAL INCOME AND EMPLOYMENT DEVELOPMENT (Zim-AIED)

QUARTERLY REPORT #2 – FY2015

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ACRONYMS

AI	Artificial Insemination
BA	Better Agriculture
BDS	Business Development Services
CABS	Central African Building Society
CESVI	Cooperazione e Sviluppo (Cooperation and Development, Italian NGO)
CLUSA	Cooperative League of the United States of America
COSV	Coordination Committee for Voluntary Service
CSV	Creating Shared Value
EMMP	Environmental Mitigation and Monitoring Plan
EU	European Union
FTE	Full-Time Equivalent
FTF	Feed the Future
GM	Gross Margin
GAPs	Good Agricultural Practices
IMC	Irrigation Management Committee
IPM	Integrated Pest Management
IRD	International Relief and Development
MAMID	Ministry of Agriculture, Mechanization and Irrigation Development
MCC	Milk Collection Center
MFIs	Microfinance Institutions
MSME	Micro, Small, and Medium Enterprise
PERSUAP	Pesticide Evaluation Report and Safe Use Action Plan
PFA	Partner Fund Agreement
PMP	Performance Management Plan
PAR	Portfolio at Risk
PRIZE	Promoting Recovery in Zimbabwe Project
RBZ	Reserve Bank of Zimbabwe
SAT	Sustainable Agriculture Technology
SAZ	Standards Association of Zimbabwe
TC	Tissue Cultured
ZESA	Zimbabwe Electricity Supply Authority
Zim-AIED	Zimbabwe Agricultural Income and Employment Development
ZINWA	Zimbabwe National Water Authority

FOREWORD

The Zimbabwe Agricultural Income and Employment Development (Zim-AIED) program began in October 2010 and runs through September 2015. Zim-AIED is providing technical assistance to improve household food security and increase incomes and employment of rural households. At inception in 2010, Zim-AIED activities started in all agro-ecological regions of Zimbabwe and became more focused in 2013 on specific low-income and food-insecure areas throughout Natural Regions 3, 4 and 5 where farmers have the potential to move from subsistence to small-scale commercial agriculture. The program is generating new income streams from employment created in the wider agricultural sector and contributing to improved food security for all beneficiary households. Beneficiaries are earning new income from both surplus production of food crops grown for home consumption and from production and marketing of high-value crops and livestock.

Commercialization of small-scale farmers is being achieved by:

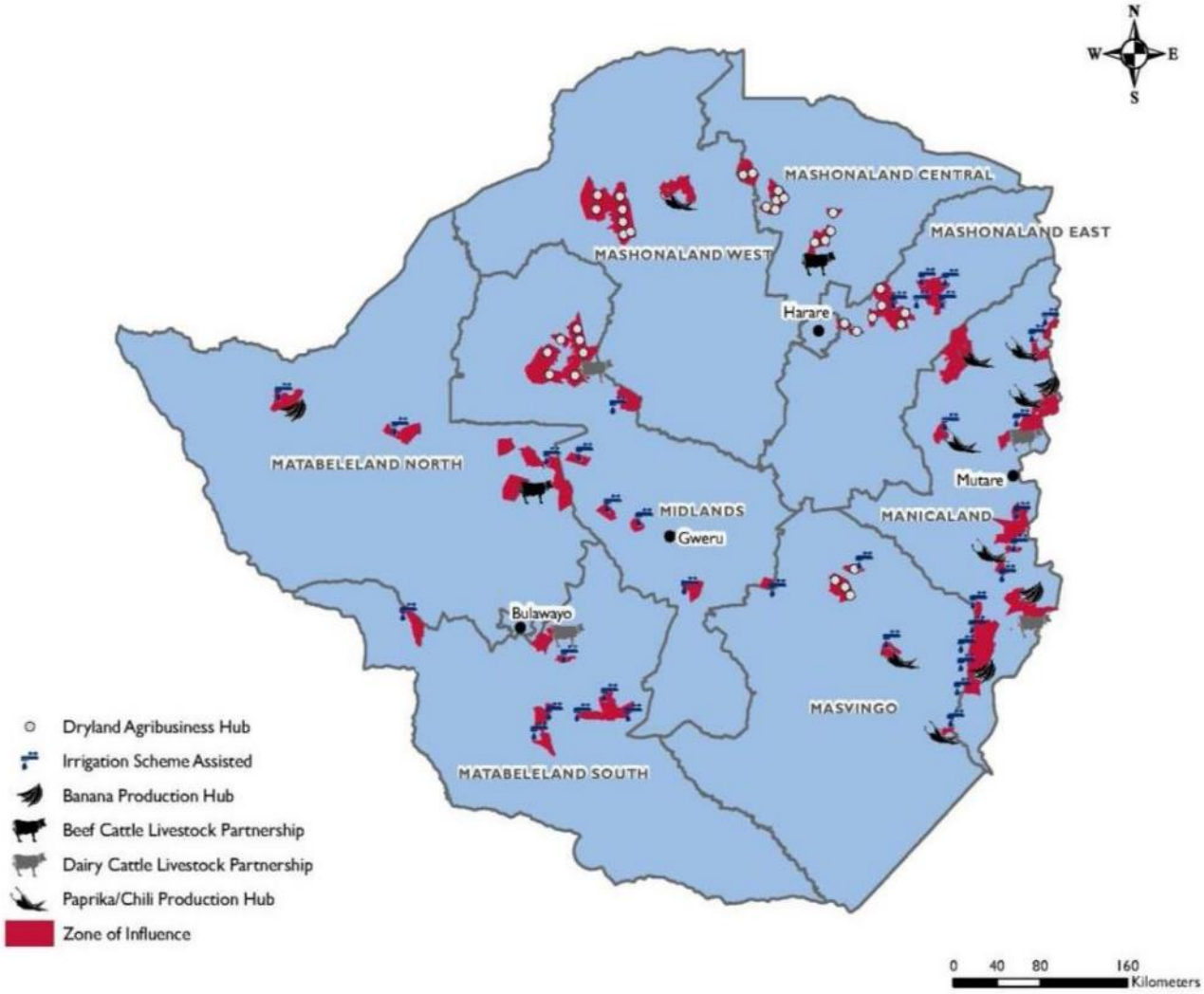
- Linking producers to local, national, regional, and international buyers.
- Providing access to credit.
- Raising efficiencies in production systems for an improved combination of livestock, cash, and food crops.
- Training farmers to adopt good agricultural and business practices.

The program is building demand for a range of crops and livestock products by linking farmers with local, regional, and international buyers and training growers on productivity, quality, continuity, and cost-competitiveness. It also provides specialized technical support for the production of food crops to sustainably increase food availability in areas and communities most vulnerable to food insecurity.

Fintrac Inc., a US-based consulting company, is implementing Zim-AIED in cooperation with four subcontractors: CARE; the Cooperative League of the USA (CLUSA); International Relief and Development (IRD); and Sustainable Agricultural Technology (SAT). Other local nongovernmental organizations and commercial companies work with the program as development partners, in some cases co-funding through a $5 million grant facility. This facility is used to leverage technical support for farmers through conventional grants, and also to fund purchases of essential inputs and new technologies on a cost-recovery basis. Zim-AIED also includes a $2.85 million revolving loan fund – AgriTrade – managed by three local banks that provide matching funds and loans on competitive commercial terms.

In summary, Zim-AIED is a market-driven program that works closely with small, medium, and large-scale private buyers to raise demand and increase competition for smallholder-grown crops and livestock products. The program directly contributes to food availability and access by concurrently increasing production of food crops and raising incomes of rural households in selected areas.

Figure 1: Zim-AIED Geographic Coverage

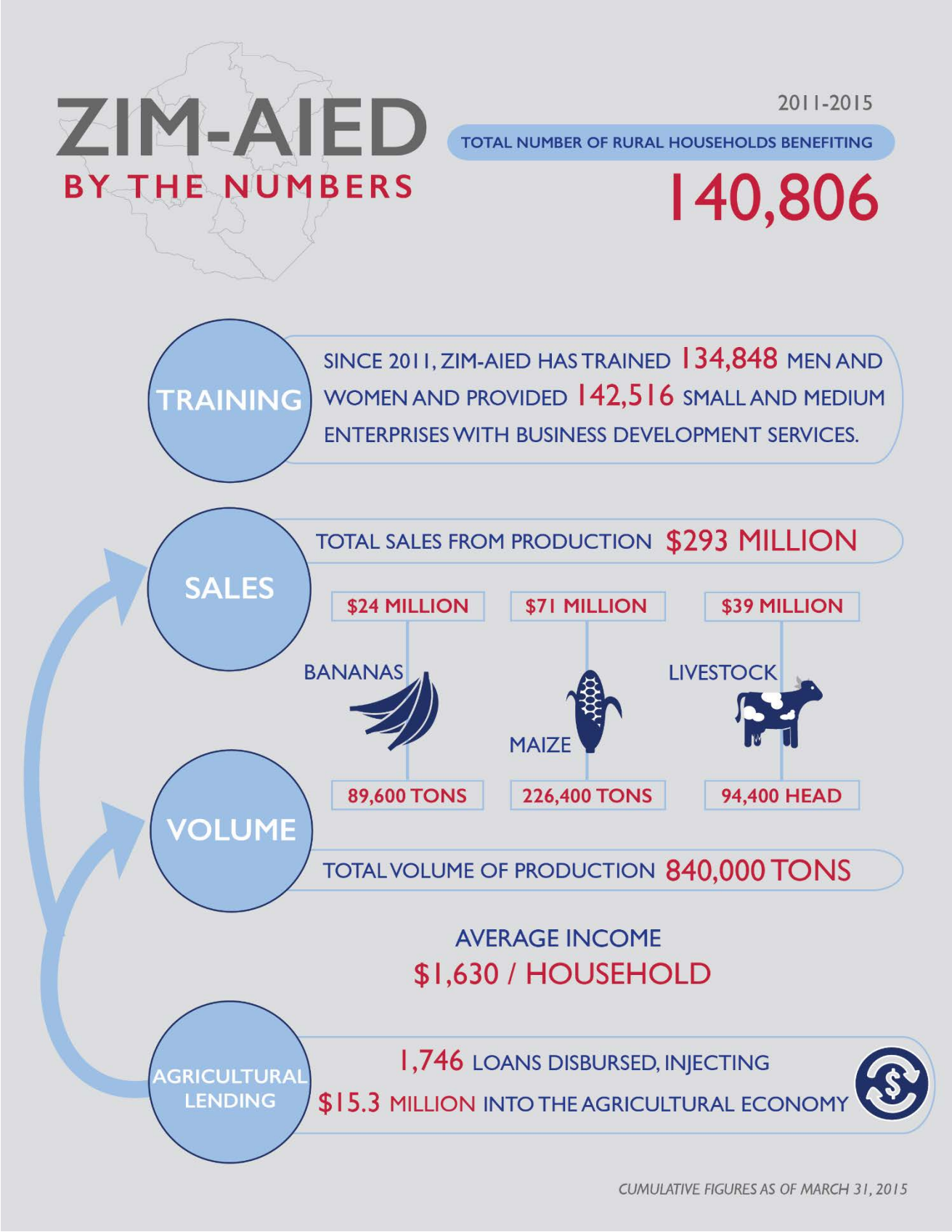


1. EXECUTIVE SUMMARY

This is the second quarterly report of FY2015 of the Zimbabwe Agricultural Income and Employment Development (Zim-AIED) program. Zim-AIED is providing technical assistance to improve food security and increase household incomes of 125,000 rural households throughout Zimbabwe. Significant achievements for the quarter are summarized below:

- All Zim-AIED activities were directed at increasing the number of companies purchasing products from smallholders through **market linkages**; increasing the availability and disbursement of working capital to smallholders farmers through partner financial institutions; increasing **production and sales** of maize and other food crops; raising **smallholder earnings** from cash crops; and actively supporting **new agribusiness investors** and **direct lending of loans to smallholder farmers** in rural areas.
- A total of **1,064 rural households received various types of technical assistance** for the first time this quarter to raise productivity, access new markets, obtain credit, and increase incomes and employment. Fifty-three percent of program beneficiaries were women. The **total number of beneficiary households**, including those who joined Zim-AIED during previous years, is **140,806**.
- The **total recorded farm-gate sales of agricultural products by program beneficiaries were valued at $15 million** for the first two quarters of FY2015. The program was successful in linking smallholder farmers to profitable output markets.
- The **average estimated net income per household from production of agricultural products by program beneficiaries is estimated at $1,630 per household**. Major contributors were maize, paprika, tomatoes and livestock.
- A total of **22 new full time equivalent positions (FTEs) were created during the quarter while 1,292 FTEs positions created in previous years continue to be sustained.**
- A total of **$2.16 million has now been recovered in USAID loan capital extended** to CABS and Micro King under the AgriTrade facility. The $771,516 balance with Trust Bank has remained inaccessible since the revocation of the bank's license in December 2013.
- **289 loans valued at $81,583 were disbursed to Zim-AIED supported farmers during the quarter** by non-USAID funded AgriTrade partners. This represented a decrease in both number and value of loans by 38.9 and 42.4 percent, respectively, compared to the previous quarter**. Cumulatively, through March 2015, a total of 1,892 loans valued at $500,934 have been disbursed directly to smallholder farmers by non-USAID funded AgriTrade partners.**
- **7,070 farmers on 4,510 hectares in 27 irrigation schemes** enhanced their ability to function as commercial agribusiness hubs thanks to strengthened linkages facilitated by Zim-AIED with parastatals, input suppliers, marketing organizations, and microfinance institutions.
- **Farmers paid back $540,653 in recoverable grants during the quarter, reducing the net disbursement to $3.4 million.** These grants support a wide range of productivity-enhancing, postharvest, and marketing interventions directed at smallholders.
- The program **implemented a gender mainstreaming policy** whereby men, women, and youth were deliberately considered in the planning of all program interventions. As a result, 50 percent of all beneficiaries that have received program assistance since inception are women.

Figure 2: Zim-AIED by the Numbers



2. PROGRAM OBJECTIVES

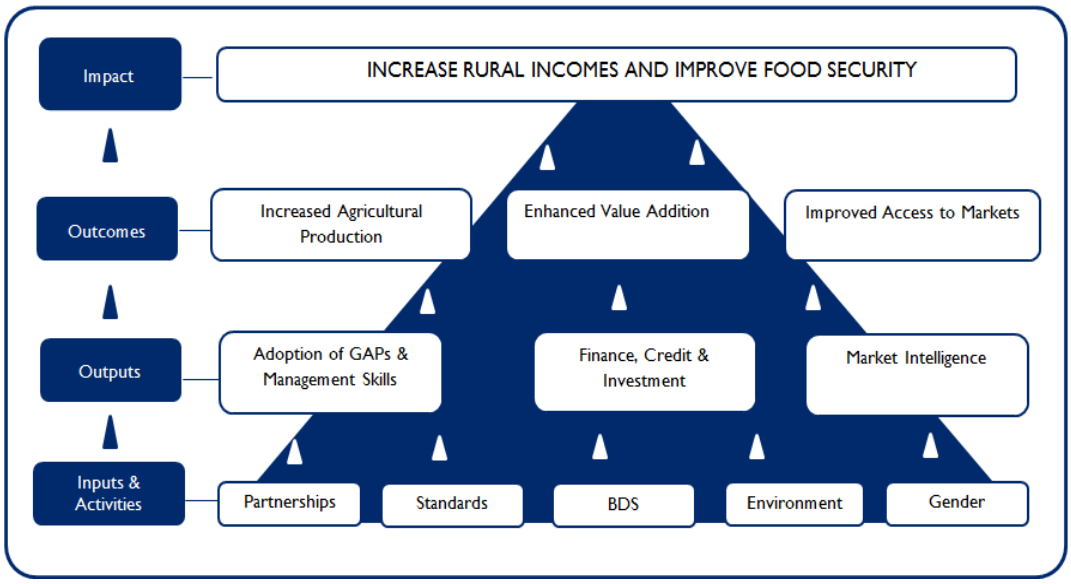
The primary objective of the Zim-AIED program is to improve food security for 150,000 Zimbabwean small-scale farmers (125,000 households) located in communal and old resettlement areas by increasing household incomes from agriculture and increasing food production among vulnerable but commercially viable farmers. This goal is being reached through the achievement of three intermediate results:

I. *Expanded Market Access*: Measured through change in volume and value of sales of targeted commodities and integration of farmers into out grower and contract farming schemes for selected cash crops.
II. *Increased Agricultural Production*: Measured through changes in total production and productivity; changes in product mix to include high-value crops; and changes in area under production at the household and national level. The emphasis is on commercially viable production of both staple food and high-value crops.
III. *Enhanced Value Addition*: Measured through change in farm sales of semi-processed products and crops for processing, new employment generation in value-added products, and investment in processing facilities.

The focus of Zim-AIED is on profitable livestock, staple food, and high-value crop production; new sales and income generation; and employment creation. It targets low income households in rural areas. Interventions are aimed at improving the livelihoods of "vulnerable-but-viable" farmers through sustainable commercial initiatives. Already, many rural families in partnership with Zim-AIED are moving from subsistence to commercial farming and increasing their asset base through investment in high-value crops and livestock.

Figure 3 shows the results framework for Zim-AIED implementation. The program focuses on expanding market access, increasing the availability of credit and finance across the value chain, raising production, and adding value to crops. To maximize outreach and ensure sustainability, these interventions are carried out via partnerships with commercial companies with additional support from NGOs, particularly in vulnerable areas.

Figure 3: Zim-AIED Results Framework Summary



The program is developing commercial partnerships to create a national network of agribusinesses that can strengthen farmers' access to markets with fair prices; provide working capital and

finance at realistic rates; supply inputs efficiently; and provide extension and training to growers as an embedded cost. The partnerships focus on establishing service provision options at market rates.

In its final year, Zim-AIED is intensifying activities to ensure institutions and systems are in place before the program ends. Specifically, activities are being streamlined to focus on:

- **Increasing farmers' access to credit** – increasing the number, volume and value of credit to smallholder farmers.
- Finalizing efforts to **build up the capacities of local businesses, producer groups and other community institutions.**
- **Increasing and intensifying market linkages** – bringing more market players in to engage crop and livestock farmers in both dryland and irrigated agribusiness hubs (input suppliers, output buyers and credit providers).
- **Streamlining training and technical assistance into a demand-driven process** that works to address site-specific challenges.
- **Putting systems and processes in place that allow farmers to continue forward** – handing over technical assistance and training responsibilities to respective private sector partners and other stakeholders.
- **Continuing to identify opportunities that increase Zim-AIED's footprint** in its areas of operation. No new geographic areas are expected but consideration will be given to any new opportunities that could provide high returns with minimal resources.

3. ACTIVITIES

Program activities included improving access to credit for both crop and livestock farmers and traders, and providing training and technical assistance on productivity and marketing. The sections below describe Zim-AIED activities in six categories of results measured against 14 Feed the Future, 10 custom and five gender specific indicators.

- **Beneficiaries:** number, gender balance, geographical spread, and types of support received.
- **Sales:** amount of new money in the pockets of Zim-AIED beneficiaries, measured by sales of all agricultural products.
- **Gross margin and net income:** profitability and net earnings from agricultural activities.
- **Finance and credit**: AgriTrade revolving fund and micro-credit support for rural traders and farmers.
- **Business development**: recordkeeping, crop budgets, marketing and contract production.
- **Productivity:** increased production and net returns from crop and livestock products.

3.1 BENEFICIARIES

FTF 4.5.2-13 Number of rural households benefiting from USG Assistance

In FY2015, Zim-AIED aims to work with 3,500 new households while continuing to service at least 5,000 households who benefited from the program in previous years. During the quarter under review, the program reached 1,064 new households of which 53 percent were women. Since the start of FY2015, 3,919 new households have received technical assistance from the program (Table 3.1.1), already 12 percent above the yearly target.

Table 3.1.1: Geographical location of Zim-AIED beneficiaries FY2011 to Q2, FY2015

Province	FY2011	FY2012	FY2013	FY2014	FY2015[1]			Cumulative to date		
					M	F	Total	M	F	Total
Manicaland	8,855	11,070	6,215	3,875	488	610	1,098	15,268	15,845	31,113
Mashonaland Central	3,546	5,415	9,048	1,255	36	12	48	10,499	8,813	19,312
Mashonaland East	2,439	8,619	12,041	2,216	442	183	625	13,019	12,921	25,940
Mashonaland West	5,920	7,405	6,245	484	66	64	130	11,140	9,044	20,184
Masvingo	22	9,578	4,479	826	36	66	102	5,694	9,313	15,007
Matabeleland*	815	3,688	2,703	1,792	119	134	253	4,118	5,133	9,251
Midlands	441	5,018	9,261	3,616	835	828	1,663	10,919	9,080	19,999
Total	**22,038**	**50,793**	**49,992**	**14,064**	**2,022**	**1,897**	**3,919**	**70,657**	**70,149**	**140,806**

**Includes Matabeleland North and South Source: Zim-AIED*

Midlands and Manicaland provinces have contributed the highest number of new beneficiaries due to the intensification of the livestock activities that include value addition through pen fattening; breeding through artificial insemination (AI) services; training livestock producers on good animal husbandry and business practices; and facilitating linkage to markets and credit. A total of 140,806 households have benefitted from program activities since inception in October 2010 (Table 3.1.2). This is 12.6 percent or 15,806 households above the life-of-program (LOP) target of 125,000 households.[2] Fifty percent of beneficiaries are women.

