



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



Zimbabwe Livestock Development Program Quarterly Report #2 (October-December 2015)



USAID
FROM THE AMERICAN PEOPLE



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ACRONYMS

ABS-TCM	African Breeders Services Total Cattle Management Ltd.
CIRIS	Client Impact and Results Information System
DLPD	Division of Livestock Production and Development
DVS	Department of Veterinary Services
EMMP	Environmental Monitoring and Management Plan
FAO	Food and Agriculture Organization
FMD	Foot & Mouth Disease
GAPs	Good Agricultural Practice(s)
GAHPs	Good Animal Husbandry Practice(s)
HH	Household
MAD	Minimum Acceptable Diet
MCC	Milk Collection Center
M&E	Monitoring and Evaluation
MFI	Microfinance Institution
NGO	Nongovernmental Organization
NRM	Natural Resource Management
PERSUAP	Pesticide Evaluation Report and Safer Use Action Plan
RDC	Rural District Council
USAID	United States Agency for International Development
WASH	Water, Sanitation, and Hygiene
Zim-AIED	USAID Zimbabwe Agricultural Income and Employment Development Program
Zim-AHEAD	Zimbabwe Applied Health Education and Development

I. EXECUTIVE SUMMARY

This quarterly report (October-December 2015) is the second for the Feed the Future Zimbabwe Livestock Development program that is funded by USAID/Zimbabwe under contract AID-613-C-15-00001 and implemented by Fintrac Inc. The following report summarizes activity achievements, results, and impact from the second quarter of this 60-month contract. During this period, program activities primarily concentrated on completing and analyzing the baseline survey and setting up field activities and operations. Challenges remained from Foot and Mouth Disease (FMD) and the poor state of rangelands due to the drought in the 2014/15 agricultural season; and these problems were compounded by the erratic, poorly distributed, and inadequate rains between October and December 2015. At the start of the 2015/16 agricultural season, livestock in all target areas faced severe food and water shortages with cattle deaths reported in most areas. Farmers have curtailed dryland fodder production because crop establishment has failed or performed poorly because of inadequate moisture.

Direct technical assistance from the Feed the Future Zimbabwe Livestock Development program addresses humanitarian and food security needs to not only increase smallholder farmers' incomes, but also generate income for others in the community through employment in the agricultural sector. Program interventions raise production and productivity; add value to products; expand market access; and increase the availability of credit and finance at all levels in the value chain. In addition, participating households receive training in and are exposed to good nutrition and hygiene practices. The program is also promoting social inclusion of women and youth, and environmental stewardship.

To maximize outreach and ensure sustainability, intervention partners with commercial companies and non-governmental organizations (NGOs). Partnerships with financial organizations, private sector traders, processors, input suppliers, and technical service providers constitute a key part of the program approach to commercializing small-scale beef and dairy farmers. Negotiations continued with identified potential partners for cost-sharing partnerships.

Specifically during the period under review:

- The program completed a baseline survey among households in the targeted communities; based on these findings and an analysis of the results, the program adjusted targets and technical areas for intervention.
- A needs assessment for LEAD Trust - the organization implementing the Feed the Future Zimbabwe Crop Development program - was conducted to identify capacity building requirements and a work plan was completed for implementation.
- The meetings to finalize the MOUs with Shurugwi local authorities were conducted and introductory meetings continued to be held with farmers, local leadership, other donor programs, and some buyers of dairy and beef products in all target areas.
- The team continued with economic and market analysis to help identify specific activities for each target site. On-the-ground assistance included training, technical assistance, credit, input, market linkages for beef farmers after pen fattening of their cattle, fodder production, disease control, and supplementary feeding.
- A draft gender strategy was submitted for discussion and approval to USAID/Zimbabwe.
- The subcontract with African Breeders Services – Total Cattle Management (ABS-TCM) was submitted to USAID/Zimbabwe for approval.
- By the end of the period under review, 750 beef and dairy rural households, or 856 smallholder farmers, have benefitted from Feed the Future Zimbabwe Livestock Development program interventions since inception in June 2015. Of these households, 33 percent (250 households) are engaged in dairy farming and 11 percent (28 households) are small-scale commercial farmers. Communal dairy and beef households constitute 96 percent of the program beneficiaries to date.

- Smallholder farmers working with the program delivered 83,928 liters of milk valued at \$43,494 to the three milk collection centers (MCCs) as well as processors Dendairy and Kershelmar in program focus areas during the quarter compared to 85,838 liters worth \$47,106 in the last quarter. Deliveries declined because of low production due to lack of adequate feed and some cows drying off.
- Compared to 170 pen-fattened animals valued at \$55,554 sold in the previous quarter, this time around 302 pen-fattened animals from 204 farmers valued at \$174,662 were sold from 26 Feed the Future Zimbabwe Livestock Development program's supervised feedlots to formal buyers. Gross earnings per animal were \$578.35 compared to \$326.78 in the last quarter due to firming prices and improvement in quality.
- A total of 571 beef farmers, of which 45 percent were women, participated in beef training sessions across the nine beef focus areas during the period under review. Pen fattening, good animal husbandry practices (such as supplementary feeding), and beef marketing were among the most popular topics with farmers in this quarter.
- The program promoted fodder production by setting up 86 demonstration plots on farmers' fields to showcase good agricultural practices (GAPs) in fodder production for wider adoption by surrounding farmers. Training and technical assistance helped establish forage sorghum, velvet bean, leucaena, and mulberry plantations. However, in all focus areas, low rainfall severely affected fodder establishment.
- A total of 285 dairy farmers (170 males and 115 females) received training and technical assistance on animal nutrition and health, quality control, marketing, and GAHPs. Fifty-six percent of the dairy farmers trained were from Gokwe South. The training and technical assistance aims to increase milk yields from the baseline figure of 2.61 liters per day per cow to above 12 liters per day per cow; normalize the lactation periods to about 300 days; and set the calving intervals to between 12 and 13 months.
- The program facilitated access to credit for 194 farmers, who altogether received loans from financial institutions worth \$51,194.32. Women constituted 31 percent of these farmers, and accessed \$13,671.71 in loans that primarily went to pen fattening their animals. Of note, four male dairy farmers received credit worth \$2,000 for improving their paddocks.
- In this quarter, 204 feedlot farmers sold 302 of their value-added animals through Sabie Meats, Montana Carswell Meats, Koala Park, and Heads and Hooves. Of the 204 farmers, 32 percent were women. Forty-seven milk producers were linked to MCCs (Gokwe and Umzingwane) to ease aggregation and for better handling of milk; of which, 38 percent were female farmers.
- Feed the Future Zimbabwe Livestock Development program is deliberately promoting the uptake of productive and profit-enhancing technology among female farmers. This quarter, women accounted for 32 percent (65) of the 204 program beneficiaries who adopted and applied pen-fattening technology to increase the value of their marketed beef animals. Results indicate that women excelled in this technology compared to their male counterparts as they were meticulous in putting into practice the training and technical assistance they received from the program.

Going forward, planned activities include 1) finalizing and initializing the subcontract with ABS-TCM; 2) finalizing the gender implementation strategy; 3) drafting a nutrition strategy; 4) training and technical assistance to beneficiaries at the program's 86 centers of excellence; and 5) implementing the first phase of the annual survey to collect data on performance indicators.

2. INTRODUCTION

2.1 BACKGROUND

Feed the Future Zimbabwe Livestock Development program began June 23, 2015 and runs through June 22, 2020; over this time, the program works to reduce rural poverty and improve household food security among smallholder producers through increased production, productivity, and market linkages in the beef and dairy cattle sectors. Activities to commercialize small-scale beef and dairy farmers on communal and non-contested land include the following:

- Raising efficiencies in beef and dairy production systems.
- Facilitating access to inputs, finance, and credit.
- Linking producers to local, national, regional, and international buyers.
- Training farmers to adopt good agricultural, business, and animal husbandry practices.
- Training farmers to adopt good nutrition and hygiene practices.
- Strengthening the capacity of local organizations to implement agricultural development programs.

The program is building demand for smallholder-produced beef and dairy products by focusing on quality, continuity of supply, and cost-competitiveness. Feed the Future Zimbabwe Livestock Development program also collaborates with Feed the Future Zimbabwe Crop Development and other donor programs to provide specialized technical support to produce nutritious crops that sustainably increase the availability of these foods for beneficiary households. Fintrac is implementing Feed the Future Zimbabwe Livestock Development program with subcontractor ABS-TCM in addition to assistance from local private companies, NGOs, the Department of Livestock and Veterinary Services (DLVS), and other government departments involved in the beef and dairy value chains.

2.2 GOALS & OBJECTIVES

Primarily, Feed the Future Zimbabwe Livestock Development program seeks to reduce poverty and increase food security among 3,000 beef and 2,000 dairy smallholder farmers in Natural Regions III, IV, and V. The program focuses on increasing production, productivity, and market linkages of beef and dairy farmers to improve their food security, incomes, and nutrition status. The program will accomplish this goal through the achievement of three intermediate results:

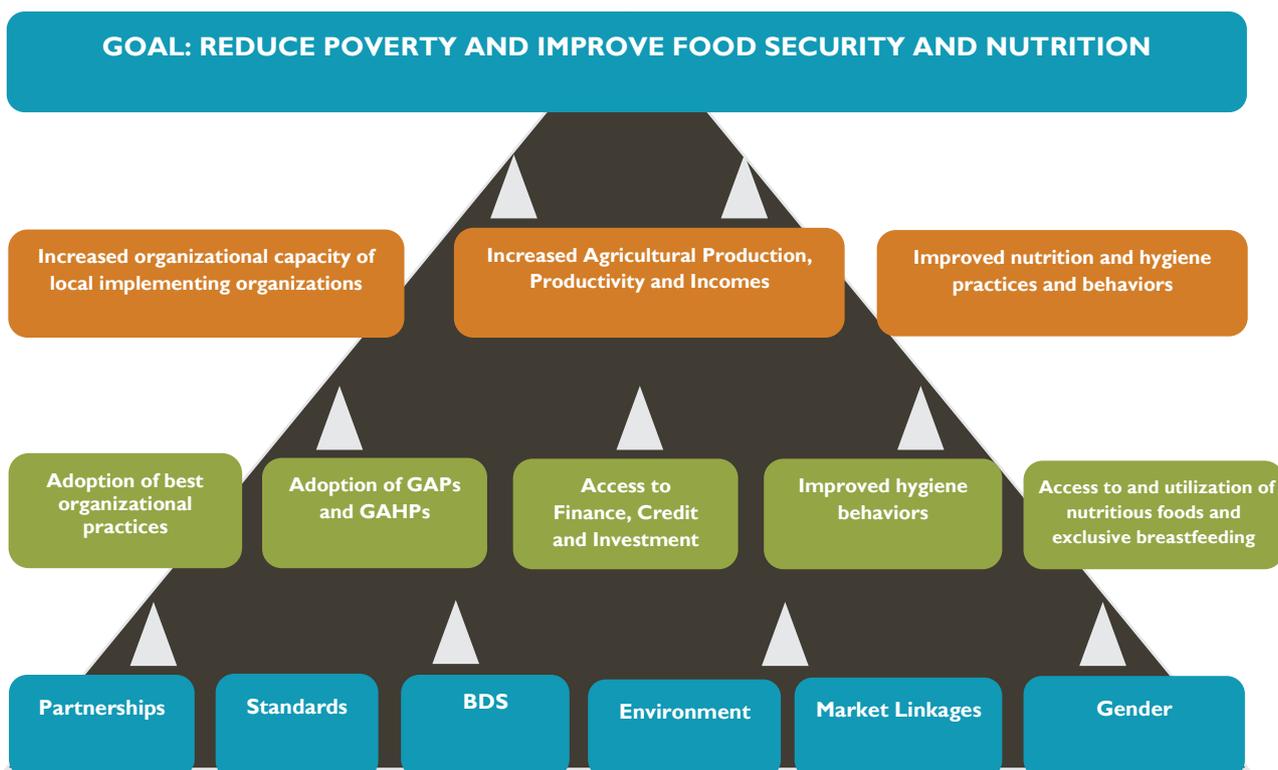
1. **Increased agricultural production and productivity** of targeted beef and dairy smallholder farmers through greater market linkages; access to appropriate credit and finance; adoption of GAPs and technologies; and investment.
2. **Improved hygiene and nutrition-related behaviors** through training on good household nutrition, hygiene, and sanitation practices, and exclusive breastfeeding.
3. **Increased organizational capacity of local organizations** to implement USAID and agricultural development programs via capacity building and transferring skills; sharing best practices; and attracting new investments in private sector organizations partnering with both Feed the Future Zimbabwe Livestock Development and Feed the Future Zimbabwe Crop Development.

The Feed the Future Zimbabwe Livestock Development program concentrates on profitable beef and dairy production and income generation through appropriate and sustainable interventions that improve the livelihoods of vulnerable livestock owners. These activities will move rural families from subsistence to commercial farming and increase their net worth through investment in cattle and other on-farm productivity-enhancing assets.

2.3 IMPLEMENTATION APPROACH

The results framework below summarizes the Feed the Future Livestock Development program implementation approach. Interventions will sustainably raise production, productivity, and incomes from smallholder beef and dairy systems; improve hygiene practices and behaviors; increase the availability and utilization of nutritious foods; expand market access and availability of credit and finance across value chains; add value to beef and dairy products; and boost agricultural investment as well as adoption of best organizational practices by local implementing organizations.

Figure 1: Results Framework Summary



To maximize outreach and ensure sustainability, the Feed the Future Zimbabwe Livestock Development program is partnering with commercial companies, NGOs, and relevant government departments to carry out interventions. Partnership with relevant government departments enabled easy entry into target areas and entails sharing of technical information and training platforms. In addition these departments form part of the program’s exit strategy.

Developing commercial partnerships through a national network of agribusinesses strengthens farmers’ access to markets with fair prices; provides working capital and finance at realistic rates; supplies inputs efficiently; and provides extension and training to growers as an embedded cost. The partnerships focus on establishing service provision options at market rates. During its first half of the year, the program has been engaged in the following:

- Identifying high-potential and viable beef and dairy agribusiness hubs in targeted regions.
- Ensuring competitiveness of smallholder beef and dairy sectors by improving productivity and efficiency.
- Facilitating and fostering linkages with formal and informal buyers to increase demand for smallholder beef and dairy products. Activities also seek to improve quality, increase quantity, and assure reliability of supply and logistics.

- Creating more sustainable markets and harnessing new private investment in smallholder beef and dairy by supporting innovative business models in the formal and informal sectors.
- Bringing more market players to engage livestock farmers in identified agribusiness hubs.
- Expanding the availability of inputs for beef and dairy farmers throughout identified agribusiness hubs by creating commercial partnerships with input suppliers and introducing low- to no-cost interventions that improve productivity, animal health, and nutrition.
- Increasing access to finance for all value chain actors to facilitate investment.
- Improving overall household health and nutrition through improved dietary diversity (e.g. by incorporating livestock products) and trainings on household nutrition and proper sanitation.
- Building the capacity of local businesses, producer groups, and other community institutions through the program and its sister program, Feed the Future Zimbabwe Crop Development.
- Providing demand-driven training and technical assistance to address site-specific challenges.
- Identifying opportunities that allow program beneficiaries to generate high returns with minimal resources.

