



**USAID**  
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# 2009 ANNUAL REPORT

Incorporating  
Quarterly Report  
4<sup>th</sup> Quarter 2009

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## ADMINISTRATIVE DATA

Country	Zambia
Project Title	Production, Finance and Technology (PROFIT)
Cooperative Agreement No	690-A-00-03-00172-00
Implementing Agency	NCBA/CLUSA
USAID Technical Office	SO5/Dann Griffiths
Date of Last Evaluation/Audit	N/A
Date of Next Evaluation/Audit	N/A

## FINANCIAL DATA

Date of Authorization	April 1, 2005
MAARD Number	6110005.01-3-04073
Total Estimated Amount	\$ 17,549,830
Total Federal Funds Authorization	\$ 15,967,415
Appropriation	72 – 19X1030
BPC	GGAX-05-21611-1G13

## PROFIT 4<sup>TH</sup> QUARTER 2009 PMP INDICATOR TABLES

PROFIT INDICATORS		BASELINE	FY07		FY08		FY 09			
			Target	Year Total	Target	Year Total	Target	Q4 09 Actual	Year Total	
<b>Trade/Exports related indicators</b>										
1	Value of purchases from smallholders of targeted commodities	\$46,870,313	\$51,674,520	\$25,737,563	\$54,258,246	\$41,637,131	\$56,971,159	\$53,095,324	\$55,273,006	
<b>Production/Sales/Value Addition related indicators</b>										
2	Value of Food and non Food Agricultural production by USAID	\$5,523,455	\$7,001,270	\$10,352,500	\$7,341,334	\$29,929,001	\$7,698,400	\$24,275,103	\$25,740,405	
3	Value of sales of all goods and services	\$5,397,833	\$6,902,500	\$11,735,880	\$7,410,350	\$30,501,720	\$7,820,432	\$24,767,925	\$27,201,856	
4	Value of resources derived from sustainable natural resources or	\$714,978	\$865,123	\$4,564,154	\$951,635	\$435,492	\$1,046,799	\$0	\$152,016	
5	Value of production per unit disaggregated by commodity sector.	Cotton (ha)	\$163	\$190	\$347	\$205	\$279	\$220	\$257	\$257
		Honey (hive)	\$4.44	\$4.90	\$6.08	\$5.14	\$3.70	\$5.40	\$3.70	\$3.70
		Red meat (animal)	\$116	\$128	\$198.55	\$135	\$363	\$141	\$383	\$383
		Dairy (animal)					\$824	\$865	\$999	\$999
		High Value Crop - Pineapple (ha)	\$785	\$865	\$2,500	\$909	\$2,170	\$954	\$2,170	\$2,170
6	Value of production per cent	Cotton	\$192	\$212	\$640.81	\$222	\$418	\$233	\$385	\$385
		Honey	\$35	\$39	\$61	\$41	\$271	\$43	\$271	\$271
		Red meat	\$94	\$104	\$251.10	\$109	\$363	\$114	\$766	\$766
		Dairy					\$4,118	\$4,323	\$3,997	\$3,997
		High Value Crop - Pineapple	\$628	\$692	\$1,250	\$727	\$2,170	\$763	\$2,170	\$2,170
7	Gross Margin per unit	Cotton (ha)	\$10	\$11.03	\$165.70	\$11.58	\$95	\$12	\$146	\$146
		Honey (hive)	\$2.44	\$2.69	\$3.74	\$2.82	\$3	\$3	\$3	\$3
		Red meat (animal)	\$7.11	\$8.60	\$191.88	\$9.03	\$353	\$9	\$343	\$343
		Dairy (animal)					\$329	\$345	\$505	\$505
		High Value Crop - Pineapple (ha)	\$547	\$603	\$1,958.34	\$633	\$853	\$665	\$853	\$853
8	Volume of produce processed (mt)	Cotton	19,200	24,192	35,200	25,402	28,896	26,672	44,000	44,000
		Honey	347	437	15	459	299	482	0	280
		Red meat	0	255	171	510	235	1020	974.26	982.26
		Milk (Lts)				6,222,000	6,300,000	6,615,000	3,619,056	7,024,221
		High Value Crop - Pineapple	0	1,000	109	2,000	26	2500	0	50
<b>Technologies related indicators</b>										
9	Number of clients engaged in improved and/or value added processing and production disaggregated by technology type.	Conservation farming	3,200	25,000	43,000	45,000	32,924	63,000	67,000	70,156
		Vet contract/herd management	0	1,000	672	2,000	6,297	2,500	1,347	4,021
		Contract production	37,500	65,000	44,635	75,000	254,254	80,000	0	106,100
		Improved honey production	0	750	0	1,000	7,246	1,250	0	4,000
		Input products and services	10,000	100,000	21,974	150,000	43,447	200,000	15,773	55,703
10	Area or number of commodities under improved technologies	Conservation farming (ha)	3,200	25,000	43000	45,000	18,122	63,000	100,963	106,000
		Vet contract/herd management (hd)	0	10,000	7,780	20,000	19,546	25,000	25,952	57,597
		Contract production (ha)	32,000	60,000	43,015	70,000	110,175	75,000	0	136,050
		Improved honey production (hives/Q.C trainings)	0	1,500	0	2,000	37,725	2,250	0	32,000
		Input products and services (ha)	10,000	100,000	21,974	150,000	43,447	200,000	15,773	55,703
11	Improved technology adoption rate (%)	Conservation farming	10%	15%	15%	18%	20%	20%	44%	44%
		Vet contract/herd management	0%	55%	43%	80%	100%	33%	33%	
		Contract production	25%	24%	15%	26%	28%	0%	17%	
		Improved honey production	0%	10%	0%	15%	20%	0%	13%	
		Input products and services	10%	15%	40%	20%	25%	48%	48%	
12	Number of hectares under biodiversity conservation.	3,200	25,000	43,000	45,000	18,122	63,000	100,963	106,000	
13	Number of hectares under managed natural resource production	0	366,000	0	366,000	4,166,000	366,000	0	0	

PROFIT INDICATORS		BASELINE	FY07		FY08		FY 09				
			Target	Year Total	Target	Year Total	Target	Q4 09 Total	Year Total		
<b>Finance related indicators</b>											
14	Value of finance/capital accessed by USAID assisted groups	\$1,845,045	\$4,000,000	\$1,612,750	\$6,000,000	\$7,066,870	\$8,000,000	\$0	\$3,041,870		
15	Number of loans by USAID assisted institutions disaggregated by gender	Male		42,014		86,912		0	84,801		
		Female		1,028		21,727		0	21,200		
		Total	32,000	60,000	43,042	70,000	108,639	75,000	0	106,001	
16	Percentage of the number of loans on schedule for repayment	90%	90%	50%	90%		90%	90%	90%		
17	Value of loans by USAID assisted institutions disaggregated by gender (lenders)?	Male	\$1,845,045	\$4,000,000	\$1,580,335		\$5,553,524		\$0	\$2,436,623	
		Female			\$32,415		\$1,513,346		\$0	\$605,247	
		Total			\$1,612,750	\$6,000,000	\$7,066,870	\$8,000,000	\$0	\$3,041,870	
18	Percentage of the value of the lending portfolio on schedule for	90%	90%	50%	90%		90%	90%	90%		
<b>BDS related indicators</b>											
19	Number of clients/entrepreneurs receiving BDS disaggregated by category e.g smallholder farmers, agribusiness firms	<b>Small holder</b>									
		Male				167,932		52,591	192,818		
		Female				99,872		23,814	69,187		
		Total	37,500	100,000	118,979	150,000	376,304	200,000	76,405	262,005	
	<b>Agribusiness</b>		2	200	234	300	2,032	400	1,539	4,067	
		Male					167,932		52,591	192,818	
		Female					99,872		23,814	69,187	
20	Number of farmers reached with extension/outreach services	Total	37,500	60,000	118,979	80,000	376,304	100,000	76,405	262,005	
		Male	0	187,500	0		1,740		4,348	12,574	
		Female					1,988		5,039	13,957	
21	Number of people reached with HIV/AIDS A & B outreach programmes	Total				225,000	3,728	262,500	9,387	26,531	
<b>Policy related indicators</b>											
22	Number of policy areas worked on or affected if any	0	0	0	0	4	0	4	6		
23	Policy progress milestones – Analysis, debate, submission,	0	0	0	0	4	0	4	6		
<b>Training related indicators (disaggregate by gender)</b>											
24	Number of people trained in	<b>Agricultural production</b>									
		Male				162,443		52,591	189,818		
		Female				102,665		23,814	68,187		
		Total	32,000	60,000	118,923	80,000	265,108	100,000	76,405	258,005	
		<b>Private sector growth</b>		40,000	70,000	119160	90,000	375,762	110,000	77,944	266,169
		<b>Nat. Resource Mgmt &amp; Conservation</b>									
		Male				125,405		22,845	28,203		
		Female				69,423		15,230	17,016		
		Total	5,500	6,000	11,000	7,000	194,828	8,000	38,075	45,219	