Table 3.1.2: Rural households assisted by Zim-AIED through Q2, FY2015

Target	Achieved to date	Variance	% Variance
125,000	140,806	15,806	12.64

Source: Zim-AIED

These households received at least one or more technical assistance visit or training intervention in agronomy, natural resource management, livestock husbandry, business skills, new technologies, accessing credit from micro, small, and medium enterprises (MSMEs), and creation of new linkages with input and output markets.[3]

[1] FY2015 new beneficiaries are only for the period from October 2014 to March 2015 (Q1 and Q2, FY2015)
[2] Reduced target from 150 000 to 125 000 based on reduced funding
[3] MSMEs include smallholder farmers, agro dealers, private commercial partners and irrigation schemes

Table 3.1.3: Number of individuals participating in Zim -AIED activities, Q2 FY2015

Activity	FY2011	FY2012	FY2013	FY2014	Q2, FY2015			Cumulative to date		
					M	F	Total	M	F	Total
Training and technical assistance	11,896	58,055	54,851	28,832	1,728	2,002	3,730	62,739	72,109	134,848
Traders receiving loans	305	408	321	55	-	-	-	585	505	1,090
Farmers receiving loans (AgriTrade)	-	-	79	61	-	-	-	90	50	140
Farmers receiving loans (other)	-	-	11	1,034	114	86	200	831	819	1,650
Farmers linked to markets	-	11,194	18,529	2,252	-	-	-	20,383	10,753	31,136
Contracts issued to farmers	-	10,350	6,228	3,576	-	-	-	11,171	10,732	21,903

During the quarter under review, 3,730 individuals, of whom 54 percent were women, received training and technical assistance from program and partner staff. The focus continued on increasing direct lending to smallholder farmers, especially through microfinance institutions (MFIs) such as Virl Financial Services, Untu Financial Services, Inclusive, and Quest Financial Services since access to credit is essential for sustainable commercialization of farmers. Two hundred (69 percent) of the 289 farmers who received loans were first time borrowers. There were no loans disbursed to traders and farmers under the AgriTrade facility this quarter due to liquidity challenges, nor were there new contracts issued to farmers.[4]

3.2 INCREMENTAL SALES

FTF 4.5.2-23 Value of incremental sales attributed to FTF implementation:

A total of $15 million in sales were recorded during the quarter by beneficiary smallholder farmers that have formal and informal marketing arrangements with commercial partners (Table 3.2.1). These sales are only a partial representation of the actual total sales by all Zim-AIED beneficiaries due to the fact that very few value chains that were assessed this quarter were able to provide data. Complete sales figures will be validated in the third quarter during the second round of the gross margin survey.

Table 3.2.1: Value of reported sales by Zim-AIED beneficiaries – FY2012 to Q2, FY2015

Product	Fiscal Year[5]	Volume of Sales (kg)	Value of Sales ($)
Maize	2015	9,154,510	2,197,082
	2014	109,525,000	35,964,160
	2013	80,242,000	25,086,222
	2012	27,433,000	8,230,000
Sugar Beans	2015	1,467,313	1,607,842
	2014	10,243,000	11,301,578
	2013	2,425,000	2,934,162
Bananas	2015	6,037,564	1,630,142
	2014	47,979,000	13,072,020
	2013	19,742,000	5,526,757
	2012	15,895,000	3,815,000
Paprika	2015	49,418	80,848
	2014	970,000	1,812,085
	2013	737,000	910,855

[4] However, Matanuska renegotiated a new contract with the 441 banana farmers at Mutema and Musikavanhu irrigation schemes in Chipinge district, Manicaland during the quarter.

[5] Interim figures based on recorded actual sales by Zim-AIED field technicians for FY2015 (October2014 to March 2015). Survey data will be used to determine final sales for FY2015.

Table 3.2.1: Value of reported sales by Zim-AIED beneficiaries – FY2012 to Q2, FY2015

Product	Fiscal Year[5]	Volume of Sales (kg)	Value of Sales ($)
	2012	987,000	1,272,700
Butternuts	2015	612,958	165,499
	2014	495,000	131,924
	2013	547,000	257,090
Cabbages	2015	397,409	67,559
	2014	454,000	156,529
	2013	1,786	339,057
Fine Beans	2015	9,304	5,582
	2014	49,000	30,733
	2013	10,000	5,415
Peppers	2015	TBD	TBD
	2014	30,000	11,520
	2013	34,000	17,000
Tomatoes	2015	3,152,087	1,639,085
	2014	3,573,000	1,636,627
	2013	4,728,880	2,670,153
Beef Cattle	2015	16,803	6,562,097
	2014	37,539	16,631,193
	2013	45,336	20,084,017
	2012	24,475	9,790,000
Dairy Cattle (Milk)	2015	972,138	661,740
Sweet Potatoes	2015	TBD	TBD
	2014	18,509	6,046,646
	2013	3,040	1,029,013
Soya Beans	2015	45,912	44,535
	2014	3,521	1,637,306
	2013	132,000	65,364
Cow Peas	2015	43,679	23,150
	2014	194,000	249,259
	2013	499,000	93,516
ABE Chilies	2015	50,866	35,606
	2014	363,000	252,570
	2013	72,330	59,930
Potatoes	2015	TBD	TBD
	2014	239,000	36,882
	2013	72,000	603,000
Groundnuts	2015	116,096	124,223
	2014	3,490	2,398,976
	2013	2,061	1,013,842
Tabasco Chilies	2015	320,380	160,190
	2014	647,000	335,954
	2013	257,000	151,630

3.3 GROSS MARGIN AND NET INCOME

FTF 4.5-16 Gross margin in dollars per hectare for three selected products

The first round of the gross margin survey was conducted this quarter. Table 3.3.1 highlights the gross margin data points and calculations for maize, paprika and banana.[6] Respondents were randomly selected from Zim-AIED's database of unique beneficiaries at the end of first quarter FY2015. Randomization was applied in terms of geographic location, year they started benefiting from Zim-AIED, sex, household type, age, birth year, and landholding size.

Table 3.3.1: Estimated gross margins for maize, banana and paprika among Zim-AIED farmers

Crop	Year	Number of farmers	Area (Ha)	Yield (tons/Ha)	Price ($/ton)	Value of Production ($/Ha)	Cost of Production ($/Ha)	Gross Margin ($/Ha)
Maize	FY2015	107,135	95,527	2.00	240	480	315	165
	FY2014	95,605	105,325	2.28	328	748	315	433
	FY2013	86,818	68,057	1.62	312	506	293	213
	FY2012	62,309	51,760	1.47	301	442	217	225
Paprika	FY2015	1,652	535	1.38	1,638	2,260	716	1,544
	FY2014	1,548	680	1.66	1,870	3,104	719	2,385
	FY2013	2,650	689	1.07	1,235	1,321	554	767
	FY2012	2,652	700	1.41	1,290	1,819	584	1,235
Banana	FY2015	3,893	1,057	6.22	270	1,679	423	1,256
	FY2014	3,893	1,975	27.48	272	7,475	1,417	6,058
	FY2013	3,440	1,872	10.55	280	2,954	1,120	1,834
	FY2012	359	1,080	6.11	240	1,466	990	476

Estimated gross margin for maize of $165 per hectare is lower than FY2014 and the FY2015 target of $434 per hectare because of the depressed farm-gate price resulting from the liquidity challenges facing buyers and the revoking of SI 122 in 2014.[7] Price dropped from $390 to the current $240 per ton. In addition yields under dryland production, which forms the bulk of maize production, are expected to be lower than FY2014 due to the late start of the season, weed pressure, leaching of nutrients, and the prolonged dry spell from mid-January to late March. Production costs remain at the FY2014 level of $315 per hectare as only partial data is available from the first survey.

Paprika gross margin is estimated at $1,544 per hectare compared to a target of $2,385 per hectare. Yields are expected to be lower on the dryland crop due to weed pressure, nutrient leaching, and prolonged drought. Waterlogging on some fields under irrigation has resulted in poor crop stands. In addition, a lower price is anticipated as buyers face liquidity challenges.

Banana is a perennial crop, harvested multiple times in a year and current results are based on performance of the data points observed in Q1 and Q2 of FY2015. These quarters are the lowest production periods for banana. Gross margin and yields for banana are expected to increase in the remaining two quarters while production costs will marginally change with harvesting operations. Thus, gross margin for banana is expected to exceed what was achieved last year and match the FY2015 target of $7,000 per hectare. Current gross margin estimates for other value chains monitored by Zim-AIED are detailed in Annex 2 and the FTFMS report.

Due to budget limitations, Zim-AIED is scheduled to conclude in July 2015. This early closure will constrain the program's ability to collect complete data sets, particularly for sales, prices, and

[6] The gross margin data points i.e. area under production; volume of production; price per ton; and cost of production are partial as they are based on survey data collected in February and March 2015 hence the resultant gross margins are estimates.

[7] Through SI 38 of 2015 government through the Ministry of Agriculture, Mechanisation and Irrigation Development (MAMID) repealed SI 122 of 2014. The repealed regulations compelled buyers to procure grain at a price fixed by the minister of MAMID through the Agricultural Marketing Authority (AMA) at the beginning of each buying season in April for maize, pearl millet, sorghum, wheat and finger millet. The price fixed for 2014 buying season was $390 per ton for AB maize. This price was higher than import parity, regional prices in Zambia ($220) and RSA ($210). The revocation means grain millers and buyers are now free to buy maize and other grains at market prices well below the $390 per ton.

marketing costs that cannot be collected in full until August/September. Annual results will therefore be extrapolated from data collected in the May and June gross margin survey. Annex 9 details the correction factors that will be applied to the various gross margin data points to extrapolate the May/June data to annual results. The correction factors have been obtained through analysis of data from past years. The verified correction factor(s) will be applied only to information from farmers with partial production data after the May/June survey to establish the actual gross margins.

3.4 FINANCE AND CREDIT

Zim-AIED provides funds and technical assistance for a $2.5 million revolving credit facility, AgriTrade. This intervention contributes towards Zim-AIED's achievements against the four Feed the Future indicators listed below:

- *FTF 4.5.2-11 No. of …private enterprises (for profit)… receiving USG assistance.*
- *FTF 4.5.2-29 Value of agricultural and rural loans*
- *FTF 4.5.2-38 Value of new private sector investment in the agriculture sector….*
- *FTF 4.5.2-43 No. of firms engaged in agriculture …operating more profitably…*

There were no new loan disbursements under the AgriTrade facility during the quarter (Table 3.4.1). Cumulative loan disbursements from the facility remained unchanged at $15.33 million from 1,746 loans (Table 3.4.2).

Table 3.4.1: AgriTrade Loan Portfolio

	CABS		TRUST		MK		Current Active Portfolio	
	#	Value	#	Value	#	Value	#	Value
New Loans Disbursed	0	$0	0	$0	0	$0	0	$0
Portfolio Commitments	0	$0	28	$613,819	0	$0	28	$613,819

On January 15, 2015, MicroKing made its final repayment ($39,500) of the USAID loan capital extended under AgriTrade (Table 3.4.2). Since January 2015, CABS and MicroKing have been financing agricultural loans previously under AgriTrade through their internal portfolios. Trust Bank remains closed since losing its banking license in December 2013; a total of $771,516 in USAID loan capital remains outstanding pending the High Court's ruling on the bank's liquidation (Table 3.4.2).

Table 3.4.2: AgriTrade Portfolio: Cumulative figures as of Q2, FY2015

	CABS	TRUST	MK	Cumulative Disbursements
Value of Loans Disbursed to Date	$3,634,500	$3,854,142	$7,844,506	**$15,333,148**
Number of Loans Disbursed to Date	20	85	1,641	**1,746**
Average Loan Size	$181,725	$45,343	$4,780	**$8,782**
USAID/Zim-AIED Loan Capital advanced	$750,000	$1,350,000	$1,679,500	**$3,779,500**
USAID/Zim-AIED Loan Capital outstanding balance	$0	$771,516	$0	**$771,516**
Value of Loans Disbursed to Date	$3,634,500	$3,854,142	$7,844,506	**$15,333,148**

By the end of the second quarter FY2015, a total of $3,779,500 of USAID capital injected into the Zimbabwean agricultural economy through the three partner banks has generated $15.3 million in new loans to finance various activities along different value chains pertaining to smallholder farmers since the launch of the AgriTrade in May 2011.

MicroKing did not disburse new loans during the quarter. This was mainly attributed to the liquidity challenges faced by its parent company AfrAsia Bank since the second half of 2014. On February 24,

2015, the Reserve Bank of Zimbabwe revoked the banking license of AfrAsia bank and as a result, MicroKing had to temporarily close its operations.[8]

CABS stopped disbursing new loans under the AgriTrade facility in early FY2015 after it fully repaid the USAID loan capital on September 30, 2014. The bank is now disbursing agricultural loans under its SMEs department. Zim-AIED linked a total of 441 smallholder banana farmers at Chibuwe and Mutema irrigation schemes in Manicaland with CABS to access working capital and capital investment loans totaling $504,000, and the program continues to provide training and technical assistance on banana production to these farmers.

Trust Bank remained inactive since losing its banking license on December 6, 2013. The USAID loan capital amounting to $771,516 remains outstanding with the bank. The recovery of these funds is pending the ruling by the High Court on the liquidation of the bank.

Non-USAID funded partners

Zim-AIED continued its drive to increase smallholder farmers' access to credit, working mainly with non-USAID funded financial partners as part of its strategy to prepare farmers for a post Zim-AIED world. During the quarter, a total of 289 new loans valued at $81,583 were disbursed by non-USAID funded AgriTrade partners. Disbursements decreased by 38.9 percent in the number of loans and 42.4 percent in the value of loans compared to the last quarter. The reduced lending in the quarter was partially due to the decrease in demand for input loans on irrigation schemes as farmers concentrated more on dryland farming, which they generally prefer to self-finance. Cumulatively, 1,892 loans valued at $500,934 have been disbursed by non-USAID funded AgriTrade partners as of March 31, 2015 (Table 3.4.3 and Annex 8) to smallholder farmers working with Zim-AIED.

Table 3.4.3: Non-USAID funded partners: Direct lending to smallholder farmers through Q2, FY2015

Disbursements	Inclusive		Untu		Agribank		Quest		Virl		Total	
	#	Value	#	Value	#	Value	#	Value	#	Value	#	Value
Cumulative *since August 2013*	14	$7,000	139	$24,045	432	$129,514	428	$82,294	879	$258,082	**1,892**	**$500,934**
Q2, FY2015	14	$7,000	34	$7,532	0	$0	39	$4,750	202	$62,301	**289**	**$81,583**

The quarter witnessed the process of crowding in of MFI's at some of Zim-AIED assisted irrigation schemes. At Musikavanhu irrigation scheme in Manicaland, Virl disbursed 62 sugar bean loans worth $14,016 while Agribank was also processing 45 sugar bean loans worth $8,640 to other farmers for disbursement in April 2015. At Chitora 1, 2 and 3 in Mashonaland East, Virl disbursed 33 loans worth $10,148 for horticulture production while MicroKing's disbursement of $11,000 to 22 horticulture farmers at the same scheme was delayed by its temporary closure in February 2015[9]

Quest Financial Services distributed 39 loans worth $4,750 this quarter. These loans were disbursed to smallholder farmers on three irrigation schemes, namely Tshongokwe (15 loans worth $1,888) for sugar bean and horticultural crop production, Makwe (7 loans worth $1,080) for horticultural crop production, and Silalabuhwa (17 loans valued at $1,782) for sugar bean production. All loans were charged a 3 percent monthly interest and 5 percent establishment fee. Loan tenor ranged between 5-6 months depending on the specific crop produced.

Virl Microfinance disbursed 202 loans valued at $62,301 during the quarter under review. Twenty-seven loans worth $4,495 for paprika production and 62 loans worth $14,016 for sugar bean production were disbursed to farmers on the Musikavanhu irrigation scheme in Manicaland.

[8] In early March, 2015, MicroKing reopened for business as a stand-alone entity and outside the AfrAsia group, after the Government of Zimbabwe intervened mainly to protect DFID's equity of $800k in MicroKing. MicroKing is currently operating under the strict supervision of the RBZ.

[9] See note 9

Farmers at three irrigation schemes in Mashonaland East received 64 input loans for horticultural crop production worth $27,044. The disbursements were as follows: Nyaitenga irrigation scheme (21 loans worth $11,000), Chipo irrigation scheme (10 loans worth $5,896), and Chitora 1, 2 and 3 schemes (33 loans worth $10,148). In Honde Valley, 49 loans worth $16,746 for working capital and capital investment were disbursed for banana production. All loans were charged 4 percent monthly interest, 2 percent life insurance, and 5 percent establishment fee. Loan tenor ranged between six and ten months depending on the specific crop produced.

Untu Financial Services disbursed 34 loans valued at $7,532 during this quarter. The input loans were disbursed at Ngondoma irrigation scheme in Kwekwe, Midlands for sugar bean, tomato, green mealies and cabbage production. Loan size per farmer ranged between $91 and $625, depending on the enterprise and number of times the farmer has borrowed previously. The loans have a tenor of five months with a two percent monthly interest rate. No other charges were levied on the loans.

Agribank. There were no new loan disbursements by Agribank during the quarter. Agribank has been working on loan disbursements for sugar bean production at Musikavanhu irrigation scheme since February 2015. A total of 45 loans worth $8,640 are currently being processed and are expected to be disbursed in April 2015.

Inclusive Financial Services extended its first loans to Zim-AIED beneficiaries during the current quarter. Fourteen loans of $500 each were issued to smallholder livestock farmers at Zamalokhu feedlot, Lupane district in Matabeleland North. The loans were for purchasing cattle and feedstock for pen fattening. Each loan had a tenor of 60 days with a monthly interest of six percent and a four percent establishment fee. Two women and 12 male livestock farmers accessed the loans.

AgriTrade Portfolio at Risk (PAR)

The AgriTrade Portfolio at Risk (PAR) decreased from 10.4 percent recorded in the previous quarter to 7.8 percent by the end of March 2015 (Table 3.4.3). The 2.6 percent decrease was a result of the removal of MicroKing's amount at risk ($101,756) from the AgriTrade portfolio.

Table 3.4.3: AgriTrade Portfolio at Risk (PAR) by March 31, 2015

	CABS	TRUST	MK	By March 31, 2015
Loans Past Due: 30 to 180 days	$0	$48,034	$0	**$48,034**
Number of Loans Past Due	0	6	0	**6**
PAR	0%	7.8%	0%	**7.8%**

Commodities Purchased

There were no new commodity purchases recorded under the AgriTrade portfolio this quarter as MicroKing suspended its monitoring of AgriTrade borrowers since the start of FY2015 and CABS no longer has an AgriTrade portfolio. Cumulatively, recorded commodity purchases under AgriTrade since program inception remained at $29.65 million as of December 31, 2014.

3.5 BUSINESS DEVELOPMENT

Business development services are a cross-cutting activity that contributes directly to all Zim-AIED results. The core task is to assist program beneficiaries in identifying permanent opportunities for making more money. During the quarter, activities focused specifically on:

- **Strengthening the organizational capacity of farmer groups-** this entailed diagnosis of weaknesses in groups and providing tailor made training or technical assistance to address the identified inadequacies.
- **Market linkages-** reinforcing established input and output market linkages through market fairs and culminate FaaFB sessions.
- **Business skills-** focused on analyzing farm records to evaluate performance of enterprises.
- **Farmer led extension system-**training lead farmers to establish a permanent knowledge/skills base in the community for sustainable adoption of good agricultural and business practices.

During the period under review, training and technical assistance was streamlined to focus on finalizing efforts to strengthen the organizational capacity and reinforce input market linkages of the 71 farmer groups the program supports (Table 3.5.1).

Table 3.5.1: Categories of farmer groups working with Zim-AIED in Q2, FY2015

Category of farmer group	Number
Irrigation schemes	27
Banana producer groups	18
Input procurement groups	14
Feedlots	3
Milk collection centers	6
Nucleus breeding centers	3
Total	**71**

The team continued to use the group evaluation tool to diagnose weaknesses in the farmer groups. Specific training and technical assistance sessions were then promptly provided to address the identified inadequacies. The assessment and strengthening of the groups is a crucial process before the groups move on to working directly with Agritex and the private sector partners.