2.4 TARGET GEOGRAPHIC ZONES

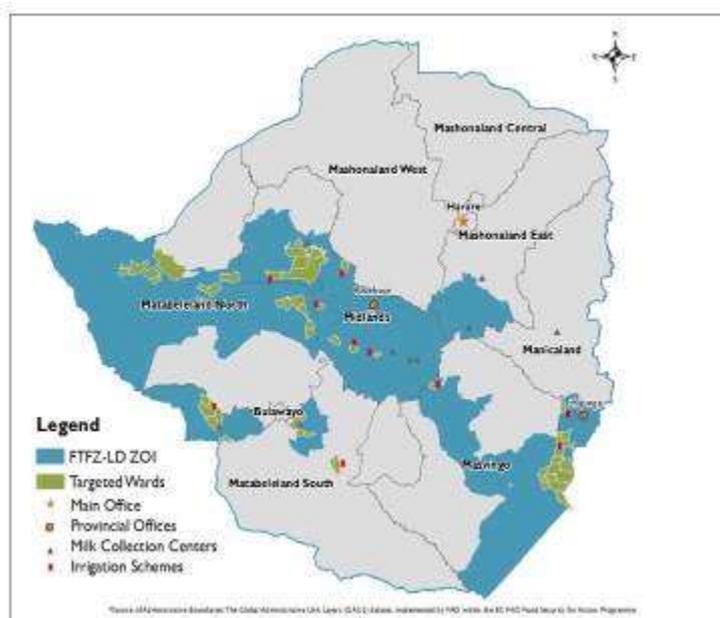
Districts and preliminary wards for beef and dairy interventions were selected based on the number of households engaged in beef and dairy activities; potential for market development through private sector alliances; proximity to Development Food Assistance Programs and other donor activities; baseline income and herd size requirements; potential for a high number of female-headed households; and logistical and operational cost.

Program interventions have targeted irrigation schemes, ZimAIED-established beef and dairy hubs, and existing MCCs in Natural Regions III, IV, and V. The program will capitalize on the established interactions of farmers, buyers, input suppliers, and service providers around these hubs to strengthen links between farmer groups, buyers, input suppliers, and service providers. Technical assistance will further cement these linkages into strong business partnerships.

During the quarter under review, the team implemented program activities at sites in Hwange, Lupane, Nkayi, (Matabeleland North) Umzingwane, (Matabeleland South) Gokwe South, Kwekwe, Shurugwi, Chirumhanzu (Midlands), and Chipinge (Manicaland) districts and met with farmers, local leadership, other donor programs, and private sector players. Combined with its ongoing economic and market analysis, the team continued to refine its interventions for each target site. Selection of the most promising sites for beef and dairy will continue in the next quarter, and will be guided by the program's overarching commercialization approach:

- Market potential – accessibility, size, growth potential, buyer interest
- Rapid expected returns on labor and capital
- Capital requirements and access to credit and finance
- Availability of infrastructure and facilities

Figure 2: Geographic Focus Areas



- Availability of capable commercial partners
- Overall competitiveness in product cost and quality – including analysis of grower knowledge and climatic and agronomic factors

3. ACTIVITIES

Activities occurred in Gokwe South, Kwekwe, Chirumhanzu, Shurugwi, Gweru, Umzingwane, Chipinge, Hwange, Lupane, and Nkayi. Interventions included completing the baseline survey in all areas; setting up 86 farmer (32 female and 54 male) run centers of excellence to conduct farmer field schools; arranging producer credit for pen fattening and dairying; providing marketing assistance; fostering group development; and supplying technical assistance.

Dry weather conditions and intermittent rains in all focus areas characterized the reporting period. Cumulative rainfall received at the end of the quarter did not adequately support crop life. Table 3 below summarizes the cumulative rainfall in program focus areas up to the end of December 2015. The low rainfall in all districts affected fodder establishment, the main planned activity for the quarter. Many districts either never commenced planting of the fodder crops or aborted the process because of inadequate moisture. Most crops that were established succumbed to the dry spell, except for the velvet beans in Umzingwane.

Table 3: Total Rainfall Received (mm) and its Effects on Fodder Demonstration Plots in Program Areas, October – December 2015

Area	Rainfall Received by Month (mm)			Cumulative to Date (mm)	Fodder Crop Status	Comment
	Oct.	Nov.	Dec.			
Shurugwi	5	20	30	55	Germination was 65% due to inadequate moisture; maize was approaching permanent wilt	Crops were approaching permanent wilting point; resuscitated by the wet spell received in first week of January 2016,
Musikavanhu irrigation	2	25	6	33	Fodder in Musikavanhu growing well	Only sun hemp was established in the irrigation scheme; other crops outside the irrigation are a write off
Chisumbanje	2	41	43	86	Not yet planted	Farmers still struggling to successfully establish a crop.
Umzingwane	1	41.6	25.5	68.1	Planted velvet beans only	Velvet beans have managed to survive the dry spell
Gokwe wards 13,15,16, and 19	0	32.5	97.9	130.4	Poor - Fair germination and crop stand poor to fair in most areas	Dry spell with uneven germination and wilting crop
Nkayi	12.5	127	34	173.5	Germination was good but establishment poor given prolonged dry spell	Some demonstration plots successfully recovered from the effects of the dry spell
Lupane	3	63	35	101	Germination was good but establishment poor given prolonged dry spell	Some demonstration plots successfully recovered from the effects of the dry spell
Chirumhanzu	0	30	92	122	No fodder demos established	

The following sections describe Feed the Future Zimbabwe Livestock Development activities briefly in nine categories that reflect our technical approach and objectives:

- Beneficiaries – number, gender balance, geographical spread
- Sales and incomes – amount of new money earned by beneficiaries

- Productivity – direct interventions in beef and dairy
- Market access – research, analysis, planning, and new business development
- Finance and credit – microcredit support for smallholder beef and dairy farmers
- Nutrition and hygiene activities
- Gender – cross-cutting activities to support the inclusion of women and youth
- Environment
- Organizational capacity development

3.1 BENEFICIARIES & GEOGRAPHICAL COVERAGE

A total of 750 rural households or 856 smallholder farmers¹ have benefited from interventions since June 2015 (Table 3.1.1). Of these households, 33 percent (250 households) are engaged in dairy farming and 11 percent of the dairy households (28 households) are small-scale commercial farmers. Communal dairy and beef households constitute 96 percent of the program beneficiaries to date.

Farmers received training and technical assistance in beef and dairy production and productivity, and were linked to credit and input suppliers and markets. Women constituted 43 percent of beneficiaries, with 69 percent of the women participating in beef activities compared to 29 percent in communal dairy activities and 2 percent in small-scale commercial dairy. Section 5 describes in further detail how the program aims to include more women and youth in profitable enterprises traditionally dominated by men.

Table 3.1.1: Geographical Distribution of Households, July - December 2015

Value Chain	District	Natural Region	Q1 (July - Sept)			Q2 (Oct - Dec)			Cumulative		
			Female	Male	Total	Female	Male	Total	Female	Male	Total
Beef	Chipinge	V	88	48	136	17	86	103	105	134	239
	Gokwe South	III	2	1	3	69	55	124	71	56	127
	Hwange	IV	0	0	0	2	2	4	2	2	4
	Kwekwe	III	1	1	2	5	14	19	6	15	21
	Lupane	IV	0	1	1	4	14	18	4	15	19
	Nkayi	IV	1	1	2	13	17	30	14	18	32
	Shurugwi	III	0	2	2	11	20	31	11	22	33
	Umzingwane	IV	2	0	2	8	15	23	10	15	25
Sub Total			94	54	148	129	223	352	223	277	500
Communal Dairy	Chipinge	V	0	1	1	4	9	13	4	10	14
	Chirumhanzu	III	0	0	0	16	18	34	16	18	34
	Gokwe South	III	3	9	12	65	67	132	68	76	144
	Shurugwi	III	0	1	1	2	15	17	2	16	18
	Umzingwane	IV	5	7	12	0	0	0	5	7	12
Sub Total			8	18	26	87	109	196	95	127	222
Small-scale Commercial Dairy	Gokwe South	III	0	0	0	2	18	20	2	18	20
	Shurugwi	III	0	0	0	0	1	1	0	1	1
	Umzingwane	IV	3	3	6	1	0	1	4	3	7
Sub Total			3	3	6	3	19	22	6	22	28
Grand Total			105	75	180	219	351	570	324	426	750

Source: CIRIS

¹ The number of rural households was derived from the number of individual farmers trained. The annual survey should verify that 14 percent of households trained have at least two trainees from the same household.

Beef interventions occurred in all districts covered by the baseline survey, except Gweru as it is targeted for the next quarter. Dairy activities concentrated in the traditional smallholder dairy areas (Gokwe South, Shurugwi, and Umzingwane). The program is also formulating strategies to move into the non-traditional dairy areas of Chipinge South and Chirumhanzu.

With six months into program implementation, Feed the Future Zimbabwe Livestock Development is 33 percent (250 households) shy of its annual beneficiary target of 750 rural households for beef. As for dairy, the program has reached 50 percent of its 500 rural household target (Table 3.1.2). The program is on course to meet its beef and dairy beneficiary targets. The last two quarters of FY2016 will concentrate on enrolling more dairy farmers by identifying potential beef-dairy households,² resuscitating dormant dairy producers,³ and identifying marketing opportunities (e.g. building capacity of existing MCCs to deliver quality service to members and engaging new market players).

Table 3.1.2: Beneficiary Households Variance

Value Chain	FY16 Target	Achievement to date	Variance
Beef	750	500	-250 (-33%)
Dairy	500	250	-250 (-50%)
Total	1,250	750	-500 (-40%)

Source: CIRIS

Table 3.1.3 details the types of assistance beneficiaries received from the program. A total of 856 smallholder farmers were trained as individuals and in groups, of which 43 percent were women. Among the trainees, 571 received beef trainings and 285 received dairy trainings. These trainings covered farmers in Chipinge, Chirumhanzu, Gokwe South, Hwange, Kwekwe, Lupane, Nkayi, Shurugwi, and Umzingwane districts. Also, some farmers were linked to input and product markets and 194 farmers received input loans (credit) for pen fattening and dairy production.

Table 3.1.3: Program Interventions, June - December, 2015

Activities	Beef Farmers			Dairy Farmers			Combined Unique Farmers		
	Females	Males	Total	Females	Males	Total	Females	Males	Total
Trainings and TA	255	316	571	115	170	285	370	486	856
Farmers receiving credit	60	130	190	0	4	4	60	134	194
Farmers linked to buyers	65	139	204	18	29	47	83	168	251

Source: CIRIS & FTFZ-LD

3.2 SALES AND INCOME

Meaningful and sustainable commercialization of smallholder farmers occurs when markets are available; farmers must develop the confidence to transact in these markets and then can generate profitable sales and incomes sustainably. The program has continued to focus on expanding market access for beef and dairy products from smallholder farmers to enhance farmers' confidence in seeking market intelligence and lucrative markets. Various activities sought to improve competitiveness by facilitating value chain relationships between private sector players and farmers. Interventions in this quarter included:

² Beef-dairy households produce milk from their existing beef herds for nutritional household purposes and sell surplus milk to increase household incomes. These farmers learn good dairy practices to increase current milk production.

³ These farmers are currently not delivering milk to MCCs (mainly because their cows have dried up or died) but remain registered; they are the first target beneficiaries because strategies such as artificial insemination, purchase of in-calf dairy cows, improved fodder production, and technical assistance on GAHPs can boost their milk production.

- Facilitating linkages between beef farmers in Gokwe South, Chirumhanzu, Shurugwi, Umzingwane, Kwekwe, Nkayi, Lupane, and Chipinge with abattoirs (Carswell-Montana, Heads and Hooves, Koala Park, and Sabie Meats).
- Holding discussions with milk processors Kershelmar and Dendairy to explore possibilities of establishing milk supply arrangements from smallholder dairy farmers. Both processors can absorb more milk as they are operating below their installed capacities. They are willing to partner with the program to increase on-farm milk production and productivity; provide a guaranteed market for any milk meeting their quality standards and are willing to collect on farm if production levels are 3,000 liters per collection which can be after every 48 or 72 hours.
- Facilitating short-term credit for financing pen fattening activities and fodder production.
- Initiating assessments and discussions with MCCs to improve viability by building capacity.

3.2.1 Milk and Dairy Products

Farmers delivered 83,928 liters of milk valued at \$43,494 to the three MCCs and processors Dendairy and Kershelmar in program focus areas during the quarter, compared to 85,838 liters worth \$47,106 in the last quarter (Table 3.2.1.1). Sales from the MCCs amounted to \$72,236 compared to \$73,775 in the previous quarter. Feed the Future Zimbabwe Livestock Development program has initiated discussions with processors Dendairy and Kershelmar to establish linkages with the MCCs and farmers. Further, to engage the MCCs in capacity building, the program began assessments and meetings with the three participating MCCs.

Table 3.2.1.1: Recorded Sales of Dairy Products in Activity Areas

	Jul – Sept 2015		Oct – Dec 2015		Buyer
	Quantity (lt)	Value(\$)	Quantity (lt)	Value(\$)	
i) Raw milk deliveries by farmers					
Gokwe MCC (lt)	29,669	\$17,208	30,598	\$16,829	Local, Dendairy
Shurugwi MCC (lt)	617	\$358	592	\$296	Local
Umzingwane	55,552	\$29,540	52,738	\$26,369	Dendairy/ Kershelmar/ Umzingwane MCC
Totals	85,838	\$47,106	83,928	\$43,494	
ii) Raw milk sales					
Gokwe MCC (lt)	1,680	\$1,616	7,522	\$4,137	Local, Empress Mine, Nkayi, Dendairy
Shurugwi MCC (lt)	617	\$617	0	\$0	Local
Umzingwane (lt)	52,874	\$28,294	50,291	\$30,174	Dendairy/ Kershelmar
Totals	55,171	\$30,527	57,813	\$34,311	
iii) Sour milk sales					
Gokwe MCC (lt)	6,627	\$13,254	5,976.50	\$11,774	Local, Empress Mine, Nkayi
Shurugwi MCC (lt)	0	\$0	592	\$592	Local
Umzingwane (lt)	2,562	\$1,281	2,447	\$1,224	Local, Spar
Totals	9,189	\$14,535	9,016	\$13,590	
iv) Cultured Milk					
Gokwe MCC (lt)	11,571	\$11,571	7,411	\$8,745	Local, Empress Mine, Nkayi
Shurugwi MCC (lt)	0	\$0	0	\$0	
Umzingwane (lt)	0	\$0	0	\$0	
Totals	11,571	\$11,571	7,411	\$8,745	
v) Yogurt					
Gokwe MCC (lt)*	165	\$549	21	\$67	Local, Empress Mine, Nkayi
Shurugwi MCC (lt)	0	\$0	0	\$0	

Table 3.2.1.1: Recorded Sales of Dairy Products in Activity Areas

	Jul – Sept 2015		Oct – Dec 2015		Buyer
	Quantity (lt)	Value(\$)	Quantity (lt)	Value(\$)	
Umzingwane (lt)	0	\$0	0	\$0	
Totals	165	\$549	21	\$67	
vi) Whey					
Gokwe MCC (lt)	10,291	\$2,058	9,668	\$1,934	Local, Empress Mine, Nkayi
Totals	10,291	\$2,058	9,668	\$1,934	

**The MCC increased its raw milk deliveries to Dendairy during the quarter and production of yogurt was reduced in the process since raw milk intake remained almost the same*

Source: FTFZ-LD & various

In the non-traditional dairy areas of Chipinge and Chirumhanzu, milk production derives mainly from beef animals for home consumption; farmers sell some surplus raw or sour milk through the informal market/farm gate sales, but these transactions are not recorded.

