



## Fiscal Year 2006 Results Report

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## **LIST OF ACRONYMS**

G – Goal

FY – Fiscal Year

FFP – Food for Peace

IPTT – Indicator Performance Tracking Table

IR – Intermediate Result

LOA – Life of Activity

LOL/Z – Land O'Lakes/Zambia

PLWA – People Living with HIV/AIDS

MCC – Milk Collection Center

SO - Strategic Objective

UHT – Ultra High Treated

ZACA – Zambia Agricultural Commodity Agency

## **1.0 INTRODUCTION**

The results in this report refer to the objectives and activities carried out by Land O'Lakes/Zambia (LOL/Z) during the period October 1, 2005 – September 30, 2006. During this time, Land O'Lakes intensified the implementation of activities aimed at reducing food insecurity among vulnerable populations through dairy development activities. Over 2,000 households directly benefited from the program during the period under review. Program interventions continued to be channeled through select farmer groups. Technical Assistance at Milk Collection Centre level also continued because the program recognizes that maintaining a secure market for the raw milk that smallholder producers supply is important to their livelihoods. It is the means by which they earn an income to improve their food security situation as well as to cope during times of dire need.

Program activities during this period were aimed at addressing the access element of food security by providing vulnerable households an opportunity to have a stable and sustainable income through dairy production. In order for smallholder producers to have sustainable incomes, and ultimately become food secure through enhanced purchasing power, the milk demand and milk supply sides have to be addressed. With 40% of all rural households being net purchasers of staple food in any given year (mainly due to low productivity even in good-harvest years)<sup>1</sup>, increasing the incomes of these households is one of the most effective ways of addressing their food security. The program components – Dairy Livestock Development, Dairy Industry Development and Warehouse Receipt System – were therefore interlinked to achieve food security for rural households participating in the program.

### **1.1 Dairy Livestock Development**

The strategy of the dairy livestock development component is to build capacity within vulnerable populations to reduce food insecurity through dairy production. Due to the variability of rainfall within Zambia, which is concentrated between December and March, cultivation of the maize crop occurs at this time. Yet, due to depleted stocks from the previous year, food insecurity during this “hungry period” is at its peak. Milk production is also at its highest due to the abundance of pasture so dairy can assist greatly in reducing food insecurity. The milk production from traditional cattle has tended to drop drastically with the onset of the dry season and production normally ends by July/August. By improving both the genetic quality and nutrition of dairy animals owned by vulnerable households, Land O'Lakes seeks to give its program beneficiaries a steady flow of income throughout the year, including the hunger period to enable them purchase food when their own harvest runs out.

Land O' Lakes' intervention continues to be targeted at appropriate knowledge transfer through group training of farmers and building capacity within the local extension services to provide community based technical assistance. Technical training and knowledge transfer include dairy husbandry, clean milk production, forage production and animal health amongst others. Other activities have included distribution to vulnerable households of exotic higher potential dairy stock and an artificial breeding sub-program.

### **1.2 Dairy Industry Development**

In order to ensure a secure market for the raw milk produced by the program beneficiaries, the program continued to provide technical assistance to the Milk Collection Centers (MCCs), which were established to assist smallholder farmers access to a stable market by bulking their raw milk together and accessing the market through consumers and dairy processors. Land O'Lakes also continued to work with small and medium scale dairy processors, who purchase milk from

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<sup>1</sup> Food Security Research Project/Michigan State University, 2003

MCCs, to improve their capacity utilization and to ensure their ability to provide smallholder dairy farmers with a steady market for their milk. In particular, Land O'Lakes facilitated the formalization of purchase agreements between MCCs and dairy processors.

### **1.3 Warehouse Receipt System**

Most rural households embark on several livelihood strategies in order to meet their food security needs. For instance, households participating in the Land O'Lakes Dairy Development Program are also crop producers. Approximately 60% of the country's primary staple food, maize, is produced by rural smallholder farmers. The Warehouse Receipt System was initiated by USAID/Zambia and aims to ensure that producers get competitive prices for their crop by enabling them to store their produce until the market is favorable. The program is currently being administered by the Zambia Agricultural Commodity Agency (ZACA). Smallholders tend to market the bulk of their crop in the immediate post-harvest period, their decisions to sell being dictated by the need for cash rather than whether or not prevailing prices are remunerative. They cannot sell in the more formal markets due to volume constraints and quality variability, which leads to their crop being significantly discounted when sold to local middlemen. Quality analysis is usually by sight and is highly subjective. Enabling smallholder farmers' access to the Warehouse Receipt system helps reduce the marketing problems they face and make it possible for them to earn more for their crop. This is because the system enables farmer groups to bulk their crops into economic lot sizes that can be sold further down the marketing chain to processors.