To ensure all targeted farmers adopt good business and agricultural practices regardless of the size of their operation, all activities took place in cooperation with private sector partners or nongovernmental organizations linked to for-profit companies (Annexes 6 & 7). Further, involvement of the NGOs and private sector players ensure the sustainability of Zim-AIED's interventions beyond the life of the program. Some of these partners are sub-grantees or subcontractors while others are buyers, suppliers, and lenders who work in cooperation with Zim-AIED using their own funding. Central to the rollout of these activities was a conscious strategy to ensure their sustainability through these partners.

In addition to the crucial role of business training, commercialization requires a range of other specific business-related interventions that are monitored through six FTF indicators summarized below.

3.5.1 Technical Assistance and Training

FTF 4.5.2-11 Number of food security …organizations… receiving USG assistance

During the quarter under review, 1,025 organizations received training and technical assistance from Zim-AIED and its partners. A total of 82 IMC members from Silalabuhwa (Insiza), Ngondoma and Exchange (Kwekwe) irrigation schemes received leadership training on how to effectively perform their roles and manage utility bills. The IMCs were assisted in drafting practical action plans for settling their debts with service providers. Another 59 milk collection center (MCC) members from Upperand, Mayfield, Paidamoyo and Goshen (Rusitu, Chipinge) received leadership training on budgeting and constitution drafting. The training was done to equip Paidamoyo, Upperand, and

Goshen with managerial skills necessary for the MCCs to operate as autonomous entities. The three are new MCCs, emerging from the parent Mayfield MCC after failing to resolve past conflicts.

Zim-AIED mobilized farmers to form six savings groups from the agribusiness hubs of Guruve (wards 7,9,11 and 12) and Murewa (wards 15 and 25). After receiving training on group organization and management the farmer groups were linked to agro-chemical suppliers (Windmill, Profert) and seed houses (SeedCo, Pioneer, and Klein Karoo) for collective purchase of seed, fertilizer and pesticides.[10]

Twenty-two leaders drawn from input procurement groups were trained on financial recordkeeping and reporting procedures. The groups have now set up robust financial accounting systems that enable precise tracking of instalments paid by farmers and the proportionate disbursement of bulk inputs upon delivery. Because of the meticulous recordkeeping, leaders were able to mobilize the groups to procure and disburse fertilizer worth $26,537 from Windmill during the 2014/15 cropping season.

The transparent accounting system has boosted group members' confidence in the group input procurement model resulting in high adoption. Of note are the groups from Guruve who have continued with the model for two consecutive seasons with minimum support from the program. This model is feasible for cash-strapped smallholders as it provides a wide window for repayment that matches the inconsistent cash flows experienced in the rural economies, notwithstanding the lasting business relationships built with the private sector input suppliers.

The Gokwe MCC received a grant from ADF and used the money to buy a tractor and forage harvester and chopper. Zim-AIED provided the group with technical assistance to develop a cost recovery business model for operating and maintaining the tractor. The group has since adopted the appropriate business systems, such as using logbooks to monitor mileage and hours of operation. A tractor-driven forage harvester is set to improve animal nutrition and subsequently milk yields, which are currently averaging 12 liters per cow per day.

The program linked farmers in Gutu to input suppliers such as Nico-Orgo and Windmill. Although their inputs were ultimately received, farmers were not happy with Nico-Orgo due to delays experienced in the delivery of inputs. Despite these initial challenges however, Windmill, Nico-Orgo, and Agritex are committed to continuing to work with the farmers after the exit of Zim-AIED.

Of note was the formation of the input procurement group in Ward 25, Murewa. This was after the farmers in this ward heard of the success of the Windmill program in neighboring Ward 15. The group subsequently procured 35 tons of inputs from Windmill, resulting in their achieving strong maize yields of at least four tons per hectare.

FTF 4.5.2-37 Number of MSMEs receiving business development services

During the period under review, integrated training and technical assistance was provided in agronomy, irrigation management, natural resource management, gender mainstreaming, marketing, postharvest handling, recordkeeping, budgeting, and contract management. A total of 4,133 MSMEs received BDS training from Zim-AIED and its implementing partners. Of these 2,558 were unique individuals with 1,329 of them females (51.9 percent). Table 3.5.2 shows the breakdown of beneficiaries who received training in various business skills during the quarter.

Table 3.5.2: Business development services in Q2, FY2015

Subject	Q2, FY2015		
	Male	Female	Total
Credit Management	441	500	941
Enterprise Budgeting	96	15	111
Farm Planning	154	22	176

[10] See also section 3.6.1 with details on the 10 input procurement groups in maize producing areas Zim-AIED gave technical assistance in Q2 FY2015.

Farmer Group Organization & Management	897	559	1,456

At the household level, farmers continued to receive training in the concept and modules of farming as a family business. This concept recognizes every family member as an important stakeholder that has a role to play in the family agribusiness. The ultimate goal is to remove gender disparities within society in terms of who does and gets what within the different value chains.

As an introduction to pen fattening, a total of 21 farmers drawn from the three nucleus breeding centers in Nkayi received training on feedlot budgeting. Real time budgets derived from high performers at Fanisoni feedlot were used to demonstrate the profitability of pen fattening. As a result the group committed to induct their cattle during the last week of May 2015 in anticipation of firm prices by August 2015.

Thirty cattle owners from Fanisoni (Nkayi), Zamalokhu and Zenzele (Lupane) that participated in the Zim-AIED pen fattening activities in the first quarter were assisted in evaluating their recordkeeping performance. The analysis illustrated the effect of age, breed, and sex as factors influencing the profitability of pen fattening. The levy charged on cattle sales by the Nkayi RDC ($30 per beast) was identified as a cost that can be reduced if farmers continue to voice their concern and engage with the local authority.

Seventy farmers growing African Birds Eye chilies at Tshovani irrigation scheme received training on enterprise performance evaluation. The evaluation identified sub-optimal tillage of the heavy clay soils using ox-drawn ploughs instead of tractor-drawn implements as the yield bleeder. It was recommended that farmers hire private tillage service providers to ensure effective land preparation.

A total of 996 farmers participated in Zim-AIED's wrap-up sessions in the Honde Valley. These sessions were well received by both farmers and Agritex staff. Farmers testified on the economic benefits they are now deriving from the new linkages with buyers, input suppliers, and microfinance institutions. The sessions also provided a platform for the groups to reflect on their business relations with the public and private sectors including strategies necessary to sustain those relationships post Zim-AIED. The banana group leaders committed to continue supporting the umbrella committee that was established to negotiate business terms with FAVCO given the logistical challenges present throughout the valley that threaten the viability of the banana value chain.

3.5.2 Investment

FTF 4.5.2-38 Value of new private sector investment… leveraged by FTF implementation

The reported new investment by private sector partners working with the program was $11,743 during the quarter. Livestock partner, Inala Enterprises in Nkayi, using its own resources, constructed a stock feed shade at Dakamela NBC 1 for $1,500 and bought cattle crushes for NBC 4 and 5 for $1,500. Better Agriculture invested $1,745 in dryer and depot refurbishment in preparation for the harvest of the ABE chili crop. Matanuska invested a total of $6,998 on the Chibuwe A5 packshed floor and office furniture for their Mutema office.

Investments made by partners during the quarter were 42 percent of what was made in the first quarter of FY2015. The liquidity crunch, high cost of borrowing, and the generally low demand in the economy remain constraints to capital investment from the private sector.

3.5.3 Profitability

FTF 4.5.2-43 Number of firms …now operating more profitably because of USG assistance

This is an annual indicator and will be reported at the end of FY2015.

3.5.4 Employment

FTF 4.5-2 Number of jobs attributed to FTF implementation

A total of 1,314 full time equivalent (FTE) new and continuing jobs were recorded this quarter. The level of employment achieved by the program to date has been maintained. Four of Zim-AIED's partners – Matanuska, Better Agriculture, Inala, and O'Enem Meats – added new employees. Matanuska employed 48 local smallholder farmers (29 males, 19 females) to work on irrigated tissue-cultured banana plantations in Mutema and Chibuwe in Chipinge district; Better Agriculture employed 41 smallholder farmers (33 males and 8 females) as general field hands. O'Enem Meats employed three general hands (two males and one female), and Inala Enterprises employed one male general hand.

3.5.4 Technology Adoption

FTF 4.5.2-42 Number of …organizations… that applied new technologies or management practices

A total of 1,044 organizations continued to apply new technologies or management practices they learned from the Zim-AIED program. These organizations include agrodealers who received loans under the AgriTrade loan facility, IMCs, producer organizations, and MCCs. Adoption of new management practices at irrigation schemes have resulted in fewer equipment breakdowns and down times, resulting in better utility payments, greater water supply, and higher productivity by IMC members.

3.6 PRODUCTIVITY

The reporting period was characterized by dry weather conditions which lasted from mid-January 2015 to the end of March 2015 in the majority of program areas, coming on the heels of heavy rains in late December and early January. The effect of the drought was severe in most areas except in Hurungwe and Guruve where the dry spells were short. Yield expectations for most Zim-AIED monitored dryland crops have been revised downward.

Productivity-enhancing activities focused on technical assistance to lead farmers, formation of input procurement groups, and direct lending from microfinance institutions. Activity areas centered around existing agribusiness hubs in Manicaland, Mashonaland, Matabeleland, and Masvingo provinces.

Productivity increases are monitored by three FTF indicators, summarized below and detailed in the specific activity interventions, sections 3.6.1 to 3.6.8.

FTF 4.5.2-7 Agricultural sector training

Training and technical assistance was provided to 3,730 farmers producing livestock, banana, paprika, chilies, horticulture, maize, sugar bean, cowpea, groundnut, and sweet and table potato on the use of seed dressing, weed management, correct fertilizer application, correct irrigation techniques, and safe use of pesticides.

FTF 4.5.2-2 Area under improved technologies

Zim-AIED estimates that 92,499 hectares were under improved technologies by the end of the second quarter FY2015 and new technologies were applied to 4,325 hectares of crops and livestock.

Harvesting of fodder crops commenced during the quarter. Farmers are making bales from mixing the fodder crops, natural veld, and withered maize/small grains stover, which they prematurely harvested from their field as a result of the prolonged dry spell. Trainings and demonstrations on fodder production, preservation and utilization in livestock target areas have assisted farmers in appreciating the use of home grown fodder as a cheaper source of supplementary feeding for their livestock.

FTF 4.5.2-5 Farmers who have applied new technologies

A total of 55,044 farmers applied improved technologies including use of improved genetics in crops, cultural practices (covering seed production, transplanting, mulching), pest and disease management, irrigation, improved land preparation, and soil erosion control.

Farmers in in Gokwe South were hit hard by the drought. However, for reasons mentioned above, the Untu-supported farmers are expected to have average yields of around five tons per hectare compared to the expected average of 0.5 tons per hectare from other farmers.

The maize crop in Gutu was a complete write off due to the prolonged dry spell. However, Zim-AIED's impact is visible on the farmers who are in the input procurement groups, as they can still expect maize yields of up to 2 tons per hectare. The farmers followed the good agricultural practices (GAPs) they learned in the program which included early planting, mulching, basin planting, and minimum tillage.

The dryland crop in Honde Valley is expected to yield an average of 0.6 tons per hectare. Farmers in the area tend to rely on their banana crop, whose proceeds are now being used to purchase maize grain or maize meal.

Maize (Irrigated)

Mutema – Chibuwe

Maize was the major summer crop covering 1,116 hectares and grown by 1,521 farmers on the irrigation schemes. An estimated 2,000 tons were produced in the season with a production value of $720,000. Due to the drought situation, prices are ranging between $360 and $480 per ton as of late March and are expected to rise further. Formal trading of maize no longer exists as formal buyers cannot match the prices offered by villagers from the neighboring drylands.

In October 2014, a total of 25 farmers from Musikavanhu B irrigation schemes received loans from Virl Microfinance to grow 0.4 hectares of maize using a new seed variety (SC 727) following Zim-AIED's recommendations. The purpose was to showcase a large-scale demonstration involving direct lending to maize farmers on irrigation schemes and use of an improved technology combined with the other maize GAPs. It was expected that farmers should attain six tons per hectare and a minimum price of $300 per ton.

Farmers achieved yields ranging between 6.5 to 9.5 tons per hectare. Most of the maize was sold dry at prices between $360 and $480 per ton. Farmers also sold up 30 percent of their crop as green mealies and realized even higher incomes.

The lesson learned is that direct funding of maize combined with the right seed technology and respective GAPs increases farmer incomes on irrigation schemes as farmers are able to take advantage of the early market and high yields. Farmers in the project realized a sales value of at least $2,520 with a gross margin of $1,920 per hectare. A 100 percent loan repayment was achieved.

Table 3.6.1.2: Summary of maize production in Zim-AIED areas since program inception

Year	# of farmers	# of hectares	Total production (tons)	Yield (tons/ha)	Total cost ($)	Total Cost ($/ha)	Value of production ($)	Value of production ($/ha)	Total sales ($)	Total sales ($/ha)	Gross margin ($/ha)
2012	-	51,760	76,214	1.00	$11,218,100	$217	$22,864,100	$442	$8,230,000	$159,001	$225
2013	86,818	68,057	110,104	1.62	$25,418,574	$293	$34,422,022	$506	$25,086,224	$368.61	$213
2014	95,605	105,325	240,062	2.28	$33,222,425	$315	$78,828,150	$748	$35,964,160	$341.46	$433
2015	107,135	95,527	191,054	2.00	$30,109,155	$315	$45,852,960	$480	$2,197,082	$23.00	$165

Expected total production from Zim-AIED production areas in FY2015 is estimated at 191,000 tons valued at $45.8 million, with expected sales through formal and informal channels of $2.3 million.

Green Mealies

Sales of green mealies from irrigation schemes in Matabeleland exceeded $37,500 from 15,000 dozen sold at an average price of $2.50 per dozen.

Sugar beans (dryland)

In Guruve and Hurungwe planting of the dryland crop continued through early February 2015. Although some of the crops were slightly affected by dry spells, the crop status is good with expected yields of at least 1.2 tons per hectare. A few farmers in Guruve obtained loans from Untu through the Zimbabwe Farmers Union. These farmers were selected with one of the criteria being participation in the Zim-AIED program.

Sugar beans (irrigated)

In Honde Valley, planting of the summer crop was done in February 2015 and yields of at least one ton per hectare are expected. About 1,800 farmers planted the crop with technical assistance from Zim-AIED.

In Chibuwe/ Mutema, 400 hectares of the crop were planted during the quarter out of target of 1,200 hectares to be achieved by end of April 2015. The crop was partly financed by Virl and Agribank with the bulk of the crop funded from the farmers' own resources. A good sugar bean season is expected in Chibuwe/Mutema as farmers have access to fertilizer in addition to their wealth of technical expertise imparted over three seasons by Zim-AIED. In addition farmers are optimistic that being a drought year, prices will be better than the $1.00 per kilogram received in FY2014.

In Matabeleland, plantings started as early as February 2015 to circumvent the frost risk. A total of 87 hectares were planted this season in the irrigation schemes that Zim-AIED is working. Current prices are at $1.50 per kilogram.

At the end of the period under review, 5,087 hectares were under sugar beans in Zim-AIED program areas with an expected production of 6,107 tons. Planting will continue through April 2015.

Table 3.6.1.3: Summary of sugar beans production in Zim-AIED areas since program inception

Yr	# of farmer	# of hectare	Total production (tons)	Yield (tons/ ha)	Total cost ($)	Total Cost ($/ha)	Value of production ($)	Value of production ($/ha)	Total sales ($)	Total sales ($/ha)	Gross margin ($/ha)
2013	25,076	2,312	2,653	1.15	$791,169	$342	$3,210,372	$1,389	$2,934,162	$1,269	$1,047
2014	33,596	12,684	14,666	1.16	$6,357,818	$501	$16,181,325	$1,276	$11,301,578	$891	$775
2015	12,642	5,089	6,107	1.20	$2,550,912	$501	$6,691,665	$1,315	$1,607,842	$316	$814

Groundnuts

Murewa, Gokwe South and Gutu are the traditional Zim-AIED groundnut growing areas. These areas were affected by drought. However, the effect on this crop was not as bad as for maize. During the field visits by Zim-AIED personnel during the quarter, farmers were mainly advised on the use of gypsum, insect and weed control. Yields of at least 1.2 tons per hectare (unshelled) are expected.

In Mutema and Chibuwe, groundnuts are produced under irrigation for the fresh market. One hundred and thirty five hectares of the crop were grown, producing about 675 tons of fresh groundnuts (33,750 buckets) that were sold in the local market and outside the area. Table 3.6.1.4 summarizes the production of groundnuts in Zim-AIED project areas since inception.

Table 3.6.1.4: Summary of groundnut production in Zim-AIED areas since program inception

Year	# of farmers	# of hectares	Total production (tons)	Yield (tons/ ha)	Total cost ($)	Total Cost ($/ha)	Value of production ($)	Value of production ($/ha)	Total sales ($)	Total sales ($/ha)	Gross margin

											($/ha)
2013	18,963	2,327	2,831	1.22	$322,931	$139	$1,393,180	$599	$1,013,842	$435.69	$460
2014	19,883	7,819	8,326	1.06	$946,527	$121	$5,723,936	$732	$2,398,976	$306.81	$611
2015	26,681	10,590	13,132	1.24	$1,283,508	$121	$14,084,805	$1,330	$124,222	$12	$1,209

Cowpeas

Although the marketing of the crop last season was not easy, many farmers in Gutu continued to grow the crop for food security reasons. Some of these farmers were also growing the crop after being assured of a market by Zaka Seeds. The farmers used seed retained from the previous season's crop. The crop area is low compared to FY2014, averaging about 0.3 hectares per farmer. Yields of around 0.39 tons per hectare are expected. As the district was severely affected by drought, the cow pea crop will contribute to household livelihood compared to maize.

Table 3.6.1.5: Summary of cowpeas production in Zim-AIED areas since program inception

Year	# of farmers	# of hectares	Total production (tons)	Yield (tons/ha)	Total cost ($)	Total Cost ($/ha)	Value of production ($)	Value of production($/ha)	Total sales ($)	Total sales ($/ha)	Gross margin ($/ha)
2013	4,183	227	235	1.04	$23,163	$102	$113,235	$499	$93,516	$411	$397
2014	1,951	759	663	0.87	$150,315	$198	$331,623	$437	$249,259	$328	$239
2015	1,923	486	191	0.39	$96,175	$198	$101,229	$208	$23,150	$48	$10

Sweet potatoes

During the gross margin survey in February 2015, it became apparent that the area under sweet potato production had gone down due to the low market prices during the previous season and the dry spell which had commenced in early January 2015. The reduction in area is estimated at around 40 percent compared to FY2014 figures. The dry spell in Gutu and Murewa will significantly reduce yields. Sweet potato weevil has been sighted in some of the crops and farmers have been advised to use Carbaryl for the control. Yields are expected to be around 10 tons per hectare in Murewa and Gutu.

Table 3.6.1.6: Summary of sweet potatoes production in Zim-AIED areas since program inception

Year	# of farmers	# of hectares	Total production (tons)	Yield (tons/ha)	Total cost ($)	Total Cost ($/ha)	Value of production ($)	Value of production ($/ha)	Total sales ($)	Total sales ($/ha)	Gross margin
2013	21,558	655	3,091	4.72	$138,302	$211	$1,046,541	$1,598	$1,029,013	$1,571	$1,387
2014	6,206	3,711	20,748	5.59	$1,371,274	$370	$6,778,201	$1,827	$6,046,646	$1,629	$1,457
2015	3,313	2,189	21,212	9.69	$1,025,820	$469	$5,134,800	$2,346	$4,534,945	$2,072	$1,877

Table potatoes

Zim-AIED assisted 12 farmers to produce this crop at Chinyika irrigation scheme in Goromonzi by linking them to Virl Microfinance for input loans, and providing technical assistance on GAPs. The crop, established in August 2014, was harvested in November 2014. Zim-AIED continued to visit the farmers to give them advice especially on the use of pesticides and also to encourage them to repay their loans. The repayment rate was at 83.3 percent as at the end of March 2015 of the $5,880 loan advanced.

Production increased at some sites in Matabeleland during the quarter under review compared to the previous season. At Makwe irrigation scheme in Gwanda area increased from four hectares in FY2014

to the current 6.8 hectares due to increased demand. The program provided training and technical assistance on crop production as well as on effective marketing.

Table 3.6.1.7: Summary of potato production in Zim-AIED areas since program inception

Year	# of farmers	# of hectares	Total production (tons)	Yield (tons/ha)	Total cost ($)	Total Cost ($/ha)	Value of production ($)	Value of production ($/ha)	Total sales ($)	Total sales ($/ha)	Gross margin ($/ha)
2013	120	60	900	15	$414,900	$6,915	$603,000	$10,050	$603,000	$10,050	$3,135
2014	25	3.75	53	14.24	$16,350	$4,360	$40,980	$10,928	$36,882	$9,835	$6,568
2015	95	10	260	26	$62,400	$6,240	$171,000	$17,100	$154,440	$15,444	$10,860

Soy bean

The crop was grown mostly by Zim-AIED beneficiaries in Guruve, Hurungwe and Goromonzi with some farmers producing under contract with ETG. The crop was in a good state during the period under review with expected yields of at least 1.3 tons per hectare. However, the dry spell coincided with the main flowering period in some areas, resulting in poor pod filling, and subsequent expected lower yields (Table 3.6.1.8). Zim-AIED continued to offer technical assistance to farmers in Guruve and Hurungwe.