3.2.2 Beef Product Sales

Local auctions in addition to private sales to abattoirs, middlemen, and program feedlots accounted for most of the beef animal sales in program focus areas during the quarter. Given the 2014/2015 drought and the poor start to the 2015/16 rainfall season, most sales were forced to avoid poverty deaths. The continued presence of FMD in some wards of Chipinge, Shurugwi, Gokwe South, and Umzingwane depressed sales as cattle movement within and around districts was restricted.

In Chipinge district, three companies, namely Sabie Meats, Koala Park, and Carswell Montana Meats actively purchased cattle from smallholder farmers, which was a great improvement compared to the previous quarter when the only buyers were Sabie Meats and informal traders.⁴

Sabie Meats and Koala Park buy based on live mass and cold-dressed mass, while Montana Meats only examines live mass. Koala Park offered better prices on paper than the other two formal buyers; however their payout per animal was the lowest. The lowest payout is because of their use of buyers/middlemen with whom they have no formal contractual obligations regards the commission charged and buying price from the farmer. These buyers, in a bid to maximize their commission, offer the lowest price behaving almost like the *makoronyeras*. The program is working to have farmers deliver and sell their animals directly to Koala bypassing the appointed buyers. .

Table 3.2.2.1: Recorded Live Animal Sales in Chipinge District Focus Areas, October - December 2015

Buyer	# Cattle	Value (\$)	Value/animal (\$)
Montana/Carswell	25	8,000	320
Koala Park	31	4,500	145
Sabie Meats	24	3,600	150
Other buyers*	580	37,525	65
Total sales	660	53,625	81

* Includes middlemen, local butcheries.

Source: FTFZ-LD & various

Other buyers outside the three abattoirs purchased the bulk, 87 percent, of cattle on offer during the period under review (Table 3.2.2.1). Formal buyers purchased each cattle at between \$145 and \$320, whereas the informal *makoronyera* buyers paid an average of \$65 per animal, which indicates the level of desperation among farmers to sell off their starving animals. The Feed the Future Zimbabwe Livestock Development program is seeking to reduce this discrepancy by linking the smallholder farmers directly to formal markets.

⁴ Koala Park and Carswell Montana opened slaughter facilities in Chiredzi (an FMD zone) during the quarter, enabling them to buy and move cattle from Chipinge (an FMD zone) to Chiredzi.

Nkayi Rural District Council (RDC) and Inala Auctions organized auctions in Nkayi district and sold 271 cattle valued at \$128,366 compared to 731 head of cattle valued at \$348,952 during the previous quarter (Table 3.2.2.2). Generally the body condition score for most cattle deteriorated as a result of poor grazing and water challenges.

Table 3.2.2.2: Cattle Sales from Auctions in Nkayi, July - December 2015

Month	Cattle Sold	Farmers	Total Sales (\$)
July	300	285	\$142,500
August	217	198	\$104,160
September	214	200	\$102,292
Total	731	683	\$348,952
October	111	96	\$55,241
November	110	91	\$50,525
December	50	40	\$22,600
Total	271	227	\$128,366
Totals (Q1 & Q2)	1,002	910	\$477,318

Source: Nkayi RDC & Inala Auctions

The number of animals sold dropped compared to the previous quarter in anticipation of utilizing the animals (especially oxen) for draught power. Forced sales due to drought reduced slightly as the veld improved with rains received, but since the season has not performed to expectation, the veld and rangeland have failed to fully recover.

In Lupane district, farmers continued to shy away from the RDC-organized auctions mainly because of lack of competitiveness as few buyers participate. Moreover, the auctions are erratic and thus poorly patronized by buyers, which make them unreliable and uncompetitive. As a result, farmers place more faith in the middlemen than organized council auction sales. Out of the eight council cattle sale pens, only two at Gomoza and St. Paul's hold infrequent auction sales. Only 10 animals valued at \$9,720 were sold through the district council auctions during the quarter.

The program is working with Kusile RDC and the Division of Livestock Production and Development (DLPD) to improve the conduct of council auctions by facilitating a livestock *indaba* (meeting) scheduled for the first week of February 2016. Discussions will hopefully better organize future livestock sales in Lupane district.

In Umzingwane district, the FMD quarantine has restricted cattle sales and auctions. The outbreak of anthrax in one ward of the district in December 2015 and the general poor condition of cattle on offer further reinforced this restriction.

At other locations, in Gokwe South the district recorded total sales through auction of 1,168 head of cattle by 1,160 farmers for a total value of \$459,100 during the period under review. In Shurugwi cattle movement remained restricted because of a FMD outbreak.

During the quarter, program-supervised feedlots sold 302 pen-fattened animals valued at \$174,662 to formal buyers compared to 170 pen-fattened animals valued at \$55,554 in the previous quarter (Table 3.2.2.3). With a buoyant market due to the holiday season, prices for pen-fattened animals increased. Gross earnings per animal were \$578.35 compared to \$326.78 because of firming prices and improvement in quality.

Table 3.2.2.3 : Sales Summary from Program Supervised Feedlots, July - December 2015

Province	# of feedlots		Total Loan value (\$)		# of animals		# of female farmers		# of male farmers		Gross Value of Sales (\$)		Net Value of Sales (\$)	
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
Midlands	2	10	\$3,187	\$20,565	27	136	2	28	19	62	\$15,575	\$84,882	\$12,388	\$64,317
Manicaland	0	7	0	\$5,979	0	66	0	13	0	20	0	\$31,502	0	\$25,523
Matabeleland	7	9	\$21,288	\$22,651	143	100	18	24	95	57	\$39,979	\$58,278	\$18,691	\$35,627
TOTAL	9	26	\$24,475	\$49,195	170	302	20	65	114	139	\$55,554	\$174,662	\$31,079	\$125,467

3.3 PRODUCTIVITY

Productivity-enhancing activities focused on training and technical assistance to lead farmers to establish fodder demonstration plots; improve marketing, supplementary feeding, and feedlot management; facilitate direct lending from microfinance institutions (MFIs); and advise on GAHPs and disease and herd management. Activities concentrated around identified centers of excellence and feedlots in Lupane, Nkayi, Hwange, Gokwe South, Chirumhanzu, Umzingwane, and Chipinge districts.

The following sections summarize interventions to increase productivity in the beef and dairy sectors as undertaken during the quarter.

3.3.1 Beef

In this second quarter, program activities concentrated on salvaging the beef herd from poverty deaths in all target areas and mitigating the external factors causing cattle deterioration and death across all the wards of Chipinge district and some wards in Lupane district. Specifically, interventions around beef marketing and supplementary feeding have been critical in assisting program beneficiaries during this time. Together with the DLPD, village heads, and livestock development committees, the Feed the Future Zimbabwe Livestock Development program is encouraging farmers to pool resources to access survival meal from stock feed suppliers.

Moreover, the program convinced National Foods to stock beef survival meal at its Checheche depot in mid-October 2015 to support the whole southern Chipinge district (see Annex 1). Although farmers in Chipinge revealed that most had some cash reserves to buy feed to save their cattle, local stock feed distributors in Chiredzi, Checheche, Chipinge, and Mutare were not stocking beef survival meal. Though some farmer groups were linked to Sabie Meats in Chiredzi and purchased 9 tons of feed, the small quantity of beef survival meal produced by Sabie Meats did not have the capacity to supply the whole district.

The initial delivery of 30 tons of survival meal from National Foods was sold within a week, and as cattle condition improved, more farmers started to demand the product. By mid-December 2015, when the government of Zimbabwe intervened to supply subsidized beef survival meal with assistance from the Food and Agriculture Organization (FAO), more than 500 tons of the feed had been sold by National Foods and its agent to approximately 1,100 farmers; this quantity saved more than 4,500 cattle from starvation over the most critical two months.

Besides the survival meal, Feed the Future Zimbabwe Livestock Development is bringing awareness to farmers of other supplementary feeds, which include cotton seed cake; cotton motes; sugar cane tops, and maize stover in those areas near irrigation schemes. Additionally, the program has introduced feedlots to give farmers an opportunity to market their cattle after improving their conditions.

Despite these efforts, challenges do remain. In Chipinge it is estimated that the district lost 25 percent of its cattle herd due to starvation (DLPD). Deteriorating body scores below 3 were reported across all program areas. In addition, the FMD outbreak, first reported in Masvingo's Mwenenzi district on May 24, continued to curtail livestock marketing and production activities in the focus areas of Umzingwane, Chipinge, Gweru, Shurugwi, Chirumhanzu, Kwekwe, Lupane, Hwange, Nkayi and Gokwe South. Vaccine shortages have limited effective treatment in many areas. Movement of cattle from program feedlots in Shurugwi was delayed for three days because of problems in getting a permit to move the cattle for slaughter. In December 2015, the outbreak of anthrax in some parts of Umzingwane opened the door for potential new problems. And lastly, low rainfall means fewer water sources for cattle; deaths due to water shortages have already been reported in Lupane district. With this threat of cattle starvation, the Feed the Future Zimbabwe Livestock Development program has concentrated its efforts in the areas described below to best help farmers weather through this time.

Pen fattening

The program has continued to assist smallholder beef farmers in Chirumhanzu, Chipinge, Gokwe South, Shurugwi, Umzingwane, Nkayi, Lupane, and Kwekwe districts with training and technical assistance in pen fattening. Training topics covered basics and principles of pen fattening, feedlot site selection, animal selection, animal induction, feedlot diets, common feedlot diseases, feedlot management, and budgeting.

Four main factors determine the outcome from feedlots:

1. *Proper animal selection.* Large-framed oxen gain weight well in comparison to cull cows, which have small frames and low weight gains.
2. *Feeding duration.* The feeding period should be long enough for the animals to attain good grades such as commercial, choice, and super. A short feeding period tends to yield economy grades as it takes the animals about two weeks to adjust to the new feed ration, during which time they gain little weight.
3. *Beef price.* Pen fattening activities should coincide with favorable pricing regimes in the market. Off-peak prices tend to narrow the gross margin and hence farmers should not randomly pen feed animals.
4. *Financial cost.* The farmer should factor in the cost of finance as determined by the feeding duration.

The target marketing period for pen-fed cattle is mid-December when beef prices are expected to be at peak because of demand during the festive season versus a low supply of good quality animals after the peak dry season (September-early December). Beef prices during the quarter continued to increase to peak at \$4.20 per kilogram for super grade in December 2015.

Collaborating with buyers, MFIs, DLPD, and the Department of Veterinary Services (DVS), the program prepared 302 animals belonging to 204 smallholder farmers for market. Feeding periods ranged between 30-60 days, and farmers altogether earned \$174,296 in sales income.

In the Midlands, the Feed the Future Zimbabwe Livestock Development program worked with 90 farmers in ten feedlots that had feeding periods between 30 and 45 days. The farmers marketed 136 cattle worth \$84,882. The farmers received loans worth \$20,565 from Quest Financial Services, Untu Financial Services, and Montana Carswell Meats (see Table 3.3.1.1).

Table 3.3.1.1: Pen Fattening Activities in Midlands Region, October - December 2015*

Feedlot Group	Area	Financier	Total Loan value (\$)	# of animals	# of female farmers	# of male farmers	Gross Value of Sales (\$)	Net Value of Sales (\$)	Buyer
Tongogara dairy	Tongogara	Untu Financial Services	3,377	23	6	9	13,234	9,857	Heads and Hooves
Gwanza Beef	Tongogara	Untu Financial Services	1,680	10	0	5	9,417	7,737	Heads and Hooves
Nyagari, Batanai,	Tongogara	Untu Financial Services	2,016	12	1	7	9,417	7,401	Heads and Hooves
Chemusonde,	Gokwe South	Montana Carswell Gokwe	1,863	12	3	7	5,232	3,369	Montana Carswell Gokwe
Samambwa, Ngondoma	Kwekwe	Untu Financial Services	2,261	14	2	8	8,079	5,818	Koala Park Abattoir,
Bayethe	Umzingwane	Quest Financial Services	3,188	21	6	10	15,339	12,151	Heads and Hooves
Advance	Tongogara	Untu	826	7	0	3	5,288	4,462	Heads

Table 3.3.1.1: Pen Fattening Activities in Midlands Region, October - December 2015*

Feedlot Group	Area	Financier	Total Loan value (\$)	# of animals	# of female farmers	# of male farmers	Gross Value of Sales (\$)	Net Value of Sales (\$)	Buyer
Shurugwi Beef		Financial Services							and Hooves
Hama Mavhaire	Chirumhanzu	Untu Financial Services	1,022	8	1	3	4,486	3,464	Heads and Hooves
Lynwood,	Chirumhanzu	Untu Financial Services	3,132	24	9	5	12,186	9,054	Heads and Hooves
Masiphakameni	Umzingwane	Quest Financial Services	1,200	5	0	5	2,204	1 004	Heads and Hooves
Total			20,565	136	28	62	84,882	64,317	

* Regions classified by Feed the Future Zimbabwe Livestock Development operational areas

In Manicaland, 33 farmers marketed 66 cattle worth \$31,502 through feedlots. Of these farmers, 24 used a \$5,979.32 loan from Quest Financial Services for stock feed, veterinary drugs, ear tags, and stock feed transport for 40 cattle, which were inducted into the pens on November 3 and 4, 2015. All of the farmers paid interest and a \$17 establishment fee up front for the loans. Cattle funded by Quest were sold to Sabie Meats on December 21, 2015. Nine farmers (three female and six male) self-financed their feedlots and achieved sales value of \$11,096. Table 3.3.1.2 below summarizes the results.

Table 3.3.1.2: Pen Fattening Activities in Manicaland Region, October - December 2015

Feedlot Group	District	Financier	Total Loan Value (\$)	# of Animals	# of Female Farmers	# of Male Farmers	Gross Value of Sales (\$)	Net Value of Sales (\$)	Buyer
Kondo-Pepukai	Chipinge South	Quest	1,483	10	2	4	6,441	4,958	Sabie Meats
Evergreen-Musapingura	Chipinge South	Quest	593	4	2	0	2,947	2,354	Sabie Meats
Chibunji	Chipinge South	Quest	889	6	1	2	2,868	1,979	Sabie Meats
Batanai	Chipinge South	Quest	593	4	1	2	2,035	1,442	Sabie Meats
Muzorwa-Mabizele	Chipinge South	Quest	904	6	2	2	2,634	1,730	Sabie Meats
Handireni	Chipinge South	Quest	1,518	10	2	4	3,481	1,963	Sabie Meats
Handireni	Chipinge South	Self	Nil	3	0	1	1,133	1,133	Sabie Meats
Eye Opener	Chipinge South	Self	Nil	13	2	4	5,145	5,145	Sabie Meats
Eye Opener	Chipinge South	Self	Nil	10	1	1	4,818	4,818	Koala Park
Total			5,979.32	66	13	20	31,502	25,522	

In Matabeleland, 81 farmers marketed 100 cattle worth \$58,278 through feedlots with funding from Quest Financial Services, Inclusive Financial Services, Heads and Hooves, and self-financing (Zamalokhu group). Cattle were sold to Heads and Hooves; Table 3.3.1.3 summarizes the results.