## **2.0 ANNUAL RESULTS**

The activities undertaken during the FY 2006 were meant to meet the targets under the Intermediate Results (IRs) set for each of the three program's components as shown in the IPTT. The program has been running for half of its LOA and hence a Mid-term review was also undertaken during the Fiscal Year to assess how well the program's goals and objectives were being attained. Therefore, this section of the reports deals with the reporting of the program results towards achieving the targets in relation to the goals, strategic objective and the intermediary results of the program.

### **2.1 Program's Goal: Reduction in Food Insecurity among Vulnerable Populations.**

In order to measure the impact of the program on its beneficiary, three food security access indicators were assessed through the survey that was conducted during the mid-term evaluation that was carried out in June of FY2006 (See Part 3).

#### **G1: Number of Months of Adequate Household Food Provisioning (NMAHFP)**

*Mid-Term Target:* Average of 9.4 NMAHFP

*Mid-Term Actual:* Average of 8.2 NMAHFP

*% of target achieved:* 87%

This indicator had undergone several revisions since the inception of the program in order to make sure the data representing the desired impact was captured. Finally, the adopted version of the indicator was the one as presented by FANTA (2005). NMAHFP captures the households' ability to ensure that food is available above the minimum level during the year. Therefore, the income from the milk realized by the household is expected to support the goal of achieving this capacity.

From the program baseline, the question close to the one suggested by FANTA (i.e. the adequacy of food in the household) was analyzed and the baseline of 6.4 MAHFP was established. During its implementation, the program hoped to improve this situation by increasing this figure by 3

months (i.e. 9.4 NMAHFP) at mid-term and by 5 (i.e. 11.4 NMAHFP) months at the end of the program.

The result of the survey revealed that the NMAHFP recorded among the beneficiaries was 8.2 representing 87% of the target. This increase would be attributed to the incomes these household

*The results of this indicator were collected and analyzed during the Program's Mid Term Evaluation (MTE) conducted in July 2006. Results established during the MTE Survey are detailed in the Survey Report in Annex 3 of the Mid Term Evaluation Report. Land O'Lakes' intervention in FY06 was extended to the Copperbelt and Central Provinces with the inclusion of new households into these two provinces. Activities in the Copperbelt Province were conducted in collaboration with LOL's implementing partner, Heifer International. The program continued to adhere to its strict food security-based farmer selection criteria in order to ensure that only food insecure households were integrated into the program. Results of the MTE survey show several households recorded improvements in their food security situation during the period under review. This can be attributed to a number of reasons including increased incomes from dairy and the fact that participation in the Dairy Development Program freed several households from being farm laborers and they instead were able to take advantage of the good rainfall conditions to grow their own crops with the assurance that they were going to get a stable and alternative income from dairy. Indirect benefits also accrued in several forms to households not participating in the program. For instance, some community members were able to obtain supplementary income from offering labour services to program beneficiaries.*

have been earning that assist them to purchase cereal foods during months when households deplete their supplies of staples.

## **G2: Household Dietary Diversity Score (HDDS)**

*Mid-Term Target: None (This indicator was recently introduced)*

*Mid-Term Actual: Average of 6.05*

HDDS is used as a proxy measure of the socio-economic level of the household. During the program implementation, it is hope that this indicator will help to measure the program's impact on the increased households' food diversification as they participate more on the program.

This indicator was introduced recently in line with the FANTA guidelines (2005). During the MTR survey, a total average score of 6.05 was recorded meaning that the beneficiaries were at that time having 6 different food groups at the time of that time. This figure will be the baseline against which the progress will be measured at the end of the program. Target has been set for 7.0 taking the minimum HDDS of the upper tercile (33% of households with highest HDDS scores in the sample). The minimum figure was chosen rather than the average of 8.25, taking into consideration the amount of time left before the end of the program.

## **G3: Individual Dietary Diversity Score (IDDS)**

*Mid-Term Target: None (The indicator was recently introduced)*

*Mid-Term Actual: Average of 5.25*

IDDS is used as a proxy measure of the nutritional quality of an individual's diet. The indicator represents the number of different food groups consumed over a given reference period. This indicator was also introduced recently in line with the FANTA guidelines (2005).

During the MTR survey, the dietary habits of children (under five years old) were considered for this score. The total average score for IDDS was 5.25, which indicates that children are having 5 different food groups at the time of the MTR. Like HDDS, this figure will be the baseline against which the progress will be measured at the end of the program. The target has been set for 6.0 taking the minimum IDDS of the upper tercile (33% of households with highest IDDS scores in the sample). Again, the minimum figure was chosen rather than the average of 6.8 taking into consideration the amount of time left before the end of the program.