USAID OPERATING PLAN INDICATORS														
2.2 Trade and Investment Capacity	FY 08 Target	FY 08 Q1 Actual	FY 08 Q2 Actual	FY 08 Q3 Actual	FY 08 Q4 Actual	FY 08 Year Total	FY 09 Target	FY 09 Q1 Actual	FY 09 Q2 Actual	FY 09 Q3 Actual	FY 09 Q4 Actual	FY 09 Year Total		
1. Number of events held that provided training on topics related to improving the trade and investment capacity building	2,000	400	307	328	1,006	2,041	2,100	628	303	411	987	2,329		
2. Number of Capacity Building Service Providers receiving USG assistance	300	694	135	516	687	2,032	378	1,988	0	0	1,539	3,527		
3. Number of firms receiving capacity building assistance to export	65,750	108,500	2500	4500	36,500	152,000	58,800	140,000	0	0	105,000	105,000		
4. Number of USG participants USG supported trade and investment capacity building trainings	150,000	188,958	9,952	154,589	22,805	376,304	147,000	132,157	0	0	76,405	208,562		
Male		52,906	7,128	93,614	14,284	167,932	125,000	99,666	0	0	52,591	152,257		
Female		27,552	2,824	60,975	8,521	99,872	22,000	32,491	0	0	23,814	56,305		
5. Total value of exports in targeted sectors in which firms are receiving USG assistance to increase their exports	\$10,000,000	\$18,000	\$318,000	\$0	\$44,518,983	\$44,854,983	\$45,000,000	\$112,000	\$0	\$0	\$47,000,000	\$47,112,000		
<b>3.2 Financial Services</b>														
1. Number of financial sector professionals trained in international standards	71	10	46	20	0	76	75	143	0	0	0	143		
Male	60	7	28	12	0	47	63	119	0	0	0	119		
Female	11	3	18	8	0	29	12	24	0	0	0	24		
2. Number of USG special funds loans issued this year	0	0	0	0	0	0	0	0	0	0	0	0		
3. Value of USG special funds loans issued this year	0	0	0	0	0	0	0	0	0	0	0	0		
<b>5.2 Private Sector Productivity</b>														
1. Number of firms with improved management practices as a result of USG assistance	46,600	108,500	1,159	498	18	110,175	75,000	136,050	0	0	0	136,050		
2. Number of firms investing in improved technology as a result of USG assistance (SD)	23,000	6,071	6,530	4,842	7,548	24,991	23,000	15,541	13,187	11,202	15,773	55,703		
3. Number of SMEs that successfully accessed bank loans or private equity as a result of USG assistance	0	0	0	0	0	0	59,100	0	0	0	0	0		
<b>6.2 Agricultural Sector Productivity</b>														
1. Number of additional hectares under improved technologies or management practices as a result of USG assistance	23,000	6,071	6,530	4,842	7,548	24,991	23,000	15,541	13,187	11,202	15,773	55,703		
3. Number of agriculture-related firms benefiting directly from interventions as a result of USG assistance	300	694	135	516	687	2,032	378	1,988	204	336	1,539	4,067		
4. Number of individuals who have received short term agriculture sector productivity training with USG assistance	80,000	77,892	9,952	154,459	22,805	265,108	100,000	128,157	15,340	38,103	76,405	258,005		
Male			7,128	93,517	14,284			96,666	11,672	28,889	52,591	189,818		
Female			2,824	60,942	8,521			31,491	3,668	9,214	23,814	68,187		
<b>7.3 Strengthen Micro-Enterprise Productivity</b>														
1. Number of micro enterprises participating in USG assisted value chains	100,000	108,500	15,643	5,163	22,805	152,111	100,000	128,157	15,340	38,103	76,405	258,005		
2. Number of micro enterprises receiving business development services from USG assisted sources	140,000	110,966	4,650	130	36,500	152,246	140,000	140,000	0	0	105,000	105,000		
<b>8.1 Natural Resources and Biodiversity</b>														
1. Number of people trained in natural resources management and/or biodiversity conservation as a result of USG assistance	56,700	33,906	19,774	140,130	1,484	195,294	56,700	7,144	0	0	38,075	45,219		
Male		26,952	13,169	84,097	1,187	125,405		5,358	0	0	22,845	28,203		
Female		6,488	6,605	56,033	297	69,423		17,016	0	0	15,230	32,246		

**The Agricultural Retail Industry**

- **Over \$1.2m of input sales were generated by the 1,500 agricultural retail industry in-community agents in 2009**, representing a 50% increase on 2008 sales and demonstrating the viability of the smallholder market as well as the agent model. The sales peak was also spread further throughout the year as firms learned to take advantage of the periods of liquidity within the smallholder sector. (note Q4 comparisons Fig 1. below)
- Coupled with significantly increased sales within the veterinary sector, it is clear that the **model of smallholder input market engagement promoted by PROFIT is becoming a systemic market evolution** (see below)

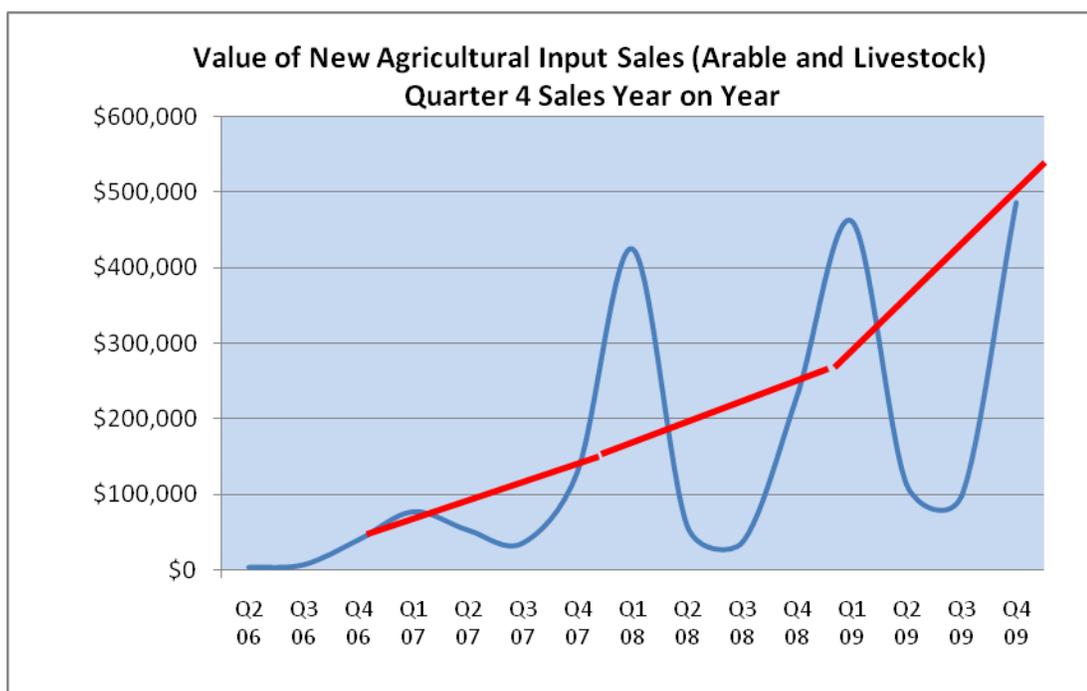


Fig 1. Combined input sales by Quarter since project inception

Total	2006	2007	2008	2009
Value of New Arable and Livestock Input Sales	\$49,467	\$295,615	\$748,185	\$1,158,837
% Increase on Last Year	n/a	498%	153%	55%