Table 3.3.1.3: Pen Fattening Activities in Matabeleland Region, October - December 2015

Feedlot Group	District	Financier	Total Loan value (\$)	# of Animals	# of Female Farmers	# of Male Farmers	Gross Value of Sales (\$)	Net Value of Sales (\$)	Buyer
Nesigwe Sihlengeni	Nkayi	Quest Financial services	3,064	16 5	3 2	12 3	8,765	5,701	Heads and Hooves
Gonye	Nkayi	Quest Financial services	750	5	2	3	3,094	2,344	Heads and Hooves
Fanisoni	Nkayi	Quest Financial services	2,113	13	2	7	8,914	6,801	Heads and Hooves
Zinyangeni	Nkayi	Quest Financial services	465	4	0	3	1,800	1,335	Heads and Hooves
Zenzeleni	Lupane	Heads and Hooves	2,900	20	2	7	14,120	11,220	Heads and Hooves
Tshongokwe	Lupane	Inclusive financial services and Heads and Hooves (feed)	6,521*	17	7	5	11,006	4,485	Heads and Hooves
Zamalokhu	Lupane	Self	Nil	6	3	10	3,545	3,545	Heads and Hooves
Zwanano	Lupane	Inclusive and Quest financial services	6,957	14	3	7	7,034	77	Heads and Hooves
Total			22,770	100	24	57	58,278	35,508	

*\$119 worth of stock feed was supplied by Heads & Hooves on loan recovered when cattle were sold.

In all beef focus areas, farmers formed beef marketing groups to facilitate borrowing from MFIs and direct marketing to abattoirs. Marketing groups enabled the farmers to source credit directly from MFIs; receive training and technical assistance on pen fattening; bypass the middlemen in selling their beef cattle; reduce marketing costs (permits, transport) per animal through consolidation of sales; and provide access to lucrative markets.

Breeding

The program continues to urge farmers to manage breeding through selecting quality bulls and selling off unproductive beasts so as to use the resulting income to purchase quality breeding females. In particular, the program has been working with farmers disposing animals through feedlots to use the income realized to secure more improved breeds of bulls and/or heifers.

Table 3.3.1.4 below shows current average herd composition among targeted Feed the Future Zimbabwe Livestock Development beneficiaries from the baseline survey compared to the end target in Year 5.⁵

Table 3.3.1.4: Progress of Herd Composition Among FTFZ-LD Beneficiaries

Herd Composition	Baseline Average	Target Year 5*
Breeding Cows	2	4
Breeding Heifers	0.7	1
Bulls	0.1	0.1
Culls	0	1
Calves	0.2	4

⁵ Composition calculation based on target in Feed the Future Zimbabwe Livestock Development contract, page 16.

Steers 1.5 yrs	0	2
Heifers 1.5 yrs	0	2
Steers 2.5 yrs	0.5	2
Steers 3.5 yrs (oxen)	0.8	2
Total Herd Size	4.3	18

* **Target** herd composition based on 100 breeding females, for 3.5 years production (80% weaning, 4% bulling, 20% culling, bulling heifers at 2 years, surplus heifers disposed at 1.5 years)

Under commercial conditions, based on a production system of 3.5 years, breeding females (cows and heifers) constitute 27 and 30 percent of the total herd. Baseline figures show that breeding females make up 63 percent of the current herd, a clear indication of the need to assist farmers with good herd and animal husbandry practices. Data indicates weaning rates of 10 percent compared to 80 percent in commercial herds. The result is a static herd that fails to sustainably generate livestock for sale (steers and surplus heifers) or to replace breeding cows.

The program will train beneficiaries on GAHPs and business practices that will improve conception, weaning, and bulling weights. In addition, through herd rationalization (disposal of unproductive cattle and using the proceeds to acquire quality breeding females) and natural herd increases, on average each household should have at least five breeding females by Year 5.

Detailed breeding models will be developed and implemented in collaboration with ABS-TCM once USAID approves the subcontract.

Training

During the quarter, the program trained 656 farmers in beef production⁶, of which 45 percent were women, across the nine geographical focus areas. Within this group, 85 were dairy farmers (Table 3.3.1.5).⁷ The bulk of the farmers were from Chipinge and Gokwe South because the program structures were already in place; field operations in most areas only commenced mid-September 2015 with the baseline survey.

Table 3.3.1.5: Unique Beneficiaries Receiving Beef Training by District, Q2 FY2016

District	Female	Male	Total
Chipinge	123	158	281
Chirumhanzu	14	15	29
Gokwe South	95	76	171
Hwange	2	2	4
Kwekwe	7	17	24
Lupane	5	17	22
Nkayi	16	21	37
Shurugwi	15	32	47
Umzingwane	17	24	41
Grand Total	294	362	656

Pen fattening; GAHPs (supplementary feeding), and beef marketing, were among the most popular trainings with farmers during the quarter (Table 3.3.1.6).

Table 3.3.1.6: Beef Training by Subject, Q2 FY2016

Training Subject	Female	Male	Total
Animal Breeding	18	30	48
Animal Health	35	56	91
Cattle and Meat Grading	68	60	128
Fodder Production	77	86	163

⁶ This number includes dairy farmers with beef herds who were trained in beef production.

⁷ Only farmers with the program's target number of cattle (10 and below) were recorded. Farmer stock record cards were used to identify farmers qualifying as program beneficiaries.

Husbandry Practices	180	240	420
Marketing	72	111	183
Pen Fattening	240	311	551

In Chipinge district, 281 farmers (123 females and 158 males), were trained on different subjects, including GAHPs such as dosing, ear tagging, supplementary feeding, animal health management, and use of cattle handling tools like nose tongs. They also received training on pen fattening and related activities, such as cattle selection for feedlots; pen and race construction; feedlot cattle induction; feedlot feeding and watering practices; and feedlot cattle marketing, including loading cattle into trucks.

3.3.2 Dairy

Although Feed the Future Zimbabwe Livestock Development intended to spend the second quarter providing training on fodder flow planning and production to prepare for the 2016 milk production season, delayed rains and persistent dry spells affecting all dairy zones postponed most fodder demonstration plots because of ineffective soil moisture. Even so, by the end of the quarter, 297 farmers were trained on GAHPs in dairying, such as fodder production, breeding, milk quality, and artificial insemination. Further, the program facilitated building and strengthening linkages between dairy farmers, input suppliers, markets, and credit providers.

During the quarter, 27 dairy farmers from Umzingwane (Irisvale), Shurugwi, and Chirumhanzu participated in program organized feedlots. The farmers put 44 of their beef animals into feedlots to raise resources for purchasing improved dairy breeding females and inputs for fodder production. Also, the program started work on resuscitating two dairy cooperatives in Chirumhanzu. One of the groups has selected a new committee and is registering membership.

At a team meeting, the Feed the Future Zimbabwe Livestock Development program staff developed and discussed a dairy model to assist all the teams in the field with farmer-specific solutions in herd-size management, fodder planning, and feeding regimes.

Looking to continue building the capacity of MCCs and milk groups, the program held two exploratory meetings with Gokwe and Umzingwane MCC executives to gauge possibilities of engagement. As a direct result, an initial assessment using the capacity assessment tool will be conducted for these two MCCs in the coming quarter to inform a capacity building work plan.

Fodder production

Adequate feed is essential for milk production and disease prevention in beef and dairy herds, and maintenance of adequate body condition for reproduction. Supplementary feeding allows farmers to fight poverty deaths and maintain animal body conditions at acceptable levels that enhance ovulation. Animals with poor body condition scores (below 3) are unlikely to come on heat and have a tendency to skip a year without dropping a calf.

The program promotes fodder production through demonstrations on farmers' fields as one of its key GAHPs. Altogether, 86 demonstration plots were established to showcase GAPs in fodder production for wider adoption by surrounding farmers. During the quarter, farmers received training and technical assistance to establish forage sorghum, velvet bean, leucaena, and mulberry plantations.

In the Midlands, 24 fodder demonstrations, referred to as centers of excellence, were established and form the nucleus of best practices for other surrounding farmers growing fodder crops. The erratic rainfall, as low as 70 millimeters (2.75 inches) to date in some areas, along with the persistent dry spell and scorching temperatures above 40 degrees Celsius, have challenged fodder production this season. However, the program has explored innovative solutions, such as the bottle drip technology, to minimize the impact of these conditions (see textbox).

In Umzingwane district's Irisvale dairy focus area, farmers were engaged and came up with their own fodder flow plans adequate for feeding their dairy herds. The majority of farmers planted velvet bean as their main fodder crop and aborted planting pearl millet and cow peas due to the drought. The area last received effective rains (rain accumulation over 25mm) on December 22, 2015 (see Table 3.3 for cumulative rains to date).

The program is introducing mulberry and leucaena as alternative fodder trees in Umzingwane. One lead farmer has already established nurseries for mulberry and leucaena. Field planting will commence upon receipt of effective rains. Forage production from the trees is expected within 12 months from date of establishment.

In Chipinge, Manicaland, the drought completely wiped out all rain-fed fodder production demonstration plots. Ten farmers had been selected to lead in the production of fodder crops and the plan was to grow enough fodder to feed each farmer's whole herd up to five kilograms per day over the driest months between July and November. In response to these conditions, the Feed the Future Zimbabwe Livestock Development program established mulberry and cactus nurseries to train farmers on sustainable production practices and best utilization methods. As a desert plant, cactus would be highly adapted to Chipinge conditions.

Besides introducing drought-tolerant plants, the program has initiated fodder production with cattle farmers keen toward dairy who own plots on irrigation schemes. Ten farmers have been identified at Musikavanhu Irrigation Scheme, Chipinge district and have established fodder plots averaging 0.3 hectares with velvet beans, sorghum, and sunn hemp. The sorghum is expected to yield 15 tons of silage, or 7.5 tons per hectare of hay. Velvet beans and sunn hemp will likely yield 12 tons of silage and between 6.5 and 7 tons of hay per hectare respectively. The group has one main demonstration plot, which also has sugar cane, bana grass, and a reserved space for cactus. The sugar cane tops will

Drought Mitigation Innovations Spur Hope

With crops deteriorating fast in Irisvale, Umzingwane, Ethel Dube is growing a thriving fodder crop despite the dry scorching conditions thanks to an innovative bottle drip technology. Using locally available empty opaque beer containers, which are normally discarded, she drills a small hole in the bottom of the plastic bottle and adjusts the screw-on top to achieve the desired dripping rate for a regulated amount of water at each planting station. Another method with this bottle drip technology hangs a bag of matured manure in a 200-liter drum storing water for the bottles so that mineral nutrients can dissolve and be applied to the plants when the water is used in the bottle drip. The process in essence becomes fertigation. Program technicians introduced farmers to these technologies as the drought continues to threaten fodder crop production; the bottle drip technology provides hope by bridging the prolonged dry spell. "I look forward to producing feed from this patch thanks to the use of these bottles," Dube said. She is utilizing the bottle drip technology on a 0.1 hectare velvet bean fodder crop. The program is also engaging irrigation specialists such as Drip Tech and Pedstock, registered suppliers of Netafim irrigation equipment, to explore irrigation innovations or ways to improve on this rudimentary drip tech for smallholder farmers who do not have water pumping skills.



Photo by Fintrac
A velvet bean plant emerging thanks to innovative bottle drip technology. Inset: Drum showing simple fertigation technology to infuse

be used as the main energy source. The program aims to produce a dairy meal using these raw materials, including cotton cake.

In Nkayi district (wards 5, 17, 18, 20 and 21); the program held fodder production awareness meetings aimed at getting farmers to understand the need for supplementing their animals during the dry season. A total of 59 farmers registered to host fodder production demos and purchased velvet bean seed for fodder production. On average, each farmer was expected to plant a minimum of 0.2 hectares, sufficient to feed at least three cattle for 90 days during the dry season. While most farmers chose to grow velvet bean because of its tolerance to a wide range of soil types and dry spells, a few others also decided to plant sunn hemp.

In Lupane district, 21 farmers registered to grow velvet bean as a fodder crop. The farmers sourced seed at \$1.50 per kg from a Nkayi farmer who produced the seed under the Zim-AIED program.

Out of the 80 farmers who registered to grow fodder crops across the two districts of Lupane and Nkayi, only 21 planted and the crops are at various stages of growth and condition. Crop growth has been severely hampered by late planting and the prevailing drought conditions. If rains are received in February, they may be adequate to set a seed crop for next year, but the amount of herbage available is unlikely to be sufficient to sustain the planned number of animals.

GAHPs

Farmers received technical assistance on how to utilize GAHPs to improve their beef and dairy businesses (see Table 3.1.3). The following GAHPs and technologies were promoted through farmer-managed demonstrations:

- *Cattle vaccination* – technical assistance was given for the recommended vaccination schedules for dairy and beef animals.
- *Dipping* – many dairy farmers rely on communal dipping, which more often is inadequate as chemicals are in short supply. The program trained farmers on on-farm dipping using the knapsack sprayer. Farmers learned proper handling, spraying, storage, and disposal of the dipping chemicals.
- *Supplementary feeding* – using home grown feeds was emphasized to reduce the cost of production and increase milk productivity. Beneficiaries received assistance to create per capita fodder flow plans and rationalize their herds. Seventeen farmers in Chirumhanzu accessed loans of \$130 per animal to pen fatten 24 beef cattle and used the proceeds to purchase inputs for fodder production. The farmers sold their livestock during the December 2015 festive season and the total sales value of the animals was \$16,668.
- *Recordkeeping* – Farmers were trained to keep separate records for each individual dairy cow to better make productivity decisions. Ethel Dube, from Irisvale, in Umzingwane district is one such farmer now making informed decisions on feeding, culling, breeding and selling based on these records. She has now identified that out of her current herd of five milking cows only one cow is sustaining the rest of the herd, and has thus instituted plans to cull the unproductive cows as part of her herd rationalization.
- *Body condition scoring* – used as a management tool in dairy.
- *Milk quality and milk handling* – this training was done in partnership with a large-scale processor, Kershelmar to impart knowledge on the basics of milk hygiene so that farmers can meet the processors milk quality requirements and avoid penalties and milk rejection.
- *Herd rationalization* – guide farmers toward keeping a dairy herd size that gives them the maximum returns possible. Five such farmers (three males and two females) from Irisvale, have realized that keeping oxen and bulls in their dairy herds is not profitable. The five have put six animals (five oxen and one bull) into a feedlot after accessing pen fattening loans of \$87.50 per animal from Quest Financial Services. The proceeds will be used for fodder production to support the dairy herd and purchase improved dairy cows.

- *Highly nutritious fodder* – mulberry trees that thrive in dry conditions provide medium- to long-term solutions to fodder inadequacy. Farmers were assisted to establish mulberry and leucaena nurseries using locally available opaque beer containers to keep costs low.
- *Individual pen feeding* – this approach entails feeding an animal in its own pen so that feed uptake and health can be monitored on an individual basis. Since animals are of different temperament and some large animals can dominate in an open pen feeding system, this approach is critical to address poor weight gain in weaker animals. The program also showed farmers how to make low-cost feeding troughs from old tires.
- *Urea treatment* – this process used on dry stover and grass improves palatability. Given the dry weather conditions this quarter, most feed resources available were dry stover and grass. To improve the palatability of the maize stover, program technicians trained farmers through on-farm demonstrations on urea treatment.