## 2.2 Program's Strategic Objective: Increased Incomes for Smallholder Farmers

### SO1: Increase in average household income from dairy sales

**Mid-Term Target:** Average of USD 636 per farmer per annum

**Mid-Term Actual:** Average of USD 732 per farmer per annum

**% of target achieved:** 115%

In line with FFP's emphasis on reducing food insecurity on a more sustainable long-term basis, Land O'Lakes' interventions promote self-reliance and empowerment of households that are perpetually vulnerable to recurrent risks to their livelihoods. The rationale is that, by giving these households an alternative source of livelihood, they will be able to cope with the effects of natural shocks such as droughts, which threaten their food security situation almost every agricultural season. Once trained and given a dairy heifer, when faced with such shocks as drought, these households will not resort to such survival strategies as selling their productive assets such as a plough that would have a negative impact on their food security status in the long term. Hence, Land O'Lakes firmly believes that by giving vulnerable households an opportunity to earn an income, the program enables them to be self-reliant and withstand the effects of shocks that threaten their livelihoods.

The data collected from all the farmers delivering milk to the Milk Collection Centers indicated the net amounts of money that were paid to each individual farmer on a monthly basis. The average net amount paid to each farmer during the whole twelve months period of FY2006 was USD732 representing 79% of the gross that was due to the farmers. This figure represents 15% more than the targeted value at mid term. On the other hand, the

*This indicator was also measured during the mid-term evaluations and results are detailed in Annex 3 of the Mid Term Report. The Survey revealed that due to the amount of work involved in dairy production, some farmers were able to hire the services of non-participating households in the form of cutting grass for fodder, milking, building of milking parlours and delivery of milk to milk collection centers. This example of economic activity demonstrated that the monetary benefits accruing from the program spilled over to households not directly benefiting from the program.*

Mid-term survey of a sample household indicated that these households reported earning a net of USD742 after their involvement in the Land O'Lakes program. One would conclude that most of this money made by the farmers after their involvement in the program would be coming from the milk sales.

## 2.3 Intermediate Results 1: Dairy Livestock Development

**Objective:** Increased incomes for smallholder dairy farmers through increase in income from dairy production

### IR 1.1: Increase in Milk Produced by smallholder farmers

**Target:** 3,025 liters of milk per household per annum

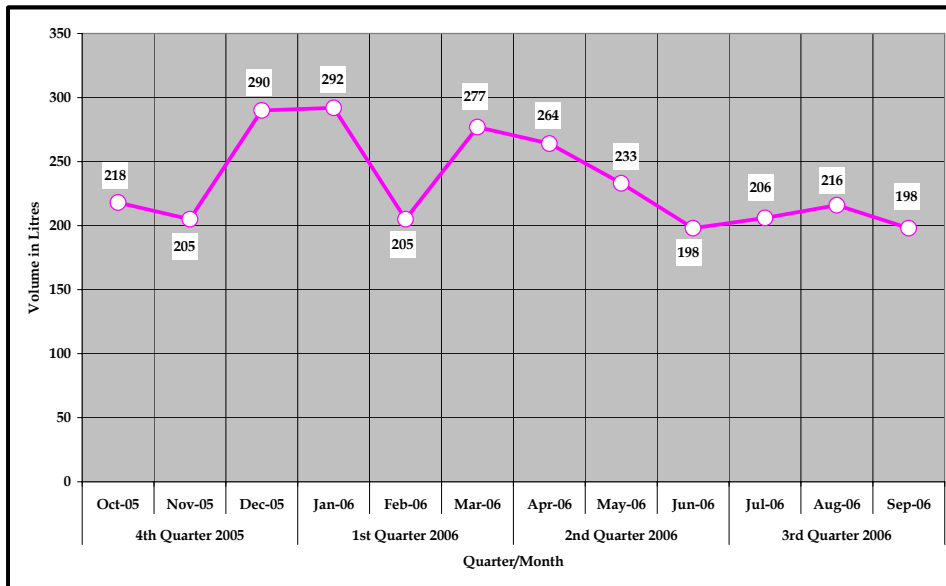
**Actual:** 2 862 liters of milk per household per annum

**% of target achieved:** 95%

During FY06, the program made tremendous efforts to increase the volume of milk produced by the smallholder farmers participating in the program. A total average volume 2,862 liters of milk per household was measured from the milk delivered to the Milk Collection Centers (MCCs). Unlike in the past fiscal year, the amount of milk delivered from the total farmers' production reduced because some farmers resorted to the site selling. Therefore, the reported figure is seemingly low compared to the reality on the ground. The fact that 95% of the target was

recorded during the fiscal year implies that the actual volume of milk produced by the farmers is more likely to be more than the targeted one. However, no methods were employed to estimate the milk that was not sold to the MCCs, but sold informally, consumed by household members, or fed to calves. The milk production in terms of volume produced per farmer varied during the period under review. The variation would be attributed to factors like seasonality, where the yield is lower during dry season and probably the disease that broke out in of the Southern Province affecting Kazungula and Sikaunzwe MCCs. The impact was so adverse to the extent that all the members stopped milking for two months in Sikaunzwe MCC. Figure 1 shows the production trend during the period under review.