Table 3.6.1.8: Summary of soya bean production in Zim-AIED areas since program inception

Yr.	# of farmer	# of hectares	Total production (tons)	Yield tons/ha	Total cost ($)	Total Cost ($/ha)	Value of production ($)	Value of production($/ha)	Total sales ($)	Total sales ($/ha)	Gross margin ($/ha)
2013	8,035	159	163	1.03	$15,177	$96	$81,307	$511	$65,364	$411	$415
2014	5,701	4,087	4,566	1.12	$623,531	$153	$2,123,460	$520	$1,637,306	$401	$367
2015	6,204	3,239	4,360	1.35	$494,692	$153	$2,049,056	$633	$21,579	$7	$480

3.6.2 Paprika and Chilies

Paprika

Zim-AIED has supported more than 1,500 smallholder paprika farmers with training in GAPS, technical assistance, and credit and market linkage since FY2012 through formal and informal partnerships with key paprika buyers. During the quarter under review, 910 smallholder paprika farmers were trained in business skills; pest and disease management; and the costs and benefits of drip irrigation. Pedstock Investments, a private irrigation company trained 78 smallholder paprika farmers in Headlands on the benefits and cost of drip irrigation technology. Thirty one of the farmers initially registered to purchase drip irrigation kits from Pedstock Investments after crop sales in May 2015 and June 2015. Pedstock committed to provide a technician to assist farmers on proper use and kit maintenance if farmers purchased drip kits for at least five hectares.

The Zimbabwe Paprika Grading Standard that Zim-AIED developed in collaboration with the Standards Association of Zimbabwe (SAZ), paprika buyers, farmers, food scientists and researchers was published in February 2015 and is now available to the public from the Standards Association of Zimbabwe at a cost of $15 per copy. Each of the ten paprika production groups in the four paprika hubs now has a copy.

The 10 paprika demo plots established in Manicaland and Mashonaland West during the first quarter FY2015 were used for training farmers on good fertilizer application, disease and pest management, safe use of pesticides and herbicides. In addition, technical assistance on post-harvest handling to minimize aflatoxin contamination was also provided. Zim-AIED is giving technical assistance to all paprika growers in the four paprika hubs.

Zim-AIED is working with 1,652 smallholder paprika farmers growing an estimated 535 hectares. Production area per farmer ranges from 0.2 to 0.4 hectares (Table 3.6.2.1). The majority of the crop was at the early pod ripening stage while harvesting of the first pods had commenced in a few production areas.

Table 3.6.2.1: Projected paprika production for 2014/2015 season

		Input Supported Farmers				Unsupported Farmers				Total Farmers			
Province	District	# of Farmers	Area (ha)	Yield /ha (t)	Total (t)	# of Farmers	Area (ha)	Yield /ha (t)	Total (t)	# of Farmers	Area (ha)	Ave yield/ ha (t)	Total (t)
Mash. West	Hurungwe	17	6.8	1.50	10.20	283	58.2	1.00	58.2	300	65.0	1.05	68.4
Manicaland	Makoni/ Headlands	36	18.0	1.50	27.00	175	43	1	43	211	61.0	1.15	70.0
	Nyanga (Zim-AIED)	107	39.6	1.50	59.40	120	24	1	24	227	63.6	1.31	83.4
	Nyanga (ADF)	802	320.0	1.50	480.00	0	0	0	0	802	320.0	1.50	480
	Chipinge	29	6.5	1.50	9.75	20	3	1	3	49	9.5	1.34	12.75
	Chimanimani	48	13.0	1.50	19.50	15	3	1	3	63	16.0	1.41	22.50
Total		**1039**	**403.9**	**1.50**	**605.85**	**613**	**131.2**	**1.00**	**131.2**	**1652**	**535.1**	**1.38**	**737.05**

Source: Zim-AIED

Table 3.6.2.2: Paprika production summary from FY2012 to FY2015

The main farmer activities during the quarter were weeding (where farmers did not apply herbicides), top-dressing with ammonium nitrate, ridging scouting and spraying for pests and diseases. The crop stands quality and yield potential is high among farmers who received input loans. In Hurungwe, the loan package from Quest Financial Services included herbicides. The farmers, who were using the herbicide technology for the first time this season, managed an early control of a broad spectrum of weeds particularly during the wet spell in early January 2015 and this impacted positively on the quality of crop stands and improved the yield potential.

Rainfall was poorly distributed between January 2015 and March 2015. A wet spell in the first two weeks of January 2015 at all the four hubs was followed by scattered light showers in February 2015 and a predominantly dry period for the whole month of March 2015. Dryland crops in the Headlands, Hurungwe, and Nyanga's Sabvure hub showed effects of moisture stress due to the long dry spell in March 2015. Paprika growers who accessed credit for inputs, adopted GAPs and are receiving adequate rainfall are expected to attain minimum yields of 1.5 tons per hectare. Total production by Zim-AIED assisted smallholder farmers is estimated to exceed 737 tons (Table 3.6.2.1).

As part of market linkage strengthening, Zim-AIED organized market fairs in paprika hubs in Nyanga, Headlands, Hurungwe and Musikavanhu in March 2015. These market fairs were organized in collaboration with farmers and AGRITEX and provided a platform for sustainable linkages among farmers, buyers, input suppliers and microfinance institutions. Linking smallholder farmers to input and output markets is an integral part of Zim-AIED's smallholder commercialization thrust. Five paprika buyers, four input suppliers, two microfinance institutions, Agritex as well as 618 farmers attended the market fairs. Representatives of the two microfinance institutions informed farmers of their plans to expand direct lending to paprika smallholder farmers in 2015/16 season. The presence of multiple buyers assured paprika farmers of the available potential markets for their paprika crop.

A four member delegation of Chinese and Spanish paprika processors visited Zim-AIED assisted paprika farmers in Nyanga and Makoni districts in Manicaland to appreciate smallholder paprika production practices and postharvest handling. The buyers were impressed with the healthy and good quality crops in the areas visited. Cumulative paprika sales to date are $3.99 million (Table 3.6.2.2). Average sales per household have doubled since FY2012.

FY	# of farmers	# of hectares	Average yield (t/ha)	Total production (tons)	Total sales (tons)	Average price ($/kg)	Total sales ($)
2012	2652	808	1.22	987	987	1.29	1,272,700
2013	2744	690	1.07	737	737	1.23	910,855
2014	1548	584	1.66	970	970	1.87	1,812,085
2015*	1652	535	1.38	737	737	1.64	1,208,680

**Projected Source: Zim-AIED*

Tabasco and ABE Chilies

Following two seasons of Zim-AIED input support to Tabasco and African Bird's Eye (ABE) chili farmers contracted to Better Agriculture (BA), the Zimbabwe Microfinance Wholesale Facility (ZMWF) advanced a $207,000 loan through BA to finance inputs for both dryland and irrigated chili production for the 2014/15 agricultural season. A total of 597 BA-contracted smallholder farmers grew Tabasco and ABE chilies in Manicaland and Masvingo provinces.

In Nyanga, Honde Valley, and Tombo, 386 farmers were contracted to grow 94 hectares of Tabasco chilies. Of these, 257 farmers are at Nyakomba irrigation scheme in Nyanga district and are producing the crop under irrigation. The 106 farmers in Honde Valley, Mutasa district and 23 farmers at Tombo in Nyanga district are producing the crop under dryland conditions. Each farmer planted approximately 0.25 hectares.

Yields are expected to reach eight tons per hectare under irrigated conditions and exceed five tons per hectare under dryland conditions. Farmers will receive a price of $0.50 per kilogram for the harvested ripe wet chilies. Gross margins from Tabasco chili production are expected to range between $2,000 and $3,150 per hectare (Table 3.6.2.3). All the Tabasco chili pods will be processed into a mash at three sites (Nyakomba, Hauna in Honde Valley, and Tombo) before export to the Chili Pepper Company in South Africa for onward shipping to the US for production of Tabasco sauce.

Table 3.6.2.3: Projected Tabasco and ABE chili production for 2014/15 season

Crop	Province	District	No. of farmers	Area under production (ha)	Yield (t/ha)	Total production (tons)	Revenue ($)	Cost of production ($)	Gross margin $/ha
Tabasco Chili	Manicaland	Nyanga	257	58	8.0	464	232,000	49,300	3,150
		Honde Valley	106	30	5.5	165	82,500	22,500	2,000
		Tombo	23	6	5.5	33	16,500	4,500	2,000
Total			386	94	7.04	662	331,000	76.300	**2,710**
ABE Chili	Manicaland	Mutare South	20	6.5	4.0	26	18,200	5,200	2,000
	Masvingo	Chiredzi	65	21	8.0	168	117,600	16,800	4,800
		Zaka	126	23	8.0	184	128,800	18,400	4,800
Total			211	50.5	7.5	378	264,600	40.400	4,440

A further 211 farmers are producing 50.5 hectares of African Bird's Eye (ABE) chilies in southern Manicaland and Masvingo provinces. The entire ABE chili crop is for export to Nando's South Africa for manufacture of Nando's sauces. Better Agriculture has an off-take agreement to supply 100 tons of dried ABE chilies to Nando's in FY 2015.

Each ABE chili farmer planted between 0.2 and 0.4 hectares. Farmers at Chipendeke irrigation scheme adopted early planting and will obtain better yields than in previous years due a longer growing period. The site experiences early onset of low temperatures, thus early planting extends the season. According to Better Agriculture, average yield at the site is expected to reach four tons per hectare compared to 1.9 tons per hectare in 2014. At the other sites, target yield for ABE at harvest is expected to reach eight tons per hectare. Farmers will realize gross margins of between $2,000 and $4,800 per hectare at an expected price of $0.70 per kilogram for the wet product (Table 3.6.2.3).

Table 3.6.2.4 summarizes chili sales by farmers to BA in the quarter. Of the projected production in FY2015, farmers sold a total of 83,840kg ABE chili with a sales value of $58,688 and 135,244 kilograms of Tabasco chili pod with a sales value of $67,586.

Table 3.6.2.4 Tabasco and ABE chili production summary from January to March FY2015

Type of chili	Site	Sales quantity (kg)	Sales value ($)
ABE chili	Chipendeke	11,000	7,700.00
	Zaka	64,973	45,481.10
	Chiredzi	7,867	5,506.90
Total		**83,840**	**58,688.00**
Tabasco chili	Nyakomba	125,400	62,700.00
	Honde Valley	9,553	4,776.50
	Tombo	291	109.50
Total		**135,244**	**67.586.00**

Tabasco and ABE chilies are expected to generate on farm sales of $595,000 compared to $588,000 in FY2014 (Table 3.6.2.5). Productivity has increased by more than 50 percent since Zim-AIED's involvement in FY2013, from 3.4 and 4.5 tons per hectare to the expected 7.0 and 7.5 tons per hectare in FY2015 for tabasco and ABE chilies, respectively (Table 3.6.2.5). Increases in productivity are mainly due to farmers improved access to adequate inputs and high adoption of GAPs.

Table 3.6.2.5 Summary of tabasco and ABE chili production since inception

FY	Crop	No, of farmers	No of hectares	Average yield (t/ha)	Total production (tons)	Total sales (tons)	Average price ($/kg)	Total sales ($)
2013	Tabasco chili	331	75.2	3.4	257	257	0.50	$151,630
2014		404	88	7.4	647	647	0.50	$335,954
2015*		386	94	7.0	662	662	0.50	$331,000
2013	ABE chili	45	16	4.5	72	72	0.80	$59,930
2014		239	42	8.6	363	363	0.70	$252,570
2015*		211	50.5	7.5	378	378	0.70	$264,600

*Projected *Source: Zim-AIED*

3.6.3 Horticulture: Bananas

Honde Valley

Zim-AIED's interventions continued to positively contribute towards the commercialization of the banana sector among smallholder farmers in Honde Valley. Of note are the positive developments in the marketing system; banana yields; farmer incomes; adoption of GAPs; increased irrigation development and improved farmer organization. The introduction of improved tissue-cultured (TC) planting material, supported by improved production practices and introduction of formal buyers has completely changed the Honde Valley banana business. Marketing interventions attracted various value chain players including banana buyers, input suppliers, agro-dealers and financial institutions. Buyers are attracted by the improved banana quality, increased crop volumes and increased farmer organization. ZIM-AIED partner FAVCO is still moving the highest banana quantities in the midst of mounting competition from both formal and informal buyers. Volume of purchases by FAVCO has been increasing in each successive quarter up to the current quarter save for 2013 when competition started firming. The market share gained by competitors was mitigated the same year by increased banana volumes from the first TC harvest. FAVCO is now heavily dependent on the TC contract crop as the contracted farmers have shown great loyalty to the company as it developed them from near peasantry to commercial production. Local agrodealers like Mutare Farm Supplies and Farm and City Centre access a big number of their clients through FAVCO while financial institutions have

special products for FAVCO clients. Agribank considers FAVCO's recommendation letters as collateral.

Table 3.6.3.1 summarizes the quantities and values of bananas purchased by FAVCO during the quarter compared to the same period since Zim-AIED interventions began in Honde Valley in 2011.

Table 3.6.3.1: Banana Purchases by FAVCO in Honde Valley

Year	January		February		March		Total	
	Volume (t)	Value ($)	Volume (t)	Value ($)	Volume (t)	Value ($)	Volume (t)	Value ($)
FY2011	72	15,827	30	6,429	7	1330	**109**	**23,586**
FY2012	73	20,319	114	34,200	112	33,675	**299**	**88,194**
FY2013	115	36,800	62	19,840	52	16,640	**229**	**73,280**
FY2014	159	41,366	145	37,642	184	47,894	**488**	**126,902**
FY2015	184	49,686	188	50,876	164	44,332	**536**	**144,894**

Compared to the baseline year, volume purchases in the quarter by FAVCO were 392 percent higher and prices per kilogram were 25 percent higher. In the current quarter, FAVCO bought 536 tons worth $144,894 compared to 786 tons in the first quarter of FY2015, a 32 percent drop. The drop is due to FAVCO failing to maintain its payment period of four weeks which deteriorated to seven weeks and the breakdown of their second and bigger tractor in January 2015 also contributed to the reduced performance. Late payment of up to seven weeks at a time when other buyers are paying farmers within a week has significantly bruised FAVCO's relationship with growers resulting in some farmers diverting their crop to other buyers. However, a significant number of farmers continue to value the increased production capacity they are gaining through continued interaction with FAVCO.

Farm gate prices were reduced this quarter and FAVCO is now paying $0.25, $0.27 and $0.30 for grades C, B and A respectively. Competitors, who were paying up to $0.34 in the same quarter last year, have now reduced their farm gate price to $0.30 per kilogram but this general decline is not affecting the crop's viability as the breakeven price remains around $0.06 per kilogram.

FAVCO loan recoveries from the initial contract groups of 230 farmers are now at $71,857, which constitutes 88 percent of the original loan plus interest of $81,085. Murara Banana Association has the highest repayment rate of 90 percent with Buwu Banana Association having the least recovery percentage of 68 percent. Pressure is still being exerted on defaulters in an effort to reduce the outstanding balance which is currently standing at $9,948 for the old groups.

The new groups whose 370 members were contracted to grow the second 25 hectares of TC bananas in 2013 have repaid 62 percent of the $98,639 they borrowed. An excellent repayment performance was witnessed with Nyamatsapa group which has already repaid 94 percent of the loan.

The combined effect of financial institutions directly lending to farmers as from 2013 and the increased receipts from high production from the TC bananas and the old plantations due to adopted GAPs has increased uptake of fertilizer use. This has contributed significantly to yield increases, particularly in the old banana plantations which were traditionally grown without fertilizers. In addition the extra income and loans are being invested in developing irrigation infrastructure. Of the total $95,019 disbursed as loans to 264 banana farmers, to date $33,991 (35.7 percent) has been used for irrigation development. Virl Microfinance and Agribank have been at the forefront in lending to farmers, with the latest disbursements from Virl worth $16,746 made in mid-February 2015. During the quarter three more financial institutions: Microplan, Zimbank and CABS, have shown interest in working with Honde Valley banana farmers although none of them has yet disbursed any funds. Agribank and Virl have confirmed their preparedness to finance additional banana farmers and to date over 60 loan applications have been submitted by new farmers.

During the quarter, various training sessions were organized to enhance farmers' knowledge of basic agricultural and management practices which increase the farmers' production and productivity in

bananas. The training sessions were jointly organized and conducted by Zim-AIED, FAVCO and Agritex to ensure sustainability. A total of 882 banana farmers (490 males and 392 females) from the 17 banana producer groups were trained. The topics covered agronomy (banana fertilization and reducing leaching, banana quality management, basic banana production GAPs); irrigation (sustainable use of irrigation water, effective selection of irrigation materials); finance (accessing agricultural finance, strengthening relationships with financial institutions, loan management); marketing (adherence to set quality standards, group marketing, strengthening market linkages); leadership (conflict management) and business management (business model evaluation).

Mutema/Chibuwe

Zim-AIED teams continue to provide agronomic and technical assistance on bananas and the other summer crops to farmers within these schemes.

Successive quarterly harvests continue to surpass previous quarters as 24 percent more bananas were harvested in this quarter compared to the second quarter FY2014 (Table 3.6.3.2). Prices declined due to oversupply, resulting in reduced sales value as increased volumes failed to compensate the decline in prices.

Table 3.6.3.2: Mutema/ Chibuwe Banana Production

Year	Q1 *(Oct-Dec)*		Q2 *(Jan-Mar)*		Q3 *(Apr-Jun)*		Q4 *(Jul-Sept)*		Total	
	Tons	Value ($)	Tons	Value ($)	Tons	Value ($)	Tons	Value ($)	**Tons**	**Value ($)**
2012/13			43	$14,332	1,324	$414,785	710	$210,255	**2,077**	**$639,372**
2013/14	586	$146,307	951	$265,474	2,085	$548,477	1,397	$349,736	**5,020**	**$1,309,994**
2014/15	938	$227,599	1,258	$283,366						

Mutema continues to produce the bulk of the bananas by volume and contributed 60 percent of total volumes. Chibuwe D block continues to lead on yields, averaging 79 tons per hectare, followed by Mutema which averaged 74 tons per hectare. The combined average yield for all the blocks during the quarter was 65.5 tons per hectare. Yields achieved remain above the country's commercial average of 40 tons per hectare with the good performance set to continue.

Chibuwe D block's consistent high average yields are due to the high clay content of the soil which has better nutrient holding and cation exchange capacity which limits the amount of fertilizer leached out by the irrigation water. The banana crop is also benefitting from the good management practices as well as enthusiastic farmers who look after their plantations.

Volume of production increased across all blocks during the quarter compared to the previous quarter, except for Chibuwe C block where irrigation challenges as a result of the change in the course of the Save River from which irrigation water is drawn resulted in a decline in both productivity and quality. Production was 1,258 tons in the quarter under review compared to 938 achieved in the preceding quarter, an overall increase of 34 percent.

Farmers have recently received another loan for input financing from CABS after paying back the previous loan. Each farmer receives a working capital loan of $551 enough to cover input requirements for the 0.25 hectare block over a six month period. A new contract was adopted by both Matanuska and farmers in the quarter and is now in force.

Rusitu Valley

Despite the region having received only 50 percent of the amount of rainfall received in FY2014, banana production continues to thrive from new hectares coming into production. Although yields may decline this season, these new areas are contributing to maintaining high volumes from the region. Rusitu is projected to produce average volumes of between 300 and 400 tons of bananas weekly during the peak period running January to June.

Product from Rusitu continues to reach its traditional destinations, primarily Bulawayo, Masvingo, Chiredzi and other southern parts of the country. New buyers have entered the area thereby broadening the market and increasing competition. Medium sized buyers have become dominant and their aggregate requirement has maintained a strong demand for Rusitu bananas.

Prices have been ranging between $0.15 and $0.20 per kilogram with some of the farmers with better quality and volumes getting prices as high as $0.25 per kilogram. Product quality is improving especially among Zim-AIED beneficiaries who are using fertilizer and applying GAPs learned from Zim-AIED organized trainings and technical assistance.

The major activity during the quarter was developing and strengthening market linkages for banana farmers targeting buyers Sunspun and FAVCO and new buyers coming into the valley. The developed farmer groups continued to receive technical assistance on marketing, group organization, quality, and general logistics to enable them to better supply the different markets. The Zim-AIED established demo plots continued to be used for training especially in the case of ward 23 where farmers continued to replicate GAPs showcased by the demo plots and access improved planting material from the plots. Agritex personnel are using these demo plots for field days and regular training, thus providing the sustenance post Zim-AIED.