Breeding

Baseline results show that at present fewer than 13 percent of the cattle in the herds of the targeted dairy wards are pure dairy breeds (Jersey or Friesland); instead, most of the cattle are crosses (Table 3.3.2.1). Feed the Future Zimbabwe Livestock Development will focus on introducing the dairy genes through artificial insemination and improved bulls on existing dairy cows, and through purchases of quality heifers to achieve herd productivity and production.

Table 3.3.2.1: Current Common Breeds in Potential Dairy Wards

District	Breeding Program	Common Breeds			
		Red Dane x Tuli (%)	Jersey (%)	Friesland (%)	Crosses(% < than 50% dairy blood)
Gokwe	Uncontrolled natural service from bulls	28	1	2	69
Shurugwi	Uncontrolled natural service from bulls	0	5	8	87
Umzingwane Claring	Uncontrolled natural service from bulls	9.7	5	3.5	81.8
Umzingwane Irisvale	Uncontrolled natural service from bulls	8.7	5	2.5	83.8

The baseline composition of the dairy herd in targeted Feed the Future Zimbabwe Livestock Development areas is shown in Table 3.3.2.2 as compared to the target in Year 5. The target herd composition is based on a minimum of three milking cows.⁸ The productive herd composition required to sustainably provide the productive cows (three milking cows) is 10; based on an 80 percent weaning rate, 0 percent bulling, 20 percent culling, and bulling heifers at two years. In addition steers and oxen are added to the herd as they are necessary for providing draught power; however these animals will receive minimum maintenance in terms of feed as they will be raised from communal grazing.

Table 3.3.2.2: Progress of Dairy Herd Composition Among Program Beneficiaries

Herd Composition	Baseline Combined	Baseline Communal Dairy Herd	Baseline SSC Dairy Herd	Target Year 5*
Cows in milk	2.82	1.70	5.22	3
Dry cows	0.05	0	0.17	1
Bulls	0.26	0.04	0.72	0
Heifers in calf	0	0	0	1
Heifers 12 to 27 months	1.43	0.66	3.08	2
Heifers 6 to 12 months	0	0	0	2

⁸ Contract document page 17: each beneficiary household to own a minimum of three high quality milking cows with a minimum yield of 12 liters per day for 300-day lactation.

Calves	1.53	0.90	2.89	2
Steers 2.5 yrs	0.45	0.22	0.94	1
Steers 3.5 yrs (oxen)	0.92	0.69	1.42	1
Total herd size	7.46	4.21	14.44	13

* **Target** herd composition based on 3 milking cows, for 300-day lactation (80% weaning, 0% bulling, 20% culling, bulling heifers at 2 years, surplus heifers steers disposed at 1.5 years. 2 oxen required for draft power)

To achieve the target, the program intends to introduce dairy breeds through finance programs that encourage smallholder farmers to purchase in-calf heifers. A first step involves rationalization of the current dairy herds by selling unproductive cattle, such as bulls, steers, and oxen, and utilizing the sales proceeds to source quality female dairy cows and heifers; this process has started in Irivale, Shurugwi, and Chirumhanzu.

The second step in the rationalization of the herd involves having a high proportion of productive elements in the herd (milking cows, dry cows, and replacement heifers) through natural increases or off-farm purchase of productive females. A look at the baseline herd indicates the need to embark on GAHPs that improve weaning and conception rates so as to realize the productive potential of the existing herds. The program is focusing on providing adequate feed for all productive classes of animals to ensure correct growth rates and body condition scores; reduce calf mortality and benefit from natural increases; ensure herd health; and improves efficiencies in artificial insemination service provision.

Finally, the third step is to eliminate the use of bulls in the herd and adopt artificial insemination or organized bull schemes run by farmers or the Zimbabwe Association of Dairy Farmers.

Feed the Future Zimbabwe Livestock Development has continued to collaborate with processors, MFIs, and the US African Development Foundation to leverage resources that will assist dairy beneficiaries to access high-quality cows. Encouragingly, the government has created funds under the Dairy Revitalization Committee to work with research stations (Matopos, Henderson, Makoholi, and Grasslands) and avail dairy heifers for purchase. MCCs now also have revolving funds earmarked for livestock purchases as a result of the USAID-funded dairy program managed by Land O'Lakes; for example, Gokwe MCC has \$30,000 in the Cattle Bank Fund to buy dairy cattle.

In preparation for the breeding season in the upcoming quarter the program has:

- Encouraged farmers to cull their bulls to take advantage of the artificial insemination services that will be provided by ABS-TCM. Culling bulls is a rational exercise among the smallholder farmers as they have fewer than 25 cows in their herd.
- Encouraged farmers to set up paddocks as doing so ensures undesirable bulls do not sire breeding cows.
- Trained farmers on the basics of artificial insemination.
- Assisted farmers in setting breeding goals.

Training

A total of 297 dairy farmers (177 males and 120 females) received training and technical assistance on animal nutrition and health, quality control, marketing, and GAHPs (Table 3.3.2.3). Fifty-six percent of the dairy farmers trained were from Gokwe South. The training and technical assistance aimed to increase milk yields from the baseline figure of 2.61 liters per day per cow to above 12 liters per cow per day and sought to normalize the lactation periods to about 300 days, and the calving intervals to between 12-13 months.

Table 3.3.2.3: Dairy Training by Subject, Q2 FY2016

Training Subject	Female	Male	Total
Animal Health	0	3	3
Fodder Production	79	130	209
Husbandry Practices	88	93	181

Marketing	0	6	6
Quality Control	4	18	22

Marketing

A study of the milk delivery records at the three MCCs during an exploratory exercise revealed that the MCC should re-examine the volumes of milk delivered by each of the members to adequately cover the MCC overheads; pay the farmers for the milk delivered; buy all the inputs for the processing; and sufficiently set aside reserve funds for equipment repairs and other mishaps without having to rely on donations. The MCCs were agreeable to this finding and have scheduled meetings to discuss this problem and other issues in the coming quarter.

The program pursued efforts to expand market access for smallholder farmer milk products during the quarter. Meetings were initiated with Kershelmar and Dendairy for milk supply arrangements. The processors indicated that they were ready and willing to partner with the program and absorb any quality milk from smallholder producers in excess of 15,000 liters per day. Specifically, the program discussed with these processors the logistics of how farmers could produce and transport quality milk. Key interventions include increasing production and productivity, and ensuring consistency in volumes supplied and quality. The program is currently looking to grow the existing MCCs as entry-level markets to supply Kershelmar and Dendairy.

Cheap imports continued to undermine the local dairy industry (producers and processors) – local products have not been able to match the prices of imports because of high production costs. Current formal milk prices for raw milk vary from \$ 0.50 to 0.70 per liter compared to \$0.35 in Malawi and \$0.25 in Zambia.

Industry capacity utilization remains low at below 35 percent because of low local production volumes. At farm level, milk losses remain high given the lack of cold chain facilities to enable farmers to participate in the formal market. Apart from large processors, the program is exploring large-scale dairy farmers with whom smallholder farmers can forge partnerships to consolidate milk volumes and facilitate cold chain access.

3.3.3 Partnerships

Partnerships with private sector traders, processors, input suppliers, technical service providers, and credit and financial institutions are a key part of Feed the Future Zimbabwe Livestock Development's approach to commercialization of small-scale farmers. Engaging commercial companies ensures market-led program interventions and cost-shared alliances with private sector partners to deliver products and services.

Technical staff focused this quarter on engaging potential partners through field visits and analysis of submitted concept notes. Annexes 2 and 3 provide a provisional list of companies currently being considered as formal partners. The strategy is to engage private sector partners and subcontractors to not only purchase product or supply inputs but finance some developmental facets of the value chain (such as supplying milking cans on a cost-recovery basis or setting up joint chilling facilities with producers). Buyers, input suppliers, and finance institutions have in-house expertise in beef and dairy production, quality standards, and market specifications that they can transfer to small-scale producers as part of the partnership. The program will finance technical training and extension on a declining scale for eventual hand over to the private partner. The input suppliers will provide training, demonstrations, and field days on a cost-sharing basis until sales of their products and purchase of produce from the farmers increase to levels where the costs can be covered. The focus is on collaborating with companies that show deliberate investments in smallholder farmers as strategic partners. This arrangement ensures the program builds sustainability and a smooth exit strategy by creating the foundation for direct private sector support.

Feed the Future Zimbabwe Livestock Development's technical team will provide maximum technical support and capacity building to these partnerships. They will also monitor partner performance and impact continuously and revise the partnership portfolio whenever necessary.

During the quarter under review, Heads and Hooves financed stock feed worth \$119 to farmers in Lupane and Nkayi; Kershelmar trained dairy farmers in Irisvale on clean milk production; National Foods provided stock of survival meal to Chipinge farmers; and partner abattoirs (Koala, Montana, Sabie Meats, Heads and Hooves) provided free or subsidized transport and training.

3.4 NUTRITION, WASH, AND HYGIENE

The program tracks its hygiene and nutrition impact on beneficiaries by:

- The percent of beneficiary households that consistently practice four out of six of the following hygiene practices:
 - Having a handwashing station with cleansing agent and water within 10 paces of latrines
 - Handwashing with cleansing agent at four critical moments (after defecating; after cleaning a child or handling diapers; before preparing food; before eating)
 - Disposing of solid household waste in protected pit
 - Using recommended water treatment or purification technologies
 - Storing water in safe storage containers
 - Disposing all feces in a toilet or latrine
- The percent of beneficiary households that consistently and regularly consume a minimum of five of the following food groups:
 - Grain, roots, and tubers
 - Legumes and nuts
 - Dairy products (milk, yogurt, cheese)
 - Organ meat (liver, kidney, heart, lungs, tripe, brains, etc.)
 - Flesh foods (meat) and other miscellaneous small animal protein (edible insects, birds, mice, worms, etc.)
 - Eggs
 - Vitamin-A rich dark green leafy vegetables (covo, spinach, rape, cabbages, mustard, etc.)
 - Other Vitamin-A rich vegetables (carrots, butternuts, amaranthus, black jack, pumpkin leaves, cowpeas leaves, sweet potatoes leaves etc.)
 - Other fruits and vegetables
- The acceptable mean number of food groups eaten by women of a reproductive age (16-49 years) has to be at least five.
- A significant declining trend in the percentage of beneficiary households that consistently face moderate to severe hunger.
- A significant increasing trend in the percentage of beneficiary households with nursing mothers who practice exclusive breastfeeding in the first six months.
- The percentage of children between 6 months and 2 years that consume regularly and consistently at least four of the following foods in addition to breast milk:
 - Grain, roots, and tubers
 - Legumes and nuts
 - Dairy products (milk, yogurt, cheese)
 - Flesh foods (meat, fish, poultry, and liver/organ meats)
 - Eggs
 - Vitamin-A rich fruits and vegetables
 - Other fruits and vegetables

Table 3.4.1 shows an analysis of the baseline results.

Table 3.4.1: Baseline Results of WASH and Nutrition Indicators in Focus Areas

Area	% of HHs consistently consuming at least 5 of 9 food	Mean # of food groups eaten by women of a reproductive	Prevalence of households with severe to	Prevalence of exclusive breast feeding	% of HHs practicing at least 4 out of 6 good	Prevalence of children receiving a MAD
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	groups (dietary adequacy)	age	moderate hunger		hygiene practices	
Chipinge	2%	1.7	37%	63%	5%	0%
Chirumanzu	0%	3	80%	100%		0%
Gokwe South	18%	3.4	1%	86%	4%	7%
Gweru	9%	3.2	27%			0%
Hwange	0%	2.7	23%	86%	86%	0%
Kwekwe	7%	3.2	38%		26%	0%
Lupane	15%	2.5	22%		23%	0%
Nkayi	4%	2.6	87%	92%	4%	0%
Shurugwi	11%	2.7	74%	75%	23%	0%
Umzingwane	3%	0.9	69%		100%	0%
Overall	7%	2.5	39%	72%	13%	1%

Women dietary diversity in terms of the mean number of food groups consumed was at 2.5 against an expected 5 or more while the household dietary diversity score had a low of 7 percent. Only 1 percent of children in the age group 6-23 months receive a minimum acceptable diet. Chipinge and Nkayi had the lowest dietary diversity scores of 1 and 1.5 respectively in terms of food groups consumed. In Chipinge the main consumed food groups were grains and vegetables. Chipinge, Gokwe South, and Nkayi scored lowest on good hygienic practices and showed high scores of prevalence of poverty. Addressing hygienic issues requires the program to implement activities that increase the current household incomes with trainings on behavior change.

Through technical assistance, a farmer in Chipinge, Elina Sithole, has taken the initiative to construct a toilet using the proceeds from cattle sales. After program messaging sensitized her to the need for a sanitary environment, she vowed to utilize income from cattle sales to make changes. Now, the construction of the toilet is underway, which is a milestone for most farmers in Chipinge area as they typically wait for donor assistance.

Given the baseline results, the Feed the Future Zimbabwe Livestock Development team embarked on inception meetings in the nine target districts, except Gweru, to understand in depth the beneficiaries' knowledge, attitude, practices and beliefs around water, sanitation, and hygiene (WASH) and nutrition to help shape future strategies. Based on these visits, ad hoc interventions for specific areas were recommended. For example, considering Chipinge is in Natural Region V, the team recommended cowpea production as it provides required protein for humans and livestock.

Stakeholder consultations and meetings with Amalima, Zimbabwe Applied Health Education and Development (ZIM-AHEAD), and Feed the Future Zimbabwe Crop Development continued this quarter to learn and share experiences that will inform the nutrition and WASH strategy for the project. The team adopted the following to be included in the strategy:

- The Ndebele version of the training manual on nutrition developed by the Amalima team.
- Program beneficiaries in wards 1, 3, and 4 of Chipinge should participate and join the community health clubs run by ZIM-AHEAD. The training developed by ZIM-AHEAD under their Participatory Health and Hygiene Promotion modules would be adopted for implementation in Chipinge district.

As part of advocacy to government stakeholders, separate meetings were held with the Ministry of Health and Child Welfare in Matabeleland North and South, nutrition departments, and district nutritionists (Nkayi, Chipinge, Gokwe South, Umzingwane, and Lupane). From these meetings, the program established linkages with other development partners; health extension workers (nurses, village health workers and environmental health technicians). In Gokwe the program was advised on priority areas, which included sanitation and preservation of seasonal food crops, vegetables, and fruits. Table 3.4.2 below lists the trainings and technical assistance visits on nutrition and WASH-related issues conducted this quarter.

Table 3.4.2: WASH, Nutrition and Child Health Trainings in Program Areas, Q2 FY2016

Training Area	Training Subject	Chipinge	Nkayi	Shurugwi	Umzingwane	Total
Child Health	Growth Monitoring	0	0	3	0	3
Nutrition	Basic Nutrition	39	0	0	0	39
	Value Addition	21	0	0	0	21
WASH	Sanitation & Food Safety	31	12	0	11	54
	Treatment of Safe Drinking Water	30	0	0	0	30

Following a visit to smallholder dairy farmers in the Claremont and Irisvale area in Umzingwane, the team observed compromised hygienic practices in their on-farm handling of milk and milking utensils, which had resulted in high rejection rates by the processor. The team arranged a training session at the Umzingwane MCC to address the handling of milk and utensils. The training session was attended by 11 farmers currently supplying milk to the center.