**Figure 2-1: Monthly Average Liters of Milk Produced Per Farmer During the FY2006.**



The trend indicates that milk was on an increase during the rainy season and was low during the dry season. The sharp decrease volume in February 2006 was due to the disease that broke out during that month. This situation had an overall negative effect on the targeted figure earlier reported.

**IR 1.2: Increase in average yield of dairy cattle**

**Target:** 8.0 liters per cow per day

**Actual:** 7.8 liters per cow per day

**% of Target Achieved:** 98%

The milk yield was estimated based on the liters of milk produced by the farmers participating in the program. A yield of 7.8 liters per cow per day was estimated during the period under review. This estimation was based on the average total liters of 2,862 that was produced and marketed by each farmer to the MCC. It was established that most farmers own only one cow that is giving them the milk to deliver to the MCCs. Taking into consideration the milk that is consumed at home and that is sold informally, the yield rate is most likely more than the reported one there by surpassing the target for the FY in under review.

**IR 1.3: Number of smallholder farmers owning improved dairy cattle**

**Target:** 650 farmers

**Actual:** 587 farmers



**% of target achieved: 91%**

In order to improve the productivity through improvement of the genetic potential of dairy animals owned by smallholder farmers, the program planned to distribute improved animals to an additional 400 households during the FY2006. In addition to this, the AI program continued running as well as the pass-on program was planned.

A total of 299 animals were distributed with each household receiving one heifer during the FY under review. Under the AI program, 67 household had their traditional animals giving birth to calves of improved breeds. And under the pass-on program, 17 additional households received the calves of improved breeds from the beneficiaries who received the improved heifers first. This gave the total of 383 households received improved breeds of animals during the FY. Since the program inception, a cumulative total of 587 households has been provided with improved dairy animals through the three above mentioned avenues. The programs target was to have 650 households having the improved dairy animals translating into 91% achievement so far.

#### **IR 1.4: Number of smallholder farmers trained**

**Target:** 1,200 farmers

**Actual:** 1 911 farmers

**% of target achieved:** 159%

In order to transfer technical knowledge to the farmers, the program carries out trainings of different types. This intervention has seen farmers improve their capacities to carry out dairy activities and thereby improving their animal's productivity. Most of the success in making a difference in beneficiary households can be attributed to the trainings the program held for farmer groups. Technical support and farmer exchange visits were also undertaken in order to improve the adoption rates of recommended activities. During the FY 2006, Land O'Lakes endeavored to train an additional 600 smallholder farmers some of whom were to receive heifers from the program. Most, if not all, of these targeted new farmers were to come from the new areas where the program newly commenced activities during the Fiscal Year. The response was overwhelming and a total of 1,136 new farmers were trained bringing the total number of farmers trained since the program inception to 1,911. These farmers were trained in different subjects such as Dairy Husbandry, On-farm Record Keeping and Animal Reproduction.

## **2.4 Intermediate Results 2: Dairy Industry Development**

**Objective:** Market linkages for smallholder dairy producers

### **IR 2.1 Gross Value of Milk sold by Milk Collection Centers**

**Target:** 85, 500 US\$ per annum per MCC

**Actual:** 71, 244 US\$ per annum per MCC

**% of target achieved:** 83%

As usual, the MCCs continued bulking the milk for the farmers that work with Land O'Lakes. The program finds this linkage as an important factor in the dairy value chain as the MCCs provide farmers with a readily available market for their produce. During FY 2006, Land O'Lakes continued providing technical assistance to the ten MCCs, which included linking them to processors who would purchase their bulked milk and strengthening the Quality Assurance subprogram aimed at improving the handling and storage of bulk milk so it can fetch competitive prices.

Although this assistance has been provided, it is worth noting that the performances of the MCCs are not all the same. Some MCCs have been observed to be doing very well while others are not. During the FY2006, it was observed that half of the 10 MCCs were doing very well to the satisfaction of the program. The program considers the MCC to be doing very well if it is able to bulk and market a minimum of 4,000 liters of milk per month. Some MCCs have operated below this yard stick throughout the period.