The technologies introduced and promoted by Zim-AIED are still being adopted and being put into practice by new farmers. More farmers are using herbicides for weed control after observing the success on their colleagues' fields. Herbicide application reduces weed control costs by 90 percent, thus substantially reducing production costs.

Most established fields around the demonstration plots have resorted to the recommended plant population of 2,000 plants per hectare in order to combat diseases caused by high planting densities. Demo plots continue to be nuclei of technology dissemination from which farmers are coming to learn and are set to continue educating farmers beyond the life of Zim-AIED.

Matabeleland

The program continued to provide technical assistance to lead farmers hosting the banana demonstration plots at the three sites in Hwange, Bulilima and Nkayi Districts. The objective is to use the demonstration plots as sources of quality material for expanding banana plantings in the region as well as showcasing the high income potential of bananas. Farmers at Lukosi continued to harvest bunches of bananas from the demonstration plot and one woman farmer has now established her own plantation from the suckers covering 0.05 hectares. Bananas at the other sites which were set back by frost are yet to start producing.

3.6.4 Local Horticulture

Zim-AIED's promotion of high-value horticulture on targeted irrigation agribusiness hubs has contributed to the success of the commercialization of smallholder farmers. Many of the farmers have benefited from the integrated approach promoted by the program. However, widespread sustainable commercialization of horticulture at levels that benefit smallholder farmers is possible with reliable supplies of water. All irrigation schemes and wetland areas listed in Annex 5 are critical to the success of Zim AIED's targeted horticultural interventions.

Ongoing training and technical assistance has been provided to 637 farmers this quarter with 23 demonstration plots, 11 run by women lead farmers, being used to show case GAPs and promote adoption of new technologies. The overarching theme to all trainings was the sustainable transfer of skills and practices.

The main horticultural crops in the ground during the quarter under review were butternut, cabbages, onions and late summer tomatoes and potatoes. A total of 42 hectares were under horticulture crops in the Matabeleland irrigation schemes during the I quarter of which 6.8 hectares were planted to table potatoes at Makwe irrigation, an increase of 2.8ha from last season.

The current potato crop has been grown with limited support from Zim-AIED technicians; however it is worth noting that the crop was in an excellent condition as of the end of the reporting period with a potential to yield over 35 tons per hectare. Farmers continued to implement the GAPs that they learned from previous trainings with the help from the resident Agritex officers. Potato production by smallholder farmers was negligible in Matabeleland until Zim-AIED started promoting the crop through farmer run demonstration plots at Makwe, Lukosi and Fanisoni irrigation schemes in FY2013.

A hybrid variety (Escazu) cabbage crop established at Tshongokwe irrigation scheme in Matabeleland North. The variety is tolerant and resistant to diamond back moth.

Ongoing direct lending initiatives have been instrumental to facilitating farmers' early adoption of productivity enhancing technologies and GAPs in horticulture. However, some challenges were experienced during the reporting period. It was noted that many of the MFI loan officers had become reliant on Zim-AIED field managers and were not making informed decisions when it came to selection of inputs. There were also delays in input disbursements to farmers due to a shortage of finance within the MFIs and the issue of input aggregation and disaggregation. MFIs initially wanting to buy all inputs from a single dealer while on the other hand farmers demanding products which the chosen dealer did not stock. For example Untu Capital selected National Tested Seeds (NTS) in Kwekwe as their local agro dealer but NTS do not stock Prime Seed tomato variety Shiva and were not prepared to supply the competitor's seed wanting farmers to accept their own in house variety. The MFI was therefore forced to purchase appropriate inputs from several input suppliers causing delays.

To address the last issue Zim-AIED hosted a one-day agronomic training for loan officers from MFIs working with the program. Key messages during this training were the importance of crop timing on potential gross margin returns from a weather and market perspective; selection of correct seed varieties; and securing the right PERSUAP compliant pesticides in appropriate containers. Ongoing meetings were held with senior managers and owners of these MFIs to provide sustainable solutions to working with farmers post Zim-AIED. One MFI has already hired a consultant for several days a month who assists them in agronomy related decisions and farmer support.

To assist farmers in maintaining the linkages established with input suppliers, Zim-AIED is distributing to each partner IMC/input group a file containing production guidelines, budgets, farming as a family business module, copies of the IMC/group constitution, and other relevant information such as contact details for input suppliers, marketing companies and MFIs. Zim-AIED's strategy to prevent the information "disappearing" is to have an official handover ceremony so that a larger group of people in the scheme/group will hold the IMC and Agritex officers accountable so that the information is kept in the scheme offices for access by all.

3.6.5 Livestock

The Zim-AIED livestock team focused on consolidating activities and tying up loose ends in preparation for the close out of the program in September 2015. Activities included:

- Monitoring the impact of the heifer and bull loan scheme in Nkayi district of Matabeleland North.
- Monitoring livestock sales through partner fund agreements with Inala Enterprises in Nkayi district and O'Enem Meats in Mazowe district.

- Continued trainings in livestock GAPs (fodder production, Para-vet training, feedlot management, good animal husbandry practices, feedlot establishment) in and around targeted agribusiness hubs and irrigation schemes where Zim-AIED is implementing activities.
- Strengthening the institutional capacities at the feedlots and nucleus breeding centers (NBC) in Matabeleland North and Midlands.
- Linking smallholder livestock farmers to output and input markets.
- Linking smallholder livestock farmers to financiers.
- Working with the Veterinary Services Department, Agritex, LPD, private livestock companies, local authorities and Non-Governmental Organizations in promoting lead farmers and agribusiness hubs as a way of establishing a farmer-led extension system within the smallholder livestock farming sector.
- Implementing a streamlined dairy development program around four milk production areas (MPA) at Tsonzo (Mutasa district), Rusitu (Chipinge district), Gokwe (Gokwe South district) and Claremont (Umzingwane district).

3.6.5.1 Beef Production in Matabeleland North & Midlands

After successfully launching and implementing three feedlots during the first quarter of FY2015 with farmers at Fanisoni, Menyezwa, and Dandanda, Zim-AIED conducted three workshops with the farmers from the respective feedlots, the abattoirs, and other stakeholders to assess the performance of each feedlot; the challenges encountered; and draw some lessons. The major challenges highlighted concerned the selection of feedlot animals; timing and finance. Farmers were advised on the right animals for pen feeding, the right times for pen feeding, and linked to possible financiers.

In Kwekwe district, Zim-AIED trained a total of 215 farmers (45 females and 169 males) on feedlot construction and management and marketing. Topics covered included dosing, dipping, ear tagging, cattle and carcass grading, feedlot construction, feedlot budgeting, marketing options (auctions, the meat processors/abattoirs, and informal marketing).

As an introduction to pen fattening, 21 farmers drawn from the three NBCs in Nkayi (Mkhalathi, Zinyangeni and Dakamela), received training on feedlot budgeting. Real time budgets derived from high performers at Fanisoni feedlot were used to demonstrate the profitability of pen fattening. Adding pen fattening activities to the NBCs is in line with Zim-AIED's strategy of developing livestock agribusiness hubs. Farmers were encouraged to self-finance through the sale of small stock such as goats and sheep to procure the feed and veterinary drugs.

Management committees at the three NBCs (Zinyangeni, Mkhalathi and Dakamela) received training on improving their roles as office bearers and managing and maintenance of the NBC infrastructure (pens, boreholes and equipment for cattle handling). The objective was to strengthen the community ownership of the NBCs infrastructure and program to ensure inclusivity and sustainability.

Considering that quality bulls are expensive and not within the reach of most smallholder farmers, Zim-AIED is currently piloting use of artificial insemination instead of live bulls. Trainings to raise awareness of this technology and demystify its use among smallholder beef farmers were conducted at Zinyangeni, Fanisoni and Komayanga livestock hubs in Nkayi district.

Farmers are registering and paying required amounts for the first demonstration of AI. The cost for an AI complete package per animal is estimated at $35.00, which includes the hormone Estrumate, the semen straw and other accessories such as lubricants and the insemination gloves. Seven farmers from Nkuba Village ward 18 (bordering Fanisoni Irrigation Scheme) have paid a total of $200 as deposit for the insemination of their10 cows, undertaking to pay the balance of $150 during the week of the AI service. Zim-AIED has linked the farmers to semen suppliers such as Africa Breeders Services–Total Cattle Management (ABS-TCM), Livestock Identification Trust (LIT) and Matopos Research Station. In this pilot program, Matopos Research Station will be providing the AI technicians for free as part of government services.

Zim-AIED partner, Livestock Zone partnered with High Grow (a Bulawayo based company supplying day old broiler and layer chicks and stock feed) as a sales agent for its broilers chicks and feed at Nkayi Centre. Even though no cattle feeds were sold to farmers during the quarter, 25 tons of broiler feed and 2,500 broiler chicks were sold to 104 smallholder farmers from Zim-AIED operational areas of Fanisoni, Zinyangeni and Mkhalathi.

The beef market was subdued in all Zim-AIED operational areas this quarter. Beef sales through Zim-AIED partner Inala were 3,931 kilograms with a value of $16,911 compared to 7,034 kilograms valued at $24,967 in the second quarter of FY2014 (Table 3.6.5.1.1 and Table 3.6.5.1.2). The center purchased 29 cattle from 27 smallholder farmers at an average price of $550 per head.

Table 3.6.5.1.1: Output of Inala's Meat Market (January – March 2015)

Month 2015	Number of beasts slaughtered	Beef (kg)	Total Income ($)
January	11	1,448	6,445
February	8	1,114	4,986
March	10	1,369	5,480
Total	**29**	**3,931**	**16,911**

Source: Zim-AIED

Sales in the second quarter FY2015 were the lowest since Q1, FY2014 (Table 3.6.5.1.2). The drop in sales may be due to the liquidity crunch which has negatively impacted on disposable incomes leading to a reduced demand for beef. Consumers have been substituting beef with chicken.

Table 3.6.5.1.2 Beef Sales at Inala's Meat Market since inception

	# Animals Slaughtered	# Farmers	Total Sales (kg)	Total Sales ($)
Q4 2013	21	18	3,125	$10,203
Q1 2014	30	28	4,665	$16,656
Q2 2014	44	41	7,034	$24,967
Q3 2014	50	47	7,688	$24,665
Q4 2014	47	43	7,478	$28,167
Q1 2015	40	38	6,527	$25,341
Q2 2015	29	27	3,931	$16,911

Source: Zim-AIED

Inala Enterprises, in conjunction with the Nkayi RDC conducted three livestock auctions this quarter. A total of 210 cattle from 171 smallholder farmers valued at $98,630 were sold compared to 32 cattle from 32 farmers in Q1, FY2015 valued at $15,610 (Table 3.6.5.3). Average prices per beast dropped from $488 in the last quarter to the current $470. Sales through the auctions increased mainly from farmers reducing their herd sizes in anticipation of dwindling grazing due to the drought conditions. Table 3.6.5.1.3 summarizes auction sales over Q2 FY2015 and Table 3.6.5.4 since Q4 FY2013.

Table 3.6.5.1.3: Number of cattle sold at auction in Nkayi District (January – March 2015)

Month	Number of cattle sold	Value
January	48	$21,215
February	56	$25,915
March	106	$51,500
Total	210	$98,630

Source: Zim-AIED

Auction sales were higher than same period in Q2, FY2014, because farmers are disposing their herds early due to the impending drought. Average prices paid per animal were also higher at $470 compared to $447 during Q2 FY2014.

Table 3.6.5.1.4: Number of cattle sold at the Auctions in Nkayi District since FY2013

Quarter	Number of cattle sold	Number of farmers	Value

Q2 FY2015	210	171	$98,630
Q1 FY2015	32	32	$15,610
Q4 FY2014	156	110	$65,645
Q3 FY2014	157	137	$73,442
Q2 FY2014	134	99	$59,858
Q1 FY2014	127	115	$46,050
Q4 FY2013	109	94	$53,460

Source: Zim-AIED

Feedlots

Zamalokhu feedlot project in Ward 14 of Lupane district continues to grow as it is now on its third round of pen fattening since the beginning of FY2015. Zim-AIED linked these farmers to $7,400 in financing to increase their feedlot herd as well as procuring feed. The farmers bought 16 animals and the required amount of feed. The farmers have since sold and paid off the loan. However the depressed beef prices impacted negatively on their gross margins. They are currently waiting for the market prices to firm to embark on a fourth round of pen fattening. Zenzele feedlot in Ward 27 of Lupane district currently has 20 animals on standby waiting for the prices to firm before inducting the animals into the pens. The farmers had a successful first round of pen fattening in Q1 FY2015.

In Kwekwe district (Midlands), Zim-AIED helped farmers construct two feedlots at Ngondoma irrigation scheme and Takawira village. An initial 21 farmers (two females and 19 males) have been linked to Untu Financial Services for financing; National Foods for stock feed; and Koala Park and Carswell-Montana Meats for marketing. The farmers will receive a total loan of $3,286 from Untu to purchase stock feed, veterinary kits, and ear tags. Thirty-one animals will be inducted into the pens at the beginning of May 2015 for 35 days. Koala Park and Carswell-Montana Meats have guaranteed to purchase the finished animals. An average gross margin of $530 per animal is expected compared to selling in the informal market at an average price of $350 per head of cattle.

Heifer and Bull loan Scheme

Zim-AIED, in partnership with Livestock Zone and Inala, is working to improve the performance of smallholder farmer's livestock herd in Nkayi through the introduction of improved heifers and bulls. The combined program has added 151 improved heifers and 28 quality bulls in the 15 wards of Nkayi (Table 3.5.6.1.5). The heifers have since dropped 84 calves of improved breed. For the beneficiaries under Inala, the herd size has increased from 536 to 756, and average herd size per household from 9 to 15 animals. The adoption of good animal husbandry practices based on technical assistance and trainings have contributed to some of the natural increase in the herds. Herd sizes are anticipated to increase exponentially once some of the born female calves come into production.

Table 3.5.6.1.5: Zim-AIED Livestock Genetic Improvement Program

Scheme	Heifers Exchanged	# of beneficiaries	Calves born from exchanged heifers	Avg. herd size before exchange	Current herd size average	Minimum herd size before scheme	Current Herd size	Initial herd size
Inala Enterprises	91	61	38	9	15	0	756	536
Livestock Zone	60	33	46	18	N/A	5	N/A	595
Total	**151**	**94**	**84**	**12**	**N/A**	**0**	**N/A**	**1,131**

3.6.5.2 Beef production in Mazowe District, Mashonaland Central

In Mashonaland Central, Zim-AIED continued to monitor the sales of cattle, beef and beef products at O'Enem Meats as well as finding ways to recover outstanding debts by the partner. Unfortunately the

partner has not made any effort to rehabilitate his debt of $147,721 he owes the program despite getting a final demand.

Slaughters during the quarter were down by two thirds compared to Q1 FY2015. However, the volume was comparable to the same period in FY2014 (Table 3.6.5.2.1). A total of 373 cattle were sold to the abattoir from 110 smallholder livestock beneficiaries drawn from five districts of Mashonaland Central. Mazowe district continue to be the major supply of the cattle to the abattoir due to its proximity to the abattoir. Sixty-eight percent of the farmers were from Mazowe and 20 percent from Muzarabani. Sales of cattle from farmers tend to be low during this period as grazing conditions are adequate. In addition, prices of slaughter stock are normally low due to subdued demand as consumers will be experiencing low buying power following the festive season.

Table 3.6.5.2.1 Cattle slaughter through O'Enem Meats since FY2012

Year	2012				2013				2014				2015	
Quarter (Q)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Number of cattle	0	209	177	230	345	315	382	343	396	399	566	905	948	373
Number of farmers	0	120	105	165	125	135	195	180	200	204	234	270	260	110
Number of cattle sold per/farmer	0	2	2	1	3	2	2	2	2	2	2	3	4	3
Estimated Total Sales ('000$)	0	94	80	104	155	142	172	154	178	180	255	407	427	168
Income/farmer($)	0	783	758	627	1242	1050	881	857	891	880	1088	1508	1640	1525

Table 3.6.5.2.2: Total output at O'Enem Meats

Product	Q2 FY2013	Q2 FY2014	Q2 FY2015
Beef	$55,096	$60,610	$60,775
Offals	$5,897	$5,265	$6,750
Slaughter fees cattle	$7,552	$11,865	$10,296
Slaughter fees-pigs	$198	$342	0
Pork	$814	$5,503	$4,936
Hides	$524	$5,165	$3,483
Processed products	$7,552	$11,980	$18,030
Total	**$77,633**	**$100,739**	**$104,270**

3.6.5.3 Dairy

Zim-AIED continued to provide technical assistance and training to farmers on GAPs including, artificial insemination, heat detection, silage making, recordkeeping, dairy enterprise planning, fodder production and conservation techniques, and good hygienic practices for milk production. A total of 357 small scale dairy farmers drawn from Tsonzo, Rusitu, Gokwe and Claremont milk production hubs received training and technical assistance during Q2 FY2015.

Leveraging on USADF grants extended to the farmers, to create revolving funds at the MCCs for the purchase of inputs, Zim-AIED continued to work with some lead farmers who received the USADF loans to train farmers on forage production and conservation including silage and hay making. Table 3.6.5.3.1 summarizes fodder production at the different milk production centers using USADF grants.

The lead farmers are expected to harvest more silage this season compared to the previous season as a result of an improved access to loans, internal savings, and some linkages to input suppliers such as Windmill. However there is still a gap as forage is only contributing about 30 percent of the recommended feed ration. Ideally the forage component should contribute between 60 and 70 percent of the feed ration to increase the profitability of the enterprises. The lead farmers in Tsonzo

and Mayfield are adopting the zero graze concepts. More work to link dairy farmers to input suppliers, financiers and equipment suppliers is still needed to close this forage gap.

route and plans are underway to implement the irrigation. Another batch of dairy cows in Gokwe and Claremont respectively are still to have the PDs done following inseminations in March 2015.

3.6.6 Value Addition: Handling and Processing to Boost Profits

Zim-AIED is working with a number of partners and buyers to develop opportunities for value addition on commodities purchased from beneficiary farmers. Farmer participation in value addition is mainly confined to on-farm grading and hygienic handling to ensure food safety. Buyers and private companies are more involved in ensuring compliance with international food standards.

Dairy

At Tsonzo MCC, 64 percent of the total raw milk delivered by farmers (31,927 liters) in the quarter was processed at the center into natural sour milk and Amasi. Processed products from Tsonzo are sold locally and also in the neighboring towns of Mutare and Nyanga. Processed milk is sold at $1.00 per liter compared to the basic price of raw milk of $0.56 per liter.

At Gokwe MCC, 18,315 liters of raw milk delivered by farmers this quarter was processed at the Centre into cultured milk, natural sour milk and yoghurt. All processed products were sold locally.

Beef

This quarter the meat market in Nkayi experienced a drop in meat sales compared to sales from previous quarters. The drop in sales may be attributable to the liquidity crunch facing the country and low consumer purchasing power leading to a reduced demand for beef. A total of 3,931 kilograms of beef was sold at a value of $16,911. The collection center purchased 29 cattle from 27 farmers at an average price of $550 per head. Generally, consumers are buying more chicken meat than beef.

At O'Enem Meats, the contribution of processed products to turnover has increased from 9.7 percent in FY2013 to the current 17.3 percent as at the end of Q2 FY2015 (Table 3.6.5.2.2). It is also worth noting that the value of sales of processed products has increased by 50 percent on Q2 FY2014, while that of beef sales has remained almost static over the same period.

Sanders Mashoko, an AgriTrade beneficiary is undertaking a cattle pen fattening business on a medium scale in Marondera district, Mashonaland East. He started his project with only five cattle per cycle in January 2011 and by 2015, he is now maintaining between 20 and 30 beasts per cycle. He accessed his third AgriTrade loan for $20,000 in July 2014. Currently, he has 30 beasts that will be ready for sale in June 2015. He buys cattle from smallholder farmers in Mashonaland East and pen fattens them for a period not exceeding 90 days.

The client's business has registered tremendous growth as a result of accessing funds under the AgriTrade facility. His turnover has increased by more than 90 percent from a quarterly turnover of $9,000 to more than $17,000 as at the end of Q2 FY2015 and he has doubled his staff.

A third time AgriTrade borrower under MicroKing, Matambudziko Makombe, owns butchery at Mutoko Centre in Mashonaland that he opened in February 2011. With his loans, Makombe buys cattle, pigs and poultry from smallholder farmers around Mutoko Centre for slaughter and sale as meat to walk-in customers at Mutoko Business Centre. As a way to add value to his meat products, Makombe bought mince and sausage making machines.