In Nkayi district, the program is promoting a simple technology of safe water storage for household use and drinking (see photo). The process involves welding a garden tap to a plastic or metal drum of any size (20, 50, 100, or 200 liters). The container is placed on a place high enough to give it a head for drawing water by opening the tap, which reduces the chances of contamination since the container is closed at all times and only opens when replenishing water.



3.5 BUSINESS DEVELOPMENT AND FINANCIAL LINKAGES

Business development and financial linkage services are cross-cutting activities that contribute directly to all program results. The core task is to assist program beneficiaries in identifying permanent opportunities for earning additional income. During the reporting period, activities focused on mobilizing farmers into production and marketing groups, mainly around the feedlot activities rolled out in Chipinge, Kwekwe, Chirumhanzu, Shurugwi, Nkayi, and Lupane districts. Functional production and marketing groups were linked with MFIs for input financing and abattoirs for guaranteed offtake of the finished animals.

In total, 26 feedlot groups comprising 139 men and 65 women received training and technical assistance on governance, administration, and collective access to input, output and financial markets. The groups also participated in business skills training on leadership, enterprise budgeting, and credit control. As a result, 194 input loans worth \$51,194.32 were disbursed by MFIs collaborating with the program, as working capital to procure stock feed and veterinary drugs from National Foods and Veterinary Distributors, respectively. Input loans ranged from \$118-160 per animal depending on the number of days under pen feeding and distance from town where inputs were procured. Farmers received individual loans, which were group guaranteed from Quest Financial Services and Untu Financial Services as well as buyers such as Montana Carswell under its feeder finance scheme. To mitigate market and default risk, the groups were linked to abattoirs Montana Carswell, Sabie Meats, Koala, and Heads and Hooves for offtake of the finished animals using stop order facilities. The stop order arrangement yielded positive results with first-time borrowers achieving a 100 percent loan repayment rate. In total, the gross sales value from pen fattening activities was \$165,545.58.

Farmers who accessed credit have built up their credit worthiness and established long-lasting business relationships with agribusinesses. In turn, these companies benefited by entering new market segments, thus increasing their sales revenues at relatively lower costs as business transactions were conducted with farmer groups rather than individuals.

During the reporting period, the program trained 98 farmers from Gokwe MCC on fodder flow planning and budgeting. The training helped farmers determine their fodder production levels and amounts to borrow for fodder production. As a result four farmers managed to get loans worth \$2,000 for fodder production and paddock construction from Untu Microfinance.

Viability assessments were done in an effort to revive Takawira and Hama Mavhaire Dairy Associations in Chirumhanzu. The assessments revealed that both associations have poor governance that has resulted in member disengagement. The program intervened by recommending that the groups review and adhere to their constitutions to regulate member behavior. As a result, Hama Mavhaire has since elected a new management committee. Both dairy associations were assisted to set up feedlots and were linked to credit for inputs from Untu Microfinance to raise money to buy dairy cows.

Business training for input suppliers, agrodealers, processors, and traders has not yet begun as local partner identification is still underway.

3.6 LOCAL CAPACITY DEVELOPMENT

A component of Fintrac's Feed the Future Zimbabwe Livestock Development contract includes providing capacity building to LEAD, a Zimbabwean organization implementing the Feed the Future Zimbabwe Crop Development program.

This reporting period, capacity building activities included a capacity assessment of LEAD in the areas of governance and leadership; operations; financial and human resources management; and program delivery. A full report detailing the findings of the assessment was produced, shared, and discussed with LEAD and USAID/Zimbabwe. The report provided useful insight into capacity building opportunities, and this information was used to develop an overall capacity building work plan.

During the reporting period, the Feed the Future Zimbabwe Livestock Development team continued to provide one-on-one technical assistance to the Feed the Future Zimbabwe Crop Development team in gender, communications, monitoring and evaluation (M&E), and project branding and marking guidelines.

The two program's M&E teams collaborated on report writing, setting targets, and reviewing baseline data for the Feed the Future Zimbabwe Crop Development program. With the assistance of the Feed the Future Zimbabwe Livestock Development gender specialist, Feed the Future Zimbabwe Crop Development also received capacity building support to develop tools for their gender analysis.

4. ENVIRONMENT

This section summarizes Feed the Future Zimbabwe Livestock Development's environmental mitigation and adaptation interventions, particularly as they relate to climate change. Commercialization underpins all program activities, and therefore the environment strategy focuses on profitable and sustainable agricultural production, which in itself is a key adaptation to any climatic change. In addition, all program activities are based on good animal, agricultural, and business practices that have positive environmental outcomes.

All program interventions are screened for compliance with US government and Zimbabwean environmental, agrochemical, and food safety regulations and are designed to have a positive impact on the environment. Specific natural resource management (NRM) related activities in this second quarter included:

- Ensuring safe disposal of animal waste from all feedlots to minimize chances for contamination of water sources. New feedlots were sited at the stipulated minimum of 30 meters from homesteads and water points to reduce the introduction of house flies and contaminated water.
- Wards near Checheche in Chipinge South are now devoid of vegetation, both grass and trees, due to over utilization, resulting in strong winds ravaging the area and raising dust storms. To minimize destruction of trees through procurement of materials for constructing feedlots, all trainings promoted environmentally sound technologies and use of commercially purchased poles. Every cattle pen constructed used purchased timber from commercial suppliers, and in areas that suffer serious deforestation, farmers were encouraged to plant multi-purpose trees, e.g. mulberries.
- Establishing tree nurseries for planting at some centers of excellence. These nurseries provide shade and forage; increase oxygen to animals; act as wind breaks; and serve as a habitat and shelter for animals and birds. Mulberry nurseries were established at centers of excellence in Umzingwane and Chipinge South.
- Promoting erosion control in fragile environments of Chipinge South by working with 10 aspiring dairy farmers to establish 0.1 hectare plots of Bana grass as forage in Musikavanhu irrigation scheme. The grass controls soil erosion as it holds soil and restricts runoff, thus increasing water percolation and saving moisture.
- Wearing protective clothing was encouraged for individuals spraying cattle or administering drugs.

Completion of the program's Environmental Monitoring and Management Plan (EMMP) serves as a useful tool for assessing beneficiary astuteness to environmental issues, sensitizing farmers to environmental issues, and tracking the level of adoption of the technical assistance given. During the quarter under review the Feed the Future Livestock Development Field Supervisors and extension officers completed EMMP assessment forms for Chipinge South, Shurugwi, and Gokwe South. Analyses of the responses indicate that farmers and the program need to address the following issues:

- **Vector control** - In all three areas beneficiaries did not have facilities or effective measures in place to control flies that are common vectors generated from feedlots, kraals, and other livestock handling facilities. Flies spread common diseases like dysentery through contamination of food. In response, the program will institute activities that minimize the impact of contamination from flies, which include safe disposal of waste and manure from livestock handling facilities; simple fly traps; and, where possible, Pesticide Evaluation Report and Safer Use Action Plan (PERSUAP)-compliant chemicals to control flies around breeding areas, such as manure and feed dumps.
- **Waste disposal** - In all three areas farmers did not have facilities for incineration. Incineration is used for safe disposition of syringes, chemical containers, dead animals, etc. to prevent contamination of the environment. The program trained farmers on the proper disposal of

syringes and any glass chemical containers by bashing and battering them and throwing them down pit latrines or burning. Farmers are encouraged to burn dead animals to prevent the spread of diseases.

- **Animal husbandry** – Respondents reported that in Chipinge and Gokwe South, proper, adequate, and appropriate livestock handling facilities; adequate management of the range land/grazing land; and sufficient woodlots and tree planting were uncommon. The program will seek to address these inadequacies, and has already begun doing so with nurseries for multi-purpose trees, such as mulberries, cactus, and leucaena; planting of bana grass; and construction of proper feedlots in Chipinge South and Umzingwane.
- **Animal health** – All beneficiaries from Gokwe South and Chipinge responded that they lack proper records for mastitis control; dosing and vaccinations; correct disposal of chemicals, containers, used syringes, plastics; and use of PERSUAP-compliant chemicals, personal protective equipment, and proper equipment for administering drugs. Beneficiaries also indicated that they have not received any training on the safe use, handling, and disposal of chemicals, which is essential to address some of the above inadequacies. It should be noted that the safe use, handling, and disposal of chemicals is a technical module delivered by the program to all beneficiaries. The Feed the Future Zimbabwe Livestock Development program will conduct these trainings twice annually until the end of the program.
- **Livestock handling facilities** – Respondents in all areas raised issues around livestock facilities being located an appropriate distance from dwellings and watering points; separate access to drinking water for animals and humans; and provision of adequate water to toilets.
- **MCCs** – Only Gokwe MCC was assessed, and as a result, the program is encouraging this MCC to put in place systems that separate organic and chemical waste.

5. GENDER

Women play a critical role in food production and nutrition in Zimbabwe; therefore, the Feed the Future Zimbabwe Livestock Development program prioritizes engaging women as part of the strategy to increase household food security and agricultural production. To enable women to reach their full potential, the program promotes female and youth participation in leadership roles; fosters gender dialogue that increases access to finance and credit for women and youth; and encourages female farmers to adopt labor-saving agricultural technologies that increase productivity.

During this quarter, Feed the Future Zimbabwe Livestock Development developed its Gender and Youth Strategy based on findings from the baseline survey and the gender contextual analysis and assessment conducted in target areas during October and November 2015.

Findings from the contextual analysis reveal that women contribute significantly to livestock production but face various constraints that prevent them from realizing their full potential. These constraints include limited ownership of cattle; limited decision-making capacities due to cultural and traditional beliefs; food insecurity; and constrained access to credit, markets and services.

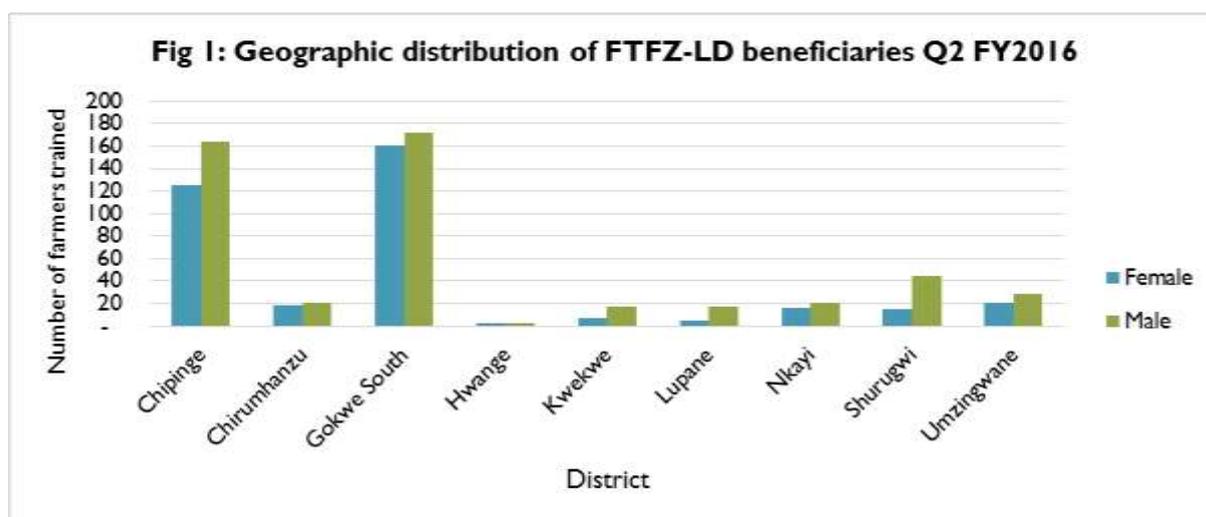
Thus, the Gender and Youth Strategy outlines activities that expand options and create new opportunities that equally generate income for men and women through targeted interventions. By addressing practical gender needs while recognizing the variation across regions, Feed the Future Zimbabwe Livestock Development will ensure maximum impact. The strategy addresses the challenges faced by women in agriculture through the following:

- Providing gender-appropriate training that involves both men and women.
- Promoting commercial opportunities for women within the beef and dairy cattle sectors.
- Encouraging, promoting, and persuading local businessmen and opinion leaders to take an innovative approach within their farms to demonstrate the benefits of an equal decision-making process in livestock management.
- Creating and encouraging microenterprise activities with women and youth groups.
- Improving nutrition for the whole family.
- Deliberately targeting women beneficiaries to host centers of excellence in beef and dairy programs.

By expanding options and creating opportunities for both men and women, the program will organically influence social norms and gender roles to improve gender equity among the targeted population. The strategy enables the program to address constraints posed by customary systems, norms, or social institutions that limit choices, decision-making, and relationships. This includes encouraging more equitable control over resources among family members, asset allocation, and improving intra-household relations and reducing domestic conflict.

MEASURING GENDER IMPACT AND WOMEN'S EMPOWERMENT

During the reporting period, hundreds of women throughout the focus areas advanced the quality of their lives and families through increased production and productivity, improved microenterprise development, and expanded access to markets (Figure 1 below).



Of the 856 smallholder beef and dairy farmers assisted by the program across the country to access productive economic resources, women accounted for 43 percent (370 farmers). Ongoing staff training and gender awareness sensitization will increase that percentage to 50 percent for the life of the program. The campaigns aim to change cultural and traditional beliefs regarding women's ownership and control of cattle (see text box).

Women have eagerly adopted and applied pen fattening technology as they accounted for 32 percent (65) of the 204 beneficiaries introduced to new technologies to add value to their marketed beef animals during the quarter (Table 3.2.2.3).

One such woman is Samukeliso Sibanda, who eclipsed her male counterparts in a feedlot venture that saw her pocket \$2,123 in new income from the sale of three animals. Heeding advice on the right selection of animals and adoption of good feedlot practices, she was the only farmer with an animal that had a super grade among her 14 fellow farmers.

Other highlights of gender-related activities in the second quarter include:

- A collaborative meeting with the Amalima program to share good gender practices.
- Commemoration of '16 days of activism' 2015 encouraged the team to increase awareness of gender-based violence across program activities.
- Messages from World AIDS Day on December 1, 2015 were incorporated in field activities.
- Deliberate gender mainstreaming efforts led to women hosting 35 percent of centers of excellence, showcasing good agricultural and animal husbandry practices. Currently the program hosts 81 centers of excellences in its beef and dairy focus areas.

Changing gender lenses

A transformation has occurred among the Ndaus in Chipinge South as some now permit women to own cattle. One good example is Ladson Mbonesi who, after program training, handed over a cow to his wife as appreciation for her hard work. Group discussions in Chipinge revealed that cultural and traditional beliefs contribute to women having limited ownership of cattle. According to Ndau custom, women cannot have their own cattle in the family herd because the household herd will perish.

LEADERSHIP

Feed the Future Zimbabwe Livestock Development promotes programs that help women effectively participate in marketing and gain ownership and management of small- and medium-scale enterprises and producer and trade associations. Enhancing the capacity of women to participate in and lead key organizations not only ensures the representation of rural women in key decisions, but also results in more widely-shared benefits.