Considering all the MCCs, an average gross value of USD 71,244 was realized per MCC representing 83% achievement towards the target for the Fiscal Year. If we take the 5 MCC that are doing very well, an average gross value of USD 114,264 was recorded, which is way above the target. The challenge for the program is to make sure that the other MCCs should operate above the threshold before the end of the program. A total of USD 617,031 was recorded from the sales of the milk by all the MCCs throughout the period, of which 82% (USD 503,998) of it was paid to the farmer members and 7% (USD 44,676) of it was paid to livestock companies (not served by the Land O'Lakes program) that delivered milk to the MCCs during the period. Only 1% (USD 6,226) was paid to non-members that delivered milk to the MCCs. Payment of the milk to the farmers and companies constitute the highest costs (above 90% of the total costs) incurred by MCCs. After paying the milk purchases costs, a total of USD 62, 131 (an average of USD6,213 for the 10 MCCs) would be considered extra money made by the MCCs from the milk bulking process. However, other costs or running the MCCs would constitute 10% meaning that a net of about USD 55,918 (an average of USD 5,592) was realized by the MCCs during the period.

## **IR2.2: Average volume of milk sold by Milk Collection Centers**

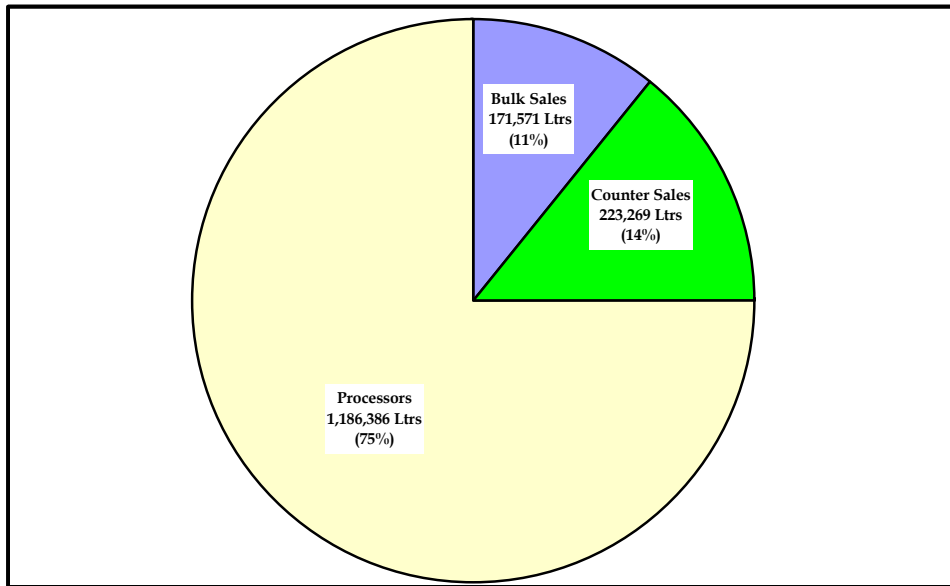
*Target:* 269, 900 Liters per annum per MCC  
*Actual:* 182, 928 Liters per annum per MCC  
*% of target achieved:* 68%

The MCCs have been bulking milk from three different sources during the period under review. Most of the milk (91%) is supplied by the member farmers whilst the non-member farmers and the Livestock Companies contribute only 1% and 7% respectively to the total milk bulked. A total of 1,659,826 liters were collected in total by all the MCCs, of which 1,581,226 (95%) was sold to three different outlets namely: the processors, bulk sales and counter sales. The milk sold to the counter sales and the bulk sales was either fresh and/or sour while that sold to the processors was always fresh. The difference between the milk collected and the milk finally sold by the MCCs is attributed to loss through the spillages and/or through the extraction of the whey when sour milk is made and sold. It is reported that in some cases the weight of whey would constitute up to 45% of the sour milk.

An average (from the 10 MCCs) of 182,138 liters of milk per MCC was sold to different outlets. As mentioned earlier, some MCCs were handling a total of less than 4, 000 liters per month, below the program's satisfaction, thereby 'diluting' the figures for those MCCs doing very well. From the 5 MCCs that are doing very well, an average of 294,653 liters per MCC was recorded during the period under review. This figure is well above the target for the FY2006.

As earlier stated, the bulked milk by the MCCs was sold to three outlets during the period under review. Most of the volume of the milk collected by the MCCs (75%) was sold to the processors. The rest of the milk was sold either as counter sales (14%) or Bulk sales (11%). Figure 2-2 below show the market share of the milk sold by the MCCs during the period under review.