Table 1. Annual Input sales by Quarter since inception

- In a sign that the behaviour of retail firms is changing in response to this growing market, **ten firms have made considerable investments in their management processes over the year**, to specifically target and manage the smallholder market.
- Another interesting behaviour change is taking place at the 'grassroots' level of the industry, with a **200% increase in the number of sub-agents engaged** during the year as agents are finding new ways themselves of increasing their market penetration.
- In a major development that signifies an unprecedented level of industry co-operation, **the agricultural retail sector funded the establishment of a CropLife Zambia Secretariat**, responsible for the expansion of retail distribution networks and the promotion of safe use of chemicals primarily through the smallholder supply chain as well as the training and certification of all in-community agents and service providers.
- As part of a drive towards the safe use of chemicals by spray service providers, **nearly 900 active spray service providers were trained and certified by CropLife Zambia** over the year, the majority being in the cotton sector

### **The Cotton Industry**

- The primary achievement recorded by PROFIT in the cotton sector over the year has been the **total adoption of the contract servicing and preferred supplier models into the Dunavant production management structure**. Through its extension systems, the company is now actively identifying and training service providers, and through its 'Gold Club', it is now incentivising high volume, high yield production and loyalty. By facilitating access to mechanical and ox-drawn rippers to service providers, Dunavant is also great strides to stimulate commercially-driven conservation farming adoption into cotton production.
- Over **670 Spray Service Providers were active across the country** during the 2008-9 seasons, servicing over 3,350 clients who attribute cotton yield increases of 30% to the service.

### **The Commodity Markets**

- Despite a hostile marketing environment characterised by heavy government intervention, **ZAMACE recorded over \$17m of trades in 2009**, representing a 100% increase on 2008 figures, with a much greater profile being gained by the Exchange in farming, trading, milling and government sectors

- After several months of negotiation, the **World Food Programme in Zambia formally amended its procurement procedures to allow it to purchase its local requirements across ZAMACE** – the first time this has happened in Africa outside South Africa and a major boost to the credibility of ZAMACE. The organisation purchased over \$2.2m of crop across the Exchange during the year and stimulated a number of significant innovations in the market such as reverse auctions and regional bids.
- **ZAMACE made strong progress in engaging the smallholder market**, with three certified warehouses and six ‘certified’ community aggregation points established and the first smallholder offer placed on the trading platform.

### The Beef and Veterinary Industries

- In a sign that there is now momentum building behind the private sector engagement of the smallholder veterinary market, **the value of sales of livestock-related goods and services into the smallholder sector increased by 170%** during the year to \$94,000. Through the ‘one-off’ service and a new focus on distributing veterinary products through the agricultural retail agent networks, the geographical footprint of the industry has increased and there has been a 68% increase in the number of cattle now falling under professional veterinary management.

### The Dairy Industry

- **Deliveries of smallholder milk into the three main commercial processors increased by over 60% in 2009**, largely as a result of significantly greater investment by the processors in extension and aggregation and collection services. Deliveries into the wider commercial processing sector rose to record levels of over 7m litres.
- While the number of smallholder and emergent dairy farmers engaged with the commercial processors is still low (1,300), substantial gains have been made in sector productivity, **with increases of household level productivity and gross margin rising by 28% and 53% respectively.**
- As a result of the improved interaction between farmer and processor, and the assurance of a guaranteed and buoyant market, **smallholder investment in new technologies and services has increased significantly**, especially in the areas of fodder management and vet services.

### **The Financial Services Industry**

- With major constraints to improving rural and agricultural access to the traditional financing sector still in place, **significant progress was made during the year in developing a transformational mobile phone based financial services platform for the ‘unbanked’**. The Mobile Transactions m-payments platform was approved by the Bank of Zambia in October 08 and \$140,000 per month passing through the system by the year-end.
- During 2009, PROFIT was a key contributor to the Fertiliser Support Programme reform process and **facilitated the design of an innovative e-voucher system** based on the Mobile Transactions payment platform. While the design was eventually not adopted by the government, the system was being used with great success in a donor agricultural inputs provision programme.
- **The groundbreaking study by PROFIT and ZNFU into the agricultural finance sector was well received in the agricultural and financial sectors**, with a resulting commitment from both sectors and the Bank of Zambia to cooperate in addressing some of the critical issue.

### **The PROFIT Programme’s total Impact on the Smallholder Economy**

- During the fourth quarter of the year, PROFIT undertook an exercise to determine the impact that a selected number of programme interventions have had on the smallholder economy over the year. A summary is presented below, and further details are given in the related programme report components:
- The number of farmers interacting with PROFIT’s private sector partners and engaged in improved input and output market relationships is now over 150,000 as shown in the table below:

## Summary of Economic Benefit to Smallholder Economy

<b>Agricultural Retail Network</b>	
Total Expenditure	\$1,064,962
Gross Attributed Income Increase	\$11,826,680
Total Gross Margin Benefits	\$10,761,717
<b>Private Vet Network</b>	
Total Expenditure	\$93,874
Gross Attributed Income Increase	\$2,612,894
Total Gross Margin Benefits	\$2,519,020
<b>Spray Service Provision - Cotton</b>	
Total Expenditure	\$24,947
Gross Attributed Income Increase	\$150,750
Total Gross Margin Benefits	\$125,803
<b>Tillage Service Provision</b>	
Total Expenditure	\$35,088
Gross Attributed Income Increase	\$128,785
Total Gross Margin Benefits	\$93,697
<b>Dairy</b>	
Marginal Sales Value	\$689,096
<b>Total Gross Margin Benefits to Smallholder Economy</b>	<b>\$14,189,333</b>

Table 2. Total benefits to smallholder economy

## THE AGRICULTURAL INPUT MARKETS

### Annual Summary

A dynamic agricultural inputs industry remains key to the productivity of smallholder farmers, and during 2009, steady and significant progress was made by the sector in its engagement of the smallholder market. Firms are making ever greater investments in staff and resources dedicated to the smallholder market, and a maturity in the sector is evidenced by the increase in the number of strategic alliances between firms being formed to make market engagement more efficient

At the 'grassroots' level of the industry, a significant escalation in the number of sub-agents involved has been an interesting evolutionary development as agents are finding new ways of increasing their market penetration.

The service delivery platform has shown great improvement this year compared to last year. The CropLife Zambia Association has taken several key roles on the certification process of spray service providers. The innovation of developing identity cards for the sprayers service providers has added value and credibility to the service providers. Companies have indicated greater interest in investing in the service platform, signified by the increase in the number of trainings conducted without the support of PROFIT and the increase in the number of trainers trained over the year.

Industry cooperation has improved over the year, with CropLife Zambia employing a full time staff for the secretariat. More trainers from the industry were trained, tested and certified by CropLife Zambia and a CropLife International representative increasing the outreach on safe use of chemicals to the farming community. Standards for testing and certification were developed and agreed upon by the industry trainers. The CropLife Secretariat conducted a number of follow-up programmes with the trainers to cross-check the quality of training and information provision to the farmers. With support from PROFIT, the industry developed safe use handbooks and some pictorial messages which proved very useful in the education process.

The retail companies continued promotions and marketing strategies through taking advantage of the cultural events and social activities in the rural areas and this year, there was an interesting development in the proactive invitation by communities to companies to participate in the events.

The managements of agents, forecasting ability and liquidity issues continued to restrict potential growth in the market and continue to present great challenges going forwards.

However, evidence of significant industry growth can be determined through the annual growth performance presented in fig.2 below.