Of the 174 leadership positions in MCCs and farmer groups in the program, women are in 31 percent of these roles. Lead farmers account for 49 percent (86) of the leadership positions, and in this category 37 percent (32) are women. The impact of women in leadership combined with support through gender training is critical in spearheading gender initiatives in the rural areas. The program aims to have women occupying 50 percent of leadership positions by the end of the program against a baseline figure of 36 percent. The program will make deliberate efforts to target women beneficiaries to host centers of excellences as well as to fill in any leadership positions in the MCCs and other commodity groups.

ACCESS TO FINANCE, CREDIT, AND MARKETS

Sixty (31 percent) of the 194 farmers who accessed credit in this quarter were women. Of the 190 loans valued at \$49,194.32 for pen fattening, 32 percent (\$13,671.71, or 27.8 percent of total value) went to female farmers.

Further, 32 percent of the 204 feedlot farmers linked to Sabie Meats, Montana Carswell, Koala Park and Heads and Hooves were women. As for dairy, 38 percent of the 47 milk producers connected to formal MCCs to ease aggregation and handling of milk were women farmers.

6. LESSONS LEARNED

The program continued to assess the ideal methods, location, and beneficiaries to implement its activities, and as a result learned lessons to take into consideration, including:

- Rearing of cattle in most focus areas is traditionally a male domain. The program will need to design women and youth-friendly activities to maximize gender and youth impact. The finalized Gender Strategy will focus on activities that productively and profitably involve women and youth in livestock programs. The program has encouraged women to host our centers of excellence; participate in pen fattening and our technical training programs.
- Credit availability stimulates adoption of new technologies, such as pen fattening, artificial insemination, paddocking, and upgrading milking systems. Feed the Future Zimbabwe Livestock Development will work with MFIs and banks to harness credit lines for short-, medium-, and long-term loans appropriate to smallholder beef and dairy farmers.
- Many smallholder farmers want to generate higher incomes from their livestock but often fail to identify and utilize available opportunities, and therefore require assistance to take advantage of available opportunities.
- Smallholder farmers generally abdicate their livestock health care to DVS. In the event that DVS has no resources, the health of their livestock is threatened and in some instances farmers lose their animals to simple health problems. Trainings on nutrition and proper care for livestock will decrease this issue.
- MCCs fall into the dependency syndrome, and development aid has propagated and entrenched this dependency. These centers need to operate as business entities that generate income to meet their running costs and still maintain an operating profit. The program aims to build the capacity of MCCs to make them viable, and is doing so by first addressing governance issues.
- Organized farmers gain bargaining power to demand better services. Group marketing can help farmers have better bargaining power. In all target areas beneficiaries received subsidized or zero cost transport. National Foods, who supplied pen fattening feed for most of the feedlots in the Midlands, provided free transport from its Bulawayo plant. Heads and Hooves and Sabie Meats in Bulawayo and Manicaland respectively provided free or subsidized transport for cattle to their abattoirs. Feed the Future Zimbabwe Livestock Development uses the group approach in delivering its technical content and linking farmers to credit and input and output markets.
One of the farmers who had his ox condemned for beef measles managed to get half of its slaughter price from Heads and Hooves after the program helped the farmer bargain based on the group's overall performance. The group had the best animals in terms of carcass grades. Normally he would have received nothing from the condemned animal.
- Stop order facilities should always be in place when dealing with formal buyers to ensure high repayment rates.

7. CHALLENGES

As lessons were learned, challenges also became apparent that should be addressed:

- Poor market organization in most focus areas diminishes the profitability of commercial beef production. Since few buyers attend poorly organized RDC cattle auctions, the resulting lack of competition hurts sales. Therefore, the program will work with the RDCs to ensure regular and planned cattle auctions. Further, sustainable competitive market linkages will be established with such players as abattoir operators and big meat wholesalers.
- Availability of drinking water for cattle limits farmers' ability to set up feedlots and dairy units. Few perennial rivers exist and cattle are watered at communal deep wells and boreholes, often in competition with humans. Possible solutions include: encouraging farmers to sink wells where underground water is close to the surface, constructing medium-sized dams for livestock drinking water, training farmers on water harvesting techniques, and establishing farmer groups for collective contribution toward borehole drilling to complement District Development Fund efforts.
- Serious food and water shortages for humans and animals in all focus areas require interventions beyond the scope of the program. Available water in all dams has now been reserved for humans and animals, which has curtailed interventions requiring crop production under irrigation. In Chipinge, FAO intervened with subsidized beef survival meal.
- Long calving intervals because of a lack of bulls and poor nutrition, especially among smallholder dairy herds. The program's genetic improvement strategy entails training local service providers on artificial insemination, fodder production, and heat detection; and linking farmers with commercial service providers.
- Governance issues undermine the proper functioning of most MCCs in the focus areas. Power struggles and the absence of a constitution at Shurugwi MCC has led to delayed milk checks, which encourages side marketing and/or termination of delivery. Power struggles and abuse of funds has closed Hamamavhaire MCC in Chirumhanzu. Low throughput at MCCs hampers commercialization of dairy production among smallholder farmers. Thus, the program seeks to increase farm-gate production through herd upgrading, nutrition, GAHPs, and market linkages while also building the capacity of MCCs in business, finance, governance, and administration.
- The outbreak of diseases such as FMD and anthrax in the operational areas and the resultant restrictions on cattle movement present marketing challenges and threaten beef viability. Cattle from the buffer zone can only be moved to another buffer zone for direct slaughter. This situation reduces the number of buyers frequenting the area for cattle as those relying on abattoirs outside the buffer zone struggle with animal movement regulations. Many farmers believe buyers are taking advantage of farmers in the buffer zone by offering low prices for cattle because they have no alternative markets. Corresponding control measures through movement restrictions threatens opportunities for market linkages, especially for beef. As part of GAHPs, the program offers training on disease awareness and control.
- Lack of coordination between government departments resulted in some challenges securing permits and clearing animals out of feedlots. Shifting schedules and timelines within the Veterinary Department hindered easy access to permits as per prior agreements between the program and DVS at the time of marketing.
- Inadequate knowledge on GAHPs and lack of capital to buy inputs, such as stock feed or veterinary drugs can lead to livestock loss due to disease, starvation, and old age. To combat this issue, the program is training farmers on benefits of supplementary feeding.
- Inadequate knowledge of efficient feedlot management obstructs farmers from fully taking advantage of pen fattening. Consequently, the program will provide training on proper animal selection and adhering to recommended feeding practices and duration.

- The prolonged mid-season dry spell in all program areas challenged fodder crop establishment and range land management; long term solutions must be found to ensure affordable food sources for beef and dairy farmers, especially in the drier areas. Some centers of excellence are pursuing drip irrigation technology and establishment of drought-tolerant pastures and tree species.

8. ACTIVITIES PLANNED FOR NEXT QUARTER

Based on the half-year progress for FY2016, Feed the Future Zimbabwe Livestock Development is on target to implement the second half of activities as outlined in the work plan. Notable activities will include:

- **Establishment of technology and GAHPs demonstrations.** Farmer-managed demonstration activities or centers of excellence will impart new technologies. During the last half of FY2016, the program will consolidate activities at its 81 established centers of excellence showcasing technologies and GAHPs in beef and dairy, as shown in Table 8.1. The actual final number of demonstration sites for FY2016 will be determined by the number of farmers willing to participate and co-finance the activities, participation of private sector partners, and logistical considerations. Training and technical assistance of beneficiary farmers will continue to be conducted around these demonstration sites.

Table 8.1: Targeted GAHPs and Technology Demonstrations

Practice	GAHPs and Technologies Targeted
Pasture development	Fodder flow planning, establishment and utilization of fodder; pasture development (sorghum, mhunga, rapoko, bana grass, fodder trees)
Recordkeeping	For individual cows and for milk; farm enterprise planning; analysis of on-farm records
Dairy Enterprise Management	Farmers understand concepts of farm business and farmer group formation for risk & cost reduction in business transactions
Animal Health	Major disease diagnosis, prevention, and treatment
Milk Quality Improvement	Improve to meet internally accepted quality standards
Artificial Insemination	Breed improvement through artificial insemination
Enhancing genetic quality	Quality bull and heifer procurement
Pen fattening	Pen fattening for improved animal quality and increased incomes

Specific technical interventions in the coming quarter will include the following:

- Thorough post-mortem analysis of pen feeding activities for greater farmer benefit when the market becomes right for pen feeding activity.
- Scaling up pen feeding activities, and credit and market linkages.
- Assisting farmers to realign herds for increased productivity, and planning for culling and marketing off the veld to raise resources for herd survival given impending drought situation.
- Scaling up GAHPs and GAPS on herd survival activities.
- Scaling up capacitation of local farmer organizations and MCCs.
- **Market Linkages.** Continue expanding market access for smallholder beef and dairy products and enhancing farmers' confidence in seeking market intelligence and lucrative markets. By building on activities to improve competitiveness through facilitating value chain relationships between private sector players and farmers, the program will:
 - Consolidate discussions with Kershelmar and Dendairy for milk supply/collection arrangements for farmers in Gokwe South and Umzingwane. Discussions will be initiated with other milk processors (Nestle and Dairiboard Zimbabwe).
 - Expand linkages between beef farmers and Montana Carswell Abattoirs, Heads and Hooves, Bulawayo Abattoirs, and Sabie Meats. Engage with smaller cattle buyers and consolidators.
 - Provide farmer production and marketing groups at the centers of excellence with business development training in constitution making, leadership, negotiation, group

input procurement, marketing; farming as a business; recordkeeping; and credit management.

- **Gender.** Feed the Future Zimbabwe Livestock Development will finalize its Gender and Youth Integration Strategy and operationalize this approach in interventions that equally generate income for men and women. Efforts will also include awareness campaigns and training and identification of gender champions.
- **Local capacity development.** With the baseline capacity building assessment draft report of LEAD Trust completed, the next step is the development of a work plan outlining the specific capacity building work to be conducted. Feed the Future Zimbabwe Livestock Development, Fintrac, LEAD, and Feed the Future Zimbabwe Crop Development will collaborate to ensure all parties are in agreement regarding the steps to be taken. In addition, initial capacity assessments will be conducted for identified partners. The process will help inform the capacity building for each partner, and enable design of appropriate action plans.
- **Nutrition & WASH.** Development of a nutrition and WASH strategy that will guide specific interventions among beneficiaries.
- **Other.**
 - Implement the first phase of the annual survey to collect data on performance indicators including average yields, costs of production, gross margins, and use of GAPs.
 - Finalization and USAID approval of subcontractor agreements for three companies and establishment of a partnership pipeline for early discussion with USAID.

ANNEX I: SNAPSHOTS



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SUCCESS STORY

Seconds from disaster: Timely beef survival meal saves Chipinge herd



Photos by Fintrac Inc.

Above: Rosemary Gangaidzo's animal purchased for \$25 from a desperate farmer.

Below: Gangaidzo with her animal two weeks after feeding survival meal.



"This program is a very good initiative as we have managed to salvage our livestock just in the nick of time,"

Ladson Mubonesi, smallholder farmer

Within a space of two weeks, Thokozani Mapindu lost seven cattle due to starvation. Chipinge district, where she lives, received far below normal rainfall during the 2014/15 season, resulting in poor foliage growth and depleted grazing land. Five of the most hard-hit wards in the district were recording an average of 10 cattle deaths per day.

The Feed the Future Zimbabwe Livestock Development Program entered the district just in time to address this precarious situation. Farmers received training in giving their animals supplementary feed during the lean season to keep body weight up. The high-fibre and cost-effective feed nourishes animals and enables them to withstand the dry season with little to no stress. Each animal requires between two to five kilograms of survival meal on a daily basis.

Local stock feed distributors in Chiredzi, Chipinge, and Mutare did not previously keep the maintenance meal in stock, prompting the program to negotiate with regional suppliers to avail stock.

After a series of successful negotiations, Sabie Meats and National Foods Limited began stocking survival meal for smallholders in Chipinge. Thanks to the awareness raised by the Feed the Future Zimbabwe Livestock Development Program, farmers came out in droves to procure the meal. Sabie Meats supplied 9.3 tons to 45 farmers, sufficient for 103 animals, over a 30-day period.

In one week, National Foods' first 30-ton delivery was sold out, and within five weeks the company sold 115 tons at \$270 per ton. To meet the huge demand, National Foods has since contracted an agent stationed within the farming community at Checheche business center.

"This program is a very good initiative as we have managed to salvage our livestock just in the nick of time," said Ladson Mubonesi, who has so far procured 300 kilograms of survival meal from National Foods for his eight animals.

In total, an estimated 550 farmers in seven wards in Chipinge saved 1,600 cattle from disaster thanks to survival meal. On average, a farmer requires at least \$25 worth of survival meal per animal to supplement them through the most critical period.

Some of the first program beneficiaries to buy meal took advantage of the situation to grow their herd sizes by purchasing other farmers' skeletal animals. The minimum offer has been \$25 per cow.

"I bought six cattle from my neighbors at prices ranging from \$25 to \$100 per live animal," said Rosemary Gangaidzo. She now has a herd of nine animals.

Feed the Future Zimbabwe Livestock Development Program is working to sustainably reduce rural poverty and increase incomes and food security for 3,000 beef and 2,000 dairy smallholder farmers in Zimbabwe.



Fintrac Inc. | December 2015



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SUCCESS STORY

Female smallholders prove livestock farming is also viable for women



Photo by Fintrac Inc.

Samukeliso Sibanda eclipsed her male counterparts in a feedlot venture that saw her pocket \$2,123 in new income from the sale of three animals. Heeding advice from the Feed the Future Zimbabwe Livestock Development Program on the right selection of animals saw her being the only farmer with an animal that had a super grade out.

"This is my first time to weigh and dip my livestock; I am very happy that I will be continually doing this myself,"

Neli Dube, smallholder farmer

Traditionally across Zimbabwean cultures, livestock farming has been regarded as a male domain. Thanks to initiatives such as the Feed the Future Zimbabwe Livestock Development Program, this perception is now changing.

Samukeliso Sibanda from Lupane district in Matabeleland North province is a traditional leader and successful beef farmer who is paving the way for women in her community to venture into livestock production. Recently, she outperformed her male counterparts in a pen feeding cycle that saw her earning \$2,400 in gross income from the sale of three animals at Sihambalahambayo feedlot.

Feed the Future Zimbabwe Livestock Development Program, which began in June 2015 and will run through June 2020, is promoting gender equity and social inclusion of women in all program activities to overcome the traditional limits on their participation in livestock farming. The program is using feedlot technology as a short-term strategy for smallholder farmers such as Sibanda to commercialize livestock activities.

With technical assistance and training from the program, Sibanda and 14 fellow farmers from Sihambalahambayo feedlot inducted 17 animals into a 45-day pen fattening cycle. Topics taught to smallholder farmers included the right selection of animals and the importance of good animal husbandry practices for increased income returns from livestock production. By adopting these lessons learned, Sibanda became the only farmer who managed to have one animal grade out as super after the value addition exercise.

The program linked the farmers to Montana Carswell Meats (MC Meats) for a profitable market where they sold their animals for a combined \$11,006. While other farmers earned an average gross income of \$614 per animal, Sibanda earned \$800 per animal.

With her new income, Sibanda has expanded her livestock enterprise and purchased three oxen intended for resale.