**Figure 2-2: Percent Market Share for the MCCs Milk Sold During FY2006**



It is interesting to note that the proportion of from MCCs sold to processors during FY2006 was higher than what was sold to them in FY2005 by 3%. This increase can be attributed to the market

intervention that was strengthened by the program during the period.

**IR2.3: Number of smallholder farmers delivering milk to MCCs**

**Target:** 1,250 farmers

**Actual:** 797 farmers

**% of target achieved:** 62%

The total number of farmer members delivering milk to the MCCs varied during the months of the period under review. The lowest turnout was in October (425 farmers) and the highest was in June (667 farmers) when most of the farmers newly entering the program started delivering to the MCCs for the first time. The number increased because the farmers who received the animals had their animals calving down and started milking. During the period under review, a total of 797 farmers at least delivered milk to the MCCs. This translates in to 64% of the target. Initially, this target was anticipated to be achieved when the new farmers from new areas (Central and Copperbelt provinces) were to be incorporated into the system and began delivering milk to the MCCs. However, this goal was not so realized, This is because, although the program distributed heifers to farmer households in new areas, and more than 80% of them are already milking, none are delivering milk to MCCs because the MCCs in the respective areas are still under construction and are anticipated to be completed during the first quarter of FY07. The delayed construction of the MCCs seemingly affected the results of this indicator. It is important to note that construction of a MCC is neither fast nor easy. Once these MCCs are completed, the program intends to recruit some more groups that will undergo the same trainings as others and eventually members will be given a heifer each. These households are expected to start delivering to these new MCCs before the end of FY07.

**IR 2.4: Volume of milk used by processors to produce dairy products**

**Target:** 20% Increase

**Actual:** 26% Increase

**% of target achieved:** 130%

The program offered technical support in different areas to the processors with the view that they would use more volumes of milk to produce dairy products. The target during the FY2006 was for the processors to increase the volume used from the time of program inception (baseline was 32 million liters/annum) by 20 percent (i.e. 28 million liters). By the end of FY2006, the processors recorded to have used a total of 40 Million liters all together (i.e. a 26% Increase). This gives the total percent achievement of 130% towards the set target.

**IR 2.5: Capacity Utilization of dairy processors**

*Target:* 31%  
*Actual:* 33%  
*% of target achieved:* 106%

During the period under review, the capacity utilization of dairy processing increased to 33% recording a 106% achievement over the set out target of 31% capacity utilization during the year. This increased has enabled the processors to effectively use their plants. This improvement would be attributed to the continued technical support that the program rendered to the processors during the period.

**2.5 Intermediate Results 3: Improved storage for Non-perishable Commodities**

*Objective: Improved storage for non-perishable agricultural produce*

**IR 3.1: Increase in commodity receipts used as collateral**

*Target:* 35%  
*Actual:* 47%  
*% of target achieved:* 130%

Due to the good harvest experienced by farmers during the period under review, the program recorded 130% above target for commodities receipts used as collateral. It should be noted that the MTR has recommended that the program should drop this indicator and replace it with one that captures outcome and impact at smallholder farmer level.

**IR 3.2: Number of smallholder farmers trained**

*Target:* 3,000  
*Actual:* 3,000  
*% of target achieved:* 100%

As the appreciation of the Zambian Kwacha reduced USD purchasing power, ZACA discontinued the wide access training and awareness programs to concentrate on targeted sessions for depositors around certified warehouses. These sessions could not start until the renewal and new applications process for certified warehouses are confirmed in the third quarter. ZACA also conducted quick surveys to obtain an indication of the expected crop for farmers who participated in earlier training and promotional sessions. ZACA estimated an average 60% harvest increase from last season.

Eight (8) follow up visits were made to smallholder depots in Southern and Central provinces to assess the small farmer crop and their readiness for the marketing and financing challenges. The

depots visited were Kabanze, Muchila, Kabwe, Macha, Chikankata and Chilala in Southern Province and Chibombo West and Malambanyama in central Province. A total of 3,000 smallholder farmers in ten rural districts were trained in the Warehouse Receipts subprogram.

**IR 3.3: Increase in quantity of commodities deposited in certified warehouses by smallholder farmers**

*Target: 10,000 MT*

*Actual: 17,000 MT*

*% of target achieved: 170%*

Because of the favorable weather conditions experienced across the country during the 2005/2006 agricultural season, smallholder farmers had a big crop that required warehouse receipt intervention for pre-marketing financing. A total of 17,000 Mt of agricultural commodities were deposited by smallholder farmers targeted by the Warehouse Receipt Program.