From slaughter and trade of an average of five beasts per month in 2011, he is now trading an average of 10 beasts per month, in addition to pork and chicken products. He is selling beef meat at $4.00 per kilogram, pork at $4.50 per kilogram and broilers at $3.50 per kilogram.

Using his profits, Makombe purchased a pick-up truck to transport purchased cattle, chickens and pigs from smallholder farmers to his butchery. He now employs three permanent workers, up from one part-time employee when he started his butchery business in 2011.

3.6.7 Irrigation

Zim-AIED technicians continued to provide training and technical assistance on 27 irrigation schemes serving more than 7,070 smallholder farmers on 4,509 hectares. The program facilitated 28 training events within the targeted irrigation hubs with 542 participants (54 percent women) covering practical aspects of water management, drainage, operations and maintenance, pump servicing and procurement of spares, utility bill payments, negotiations, natural resource management (soil and water conservation), and canal cleaning and maintenance. These training events were buttressed by strong technical assistance, and support in coordinating various stakeholder meetings.

The impact of Zim-AIED's support to irrigation schemes continues to benefit farmers in skills transfer and cost savings. To date in FY2014, $241,978 has been saved by farmers on the five irrigation schemes Zim-AIED is offering technical assistance in Matabeleland. With reduced monthly bills, the farmers have been capable of keeping up-to-date with their utility payments. Key successes include:

- At Silalabuhwa irrigation scheme in Gwanda district, significant progress was made in paying the balance of $80,210 with a $22,361 payment toward the outstanding balance. In early FY2014, Zim-AIED facilitated an agreement between farmers and ZNWA for billing to be based on actual consumption and decentralized to each block. Farmers have now taken a greater level of responsibility for their costs. As at the end of Q2 FY2015 six out of seven blocks were up to date with their monthly payments to ZINWA. Productivity on the scheme is increasing due to guaranteed water reliability from farmers' good management of their water bills.
- At Moza irrigation scheme in Bulilima district, farmers had been charged the wrong rate of $13.74 per ML instead of $7.97 per ML as far back as 2013. With facilitation from Zim-AIED, farmers met and agreed with ZINWA and are now being charged the correct rate. ZINWA has agreed to deduct $7,970 from their future bills to compensate for the overbilling.
- At Tshongokwe irrigation scheme in Lupane district, farmers were being charged for more water than their storage dam could supply. Due to Zim-AIED's intervention the figure has been adjusted and will save the farmers $1,720 per year. However, ZINWA were not prepared to reimburse the farmers for previous deductions.
- ZINWA had continued to bill Fanisoni irrigation scheme farmers in Nkayi district for the period when their engine was down for the whole of 2013/14 and part of 2014/15 season. With support from Zim-AIED the farmers were able to get $6,000 deducted from their current bill.
- Farmers at Makwe irrigation scheme, Gwanda district, negotiated with ZINWA to pay monthly installments of $1,600 per month instead of $3,340.00 that ZINWA had been charging them, thereby saving $20,880 in the last twelve months to the end of Q2 FY2015.

Zim-AIED's effort to commercialize irrigation schemes is being appreciated by government. At planning meetings with the heads of departments within the Ministry of Agriculture Mechanization and Irrigation Development (MAMID) in Mashonaland East province, Walter Mugabe, the AGRITEX PAEO had this to say about Zim-AIED's engagements at Chitora irrigation schemes: "There has been so much improvement in production at Chitora 2 and 3 irrigation schemes and we hope that as you wind down you will assist the farmers through the existing structures to ensure that these market linkages continue as farmers now have access to credit and markets." In attendance at the meetings were provincial heads of the Department of Irrigation, Livestock Production and Development, AGRITEX and MAMID.

Zim-AIED continues to work with the various IMCs and farmers providing training and technical support not only focusing on practical aspects but also on strengthening their leadership and organizational capacities using the business approach. This includes putting in place systems that reward compliance and penalize errant behavior.

4. CLIMATE CHANGE AND ENVIRONMENT

Zim-AIED places environmental concerns at the core of its agricultural development interventions because sustainable farming practices are critical to long-term profitability.

Table 4.1.1.Farmers trained in natural resource management in Q2, FY2015

Subject Area	Male	Female	Total
Water management	95	137	232
Integrated pest management	188	195	383
Conservation agriculture	27	78	105
Safe Use and Disposal of Chemicals	174	148	322
Total	379	292	671

Source: Zim-AIED

Zim-AIED technicians trained 671farmers, of which 43.5 percent were women, in natural resources management (NRM) topics covering water management, integrated pest management, and conservation agriculture and safe disposal of chemicals. Training on the safe use and disposal of chemicals covered safe handling; disposal of pesticides and containers; preferential use of PERSUAP compliant chemicals; and the importance of using appropriate protective equipment when handling chemicals. Table 4.1.1 summarizes the number of farmers who attended each training session.

Chemicals

More banana farmers are adopting the herbicide technology introduced in banana fields in Rusitu and Honde Valley. This technology offers a cost effective way to control weeds and replaces traditional hoeing. Herbicides reduce weeding costs by 80 percent, help maintain soil structure, and reduce prevalence of erosion on the steep terrain that is characteristic of these two areas.

Weed pressure from incessant rains in late December 2014 and early January 2015 resulted in a buildup of weeds and diseases. A number of Zim-AIED beneficiaries used herbicides and fungicides in particular on their sugar bean crops; however few of them had the full personal protective equipment. Most of the Zim-AIED trained farmers are now using at least overalls; but many still require further training on the importance of personal protective equipment (PPE). At Chinyika irrigation scheme in Goromonzi this quarter, due to a high prevalence of disease and pest, farmers used pesticides frequently, though they only adhered to minimum PPE requirements. Generally, farmers understand the necessity of PPE but many do not even use overalls because of financial constraints. Therefore, farmers require continuous training on this topic; Zim-AIED has been involving Agritex personnel in the NRM training sessions. In addition Zim-AIED gave out PPE (gloves, respirators, and gum boots) as prizes to the winning farmers on field days arranged by farmers in agribusiness hubs in Murewa, Guruve, Headlands, Nyanga, Goromonzi and Hurungwe during the period under review.

Livestock

Zim-AIED continued to give technical advice to farmers involved with the operations of the established three feedlots, one in Nkayi and two in Lupane district. The advice mainly emphasized the need for the feedlot pens to observe sufficient exclusion zone distances from homesteads and water sources so as to avoid contamination; handling of excess manure from the feedlots and observance of good practices in handling and disposal of pesticides and drugs used in the feedlots.

Zim-AIED continued to advise livestock farmers to utilize cattle manure from the feedlot in their cropping fields as a way of recycling the nutrients. In Matabeleland this is widely used by farmers who are practicing conservation agriculture.

Technical assistance was given to farmers in Kwekwe district in siting two feedlots at Ngondoma and Takawira, which will have their first intake of animals in May 2015, in accordance with the following checklist:

- To prevent any spills from reaching the water source, the structures should distance itself from a water source. Thus, feedlots were located 30 meters away from water sources such wells and bore holes.
- Consideration of potential air pollution from the feedlots and subsequent impact on neighbors and public perception influenced the decision to place Zim-AIED feedlots further from homesteads.
- Feedlot facilities need to be sited away from areas of alluvial soils, flood plains, or karst areas.
- Feedlot operations should include manure management systems, thus preventing runoff to protected areas, and by collecting it to support crop production under crop/livestock integration as fertilizers.
- Location also needs to consider overland flow issues and downslope filtering of runoff and grazing of run-on areas to minimize pesticide loading in watershed systems.
- Hot, humid weather can easily create heat stress and possibly death of the animals. The degree of heat stress is influenced by coat color, cattle weight, animal density, ambient temperature, humidity, solar radiation, and wind speed; therefore Zim-AIED is recommending the construction of sheds or shade structures in open feedlots. For the new feedlots, farmers should construct them around shady trees to afford the animals some sun protection.

Livestock farmers also learned the safe use of veterinary products, noting the expiry dates as well as proper disposal of empty containers through incineration and disposal by burial in areas away from human and animal traffic.

Water

During this quarter, Zim-AIED collaborate, World Vision ENSURE project, completed a large-scale repair of distribution canals by replacing earth canals with concrete canals on Nhedziwa irrigation scheme. This project will enhance efficient water distribution and reduce losses during distribution.

Planting basins for water conservation has proved to be useful and widespread in Guruve. The prolonged dry spells had little effect on the crop condition in the area compared to other districts that do not follow this practice.

Good irrigation practices are essential for soil conservation. After receiving training on good irrigation management practices, 64 smallholder farmers at Musikavanhu irrigation scheme in Chipinge, Manicaland have realized the importance of soil conservation for increased yields. Farmers are using organic manure mixed with grass litter as mulch to conserve soil moisture. Since high temperatures in Chibuwe cause organic matter to decompose rapidly and mineralize, farmers will require organic manure (30 percent dry matter) annually. Organic matter improves the soil's moisture content, thus giving crops a better opportunity to survive under hot conditions or prolonged irrigation cycles. Zim-AIED is urging farmers to use maize stover as a source of organic matter. With Zim-AIED trainings on GAPs, smallholder farmers at Musikavanhu are realizing increased sugar bean yields from 1 ton per hectare to between 1.5 and 2 tons.

Farmers on most irrigation schemes continued to receive technical assistance on water management, and especially proper land levelling and the three-quarters irrigation rule (the practice of cutting off water flow after it has run three-quarters of the field length to avoid overwatering) for flood irrigation as well as sprinkler selection and sprinkler layout for pumped schemes to reduce over application of water and tail water run-off.

Land

Maintenance of mulch in banana plantations is now more visible with much of it degrading into manure thereby enabling nutrient cycling into the soil creating a healthy and stable ecosystem with greater protection against erosion.

Smallholder banana farmers in Honde Valley, Manicaland are using the branches of the invasive shrub, *Lantana camara*, as mulch for banana plants. To avoid contamination through seed dispersal, farmers only use plants with unripe fruits as mulch. Out of 245 farmers from six farmer groups trained in the last week of February 2015 in the Valley, more than 80 percent reported that they were using the shrub as mulch in their banana fields. *Lantana camara* controls the problematic nematode pest because the decomposing leaves markedly suppress population densities of root-knot development in bananas. Synthetic nematicides can also control nematodes, but if not used properly they are costly and harmful to the environment and to farmers.

Mulching technology is not only being practiced widely in bananas but many farmers are adopting it even for their maize crops. Continuous rainfall activity in Manicaland during December 2014 presented challenges ranging from excessive leaching of nutrients, erosion, and waterlogging in some cases.

Nhedziwa irrigation scheme received total rainfall around 580 millimeters within one month which has resulted in yellowing of maize and some paprika crops due to excessive leaching. Weed control also posed a challenge as hand weeding methods, which most of the smallholder farmer depend on, were impossible during the incessant rains. Zim-AIED technicians and lead farmers gave technical assistance to farmers on erosion control methods, repairing contour ridges and opening drains to prevent water logging. Farmers were also advised to ridge up their paprika crops.

Zim-AIED facilitated access to input loans by the Nedziwa paprika farmers; hence all supported farmers had ready stocks of fertilizers to mitigate nutrient loss from leaching, thus resulting in the improvement of crop health.

Although farmers in all dryland areas understand the importance of contour ridges, many farmers are not maintaining them. Also in many cases, contour ridges are not properly surveyed. Consequently, some of the contour ridges have burst and require maintenance. Zim-AIED provided affected farmers technical assistance on the importance of maintaining contours and rectifying erosion problems. Zim-AIED has engaged Agritex to assist in promoting the practice through competitions and field days, where proper maintenance of contours is a criterion for selecting the winners.

Environment Monitoring and Mitigation Plan (EMMP)

During the reporting period, a total of 73 randomly selected rural households covering all the Zim-AIED cropping and livestock operational areas were assessed for EMMP compliance. The households were first assessed and given technical assistance on the areas that required addressing in November 2014 and then in February 2015 to assess progress towards mitigation. The main topics investigated were farm land activities, integrated pest management, safe use of pesticides, fertilizer use, irrigation, livestock and farm facilities as reported below.

Farm Land

Activity	Practicing Assessment 1 (%)	Practicing Assessment 2 (%)	% Change
Soil conservation	82	90	+8
River bank cultivation	8	10	+2
Conservation tillage	74	74	0
Crop rotation	92	95	+3

A high proportion of farmers assessed practice soil conservation, crop rotations, and conservation tillage practices. The second assessment indicate an improvement in the proportion of farmers practicing soil conservation measures as well as crop rotations, with no change to conservation tillage practices. There was a marginal increase in stream bank cultivation possibly as a result of the drought as farmers try to recoup something by growing gardens closer to water sources.

The increase in soil conservation practices might be due to Zim-AIED's engagement with Agritex to assist in promoting the practice through competitions and field days, where proper maintenance of

contours is now a criterion used in selecting participants. Winners of these competitions walk away with prizes ranging from agricultural inputs, farm machinery, and PPEs.

Integrated Pest Management (IPM)

Activity	Practicing Assessment 1 (%)	Practicing Assessment 2 (%)	% Change
IPM Scouting	87	87	0
Scouting records	23	51	+28
Weeding control	97	100	+3
Cleared zones around fields	77	85	+8

An increase in farmers maintaining scouting records from 23 percent in the first assessment to 51 percent in the second indicates that that farmers understand the need to keep accounts of their scouting. From the sample of farmers interviewed, 87 percent highlighted that they practice scouting for pests and diseases.

Safe use of pesticides

Activity	Practicing Assessment 1 (%)	Practicing Assessment 2 (%)	% Change
Use of pesticides	95	95	0
Spray equipment maintained	67	90	+23
Farmer calibrate equipment	64	77	+13
Spray records up to date	28	54	+26
Pesticides locked container	64	79	+15
Use of PPE	59	67	+8
Correct disposal pesticide containers	64	90	+26
Pesticide used PERSUAP complaint	85	90	+5
Pesticides well labelled	85	92	+7

An improvement has been noted in most parameters related to safe use of pesticides, showing that farmers are implementing the GAPs learned in training sessions. Of significance are maintenance of up-to-date spraying records, correct disposal of pesticide containers, proper storage of pesticides, and proper maintenance of spraying equipment.

While 95 percent of respondents used pesticides, only 67 percent used protective clothing. In most cases the protective clothing is not full gear. However mitigation measures have been recorded. Cost and unavailability of equipment were cited as the major reasons. The program continues to liaise with local dealers near program areas to stockpile protective clothing and continues to urge farmers to utilize service providers trained by the program, as well as to pool their resources collectively to acquire more expensive equipment like masks and breathers.

However, 90 percent of farmers use PERSUAP compliant chemicals. The program continues to liaise with local agrodealers near program areas to stockpile chemicals recommended by the field team.

Fertilizer Program

Activity	Practicing Assessment 1 (%)	Practicing Assessment 2 (%)	% Change
Use of organic material-composts/manure	95	97	+2
Safe storage of fertilizers	85	90	+5

Use of organic fertilizer is on the rise in all areas. Organic fertilizers come in different forms depending on local availability of the resource. Ninety-seven percent of the farmers use one form of organic fertilizer in combination with inorganic fertilizers.

On most irrigation schemes, Zim-AIED is promoting the use of organic materials (stover, manutre, and mulch) in improving the soil's water-holding capacity as minimum tillage to improve soil moisture conservation and minimize sheet erosion. Farmers running feedlots are being encouraged to use the manure in their fields to reduce their demand for inorganic fertilizer.

Irrigation (Application to irrigation scheme only)

Activity	Practicing Assessment 1 (%)	Practicing Assessment 2 (%)	% Change
Irrigation equipment well maintained	26	38	+13
farmer checks soil moisture	33	44	+10
Rain gauge present or access to rainfall figures	33	44	+10
Water conservation measures taken	44	46	+2
Delivery canals well-maintained	10	15	+5
Drained canals well-maintained	15	18	+3
Signs of waterlogging	18	10	-8
Algal blooms in water source	3	38	+35
Operations and maintenance fund present	28	36	+8
If water source is a well, protected from contamination	23	21	-2

Interestingly, waterlogging conditions have declined, indicating that farmers are taking head to proper land levelling and following drainage and water application as advised. Farmers on most irrigation schemes continued to receive technical assistance on water management with emphasis on proper land levelling and the three-quarters irrigation rule for flood irrigation as well as sprinkler selection and sprinkler layout for pumped schemes to reduce over application of water and tail water runoff.

There was also a marked increase in farmers reporting the existence of an operations and maintenance fund. Schemes running well-resourced operations and maintenance funds have kept up with timely payment of utility bills and repairs to equipment, reducing downtime and increasing productivity.

Livestock

Activity	Practicing Assessment 1 (%)	Practicing Assessment 2 (%)	% Change
Farmer use dips/chemical remedies	50	50	0
Spraying dosing and vaccination records up to date	12	26	+14
Chemical equipment locked in labelled containers	24	32	+8
Farmer disposes chemical containers, plastic, injections correctly	47	50	+3
Farmer has incinerator	29	35	+6
Pesticides PERSUAP	50	50	0

complaint			

Commercializing the smallholder farmer livestock herds requires adoption of good animal husbandry practices, such as keeping animal records on routine practices such as dosing and vaccinations; and using dips and chemical remedies to control some of the routine diseases and pests. Even though the percentages remain low, 50 percent of farmers dip their own animals, thus controlling ticks and other livestock diseases.

Handling Facilities

Activity	Practicing Assessment 1 (%)	Practicing Assessment 2 (%)	% Change
Separate access to water for humans and animals	41	41	0
Area around water source degraded	15	12	-3
Toilets have adequate running water	9	12	+3
Adequate waste handling facilities in place	44	50	+6

Water and sanitation need improvement as indicated in the responses. Increasing the farmers' incomes and education will go a long way in mitigating these issues.

5. GENDER

GNDR 1: *Number of lead farmers in assisted programs*

GNDR 2: *Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources.*

GNDR 3: *Number of project participants in relevant leadership positions*

GNDR 4: *Proportion of target populations reporting increased agreement with the concept that males and females should have access to social, economic, and political opportunities.*

GNDR 5: *Number of farmers engaged in contract farming*

Zim-AIED continues to make great strides in providing innovative ways to enable women and youth in agriculture to reach their full potential, which shows in the achievement of all five gender targets. The strategy is to continually raise the awareness of gender-related issues with minimal adverse reaction among Zim-AIED communities.

The program actively engaged farmers through its farming as a business training, which promotes female and youth participation in all aspects of agricultural production and marketing. Not only does this training address many of the gender-related topics in a format acceptable to the whole community, but it also addresses inefficiencies in the smallholder sector through the commercialization of farms. Zim-AIED recognizes each community's uniqueness and culture in addressing gender disparities. Zim-AIED staff look for every opportunity to increase gender awareness through a variety of practical initiatives:

- Discussing and promoting gender message at all platforms where farmers meet.
- Encouraging marginalized groups to actively participate at trainings and workshops, which includes deliberately extending invitations to these groups to participate at planned meetings.
- Engaging with influential leaders and opinion leaders in communities.

- Encouraging women to demystify gender discrimination through poetry, songs, and drama primarily at large public gatherings like field days.

Women farmers participating in the Zim-AIED program continued to excel winning the main prizes in a joint Agritex and Zim-AIED organized ward field day in Murewa, Mashonaland East, where two widows were recognized as the top two best farmers in the whole of ward 25, which shortlisted farmers from 13 villages. Ottilia Fusire and Eustina Mugodhi took first and second place respectively in a competition assessing production and productivity levels. The women received prizes mobilized by the community and private sector companies that included an ox-drawn plough, fertilizers, knapsack sprayers, and protective clothing. Despite the poor season quality, the two widows are expecting a bumper harvest thanks to establishing an early maize crop after purchasing their inputs on time. In his closing remarks, local ward councilor Geshem Thandayi praised the two women, "Through hard work, these two widows got bumper harvests while most people are food insecure this year," he said. More than 100 participants including the local chief, village heads, government department representatives, Quest Financial Services, and Windmill attended the field day held at Fusire's homestead.

Fig 5.1: Eustina Mugodhi receiving her prizes at the Ward 25 field day in Murewa

Gender Empowerment

During Q2 FY2015, Zim-AIED assisted 1,277 new farmers across the country, of which 53 percent (677) were women and 12.8 percent were youth under 29 years of age, who were exposed to new technologies and gained increased knowledge in all aspects of farming including GAPs, water management, safe use of pesticides, marketing, household budgeting, and leadership skills. The overall proportion of women who have participated in Zim-AIED training to date remained at 50 percent. Matabeleland and Manicaland recorded the highest percentages of women attending Zim-AIED training sessions during the quarter at 59 and 54 percent, respectively. There were no new farmers engaged in contract farming mechanisms during the quarter, however Matanuska signed new modified contracts with the 441 banana farmers at Mutema/Musikavanhu irrigation schemes.