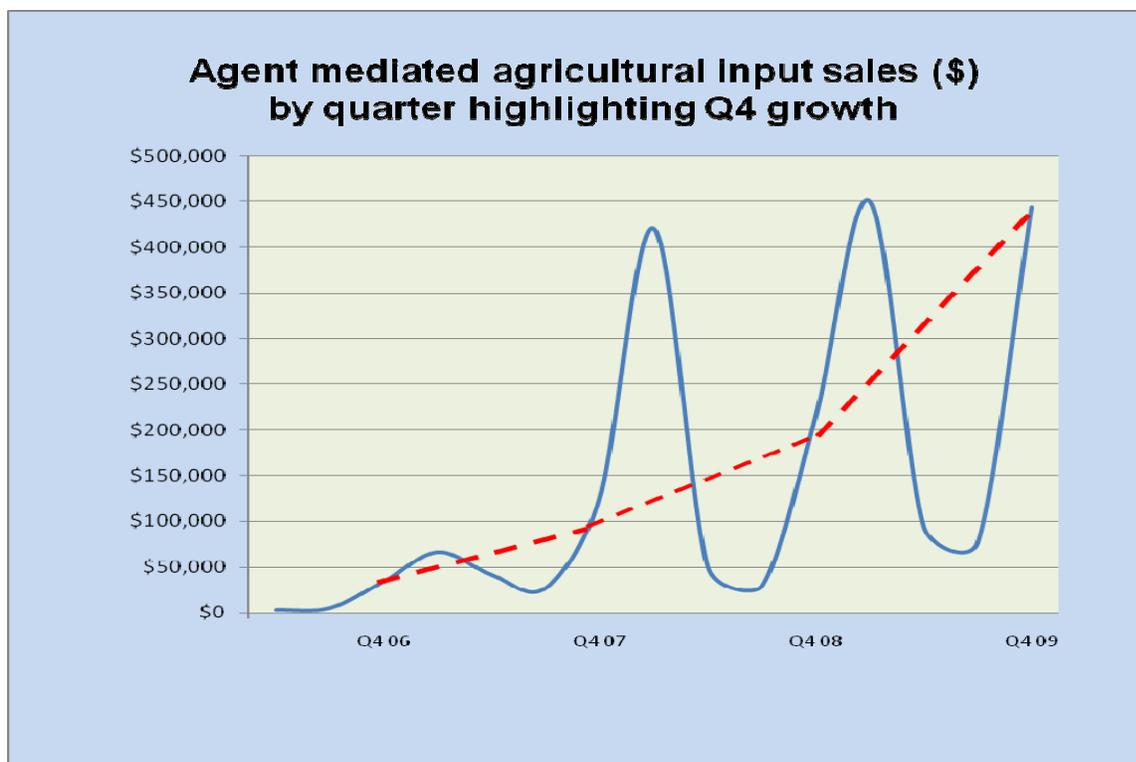


Fig 2. Combined input sales by Quarter since project inception

Total	2006	2007	2008	2009
Agricultural Input Sales	\$42,443	\$260,364	\$713,665	\$1,064,962
% Increase on Last Year	n/a	513%	174%	49%

Table 3. Annual Sales – PROFIT life of project to date

PROFIT's attribution exercise in the fourth quarter of 2009 estimated that the productivity increases and gross margin benefits accruing to the smallholder economy as a whole during the year are in the region of \$10m, as below:

**Economic Benefits to Smallholder Economy From Agricultural Retail Agent Network**

Active agent including sub agents				1,532
Total Sales FY09				\$1,064,962
Farmer actively buying				55,975
Average Hectarage across provinces				1.57
Hectares maize planted				88,055
		<b>Benefit per ha</b>	<b>Benefit value (\$)</b>	
% Hybrid Seed Sales	67%	\$147	\$8,681,722	
% Herbicides Sales	28%	\$47	\$1,158,154	
% Other Sales	5%	\$19	\$85,470	
Comissions to In Community Agents			\$117,146	
<b>Total benefits to Crop Growers from Agent network</b>				<b>\$10,042,492</b>

Table 4. Economic benefits to smallholders from the Agent network

Direct income increase is relatively hard to ascertain, but using the proxy of household asset purchase, the PROFIT Impact Assessment Study determined a statistically viable across-the-board increase in household assets among farmers that have engaged in new private sector input market mechanisms:

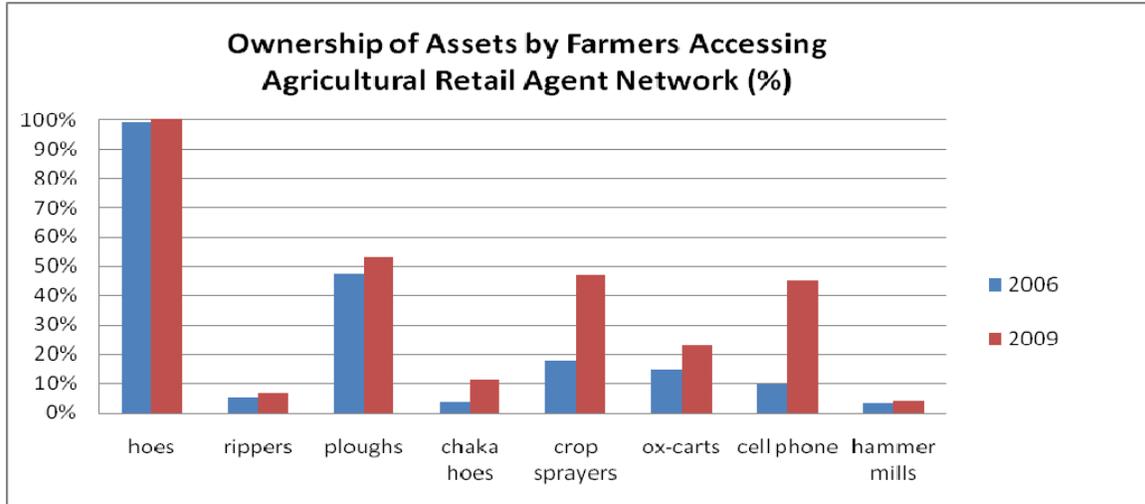


Fig 3. Asset accumulation – 2006-2009

The Impact Assessment Study also found a very significant relationship between access to the retail network and information flow related to crop production:

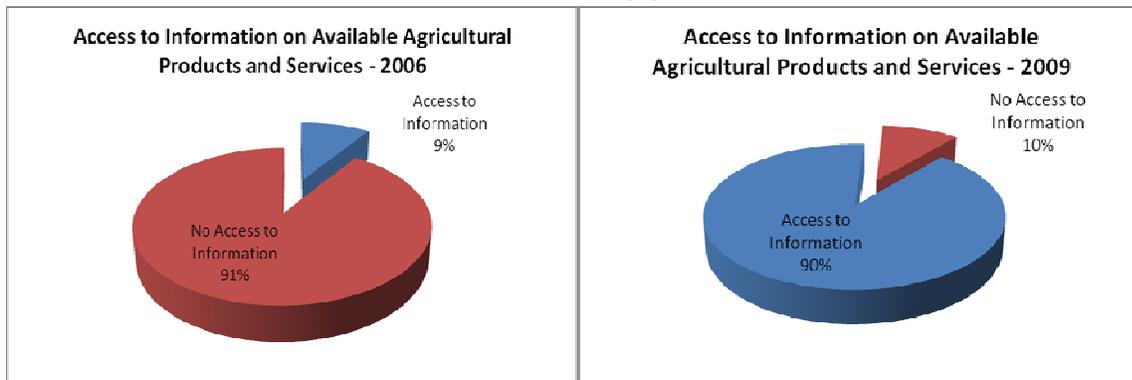


Fig 4. Critical Knowledge flow improvement 2006-2009

Finally, the Study found a similar correlation between access to the agent network and a growing sophistication in purchasing behaviour, with quality of product becoming a priority in the decision-making process:

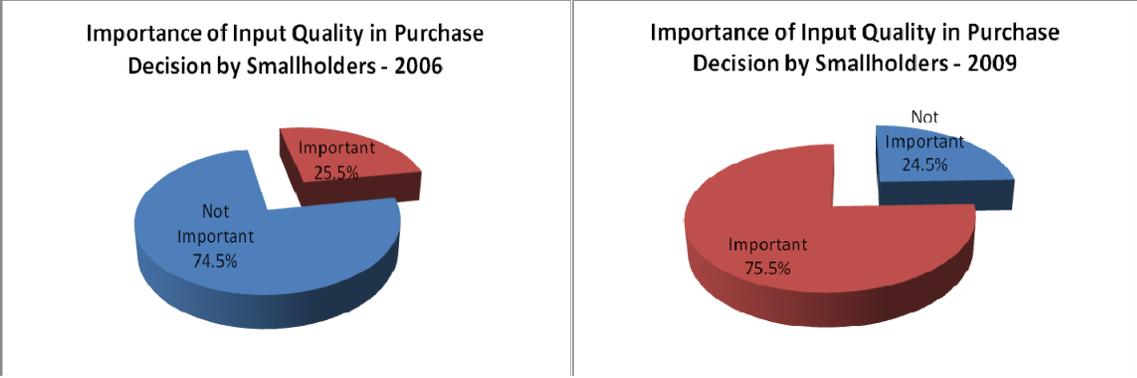


Fig 5. Importance of input quality inmaking purchahse decisions

The number of farmers served over the course of the year by the PROFIT interventions, taking in to account farmers involved in multiple sectors is illustrated by the table below.

Sector	Farmers Served in Sector	Estimated Overlap %	Number served
Cotton Industry	150,000	30%	105,000
Input Supply - Agent Network	143,810	0%	143,810
Dairy Farmers	1,300	0%	1,300
Honey Producers	6,066	0%	6,066
Beef Farmers	5,185	15%	4,408
Conservation Agriculture	158,000	65%	55,300
Total Support			315,884

Table 5. Estimated number of farmers served by sector FY09

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## Input Market Pathway: Theme 1

### Fostering a sustainable and growing spray service delivery platform increasing smallholder productivity

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#### **Achievements against benchmarks**

##### **1) *Sprayer service providers training manual developed***

- A comprehensive sprayer service training manual focusing on the key area of Safe Use of Chemicals was developed and published during the year by PROFIT and CropLife Zambia, and approved by the wider agro-chemical industry.
- Over 70 copies of this manual were distributed to the service providers within the agro-chemical industry during the fourth quarter, bringing the cumulative total of manuals distributed this year to 1,147. Feedback from industry players and the SSPs has been very positive

##### **2) *Clearly developed certification, recertification and testing regime developed and adopted by CropLife members***

- Work has continued on this process, greatly facilitated by the CropLife Secretariat which is funded entirely from contributions by the agro-chemical companies themselves.
- The standardisation of the certification process was developed by CropLife and approved by the members during the year, indicating good cooperation amongst the industry trainers. The process has continued to ensure all the service providers are certified before the start of the season.
- During the next quarter, the CropLife Zambia coordinator, with the support of PROFIT, will ensure the process is complete by end of October and that all SSPs are certified prior to the start of the agricultural season.
- Once the regime is completed, all Spray Service Providers (SSPs) will be subjected to industry-endorsed standardised training, that will form the basis against which the SSPs will be tested, certified and licensed annually. SSPs will later have an opportunity to renew the practicing license upon payment of a fee and re-testing.



***Spray Service Providers attending the CropLife Chemical safe use training, Kabwe, Central Province***

### **3) 600 trained and certified Sprayer Service Providers actively servicing over 9,000ha during the peak season. (400 on limited budget)**

- Over the quarter, 256 SSPs were selected and trained by Minelands Agri Services, Manaagro, Twiga and Cropserve.
- A cumulative total of **616 SSPs** has been trained over the year. .
- A further 60 potential SSPs have been identified by 2 agro-chemical companies (30 by Croppack and 30 by Minelands Agri Services in Mumbwa) for training before the next agricultural season.
- During the year, firms have indicated an increase in the recruitment of SSPs, demonstrating the growing importance attached to the process as a tool in the increased sale of herbicide in particular.
- A total of 110 Spray Service Providers (SSPs) were certified by CropLife this quarter, comprising nine for Minelands Agri-Services in Kabwe, and 60 for Cropserve in Mumbwa. In addition, 41 SSPs were re-certified by Mana Agro Chemicals in Chongwe, bringing the annual total to 320
- Numbers are lower than expected due to a slower-than-expected adoption of the service platform as a key tool in product sales by the agricultural retail firms.
- Much progress is expected in the next quarter as PROFIT has become actively engaged in facilitating CropLife's completion of the process by the end of October 2009. This activity will be followed by radio programmes to market the spray service providers and raise the profile of CropLife amongst the farming community.



***A newly certified SSP shows off his protective clothing kit, Kabwe***

### **4) Industry Accreditation/Identification process of SSPs internal to a firm developed**

- The process of accreditation and identification of SSPs through CropLife continued with the development and issuance of identity cards. Over the last quarter, CropLife issued a total of 180 Identification cards, bringing the total to 223 for the year.
- In addition, over 800 passport size photos and details for SSPs have been captured and the process of developing the IDs should be completed before the beginning of the agricultural season, in good time to stimulate the demand of certified agents and spray service providers.
- As part of their certification, SSPs receive CropLife-branded personal protective equipment, part-sponsored by PROFIT, consisting of a spray tunic, mask, goggles and protective gloves. In the fourth quarter, 60 personal protective equipment kits were given out to the spray service providers, making a total of 1,137 PPE kits distributed. The PPE kits received great appreciation from the farmers and some other partners have adopted the innovation.
- Aware of the prohibitive cost of conventional forms of protective clothing, CropLife has presented the concept of the 'low-cost- kit to CropLife regional associations as an

alternative to the traditional high cost approach. Other stakeholders are adopting the innovation of the spray kits due to their cost effectiveness.

**5) All firms develop in-community promotional marketing strategies and actively investing in the spray service providers' capacity to operate in the smallholder market**

- The process of conducting review meetings to check the quality of service delivery and to upgrade the capacity of the spray service providers has been demonstrated by many firms this quarter. A total of 42 review meetings were carried out by 10 companies during the quarter. Of the 42, review meetings, 12 (29%) were done without any PROFIT support.
- 268 in-community promotional events were conducted by the retail firms promoting their products and services to match with the cash flow of the smallholders. Of the 268 promotional events, 193 events (72%) were done without PROFIT support. The firms that conducted these promotions included Landserve, Syngenta, Zamseed, Pannar, ATS, MRI, Minelands Agri Services, Mana Agrochemicals, Croppack and Cropserve. The areas covered included Southern, Central, Eastern, Northern, Copperbelt, Lusaka, and Western provinces
- Over \$5,600 of spray service sales were recorded during the quarter, bringing the annual total to over \$12,000 for SSP's operating outside the cotton sector.

**6) Develop clear and simple pictorial message guides for service providers, in-community agents and farmers.**

- PROFIT has continued to work with CropLife on the development of pictorial messages as more accessible, simpler knowledge transfer tools to the spray service providers and farmers.
- CropLife, with the facilitation of PROFIT, contracted the development of the simple booklets and the process has been completed. The simple pictorial booklets will be ready for distribution through the CropLife Association to its members and the SSPs.

**Challenges**

- Firms continue to focus more on the process of training agents than on the service platform, suggesting that they are not convinced of the importance of the spray service as a platform for sales.
- Where there have been spray service providers trained, there is still a poor monitoring system of the service platform by the firms.
- No contracts have been signed between firms and spray service providers, thus keeping it an 'informal' relationship.
- Slower than desired progress has been made on defining the certification process of the spray service providers.
- Numbers of service providers are not increasing at the same rate as the demand and uptake of the products for example herbicides by the farmers.
- The promotion of the 'bundled service' with the product and service combined into one sales package still remains a challenge. This will be reflected in strategic focus for the 2009 season.