2.6 Indicator Performance Tracking Table (IPTT)

**LAND O'LAKES, INC / ZAMBIA  
INDICATOR PERFORMANCE TRACKING TABLE (IPTT)**

Indicator <sup>2</sup>	Base-line	FY 1 Target	FY 1 Achieved	FY 1 % Achieved vs. Target	FY 2 Target	FY 2 Achieved	FY 2 % Achieved vs. Target	FY 3 Target (Mid-term)	FY 3 Achieved	FY 3 % Achieved vs. Target	FY 4 Target	FY 4 Achieved	FY 4 % Achieved vs. Target	FY 5 Target	FY 5 Achieved	FY 5 % Achieved vs. Target	LOA Target	LOA Achieved	
<b>Goal (FFP/SO): Reduced Food Insecurity Among Vulnerable Populations</b>																			
<b>G1.</b> Number Months of Adequate Household Food Provisioning	6.4 Months							9.4 Months	8.2 Months	<b>87%</b>							11.4 Months		11.4 months
<b>G2.</b> Household Dietary Diversity Index (HDDI)	6.05								6.05	Baseline							TBD		TBD
<b>G3.</b> Individual Dietary Diversity Index (IDDI)	5.25								5.25	Baseline							TBD		TBD

<sup>2</sup> See Performance Management Plan for details of each Indicator

Indicator <sup>2</sup>	Base-line	FY 1 Target	FY 1 Achieved	FY 1 % Achieved vs. Target	FY 2 Target	FY 2 Achieved	FY 2 % Achieved vs. Target	FY 3 Target (Mid- term)	FY 3 Achieved	FY 3 % Achieved vs. Target	FY 4 Target	FY 4 Achieved	FY 4 % Achieved vs. Target	FY 5 Target	FY 5 Achieved	FY 5 % Achieved vs. Target	LOA Target	LOA Achieved
<b>Strategic Objective: Increased Incomes for Smallholder Farmers</b>																		
<b>SO1.</b> Increase in average household income from dairy sales	\$578 per farmer per annum							\$636 per farmer per annum	\$732 per farmer per annum	<b>115%</b>				\$694 per farmer per annum			\$694 per farmer per annum	
<b>SO2.</b> Increase in average household income from warehousing system	0							5%						15%			15%	

Indicator <sup>2</sup>	Base-line	FY 1 Target	FY 1 Achieved	FY 1 % Achieved vs. Target	FY 2 Target	FY 2 Achieved	FY 2 % Achieved vs. Target	FY 3 Target (Mid- term)	FY 3 Achieved	FY 3 % Achieved vs. Target	FY 4 Target	FY 4 Achieved	FY 4 % Achieved vs. Target	FY 5 Target	FY 5 Achieved	FY 5 % Achieved vs. Target	LOA Target	LOA Achieved
<b>Intermediate Result 1 : Increased productivity of smallholder Dairy Farmers</b>																		
<b>IR1.1</b> Increase in average Volume of milk produced by smallholder farmers	2, 750 liters per annum per farmer				2, 888 liters per annum per farmer	3, 038 liters per annum per farmer	<b>105%</b>	3, 025 liters per annum per farmer	2, 862 liters per annum per farmer	<b>95%</b>	3, 166 liters per annum per farmer			3, 300 liters per annum per farmer			3, 300 liters per annum per farmer	
<b>IR1.2</b> Increase in average yield of dairy cattle (liters per cow per day)	4.0 Liters per cow per day.				6.0 Liters per cow per day.	4.0 Liters per cow per day.	<b>67%</b>	8.0 Liters per cow per day.	7.8 Liters per cow per day.	<b>97%</b>	10.0 Liters per cow per day.			12.0 Liters per cow per day.			12.0 Liters per cow per day.	
<b>IR1.3</b> Number of smallholder farmers owning improved dairy cattle	0				250	204	<b>82%</b>	650	587	<b>91%</b>	900			1,000			1,000	
<b>IR1.4</b> Number of smallholder farmers trained	0				600	775	<b>129%</b>	1,200	1,911	<b>159%</b>	2,867 <sup>3</sup>			3,823			3,823	

<sup>3</sup> Target has been increased due to LOA accomplishment to date.