In Guruve, it was noted that women and youth farmers participating in the input/marketing groups purchased the largest volumes of fertilizer during the current farming season. In ward 11, three out of four of the top farmers who bought the largest volume of fertilizer from Windmill were all women who managed to purchase 64 bags among themselves. Mrs. Pauline Arufeyo who bought 24 bags, not only won the overall field day prize in her ward, but also received additional prizes from Windmill in recognition of her support. Mrs Agness Chirere from ward 11 was judged the best farmer in the whole ward. One young male farmer in ward 9, Omega Musiiwa, was among the top 3 farmers who bought the largest volume of fertilizers (10 bags) and again won prizes in the ward field day for being one of the most productive farmers during the current cropping season. Omega also received additional prizes from Windmill and Quest Financial Services.

Farmers participating in Zim-AIED initiated farmer groups have begun to appreciate the benefits of farmer groups in terms of the growing support and relationship with the private sector input suppliers and buyers; reduction in procurement costs for inputs through bulk purchases and timeous planting with the correct inputs, thus maximizing returns. Participation in the input groups has significantly contributed to increased household food security in a season which has left many homes across Zimbabwe in a deficit situation.

The increasing dominance of women in procuring inputs indicates that female farmers participating in Zim-AIED input groups are now able to raise enough money. In addition it shows a great shift in the perception of men as the sole financial manager for all transactions and instead placing greater trust in women.

In Ward 25 Murewa, a group that received training from Zim-AIED in 2014 on bulk procurement of fertilizers, was so successful that their numbers this year have increased to 315 from the previous 100 in FY2014. Significantly, 75 percent of the members are women. This large group is made up of six clusters and the members raise money in smaller groups of five or six to help fund their maize and horticulture production.

Zim-AIED encourages youth to participate in its programs either directly or through the FaaFB training. During the period under review Abigirl Kambuzuma, a teenager aged 16 from Guruve's ward 7 impressed 64 participants at a field day by her knowledge on safe use of chemicals. She participated in a session where questions were asked on safe use of chemicals and won a prize for her knowledge of the chemicals. She reported that she came to know about chemical use from her father who is a lead farmer and usually passes on the knowledge he gains from Zim-AIED trainings and technical assistance to the whole family on the safe use of chemicals.

Leadership

Of the 519 lead farmers registered in all Zim-AIED operational areas, 45 percent are women. The impact of women in leadership combined with support through gender training is critical to spearheading Zim-AIED's gender initiatives in the rural areas. The total number of program participants in relevant leadership positions is 503, with 34 percent of these being female.

The farmers at Makwe irrigation scheme in Gwanda district, Matabeleland South, held their annual general meeting during the period under review and elected new leadership for the IMC. Mrs. Sheila Sibanda was elected as the IMC chairperson. She is the outgoing secretary of the just dissolved committee. The new IMC now has 7 women (58.4 percent) and 5 men (41.6 percent).

Access to social, economic, and political opportunities

The program continues to note some significant changes in the male perception of female roles in rural agricultural enterprises:

- *Household finances*. In Mutema and Chibuwe among the 441 contracted banana farmers, women opened 232 accounts when the loan mechanism transitioned to CABS. The original contracted number of farmers with Matanuska only registered 180 women farmers. These numbers indicate that 19.9 percent of the men who originally signed up for the banana project have delegated the control of the financial transactions to their wives. Banana income forms the majority of the household income. Thus these women now have greater control of household funds.
- *Irrigation equipment*. Increasingly, farmers are buying polythene pipes for watering their banana plantations in Honde Valley with support from Virl and Agribank who are providing the capital required. Much of the irrigation is carried out by women and children using buckets; this initiative reduces the labor burden on women and increases their productivity.
- *Adoption of herbicides*. Weeding is one of the most laborious farm operations that tie up family labor for most of the season. Often women and children, who are normally assigned to this task, are unable to keep up, thus leaving some crops infested with weeds that greatly reduce potential yields. Further, this task is all consuming during the rains at the expense of other income generating/productive activities.
- As a result of Zim-AIED initiatives to economically empower women through the formation of input procurement groups and partnering with microfinance institutions, women are now able to purchase agro inputs on their own. Greater access to inputs enables women to maximize their returns and gives them more economic independence so that they can diversify their operations and invest in other enterprises and assets.

Access to finance and credit

Significant strides have been made not only in direct lending to smallholder farmers, but also increasing female farmers' access to credit.

FTF 4.5.2-13: The FY2015 target for the indicator is to reach out to 3,500 new rural households by offering technical assistance in agronomy, livestock, and irrigation; providing credit through the AgriTrade facility; and linking farmers to both input and profitable output markets. This quarter, **1,064** new households benefited from at least one of the program's interventions, bringing **the cumulative total in FY2015 to 3,919 new households**. Since inception, the program has reached a total of **140,806 households**. This quarter saw increased activity on agribusiness hubs as each hub hosted a market fair where farmers had the opportunity to interact with interested input suppliers, buyers, and microfinance institutions.

FTF 4.5.2-23: The FY2015 target for incremental sales is $59.31 million. To date, FY2015 incremental sales are at -$15.49 million but are expected to rise remarkably as the bulk of the crops were still under field production**.**

FTF 4.5 (16): Gross margin per unit of land, kilogram, or animal of selected product (crops / animals selected vary by country)

- **The estimated gross margin per hectare for maize is $165 against a target of $434.** The crop is grown by approximately 97 percent of the farmers in all Zim-AIED geographical focal areas, under both dryland and irrigation, although the majority is grown under rain fed (dryland) conditions. The expected low gross margin is due to the depressed farm gate price, depressed yields from the late start of the season, weed pressure, leaching of nutrients and the prolonged dry spell from mid-January 2015 to end of March 2015.
- **The estimated gross margin per hectare for paprika is $1,544 against a target of $2,385.** Paprika is currently grown by 1,652 Zim-AIED beneficiary farmers in Manicaland and Mashonaland West provinces. Based on the current field yield estimates of around 1,380 kilograms per hectare which are lower than the preset target of 1.66 tons per hectare due to weed pressure, nutrient leaching, waterlogging in irrigated fields and the dry spell resulting in poor crop stands.
- **The estimated gross margin per hectare for banana is currently at $1,256 against a target of $7,000.** Banana is a perennial crop, harvested multiple times in a year and current results are based on performance of the data points observed from October 2014-March 2015. This production period for banana is the lowest.

FTF 4.5.2-11: The FY2015 target for the number of enterprises and organizations receiving assistance is 957 organizations. This quarter, a total of 1,025 organizations continued to receive assistance.

FTF 4.5.2-38: Businesses working in collaboration with Zim-AIED through formal agreements invested $11,743 this quarter pushing the cumulative figure to $39,548 for FY2015 to date against a target of $250,000 for FY2015. The current macro-economic conditions; political economy and the existing investment policies are not conducive for investment by private sector players. High sovereign risk, liquidity constraints, high cost of production, and the generally low demand in the economy are some of the constraining factors.

FTF 4.5-2: This quarter, Zim-AIED's four partners (O'Enem Meats, Matanuska, Better Agriculture and Inala Enterprises) created 22 new full-time employment opportunities. Cumulative jobs created to date reached 1,314 with more jobs likely to be created during the harvest and selling period.

FTF 4.5.2-38: Businesses working in collaboration with Zim-AIED through formal agreements invested $11,743 this quarter, thereby pushing the cumulative figure to $39,548 for FY2015 to date against a target of $250,000 for FY2015. The current macro-economic conditions; political economy and the existing investment policies are not conducive for investment by private sector players. High sovereign risk, liquidity constraints, high cost of production, and the generally low demand in the economy are some of the constraining factors.

FTF 4.5.2-2: The FY2015 target for number of hectares under improved technologies is 97,000 hectares. Information collected from the gross margin survey show a total of 92,499 hectares under

improved technologies with 4,325 hectares under new and 88,174 hectares under continuing. This area is expected to rise marginally by the end of the production season.

FTF 4.5.2-5: A total of 55,044 farmers are applying improved technologies promoted by Zim-AIED. Farmers are continuing to apply technologies adopted in the last season, with new farmers coming on board.

FTF 4.5.2-7: The FY2015 target for the number of farmers receiving short-term agricultural productivity training is 10,000. This quarter 3,730 individual farmers were trained women constitute 54 percent of the total trainees.

FTF 4.5.2-42 The FY2015 target for the number of enterprises and organizations receiving assistance that apply new technologies or management practices as a result of US government assistance is 957. The result in the reporting period is 1,044 new and old enterprises.

FTF 4.5.2-29 The FY2015 target is $500,000. During the period under review $81,583 worth of loans were disbursed bringing the cumulative total for the year to $223,109 loans distributed, mainly from non-USAID funded AgriTrade partners.

FTF 4.5.2-43: This is an annual indicator and results will be availed at the end of the program.

FTF 4.5.2 (37): The target for FY2015 is 8,697 MSMEs. During the reporting period the program worked with 4,133 MSMEs. The program is thus on course to achieve the target.

FTF 01 The target for FY2014 is 92 percent of smallholder farmers under the Zim-AIED program to fall within the FTF definition of smallholders. During the reporting period, 99 percent of program beneficiaries were smallholder farmers according to the definition.

Table 9.3: Zim-AIED Sub Grant Disbursement Summary

Partner	ZIM-AIED Budget (Grant+ Recoverable)	Recoverable Amount Disbursed to date	Spent to date	Amount likely to be written off	Amount to likely to be recovered	Recovered to date	Net Expenditure to date	Balance Remaining		Percentage of Recoverables Expected
	(a)	(b)	(c)	(d)	(b- d)	(f)	(c-f)	US$ (a-c+f)	%	%
PF01 Mercy Corps	$99,996	0	$99,233		$0	0	$99,233	$763	1%	0%
F02 IRD	$99,990	0	$99,737		$0	0	$99,737	$253	0.3%	0%
PF03 O'Enem Meat	$656,760	$562,829	$655,598	$342,417	$220,412	$220,412	$435,186	$221,574	34%	100%
PF04 Matanuska	$1,592,942	$787,181	$983,914		$787,181	$787,178	$196,736	$1,396,206	88%	100%
PF05 SAT	$969,595	$0	$956,048		$0	1260	$954,788	$14,807	2%	0%
PF06 FAVCO	$298,500	$216,163	$266,678		$216,163	$163,052	$103,626	$194,875	65%	75%
PF07 Better Agriculture	$142,968	$141,129	$146,075	$0	$141,129	$ 74,470.00	$71,605	$71,363	50%	53%
PF08 Capsicum	$635,396	$387,292	$635,396	$279,401	$107,891	$107,891	$527,505	$107,891	17%	100%
PF09 Prime Seed	$368,250	$261,288	$347,749	$210,026	$51,262	$51,262	$296,487	$71,763	19%	100%
PF10 Agriseeds	$569,800	$36,010	$38,085		$36,010	$36,010	$2,075	$567,725	100%	100%
PF11 Inala Enterprises	$146,053	$105,479	$160,548		$105,479	$86,459	$74,089	$71,964	49%	82%
PF12 Technology Fund	$150,000	$81,150	$102,146		$81,150	47,023	$55,123	$94,877	63%	58%
Total	**$5,730,250**	**$2,578,521**	**$4,491,206**	**$831,844**	**$1,746,677**	**$1,575,017**	**$2,916,190**	**$2,814,060**	**49%**	**90%**

ANNEX 1: SNAPSHOTS

Smallholder technology adoption increases farmer's income

The use of hermetic storage cocoons helps smallholder farmers preserve their grain quality without the use of pesticides.

Photo by Fintrac

Givemore Murodza and his wife with their five-ton storage cocoon. Thanks to the new technology, Murodza and his wife are able to earn more income from their maize crop.

"Although maize is a staple food crop grown by almost every farmer in Zimbabwe, it can provide a good source of income through the use of improved storage technologies."

Givemore Murodza,
Smallholder farmer

After Zim-AIED, in partnership with the World Food Programme and GrainPro, introduced hermetic storage cocoons, Givemore Murodza from Hurungwe in Mashonaland West earned $2,100 from the sale of 5 tons of maize grain.

In July 2014, Murodza received a 5-ton storage cocoon worth $2,100 that enabled him to store his surplus maize grain without using pesticides and managed to get good prices during the maize deficit window.

Previously, Murodza used pesticides such as *Deltamethrin and Pirimiphos Metyl*, to control post-harvest storage pests. He would treat his grain every three months as reinfestation occurred. This would increase the risk of increasing pesticide residue than the recommended limits.

Thanks to the use of the 5-ton hermetic cocoon, Murodza was able to store his maize grain for six months without the use of any pesticides, with the grain completely protected from storage pests including the notorious larger grain borer.

"Thanks to the hermetic storage technology, my maize grain retained its original grain quality that saw me earn good prices on the market as the grain quality was as good as it had just been harvested," Murodza said.

With technical assistance from Zim-AIED, he was able to operate the storage facility easily. Taking advantage of the maize deficit period (December 2014), Murodza managed to sell his 5 tons of maize at a lucrative price of $420 per ton to buyers from Harare, against a price of $180 per ton during peak maize harvest periods.

Using his additional income, he purchased 1.2 tons of fertilizers to establish 3 hectares of maize and 0.5 hectares of tobacco for the 2014/15 season. He also managed to pay tuition fees for his three children without any difficulties.

"Although maize is a staple food crop grown by almost every farmer in Zimbabwe, it can provide a good source of income through the use of improved storage technologies," he said.

Murodza plans to continue using this storage to take advantage of the maize deficit window each season and increase his income earning potential.

After seeing the results of using the storage technology, surrounding farmers in Murodza's community plan to pool together resources to purchase communal cocoons.

Overall, this partnership has assisted seven farmers by providing hermetic storage cocoons worth $16,900 total.

Repeat loans boost smallholder farmer's enterprise

Smallholder farmers need access to credit to fully commercialize farming activities.

Photo by Fintrac Inc.

Trouble Jenyura proudly stands in his plot of ripening peas. With access to quality inputs, Jenyura has increased productivity and income, and is expanding his plot to include high-value horticulture crops.

To increase incomes of smallholder farmers through increased agricultural productivity, USAID's Zimbabwe Agricultural Income and Employment Development (Zim-AIED) program is working with microfinance institutions such as Virl Financial Services to facilitate access to credit for smallholder farming activities.

Trouble Jenyura from Nyaitenga irrigation scheme in Mutoko, Mashonaland East is now a productive farmer thanks to accessing an input loan from Virl under the Zim-AIED direct lending initiative.

In January 2014, Jenyura received his first agricultural loan valued at $300 comprising seed, fertilizer, and chemicals.

"Using the inputs I accessed through Virl, I established 0.25 hectares of peas and 0.25 hectares of carrots. This was my first time to fully utilize the 0.5 hectares allocated to me at the scheme, since the dollarization of our country's economy," he said.

The 10-hectare scheme has 20 horticultural farmers growing peas, carrots, cucumber, onions, green pepper, butternut, leafy vegetables, and groundnuts. Each farmer owns a 0.5 hectare plot.

As a result of accessing timely inputs, Jenyura's productivity improved by around 50 percent – from 8 to 12 tons per hectare for peas, and from 10 to 16 tons per hectare for carrots.

Jenyura sold his produce at Mbare Msika, the largest fruit and vegetable market in Harare, selling at average prices of $1.00 per kilogram for peas and $0.60 per kilogram for carrots. After selling 90 percent of the peas and 75 percent of the carrots he earned more than $2,400.

"Zim-AIED has enabled us to undertake farming on a full-time basis by linking us to financial institutions."

Trouble Jenyura
Smallholder farmer

With this income, Jenyura repaid his loan in full and received a second input loan worth $420. He established 0.25 hectares of green pepper, 0.125 hectares of leafy vegetables, and another 0.125 hectares of carrots. Determined to grow his cropping enterprise and expand, Jenyura fully repaid his second loan and is now on a third loan of $710.

"We are very happy with the way we are working with these smallholder farmers from Nyaitenga and we will continue to finance them as long as their business conduct is good," said Lynn Gwenzi of Virl.

Jenyura is now able to pay tuition fees for his children, pay hospital bills, and invest in other basic needs for his family. Through access to credit, smallholder farmers like Jenyura are able to commercialize their farming activities and increase their incomes and improve smallholder livelihoods.

Through direct lending initiatives, four non-USAID funded institutions (Virl Financial Services, Untu Financial Services, Agribank, and Quest Financial Services) have provided $467,990 worth of financial loans to 1,766 farmers across Zimbabwe.

ANNEX 2: PERFORMANCE INDICATOR SUMMARY TABLE

#	Indicator	Source	Unit	Baseline	FY2014	FY2015					
					Actuals	Target	Q 1	Q 2	Q 3	Q 4	Total
1	# of rural households benefiting from USG assistance	FTF 4.5.2-13	HH	0	26,274	8,500		3,108			3,108
2	Net income per household from target agricultural products	Custom (AIED 1)	US$	483	1,725	1,800		1,630			1,630
3	Value of incremental sales attributed to FTF implementation	FTF 4.5.2-23	**Value of incremental sales**	**(3,379,669.31)**	**87,568,391**	**59,312,403**		**(15,491,845)**			**(15,491,845)**
			Total Number of direct Beneficiaries	**22,038**	**136,154**	**125,000**		**140,806**			**140,806**
			Total Baseline sales (US$)	4,137,569.31	4,137,569.31	4,137,569.31		4,137,569			**4,137,569**
			Total Reporting year sales (US$)	757,900.00	91,705,960.76	95,450,892.00		16,042,210			**16,042,210**
			Total Reporting Year Volume of sales (mt)	16,318.43	200,394.57	209,693.47		39,619			**39,619**
			Bananas	(28,249.00)	13,043,771.12	14,169,610.60		1,271,923			**1,271,923**
			Adjusted Baseline sales (US$)	28,249.00	28,249.00	358,219.40		28,249			**28,249**
			Reporting year sales (US$)	-	13,072,020.12	14,527,830.00		1,630,142			**1,630,142**
			Reporting Year Volume of sales (mt)	282.49	47,979.42	53,232.00		6,038			**6,038**

			Number of Direct Beneficiaries	-	3,893.00	3,893.00		3,893			**3,893**
			Maize	(2,742,980.00)	33,221,179.67	20,558,540.15		(16,444,707)			**(16,444,707)**
			Adjusted Baseline sales (US$)	2,742,980.00	2,742,980.00	16,635,536.85		2,742,980			**2,742,980**
			Reporting year sales (US$)	-	35,964,159.67	37,194,077.00		2,197,082			**2,197,082**
			Reporting Year Volume of sales (mt)	13,715.00	109,524.82	113,270.00		9,155			**9,155**
			Number of Direct Beneficiaries	-	95,605.00	95,605.00		107,135			**107,135**
			Paprika	-	1,054,185.11	1,369,357.00		930,298			**930,298**
			Adjusted Baseline sales (US$)	757,900.00	757,900.00	442,728.00		757,900			**757,900**
			Reporting year sales (US$)	757,900.00	1,812,085.11	1,812,085.00		1,402,770			**1,402,770**
			Reporting year Volume of sales (mt)	757.90	969.53	970.00		738			**738**
			Number of Direct Beneficiaries	2,650.00	1,548.00	1,548.00		1,652			**1,652**
			Beans and pulses	-	11,238,382.86	8,062,429.53		218,431			**218,431**
			Adjusted Baseline sales (US$)	63,195.00	63,195.00	3,692,346.47		63,195			**63,195**
			Reporting year sales	-	11,301,577.86	11,754,776.00		1,607,842			**1,607,842**
			Volume of sales (mt)	63.20	10,243.45	10,654.00		1,467			**1,467**
			Number of Direct Beneficiaries	-	33,596.00	33,596.00		12,642			**12,642**
			Beans, fresh	-	30,724.17	30,562.00		5,440			**5,440**
			Adjusted Baseline sales (US$)	9.00	9.00	171.00		9			**9**
			Reporting year sales	-	30,733.17	30,733.00		5,582			**5,582**
			Volume of sales (mt)	0.03	49.49	49.50		9			**9**
			Number of Direct Beneficiaries	-	19.00	19.00		16			**16**

			Bird's eye chilis	-	252,529.62	254,856.00		256,160			**256,160**
			Adjusted Baseline sales (US$)	40.00	40.00	9,560.00		40			**40**
			Reporting year sales	-	252,569.62	264,416.00		264,600			**264,600**
			Volume of sales (mt)	0.05	363.15	380.00		379			**379**
			Number of Direct Beneficiaries	-	239.00	239.00		211			**211**
			Cabbage	-	155,136.82	143,930.44		58,929			**58,929**
			Adjusted Baseline sales (US$)	1,392.00	1,392.00	14,866.56		1,392			**1,392**
			Reporting year sales	-	156,528.82	158,797.00		67,559			**67,559**
			Volume of sales (mt)	4.64	453.71	454.00		397			**397**
			Number of Direct Beneficiaries	-	267.00	267.00		155			**155**
			Chili Pepper	-	335,204.15	328,316.00		302,050			**302,050**
			Adjusted Baseline sales (US$)	750.00	750.00	30,300.00		750			**750**
			Reporting year sales	-	335,954.15	358,616.00		331,000			**331,000**
			Volume of sales (mt)	1.50	646.84	690.00		662			**662**
			Number of Direct Beneficiaries	-	404.00	404.00		386			**386**
			Cowpeas	-	242,994.04	209,183.54		(16,351)			**(16,351)**
			Adjusted Baseline sales (US$)	6,265.00	6,265.00	40,075.46		6,265			**6,265**
			Reporting year sales	-	249,259.04	249,259.00		23,150			**23,150**
			Volume of sales (mt)	7.83	498.52	499.00		44			**44**
			Number of Direct Beneficiaries	-	1,951.00	1,951.00		1,923			**1,923**
			Groundnuts	-	2,370,555.32	(1,525,265.43)		(5,141,717)			**(5,141,717)**
			Adjusted Baseline sales (US$)	28,420.80	28,420.80	3,924,241.43		28,421			**28,421**