- Firms continue to be reluctant to service the distant areas regardless of demand for products by farmers.
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## Input Market Pathway: Theme 2

### Fostering expanded agent network development and improved firm level management

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#### **Achievements against Benchmarks**

##### **1) In-community Service Provider (ICSP) management training manual developed and distributed to all firms**

- The training guide for the management of agents has been compiled by representatives of the agricultural retail industry and PROFIT, to be produced in booklet form for distribution via strategic meetings with firm management staff to explain the contents. Over the quarter meetings were held with Pannar, Export Trading and Zamseed.

##### **2) At least 1,000 Community Agents and Sub-agents trained and actively servicing the Smallholder market (600 on limited budget)**

- Over the quarter, 68 new agents and sub-agents were recruited, bringing the overall number of active agents to **1,532**.
- 33,248 farmers attended in-community promotions during the quarter, of which 25,872 (78%) were men and 7,376 (22%) were women.
- Over the fourth quarter (an off peak sales period), the agent network across the country generated \$443,918 worth of new sales, comprising mainly maize seed, grain protectants, vegetable seed, insecticides and herbicides. This represents a 107% increase in sales compared to Q4 08 and demonstrates the growing ability of the agents to generate sales in 'off-peak' months.

### **Breakdown of Agent and Client Numbers**

Regions	Kabwe	Eastern	Mumbwa	Northern	Southern	Chongwe	Total
Number of Smallholders serviced	4,280	9,895	37,038	19,835	70,767	1,995	143,810
Number of Agents	37	42	146	125	139	93	582
Average/Agent	116	236	254	159	509	21	247
Average Number Smallholders buying	80	50	100	120	150	5	84
% Sales fo farmers served	69%	21%	39%	76%	29%	23%	39%
Total	2,960	2,100	14,600	15,000	20,850	465	55,975
Average Area Cultivated(ha)	0.70	0.85	0.80	1.90	2.10	0.50	1.57
Total Area Cultivated	2,072	1,785	11,680	28,500	43,785	233	88,055
Number Of Sub Agents	95	54	12	198	580	11	950
Agent Network = Agents and Sub-Agents	132	96	158	323	719	104	1,532

Table 6. Small holders served and smallholders buying through the agent network

### **3) 14 Input firms integrating In-Community Service Providers (ICSPs) into their business model (11 on limited budget)**

- 14 firms continue incorporating the ICSP into their business models:
  - Minelands Agri Services
  - Twiga,
  - Croppack
  - Pannar
  - Zamseed
  - Landserve
  - Export Trading
  - ATS
  - Cropserve
  - Mana-agro
  - MRI
  - Pioneer
  - Prime Agri
  - Afgri.
- Zamseed, Pannar, Cropserve, Twiga and MRI-Munzuma have created data bases for the agents with their head offices and their stockists in the districts.
- A total of 90 agents had signed formal contracts with their respective Ag-Retail firms during the quarter under review indicating a total of 446 agents on contracts for the fourth compared to 356 during quarter three, representing an an increase of 25%.

### **4) At least 600 new In-Community Service Providers (ICSP) recruited by all firms targeting over 100, 000 Smallholders**

- 372 ICSP's (including spray service providers, agents and sub-agents) were recruited, trained and actively servicing the smallholder farmers during the quarter, pushing the cumulative total of ICSPs recruited and trained over the past four quarters to **1,075**. This indicates a 175% achievement over the year in terms of the number of ICSP recruited by the firms.
- 34,596 farmers were serviced by these agents over the quarter, bringing the reported total for the year to 224,496, although many of these will have been 'return clients' with an estimated total client population of 143,810 farming families served.

**5) 14 Firms taking on increased ownership of the agent network development and management as measured by investment in trainings and incentives (11 on limited budget)**

- 10 firms have now shifted towards full 'ownership' of the agent network with dedicated management that conducts training, initiates agent selection and conducts trainings without PROFIT assistance:
  - Minelands Agri Services
  - Twiga,
  - Croppack
  - Pannar
  - Zamseed
  - Landserve
  - Prime Agri
  - Cropserve
  - Mana-agro
  - MRI
  - Pioneer
- Zamseed, Cropserve, Pannar, Mana-Agro and Minelands conducted training meetings with their agents and rewarded the best performing agents to encourage desired behaviour. Pannar and Cropserve gave out phones as a way of rewarding high sales to their best agents.
- Over the year there has been a reduction in the demand for resources by firms from PROFIT. Minelands, for instance, conducted training workshops in Serenje and Mkushi for 80 agents without the financial support of PROFIT
- In other cases Pannar, Zamseed and MRI are running promotional messages on local radio stations to upgrade and market the agent system to the communities. In addition, firms like Pannar has embarked on a video shooting exercise to document the agent network model as part of their marketing tool. The documentary will be aired on the national TV station and other electronic media houses to market their products and services and the agent model.
- Zamseed has extended its trainings to their stockists to better place them with product knowledge with the view to linking the company's agent network to the local stockists. This has indicated some increase in efficiency of operations between the agents and Zamseed. For example the agents in Choma used to receive seed from the Zamseed depot in Mazabuka, 200km away, but now access stock from the local Zamseed stockist in Choma.
- Croppack in Mumbwa has employed a full time Smallholder Manager to manage and coordinate the agent network to market to the smallholder community. Resulting from this initiative there has been an increased number of both sales promotions and sales, and the company has pioneered 'market days' in the local communities.
- MRI Munzuma in Monze requested assistance with the development of the consumer impact surveys for the company to understand the demands and challenges of the smallholder market and map out the strategies to handle the market effectively.
- During the quarter, MRI and Minelands Agri Services developed an incentive structure based on sales turnover for their most active agents.
- Cropserve has purchased motorbikes for all shop managers to enable them reach out to the agents and small scale farmers effectively.

- MRI-Munzuma has purchased motor bikes with trailers for seed distribution in the villages
- Nine firms have conducted agent network review meetings during the quarter under review to analyse the successes and challenges of this new form of business model, including forecasting for the peak demand season in late 2009. The firms took advantage of the review meetings to upgrade the strategies in terms of marketing their products.
- MRI Munzuma in Monze during the review meetings announced the change of their business model this year moving away completely from consignment stock with agents to the pre-paid model. MRI continues to get much higher business volumes from the rural agents than the line-of-rail stockist and own shops.



*The trailer- motorbikes that MRI-Munzuma has purchased to support the work of village agents*

**6) 14 Firms investing in agent network capacity building to consistently hold promotional events at key points of time - harvest, growing, cultural festivals, planting, and other times when opportunities arise. (11 on limited budget)**

- During the fourth quarter, three firms developed innovative marketing strategies that focused on opportunistic events at which numbers of farmers and potential clients are gathered together such as rural music festivals, cultural events and religious gatherings. Croppack, Hopevet and Cropserve marketed their products at the Lwiindi traditional ceremony of the Tonga people of the Southern Province. And at the Ikumbi Lya Longo traditional ceremony of the Sala people of Mumbwa



*Farmers who attended the traditional ceremony in Mumbwa buy agricultural inputs and vet products, Sept 09*

- During the year, 14 firms actively participated in such events
- Over the quarter nine firms actively conducted in-community field promotions to market their products without the support of PROFIT.
- A total of 193 in-community promotions were conducted during the quarter without the support of PROFIT and 75 with conducted with minor support of PROFIT.

- During the year, 938 promotional events and strategic meetings were conducted by the agricultural retail firms.

**7) Simple pictorial input information guides developed for all agricultural input product groups being used by all ICSP's across the platform.**

- The pictorials have been developed and approved by the trade for distribution.