Indicator <sup>2</sup>	Base-line	FY 1 Target	FY 1 Achieved	FY 1 % Achieved vs. Target	FY 2 Target	FY 2 Achieved	FY 2 % Achieved vs. Target	FY 3 Target (Mid-term)	FY 3 Achieved	FY 3 % Achieved vs. Target	FY 4 Target	FY 4 Achieved	FY 4 % Achieved vs. Target	FY 5 Target	FY 5 Achieved	FY 5 % Achieved vs. Target	LOA Target	LOA Achieved
<b>Intermediate Result 2: Improved Productivity of the Dairy Industry</b>																		
<b>IR2.1.</b> Gross average value of milk sold by Milk Collection Centers	61,300 US\$ per annum per MCC					60,215 US\$ per annum per MCC		85,500 US\$ per annum per MCC	71,244 US\$ per annum per MCC	<b>83%</b>				93,000 US\$ per annum per MCC			93,000 US\$ per annum per MCC	
<b>IR2.2.</b> Average Volume of milk sold by Milk Collection Centers	245,400 Liters per annum per MCC				257,700 Liters per annum per MCC	202,800 Liters per annum per MCC	<b>79%</b>	269,900 Liters per annum per MCC	182,928 Liters per annum per MCC	<b>68%</b>	282,200 Liters per annum per MCC			294,500 Liters per annum per MCC			294,500 Liters per annum per MCC	
<b>IR2.3.</b> Number of smallholder farmers delivering milk to MCCs	600				850	744	<b>88%</b>	1,250	797	<b>64%</b>	1,500			1,600			1,600	
<b>IR2.4</b> Volume of milk used by targeted Processors to produce dairy products	(000) 31,908 Liters per annum				10% ((000) 35,099 Liters per annum)	21% ((000) 38,583 Liters per annum)	<b>210%</b>	20% ((000) 38,290 Liters per annum)	26% ((000) 40,256 Liters per annum)	<b>130%</b>	25% ((000) 39,885 Liters per annum)			30% ((000) 41,480 Liters per annum)			30% ((000) 41,480 Liters per annum)	

Indicator <sup>2</sup>	Base-line	FY 1 Target	FY 1 Achieved	FY 1 % Achieved vs. Target	FY 2 Target	FY 2 Achieved	FY 2 % Achieved vs. Target	FY 3 Target (Mid-term)	FY 3 Achieved	FY 3 % Achieved vs. Target	FY 4 Target	FY 4 Achieved	FY 4 % Achieved vs. Target	FY 5 Target	FY 5 Achieved	FY 5 % Achieved vs. Target	LOA Target	LOA Achieved
<b>IR2.5</b> Capacity Utilization of targeted Processors to produce dairy products	26%				29%	32%	<b>110%</b>	31%	33%	<b>106%</b>	32%			34%			34%	
<b>Intermediate Result 3: Improved storage of Non-perishable Commodities</b>																		
<b>IR3.1</b> Increase in commodity receipts used as collateral	0							35%	47%	<b>130%</b>							50%	
<b>IR3.2</b> Number of smallholder farmers trained	0				2,000	2,133	<b>107%</b>	3,000	3,000	<b>100%</b>	4,000			5,000			5,000	
<b>IR3.3</b> Increase in quantity of commodities deposited in certified warehouses by smallholder farmers	0 Mt				5,000 Mt	3,654 Mt	<b>73%</b>	10,000 Mt	17,000Mt	<b>170%</b>	15,000 Mt			20,000 Mt			20,000 Mt	

Indicator <sup>2</sup>	Base-line	FY 1 Target	FY 1 Achieved	FY 1 % Achieved vs. Target	FY 2 Target	FY 2 Achieved	FY 2 % Achieved vs. Target	FY 3 Target (Mid- term)	FY 3 Achieved	FY 3 % Achieved vs. Target	FY 4 Target	FY 4 Achieved	FY 4 % Achieved vs. Target	FY 5 Target	FY 5 Achieved	FY 5 % Achieved vs. Target	LOA Target	LOA Achieved
<b>IR3.4</b> Number of Warehouses certified	0				3	5	<b>167%</b>	6	5	<b>83%</b>	9			10			10	

### **3.0 MONITORING & EVALUATION, AUDITS AND STUDIES**

The group assessment exercises in new areas were undertaken at the beginning of the FY in order to make sure that the groups selected met the program's food security criteria. This was done by constructing a food security calendar for each of the groups. This was followed by the farmer targeting surveys that determined the Number of Months of Inadequate Food Provisioning (NMIFP) for each household in the respective groups. A priority list of households for each group was established based on the NMIFP indicator with those households with the highest NMIFP most recommended to participate in the program and received a heifer later on.

The program activity monitoring continued and quarterly reports were produced for each of the quarter. Since the program was half way it's LOA, a Mid Term Evaluation (MTE) was designed and implemented during the FY under review. As an input to the MTE, a survey of 533 household was conducted and the results of this survey are in the report submitted along with this report.

The Standardized Annual Performance Questionnaire (SAPQ) has been appended to the hard copy of this report.