			Reporting year sales	-	2,398,976.12	2,398,976.00		124,223			**124,223**
			Volume of sales (mt)	47.37	3,489.68	3,490.00		116			**116**
			Number of Direct Beneficiaries	-	19,883.00	19,883.00		26,681			**26,681**
			Butternuts - Other	-	129,898.91	115,611.50		148,624			**148,624**
			Adjusted Baseline sales (US$)	2,025.00	2,025.00	16,312.50		2,025			**2,025**
			Reporting year sales	-	131,923.91	131,924.00		165,499			**165,499**
			Volume of sales (mt)	4.05	495.32	495.00		613			**613**
			Number of Direct Beneficiaries	-	145.00	145.00		150			**150**
			Peppers	-	11,508.00	10,368.00		(74,880)			**(74,880)**
			Adjusted Baseline sales (US$)	12.00	12.00	1,152.00		5,442			**5,442**
			Reporting year sales	-	11,520.00	11,520.00		-			**-**
			Volume of sales (mt)	0.03	29.60	30.00		-			**-**
			Number of Direct Beneficiaries	-	96.00	96.00		6,240			**6,240**
			Potatoes	-	31,440.49	14,209.04		(86,157)			**(86,157)**
			Adjusted Baseline sales (US$)	5,441.51	5,441.51	22,672.96		5,442			**5,442**
			Reporting year sales	-	36,882.00	36,882.00		-			**-**
			Volume of sales (mt)	10.27	48.06	48.00		-			**-**
			Number of Direct Beneficiaries	-	25.00	25.00		95			**95**
			Soybeans	-	1,634,417.71	1,591,186.99		(28,609)			**(28,609)**
			Adjusted Baseline sales (US$)	2,888.00	2,888.00	46,119.01		2,888			**2,888**
			Reporting year sales	-	1,637,305.71	1,637,306.00		21,579			**21,579**
			Volume of sales (mt)	7.22	3,520.95	3,521.00		46			**46**

			Number of Direct Beneficiaries	-	5,701.00	5,701.00		6,204			**6,204**
			Sweet potatoes	-	6,045,836.79	6,482,302.70		(34,808)			**(34,808)**
			Adjusted Baseline sales (US$)	809.00	809.00	65,203.30		809			**809**
			Reporting year sales	-	6,046,645.79	6,547,506.00		-			**-**
			Volume of sales (mt)	4.50	18,508.78	20,042.00		-			**-**
			Number of Direct Beneficiaries	-	6,206.00	6,206.00		3,313			**3,313**
			Tomatoes	-	1,212,922.02	1,552,524.91		1,279,073			**1,279,073**
			Adjusted Baseline sales (US$)	423,705.00	423,705.00	152,471.09		423,705			**423,705**
			Reporting year sales	-	1,636,627.02	1,704,996.00		1,639,085			**1,639,085**
			Volume of sales (mt)	1,412.35	3,573.25	3,723.00		3,152			**3,152**
			Number of Direct Beneficiaries	-	1,556.00	1,556.00		3,674			**3,674**
			Cattle	-	16,557,704.64	5,944,679.87		1,864,457			**1,864,457**
			Adjusted Baseline sales (US$)	73,488.00	73,488.00	10,686,513.13		73,488			**73,488**
			Reporting year sales	-	16,631,192.64	16,631,193.00		6,562,097			**6,562,097**
			Number of animals	-	37,539.00	37,539.00		16,803			**16,803**
			Number of Direct Beneficiaries	-	26,757.00	26,757.00		11,762			**11,762**
4	Volume of production by program beneficiaries	Custom (AIED 2)	**Total volume of production (Tons)**	**22,369**	**347,969**	**361,733**		**255,644**			**255,644**
			Banana (Tons)	174.00	54,265	59,248		6,569			**6,569**
			Paprika (Tons)	72.00	1,128	1,128		738			**738**
			Maize (Tons)	21,600.00	240,062	246,240		191,054			**191,054**
			Beans (Tons)	97,3	14,666	15,220		6,107			**6,107**
			Bird's eye (Tons)	0.05	363	380		379			**379**
			Cabbage (Tons)	4.64	561	638		639			**639**

			Chillie Pepper (Tons)	1.50	647	690		662			**662**
			Cow Peas (Tons)	21.07	663	664		191			**191**
			Groundnuts (Tons)	256.19	8,326	8,601		13,163			**13,163**
			Butternuts (Tons)	10.97	253	278		708			**708**
			Fine Beans (Tons)	0.03	18	18		10			**10**
			Peppers (Cherry) (Tons)	0.03	37	37		-			**-**
			Potatoes (Tons)	9.52	53	53		260			**260**
			Soybeans (Tons)	16.50	4,566	4,577		4,360			**4,360**
			Sweet Potatoes (Tons)	202.07	20,748	22,269		21,212			**21,212**
			Tomatoes (Tons)	1, 623	1,610	1,692		9,592			**9,592**
5	Value of production by program beneficiaries	Custom (AIED 3)	**Total Value of production (US$)**	**4,810,622**	**128,513,569**	**133,310,255**		**77,651,954**			**77,651,954**
			Banana (US$)	40,000	14,784,660	16,142,033		1,773,699			**1,773,699**
			Paprika (US$)	80,000	2,108,715	2,108,715		1,209,335			**1,209,335**
			Maize (US$)	3,880,000	78,828,150	80,856,690		45,852,960			**45,852,960**
			Beans (US$)	97,309	16,181,325	16,792,538		6,691,665			**6,691,665**
			Bird's eye (US$)	40	252,570	264,416		264,600			**264,600**
			Cabbage (US$)	1,392	193,601	223,209		108,614			**108,614**
			Chillie Pepper (US$)	750	335,954	358,616		331,000			**331,000**
			Cow Peas (US$)	16,857	331,623	331,894		101,229			**101,229**
			Groundnuts (US$)	153,714	5,723,936	5,912,997		14,084,806			**14,084,806**
			Butternuts (US$)	5,487	67,321	74,067		191,225			**191,225**
			Fine Beans (US$)	9	11,312	11,332		6,145			**6,145**
			Peppers (Cherry) (US$)	12	14,400	14,400		-			**-**
			Potatoes (US$)	5,045	40,980	40,980		-			**-**
			Soybeans(US$)	6,601	2,123,460	2,128,365		2,049,056			**2,049,056**

			Sweet Potatoes (US$)	36,372	6,778,201	7,275,006		-			**-**
			Tomatoes (US$)	487,034	737,362	774,998		4,987,620			**4,987,620**
6	Area grown per target product	Custom (AIED 4)	**Total Area Grown**	**16,950**	**137,402**	**140,077**		**119,629**			**119,629**
			Banana (Ha)	100.00	1,975	1,975		1,057			**1,057**
			Paprika (Ha)	100.00	680	680		535			**535**
			Maize (Ha)	16,000.00	105,325	108,000		95,527			**95,527**
			Beans (Tons)	97.30	12,684	12,684		5,089			**5,089**
			Bird's eye (Ha)	0.10	45	45		51			**51**
			Cabbage (Ha)	2.55	18	18		12			**12**
			Chillie Pepper (Ha)	1.00	86	86		94			**94**
			Cow Peas (Ha)	30.50	759	759		486			**486**
			Groundnuts (Ha)	246.30	7,819	7,819		10,590			**10,590**
			Butternuts (Ha)	2.30	28	28		52			**52**
			Fine Beans (Ha)	0.01	3	3		2			**2**
			Peppers (Cherry) (Ha)	0.01	10	10		-			**-**
			Potatoes (Ha)	3.60	4	4		10			**10**
			Soybeans(Ha)	20.37	4,087	4,087		3,239			**3,239**
			Sweet Potatoes (Ha)	121.00	3,711	3,711		2,189			**2,189**
			Tomatoes (Ha)	225.17	169	169		696			**696**
7	Average yields per target product	Custom (AIED 5)	Banana (tons/ha)	1.74	27.48	30.00		6.22			**6.22**
			Paprika (tons/ha)	0.72	1.66	1.66		1.38			**1.38**
			Maize (tons/ha)	1.35	2.28	2.28		2.00			**2.00**
			Beans (tons)	1.00	1.16	1.20		1.20			**1.20**
			Bird's eye (tons/ha)	0.50	8.12	8.50		7.50			**7.50**
			Cabbage (tons/ha)	1.82	30.80	35.00		53.24			**53.24**
			Chillie Pepper (tons/ha)	1.50	7.49	8.00		7.04			**7.04**

			Cow Peas (tons/ha)	0.69	0.87	0.88		0.39			**0.39**
			Groundnuts (tons/ha)	1.04	1.06	1.10		1.24			**1.24**
			Butternuts (tons/ha)	4.65	9.09	10.00		13.62			**13.62**
			Fine Beans (tons/ha)	3.00	6.19	6.20		5.12			**5.12**
			Peppers (Cherry) (tons/ha)	3.00	3.85	3.85		-			**-**
			Potatoes (tons/ha)	2.63	14.24	14.24		26.00			**26.00**
			Soybeans(tons/ha)	0.81	1.12	1.12		1.35			**1.35**
			Sweet Potatoes (tons/ha)	1.67	5.59	6.00		9.69			**9.69**
			Tomatoes (tons/ha)	7.20	9.51	10.00		13.78			**13.78**
8	Gross margin per unit of land, kilogram, or animal of selected product	FTF 4.5-16	Maize (US$/ha)	37	433	434		165			**165**
			Paprika(US$/ha)	416	2,385	2,385		1,544			**1,544**
			Banana(US$/ha)	220	6,058	7,000		1,256			**1,256**
			Beans (US$/ha)	690	775	775		814			**814**
			Bird's eye (US$/ha)	50	4,303	4,570		4,440			**4,440**
			Cabbage ((US$/ha)	173	9,582	11,199		8,008			**8,008**
			Chillie Pepper (US$/ha)	120	2,796	3,058		2,710			**2,710**
			Cow Peas (US$/ha)	502	239	240		10			**10**
			Groundnuts (US$/ha)	362	611	635		1,209			**1,209**
			Butternuts (US$/ha)	1,172	1,585	1,828		2,842			**2,842**
			Fine Beans (US$/ha)	-50	1,797	1,797		1,026			**1,026**
			Peppers (Cherry)(US$/ha)	100	823	823		-			**-**
			Potatoes (US$/ha)	502	6,568	6,568		-			**-**
			Soybeans(US$/ha)	36	367	368		480			**480**
			Sweet Potatoes (US$/ha)	271	1,457	1,457		-			**-**

			Tomatoes (US$/ha)	541	3,348	3,570		6,156			**6,156**
			Cattle (US$/ha)	#DIV/0!	431	431		354			**354**
9	# of food security private enterprises (for profit), producers organizations, water users' associations, women's groups, trade and business associations, CBOs receiving USG assistance	FTF 4.5.2-11	Enterprises Organizations Groups Associations	0	1,030	957		1,025			**1,025**
10	# of buyer and market-related firms benefiting directly from interventions	Custom (AIED 9)	Buyers/ Firms	0	292	30		19	-		**19**
11	Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation	FTF 4.5.2-38	US$	0	768,400	250,000		11,743			**11,743**
12	# of firms (excluding farms) or CSOs engaged in agricultural and food security-related manufacturing and services, now operating more profitably because of USG assistance	FTF 4.5.2-43	Firms/CSOs	0	3	5		-			**-**
13	# of jobs attributed to FTF implementation	FTF 4.5-2	FTE	0	1,294	1,110		1,314			**1,314**
14	# of hectares	FTF	New Ha	0	19,074	3,000		4,325			**4,325**

	under improved technologies or management practices as a result of USG assistance	4.5.2-2	Continuing Ha	0	74,066	94,000		88,174			**88,174**
			Total	0	93,140	97,000		92,499			**92,499**
15	# of farmers and others who have applied new technologies or management practices as a result of USG assistance	FTF 4.5.2-5	Total	0	98,534	105,000		55,044			**55,044**
16	# of individuals who have received USG supported short term agricultural sector productivity or food security training	FTF 4.5.2-7	Individuals	0	28,832	10,000		3,730			**3,730**
17	# of private enterprises, producers organizations, water users' associations, women's groups, trade and business association & CBOs that applied new technologies or management practices as a result of USG assistance	FTF 4.5.2-42	Enterprises/ Organizations/ Groups/ Associations	0	1,030	957		1,044			**1,044**
18	Value of agricultural and rural loans	FTF 4.5.2-29	$ US	790,000	2,138,284	500,000		74,583			**74,583**
19	# of beneficiaries receiving credit	Custom (AIED 6)	Individuals	1,002	4,468	2,020		275			**275**

20	Value of cost-sharing with alliance partners	Custom (AIED 7)	$ million	0	0.34	0		0.14			**0.14**
21	# of individuals receiving training in business skills	Custom (AIED 10)	Farmers/ Borrowers	0	19,854	2,500		2,558			**2,558**
22	# of MSMEs receiving business development services from USG assisted sources	FTF 4.5.2-37	MSMEs	0	26,480	8,697		4,133			**4,133**
23	# of individuals receiving training in (NRM)	Custom (AIED 11)	Individuals	0	8,589	3,000		671			**671**
24	Number of lead farmers in assisted programs	GNDR 1	Individuals	538	980	700		519			**519**
			Females	216	559	350		231			**231**
			Males	322	421	350		288			**288**
25	Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources	GNDR 2	Percent	48%	52%	55%		53%			**53%**
			Numerator	23,951	13,679			1,668			**1,668**
			Denominator	50,315	26,443			3,146			**3,146**
26	Number of project beneficiaries in relevant leadership positions	GNDR 3	Participants	455	940	483		503			**503**
			Females	159	165	182		332			**332**
			Males	296	305	273		171			**171**
27	Proportion of target populations reporting increased agreement with the concept that males and females	GNDR 4	Proportion / Percent	79%	86%	89%		86%			**86%**

	should have access to social, economic, and political opportunities										
28	Number of farmers engaged in Contract farming	GNDR 5	Farmers	0	3,205	1,000		-			-
			Female	0	1,348	500		-			-
			Male	0	1,857	500		-			-
29	Estimated number and percentage of FTF beneficiaries holding 5 hectares or less of arable land or equivalent units of livestock	FTF01	Total estimated number of smallholders		21,887	3,450		3581			3581
			Total estimated percentage of beneficiaries		83	92		96			96
			Land								
			Estimated number of beneficiaries		6,416	1,035		1611			1611
			Estimated percentage of all beneficiaries		29	30		45			45
			Livestock								
			Estimated number of beneficiaries		15,471	2,415		1,970			1970
			Estimated percentage of all beneficiaries		71	70		55			55

ANNEX 9: CORRECTION FACTOR ON ZIM-AIED GROSS MARGIN DATA POINTS

Zim-AIED started collecting gross margin data of various value chains, crops and livestock, in FY2012 through to FY2014 at least three times each year from farmer beneficiaries. The first round visit would be in February, second round in May, and third round in August. The timing of each visit follows major activities in crop production such as planting, harvesting and in-between planting and harvesting to curb farmer memory loss. Completeness of collected data against the following qualities; validity, reliability, precision, timeliness, and integrity increases from first round to the third or final round of the survey. In the first round, data on partial production costs, area under production, total arable land and adoption of some of the good agricultural practices (GAPs), the estimated production, and carry over sales, from previous season's crop are collected. In the second round, additional, cost of production that occurred between the first and the second visit, estimated production, which is more accurate than the former, carry over sales, from previous season's crop and actual production on a selected value chains from a proportion of the farmers (see Table 1) randomly selected to participate in the survey are collected. In the third or final round for the year, data on actual production, sales from current season, post-harvest technologies are collected.

Table 1: Proportion of Farmers with Actual Production on Selected Value Chains

Value Chain	Sample of farmers (n)	Proportion of Farmers with Actual Production
Maize	456	76%
Groundnuts	119	77%
Sugar beans	103	45%
Tobacco	82	82%
Paprika	53	55%
Cowpeas	34	68%
Sweet potatoes	34	18%
Bambaranuts	29	66%
Soybeans	28	79%
Tabasco Chillies	21	10%
Cotton	19	47%
Tomatoes	18	50%
Millet	14	71%
Peas	13	46%
ABE Chillies	11	45%
Carrots	10	60%
Sunflower	8	63%
Butternuts	7	86%
Cabbage	5	60%

Source: Zim-AIED Gross Margin Data, 2014

Although value chains such as tobacco, cotton are not directly promoted by Zim-AIED and their gross margins not reported quarterly or annually to USAID/ Zimbabwe mission, they contribute to household (net) income. Based on FY2014 survey Zim-AIED data, 60 percent and above of the interviewee had harvested or shelled the following value chains; maize, groundnuts, cowpeas, bambaranuts, soybeans, millet, carrots, sunflower, butternuts, cabbages and tobacco by May (second round). About 55 percent of the farmers had actual production on paprika and 50 percent on tomatoes. For sugar beans, sweet potatoes, tabasco chilies, peas, ABE chilies and cotton, less than 50 percent of farmers that harvested or shelled by the second round visit of the survey.

Following the budget cut in 2013 on Zim-AIED, the program currently projects that funding will be exhausted by July 2015, just short of the September 2015 end date of the program. The implication of

this development is such that gross margin data collection will only be up to May, 2015 or second round visit and no routine third round data collection in August, 2015. To get complete gross margin data or extrapolate the second round data to full year, a verified correction factor (see Table 2) obtained through analysis of data from past years will be applied on FY15 round 2 dataset to get a full season's data set on production, and sales data points. The verified correction factor(s) will be applied only to farmers without actual production by the second round of the survey (refer to Table 1).

Table 2: Correction Factors

Value Chain	Correction Factors[12] on;			
	Production (kg)	Production Cost (US$)	Volume of Sales (Kg)	Price ($/kg)
Butternuts	-0.20	0.61	0.01	0.00
Cabbage	-0.03	0.53	0.04	0.13
Cotton	0.04	0.07	0.43	-0.03
Cowpeas	-0.16	0.01	0.38	-0.03
Green maize	-0.15	0.00	0.37	-0.01
Groundnuts	-0.25	0.10	0.06	0.10
Leafy vegetables	-0.40	1.95	0.75	0.10
Maize	-0.09	0.10	0.34	-0.03
Paprika	-0.15	0.04	0.03	-0.01
Popcorn	0.28	0.00	0.00	0.00
Bambara nuts	-0.15	0.08	1.06	1.01
Sorghum	-0.35	0.66	0.08	0.04
Soya Beans	-0.27	0.06	0.23	0.04
Sugar Beans	-0.18	0.11	0.36	0.04
Table Potato	-0.89	0.00	0.24	-0.07
Tobacco	-0.12	0.16	0.55	-0.02
Tomatoes	0.54	0.33	0.42	-0.02

Source: Computations based on FY2013 and FY2014 Zim-AIED Survey Data

Overall, on production figures, estimated production was greater than actual production except for value chains with multiple harvests such as tomatoes and cotton. For production costs and volume of sales, third round figures were higher than second round figures because round three were recorded costs and sales and were cumulative for the year while second round were partial. For prices, farmers received lower prices after harvesting field crops such as cowpeas, paprika, maize, green mealies, table potatoes, tomatoes, cotton and tobacco due to flooding of the product and in some cases supply exceeding demand. For most horticultural crops, prices increased from the second round to the third round as farmers abandoned irrigation schemes and focused on dryland production creating a market window, less was supplied than what was actually needed.

Correction factors will be applied on partial data points collected in the second round of the survey to assume full dataset or generate data that could be collected in the third round of the survey. For example, if farmer X is estimated to harvest 2 tons of maize, incurred $300 on production costs, sold 0.1 tons of maize at $290 per ton by the second round, the actual production would be 9 percent less than the estimated production (1.82 tons); production costs would be 10 percent above round two cost ($330); volume of sales, 34 percent above round two recorded sales (0.134 tons) and prices, 3 percent less than market prices that prevailed by round two ($281 per ton).

[12] These depict the extent by which estimates have to be corrected in order to make them more or less actual figures