**Additional Achievements**

- Demand appears to be growing among the agricultural retail firms for a round of PROFIT-facilitated strategic planning meetings with senior and middle management to improve the management of the agent network.
- After a period of severe decline in the Croppack retail network in Mumbwa, a strategic management process was undertaken, resulting in a renewed interest and investment in the agent network and the employment of staff with specific responsibilities for managing the network.
- This quarter has seen increased levels of cooperation among the different firms with several informal strategic alliances forming, such as the following:
  - Pannar and Cropserve
  - Zamseed and Mana-Agro
  - Pannar and ATS
  - Pannar and Export Trading
  - Zamseed and Export Trading
  - MRI-Munzuma and Export Trading
- Firms have continued to do joint review meetings to foster strategic alliances and offer the farmers a complete input package, including preparing the agents for this season. A case in point is the joint agent review meetings held in Chongwe and Mazabuka by Zamseed with Mana-Agro Chemicals and ATS with 44 agents from all firms in attendance.
- Prime Agri-Centre and Cropserve have stepped up their effort to jointly push and promote the Pioneer seed varieties to the smallholder market in Mumbwa, Kabwe, Choma, Mpongwe and Mazabuka.
- One of PROFIT's newest clients in the smallholder market, Export Trading Company (ETC) has begun to develop close relations with existing in-community agents in Central, Southern and Eastern Provinces to utilise the agent network for the sale of fertiliser, with product available during the harvest period when farmers have money. 54 agents from Pannar, Zamseed and MRI-Munzuma have been identified to package and market the fertiliser to the farmers in the southern province. Competitively priced and with crop-for-fertiliser swap opportunities, the company is making rapid progress in rolling out its depot network across the country. In just two weeks at the end of the third quarter, ETC sold 200 tons of fertiliser in Mumbwa worth \$138,000.
- PROFIT continued to promote the strategy of conducting specific sales or market days as a good way of systematically enhancing the supply of products to the communities. It further increases the contact and enhances the commercial relationships between the

firms and the communities. For instance during the fourth quarter in Kabwe, over 20 market days were conducted by Croppack, Cropserve and Minelands.

- In a bid to mitigate some of the liquidity and credit issues that represent a serious constraint to the timely and sufficient import of inputs specific for the smallholder sector, PROFIT and Lloyds Financials Ltd designed and promoted a Credit Enhancement Fund during the third quarter. Further details in the Financial Services section of the report.
- Over the year, PROFIT was heavily involved with a number of other donor and private sector organisations in lobbying government for reform of the Fertiliser Support Programme, with a view to replacing direct input provision with an electronic voucher system. When it became clear that there was neither the will for change or the ownership of reform within the Ministry of Agriculture and Cooperatives, the process stalled but the e-voucher system was, by the end of the fourth quarter, being implemented successfully by the Conservation Farming Unit in conjunction with rural retailers for the provision of inputs to the organisation's lead farmer network.

### **Challenges**

- The timely and sufficient import of agro-chemicals and other inputs specific to the smallholder sector is seriously threatened this year by the difficulties in accessing credit facilities. The situation is particularly difficult for the smaller firms and may threaten supply later in the year.
- While the number of contracted agents is increasing, only five firms have moved towards formal contract signing with their agents, resulting often in a lack of transparency in the relationship between the two entities.
- Despite some firms dedicating management to the agent network, a failure to equip the staff with the necessary logistical resources has meant that this initiative has not had the positive impact that was expected of it.
- There is still considerable work to be done to improve the ordering and delivery systems that are critical to the success and expansion of the agent sales process.
- Delayed selection and training of agents by some firms resulted in low sales during the peak sales season.

### **Achievements against Benchmarks**

#### **1) Industry certifies 100% of the current trained and active spray service providers**

- 110 additional spray service providers were trained and tested by the firms over the quarter bringing the total to 320 over the year, meaning that all non-cotton SSPs are in the certification process.

#### **2) Certification process clearly defined and accepted by all CropLife members**

- CropLife members have defined and accepted the certification process as an integral part of their service delivery platform development process.

#### **3) Retraining and re-certification of at least 80% of the industry trainers**



***Nine retrained Trainer-of-Trainers after their re-certification***

- 45 (36 new and 9 old) Trainer of Trainers (TOT's) were trained and certified by 'CropLife International during the fourth quarter. All the TOTs have been given Identity Cards. The association plans to conduct a refresher training to the old trainers and follow on programmes in the field to check on progress with the certified SSPs early in the next year.

- The CropLife Secretariat has continued to increase its managerial and operational capacity and has started to take the lead in many industry programmes. To this effect CropLife Zambia was recognised as 'The Most Improved Secretariat' by CropLife international at the CropLife International Conference held in Namibia in June.

### **Challenges**

- The process of developing a clear certification process has been slower than expected
- Some of the accredited trainers of trainers have contributed very little to the industry in terms of the trainings offered to farmers and spray service providers. The challenge remains to ensure that all input suppliers have in-house trainers.

## **INPUT MARKET PATHWAY - TILLAGE SERVICE PROVISION**

### **Annual Summary**

During the year PROFIT has continued to foster developmental activities to promote the concept that the ripping tillage service is the only sustainable way to advance early land preparation for growth and maximisation of available land for smallholder production, particularly among those farmers without the equipment to prepare their own lands.

The programme focused on the four key principles of commercial tillage services as follows:

1. Making available to the farmers conservation farming tools, including the Magoye Ripper, through the agricultural retail agent network
2. Conducting Tillage Service Provider (TSP) trainings on managing the service as a business
3. Facilitating customer service and marketing basic skill provision for TSPs
4. Fostering linkages between TSPs and the agricultural retail sector to access herbicides, without which ripping increases the weed pressure on farmers

There has been a steady growth in the number of non-cotton TSPs associated with the activities of the Conservation Farming Unit, but a major contributing factor to the overall significant increase in numbers of TSPs has been the full-scale integration of ripping and service provision into the Dunavant farmer extension system. While nearly 350 rippers were purchased through the agricultural retail network in 2009, over 400 were issued through the Dunavant sheds in the fourth quarter alone, with the company also actively following up with recipients to ensure the tools are being used for the wider benefit of the cotton growing community.

While the promotion of the Magoye Ripper is critical as a beneficial alternative to the plough, the technology has its limitations. Its efficacy is reduced in hard soils, and by the end of the dry season, the condition of oxen is often sufficiently poor to prevent widespread ripping. As a result, PROFIT is focusing its efforts on the promotion of mechanical tillage, for which demand is very strong and the agronomic results of which are significant. During the last quarter of the year in Mumbwa, 98 oxen TSPs had prepared 58ha of cotton lands, whereas five tractor-based TSPs had ripped 90ha and ploughed another 130ha on contract, demonstrating both the strength of demand for mechanical services and the obvious comparative advantage over oxen in terms of capability.

**Achievements against benchmarks**

***1) Improved business skills developed among Tillage Service Providers (TSPs) to proactively provide early land preparation service as measured by number of commercial tillage contracts***

- 258 TSPs received business skills trainings during the year in the non-cotton sector, while Dunavant and Cargill trained a further 170 to make an annual total of 428 TSPs trained.
- While difficult to quantify exactly, it is estimated that there were, by the end of the year, 320 fully active TSPs servicing approximately 1,360 farmers, mostly in the period just prior to the 2008 planting season, preparing over 1,500ha of land.

***2) Contract models developed and in use along with prepayment concepts for TSPs***

- At least 260 TSPs developed contract models which were effectively being implemented in the fourth quarter through prepayment concepts bringing the annual figure to 320 TSPs.