The opportunity to partake in livestock farming is a welcome move by many female smallholders such as Neli Dube from Bayethe feedlot in Umzingwane, Matabeleland South. Dube is thankful to the program for affording her the opportunity to practically manage her livestock. "This is my first time to weigh and dip my livestock; I am very happy that I will be continually doing this myself," she said.

Dube is part of 15 farmers who converged to pen fatten 21 animals over a 60 day period and realized \$15,339 in total sales.

Since inception, 38 percentage of the Feed the Future Zimbabwe Livestock Development Program beneficiaries are women.



Fintrac Inc. | January 2015



FEED THE FUTURE
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SUCCESS STORY

Improved genetics pay dividends to Fanisoni farmer



Photo by Fintrac

Mlamiseli Ncube's Brahman cow gave him nine offspring over 12 years, allowing him to improve the genetic makeup of his herd to increase productivity and value.

"I implore fellow small holder farmers to take heed and seriously consider adopting improved breeds as it has been aptly demonstrated that you will be handsomely rewarded in the end,"

Mlamiseli Ncube, smallholder farmer

In order to commercialize livestock farming, Zimbabwean smallholders must raise better breeds of cattle, which is only possible with the right combination of animal genetics and good animal husbandry practices.

Mlamiseli Ncube of Fanisoni irrigation scheme in Nkayi, Matabeleland North demonstrated this notion to fellow farmers after generating \$2,187 in income from three superior breed genetics culled in a feedlot venture.

The prevalence of non-adaptable breeds in drier areas of the country poses challenges to the success of livestock farming. Breed characteristics play an important role in beef production as certain major traits such as size and length of the carcass determine incomes earned from certain breed types.

Ncube purchased a Brahman heifer 12 years ago to infuse improved genetics into his indigenous herd. The heifer went on to give him nine calves, adding significantly to his cumulative herd growth of up to 24 Brahman crosses. After nine lactations the cow became barren and Ncube decided to cull the cow and put it through a feedlot with two of its offspring. The feedlot was supported by the Feed the Future Zimbabwe Livestock Development Program through technical assistance and credit linkages.

The offspring from the cow were clearly superior to the rest of the animals in the feedlot in frame size and conformation. After nine lactations the cow still earned him \$440 after loan deductions. While other farmers earned up to \$670 per animal, Ncube's two offspring weighted around 300 kilograms each, earning him a combined \$1,750.

"I implore fellow smallholder farmers to take heed and seriously consider adopting improved breeds as it has been aptly demonstrated that you will be handsomely rewarded in the end," Ncube said.

Fellow feedlot farmers could only marvel at the superior performance of Ncube's animals in the pens and the substantial income they earned him.

Ncube's case clearly demonstrates that with good breeds and good animal husbandry practices, farmers can derive more value from their livestock. In comparison with indigenous breeds, cross breeds have a well-documented superior performance in fertility, weaning weights, age at first calving, and general growth rates - all of which translate into better bottom lines for farmers.



Fintrac Inc. | January 2016



FEED THE FUTURE
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SUCCESS STORY

Direct lending increases incomes for smallholder beef farmers.

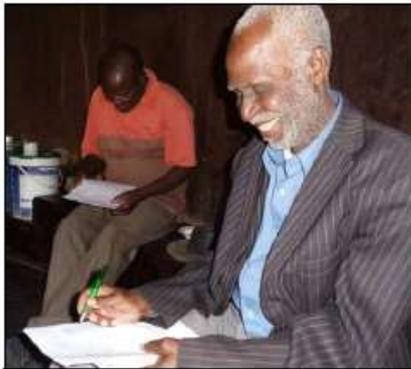


Photo by Fintrac

A visibly excited Aron Mazivuko from Shurugwi, Midlands going through his loan agreement with Untu Financial Services before signing. Thanks to the financial support, Mazivuko earned \$1,094 in gross income after selling two pen-fattened animals to Heads and Hooves.

"We are very happy that the farmers have managed to pay their loans in full, this has boosted our confidence and we are ready to provide more funding to the Feed the Future Zimbabwe Livestock Development Program farmers,"

Brighton Chinobvapasi, Untu loans officer

Due to recurrent national economic hardships, formal lending institutions in Zimbabwe have been known to shy away from perceived high-risk clients such as smallholder farmers. This limits the economic advancement of these farmers as access to credit is a prerequisite to commercialize smallholder livestock production.

In response to this challenge, the Feed the Future Zimbabwe Livestock Development Program has developed an integrated approach to commercialize smallholder beef production in Natural Regions III, IV, and V by facilitating direct lending opportunities for feedlot production.

Through this integrated approach, the program trains smallholder farmers in good animal husbandry and business practices and links them to financiers, input suppliers, and buyers.

To date, 204 farmers (32 percent women) have formed 26 feedlot groups in Manicaland, Midlands, and Matabeleland North and South provinces. These farmer groups received more than \$50,000 worth of input loans from Untu Financial Services, Quest Financial Services, and Montana Carswell Meats. The farmers were also linked to National Foods Limited for stock feed and Veterinary Distributors for drug procurement.

To complete the value chain and mitigate price risks, farmer groups were also linked to abattoirs such as Montana Carswell Meats, Sabie Meats, and Heads and Hooves for offtake of the finished animals. By facilitating relationships across the entire value chain, the program is ensuring these farmers can increase incomes and improve food security.

Collectively, the 26 groups generated more than \$160,000 in total sales from 272 pen-fattened animals and registered 100 percent loan repayment. Farmers earned up to \$570 per animal on average, a 59 percent increase in gross income.

"We are very happy that the farmers have managed to pay their loans in full, this has boosted our confidence and we are ready to provide more funding to the Feed the Future Zimbabwe Livestock Development Program farmers," said Brighton Chinobvapasi, Untu loans officer.

Direct lending provides positive benefits to agribusinesses. Farmers get an opportunity to build their credit worthiness and establish long-lasting business relationships with value chain players; and these value chain players in turn benefit by entering new market segments and increasing their sales revenue at relatively lower transaction costs as business is conducted with farmer groups rather than individuals.



Fintrac Inc. | January 2016

ANNEX 2: ILLUSTRATIVE INDICATORS

Indicator	Indicator Source	Base-line	Disaggregate	FY2016 Target	Quarter I	Total	Unit	
PROGRAM GOAL: SUSTAINABLY REDUCE POVERTY AND IMPROVE FOOD SECURITY AND NUTRITION FOR RURAL HOUSEHOLDS IN ZIMBABWE								
1	Number of rural households benefiting directly from USG interventions	FTF 4.5.2(13)	0	Total	1,250	750	750	Households (New and Continuing)
			0	Beef	750	500	500	
			0	Dairy	500	250	250	
2	Estimated number and percentage of FTF beneficiaries holding 5 hectares or less of arable land or equivalent units of livestock (Smallholders)	FTF (01)	91		90	96	96	Percent
3	Prevalence of Poverty: Percent of people living on less than \$1.25/day ⁹	LD 10	76	Overall	62	N/A*	N/A*	Percent
			84	Beef	70	N/A*	N/A*	
			60	Dairy	50	N/A*	N/A*	
4	Mean percent shortfall relative to the \$1.25 poverty line	LD 11	45		40	N/A*	N/A*	Percent
IR 1: Increased sustainable agricultural production, productivity, and incomes								
5	Average agricultural income per household	LD 1	237.72	Beef	300	N/A*	N/A*	USD
			415.22	Dairy	650	N/A*	N/A*	
6	Gross margin per animal	FTF 4.5(17)	18.80	Beef	27.00	N/A*	N/A*	USD
			119.49	Dairy	125	N/A*	N/A*	
7	Yield per dairy cow per day	LD 5	2.61		4.30	N/A*	N/A*	Liters/day

⁹ Figures indicate the proportion of beneficiary households living in poverty based on the beneficiary sample for each year, with the end target in Year 5 being 40 percent for beef and 30 percent for dairy households.

Indicator	Indicator Source	Base-line	Disaggregate	FY2016 Target	Quarter I	Total	Unit	
Sub-IR 1.1: Increased adoption of GAPS and management practices								
8	Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	FTF 4.5.2(5)	0		715	N/A*	N/A*	Farmers
Sub-IR 1.2: Expanded market access and value chain integration								
9	Percent of beneficiaries selling at least 80 percent of their milk to formal collection centers	LD 6	39		50	N/A*	N/A*	Percent
10	Percent of beneficiaries selling at least one head of beef cattle annually to formal buyers	LD 7	26	Percentage beneficiaries selling cattle	35	N/A*	N/A*	Percent
			41	Percentage beneficiaries selling cattle to formal markets	50	N/A*	N/A*	
11	Value of incremental sales (collected at farm-level) attributed to Feed the Future implementation	FTF 4.5.2(23)	0.10	Total (Actual Sales)	0.31	0.276	0.276	USD Millions
			0.03	Beef (live) Cattle (Actual Sales)	0.03	0.174 ¹⁰	0.174	
			0.07	Dairy (Actual Sales)	0.28	0.102 ¹¹	0.102	
Sub-IR 1.3: Improved NRM								
12	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	FTF 4.5.2(7)	0	Total	1,440	856	856	Unique Individuals
			0	Male	864	486	486	

¹⁰ These are actual beef cattle (live) sales recorded in our program areas

¹¹ These are dairy product sales recorded through MCCs assisted by the FTFZ-LD program

Indicator		Indicator Source	Base-line	Disaggregate	FY2016 Target	Quarter I	Total	Unit
			0	Female	576	370	370	
Sub-IR 1.4: Increased Access to Credit and Finance								
13	Value of Agricultural and Rural Loans	FTF 4.5.2(29)	0		0.05	0.05	0.05	USD Millions
14	Number of MSMEs, including farmers, receiving USG assistance to access loans	FTF 4.5.2(30)	0		170	194	194	MSMEs
15	Percent of beneficiaries borrowing at least once to finance purchase of livestock or other capital investment	LD 8	0		0	0	0	Percent
IR 2: Improved nutrition and hygiene practices and behaviors (Improved nutrition status)								
16	Women's Dietary Diversity: Mean number of food groups consumed by women of reproductive age	FTF 3.1.9.1(2)	2.5		2.8	N/A*	N/A*	Groups
17	Prevalence of households with moderate or severe hunger	LD12	39.2		39	N/A*	N/A*	Percent
Sub-IR 2.1: Improved utilization of nutritious foods								
18	Percent of households that consistently consume at least 5 of 9 food groups	LD 2	7		12	N/A*	N/A*	Percent
19	Prevalence of children 6-23 months receiving a minimum acceptable diet	LD 14	1		10	N/A*	N/A*	Percent
20	Number of people trained in child health and nutrition through USG-supported programs	FTF 3.1.9(1)	0		2,125	3	3	Unique Individuals
Sub-IR 2.2: Improved hygiene behaviors								

Indicator	Indicator Source	Base-line	Disaggregate	FY2016 Target	Quarter I	Total	Unit	
21	Percent of households that consistently practice at least 4 out of 6 good hygiene practices	LD 3	13		20	N/A*	N/A*	Percent
Sub-IR 2.3: Increased prevalence of exclusive breastfeeding								
22	Prevalence of exclusive breastfeeding of children under six months of age	LD13	72		72	N/A*	N/A*	Percent
IR 3: Increased capacity of local implementing organizations								
Sub-IR 3.1: Increased effectiveness of agricultural programs by local organizations								
23	Number of food security private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG assistance	FTF 4.5.2(11)	0		58	34	34	Organizations/Associations
24	Number of public-private partnerships formed as a result of Feed the Future assistance	FTF 4.5.2(12)	0		15	0	0	PPPs
Sub-IR 3.2: Increased adoption of best organizational practices								
25	Average change in score on organizational assessment scorecard administered pre- and post-assistance	LD 4	0		5	N/A*	N/A*	Percent
Sub-IR 3.3: Increased private sector investment in agriculture								
26	Value of new private sector investment in the agriculture sector or food chain leveraged by Feed the Future implementation	FTF 4.5.2(38)	0		20,000	500	500	USD
Additional Objectives								
27	GNDR3: Percent women program beneficiaries in relevant leadership positions	GNDR 3	36		40	31	31	Percent
28	Percent of beneficiaries who have adopted the following business practices	LD 9						Percent

Indicator		Indicator Source	Base-line	Disaggregate	FY2016 Target	Quarter I	Total	Unit
	Develop a budget for each farm enterprise		0		20	N/A*	N/A*	
	Track income and expenses in a record book		0		20	N/A*	N/A*	
	Calculate profit/loss for each major farm enterprise		0		20	N/A*	N/A*	

*Indicator is reported on annually

ANNEX 3: LIST OF BUYERS

The companies listed in the table below have all been engaged and have expressed an interest to transact with Feed the Future Zimbabwe Livestock Development program beneficiaries in the target districts.

Company	Products	Contact and Title	Tel No.	Email
Kershelmar	Milk	Mr Dhlodhlo (Procurement Manager)	0772252734	keshelmar@keshelmarbyo.co.zw
Dendairy	Milk	Denford Matiringe (Bulawayo Milk Depot)	0774306108	dendairy@gmail.com
Heads and Hooves	Beef cattle	Chris Androliakos	0779748230 0712211856	Chris Androliakos@yahoo.com
Montana Carswell Abattoir Gokwe	Beef cattle	Arthur Rex	0771247612 059-2855	arthur@mcmeats.co.zw
Montana Carswell Abattoir Redcliff	Beef cattle	Jordy Young	0772169986	jordy@mcmeats.co.zw
Bulawayo Abattoirs	Beef cattle	SI Brenner	0713433645 263 9 400715/403689	sbrenner@zol.co.zw
Sabie Meats	Beef cattle & stock feed	Neil van der Merwe	0772-214116	neil@sabiemeats.com

ANNEX 4: LIST OF INPUT SUPPLIERS

The companies listed in the table below have all been engaged and have expressed an interest to transact with Feed the Future Zimbabwe Livestock Development beneficiaries in the target districts.

Company	Products	Contact and Title	Tel No.	Email
Sabie Meats	Beef cattle & stock feed	Neil van der Merwe	0772214116	neil@sabiemeats.com
Luipaardsvlei Brahmans	Brahman bulls	Dawie Joubert	0774334554	zfejoub@bsatt.com
Ecomark & Coopers	Veterinary supplies	Dr. Morgan Matingo Dr. Oswin Choga	0772282803 0773724088	morganm@ecomed.co.zw oswinc@ecomed.co.zw
Fivet	Veterinary supplies	Dr. Bruce Fivaz John Magasi (sales)	0772189802 0773582239	bruce@vetprod.com john@vetprod.com
Lamour Dairy Products	Milk, dairy animals	Gareth Barry	0772260799	g.barry@zol.co.zw
Klen Karoo	Maize, pasture and vegetable seed	Beauty Magiya	0772339326	beuty@seedmarketing.co.zw
Quest Financial Services	Finance	James Msipa	0772573276	jmsipa@quest-fin.com
UNTU Financial Services	Finance	Clive Msipa	0774164390 04332968/308746	clive.msipa@untu-capital.com
Virl Microfinance	Finance	Virginia Sibanda	0774391252	virginia@virlmicrofinance.co.zw
Agrifoods	Stock Feeds	Luke Mutemeri	0712 632 333	lukem@agrifoods.co.zw
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