***3) At least 20 new two tine ripper purchased by TSPs***

- In the fourth quarter, and despite the poor business performance of the manufacturer, PROFIT facilitated the purchase of 6 two-tine rippers from Akajoe Enterprises in Magoye:

○ Mumbwa	3
○ Mazabuka	1
○ Monze	1
○ Kaoma	1
- The total number of rippers accessed by non-cotton TSPs over the year is 14
- Late in the fourth quarter, Dunavant purchased eight two-tine rippers to implement a TSP initiative whereby a proportion of the cost of a cotton farmer's land preparation will be carried on credit by the company. The rippers were then given to TSPs on either a simple rental or a hire-purchase agreement.
- Therefore the total number of rippers entering the smallholder TSP market in 2009 is 22

***4) At least one tractor Service Company supporting tractor operators providing commercial services and equipment.***

- Tractorzam has been working under a maintenance agreement with Mr Shambosha, the TSP accessing an equipment loan from Dunavant in Mumbwa.
- The company has also sold a tractor to a farmer/trader in Mkushi and a ripper and planter to a TSP in Mumbwa in deals brokered by PROFIT

**5) At least 1000 new Magoye rippers sold through commercial channels by September, 2009**

- Sales through either the cotton or agricultural retail networks in 2009 are as follows:

Source	Qtr 4 Total Purchased	Annual Total Purchased
Agricultural Retail Network	182	345
Dunavant	414	414
<b>Total</b>	<b>596</b>	<b>759</b>

Table 7. Ripper sales and distributed through Dunavant farmers

- Numbers were not as high as targeted due to Cargill failing to facilitate the delivery of rippers to their potential tillage service providers in the cotton sector, and a lower demand from non-cotton and cotton farmers for ox-drawn rippers due to some of the quality issues involved.
- It is estimated now that the number of rippers in the smallholder economy number almost 2,000

**Challenges**

- Less than expected numbers of farmers are adopting conservation agriculture due to cultural/traditional norms and perceptions.
- Tillage in form of ox-ripping promotions could not be conducted effectively in many areas due to hard soil conditions.
- A poor crop marketing season made it hard for farmers to raise adequate finances to invest in rippers and purchase land preparation services
- The 'Akajoe ripper' is of relatively low quality meaning numerous breakages and repairs required.

## THE COTTON INDUSTRY

### Annual Summary

The 2008-9 agricultural season proved to be a moderate success in terms of the cotton industry. While total Zambian production only recorded a 9% increase in seed cotton purchases – 104,000t up from 95,000t in 2007-8 – approximately 15% less farmers grew cotton during the season, translating into an overall industry yield improvement of over 25%. While much of this productivity increase can be attributed to a better rainfall distribution over the season, the improved management systems and increased attention to extension by Dunavant and Cargill, the two largest firms in the industry, can take some credit.

Notable this season too was a degree of industry cooperation not seen since the start of the demise of the cotton industry four years ago. All ginners and the Cotton Association of Zambia, representing all cotton farmers, reached an agreement in the first quarter on a standard, country-wide farm gate price for the harvest period. While this has not always been adhered to, side-buying has been less of a critical issue than in previous years. The Cotton Act Amendment, which provides statutory enforcement of such issues affecting the whole industry, has still not been passed but it is clear that the industry itself is beginning to react to critical issues.

The cotton industry has not been immune from the global financial crisis. Great Lakes ceased trading over the year, Birchard Cotton ended the year in severe financial crisis and both Cargill and Dunavant have faced serious liquidity problems. By the end of the year and at a global level, Dunavant was completing talks related to a merger with Louis Dreyfus, and preliminary indications show that the results of this will be positive in terms of the future of the company's Zambian cotton production portfolio, with greater investment in productivity planned.

From PROFIT's point of view, the key achievement within the sector in 2009 has been the full internalisation of the 'PROFIT methodology' within the Dunavant management system. Over the year, the identification and training of both tillage and spraying service providers has been integrated into the company's YIELD extension programme, as has the scaling up of the role the service providers play in productivity enhancement within the farmer network. While both Cargill and Birchard have progressed some way towards internalisation of this process, the initiative taken by Dunavant, which accounts for over 40% of the country's cotton production, is a major step forwards. Dunavant had also, by the start of the 2008-9 season, fully implemented their 'Gold Club' for preferred suppliers with a variety of incentives for greater cotton production. During the 2008-9 season, there was little success gained in either the Dunavant or Cargill initiatives to integrate third party input suppliers into the supply chain. Late delivery, unsuitability of pack sizes and a lack of incentive to the shed managers to sell inventory, combined with difficult accountability all contributed to the low sales and low returns to the companies. Both companies resolved to place more reliance on the 'external' input retail mechanisms that already exist in the communities and have an incentive structure better designed to move volume.

**Achievements against Benchmarks**

**1) At least two cotton companies adopting more professional management strategies involving a rationalization of their production base to exclude non-contributing farmers and rewarding of the most productive farmers.**

- In October 2008, Dunavant launched and implemented its 'Gold Club' for its preferred suppliers, which number just over 15,000 producers, managed by 175 'Gold Club' distributors. A series of incentives have been built into membership that encourages greater production and loyalty.
- During the third quarter, Cargill began moving towards some form of preferred supplier concept with the introduction of 'cotton schools' whereby their best performing farmers have access to more intensive training and also to services such as tillage and spraying. In a significant development in the fourth quarter, seven senior extension officers have also been identified as drivers of the spraying and tillage service development within the company.

**2) 800 qualified and active spray service providers in the cotton industry (600 on limited budget)**

- During the first quarter of the year, PROFIT's three clients in the cotton sector, in conjunction with the programme and agricultural retailers trained **1,356 spray service providers** in the technical component of spray contracting.
- During the third quarter, Birchard and Dunavant, in conjunction with PROFIT, trained and certified 822 of these spray service providers to the Croplife Zambia standards of safe use of chemicals. PROFIT issued basic protective clothing kits to the SSPs who successfully passed the certification exam



***A Croplife-certified SSP in Katete demonstrated his protective clothing kit, Feb 09***



***A group of 'Gold Club' SSPs with their Dunavant Business Training Manuals, Katete, July 09***

- In the fourth quarter, Dunavant trained 359 SSPs in the business elements of spray service provision, using business management training material designed by PROFIT.
- It is estimated that 670 SSPs were commercially active during the 2008-9 growing season, covering approximately 3,350ha of cotton on behalf of approximately the same number of clients.

Company	SSPs Trained - Technical	SSPs Trained – Business	SSPs Certified by Croplife	SSPs active during 2008/9 Season	Number of Clients Served	Area of Cotton under SSP Contract
Dunavant	711	359	462	310	1,860	2,605
Cargill	239	-	-	-	-	-
Birchand	406	-	360	360	1,490	745
<b>Total</b>	<b>1,356</b>	<b>359</b>	<b>822</b>	<b>670</b>	<b>3,350</b>	<b>3,350</b>

Table 8. Spray Service Providers trainees and active FY09

- At an average per hectare contract price for a season's scouting and spraying service of \$7.45 (excluding the chemicals provided by the client), the SSPs active in cotton during the season generated \$25,000 of revenue
- The main reason why numbers of commercially active SSPs fell short of expectations is that Cargill failed to import its consignment of ULVA+ sprayers in time for the season, thus delaying the implementation of its SSP programme by a year.
- Below is a calculation showing the attributable value of the spray service provision activity within the cotton sector during the 2008-9 season:

### Impact of Spray Service Provision in Cotton Sector 2008/9 Season

Number of Active SSPs	670
Average Number of Clients	5
Total Number of Clients Served	3,350
Average Land Area per Client (ha)	1
Total Land Area under Contract (ha)	3,350
Increase in Production Attributed to SSP	30%
Average Cotton Yield (kg/ha)	600
Average Cotton Yield with SSP (kg/ha)	780
Average Increase in Yield Per Client (kg)	180
Total Increase in Cotton Production Attributed to SSP (kg)	603,000
Cotton Price (farm gate \$ per kg)	\$0.25
Average Cost of SSP service (per ha)	\$7.45
Increase in Cotton Revenue per Farmer	\$45.00
<b>Increase in Farmer Gross Margin (Incr in Revenue less SSP cost)</b>	<b>\$37.55</b>
Total Increase in Farmer Revenue Attributed to SSP	\$150,750
<b>Total Increase in Industry Farm Gate Gross Margin Attributed to SSP</b>	<b>\$125,803</b>

Table 9. Impact and benefits of Spray Service Provision

### 3) 400 trained and active tillage service providers (250 on limited budget)

- Over the course of the first quarter, Dunavant and Cargill, in conjunction with the Conservation Farming Unit trained a total of 170 tillage service providers in the technical aspects of ripping service provision, from an approximate total of 320 oxen owners who expressed interest.
- During the fourth quarter, Dunavant facilitated the business training of 380 actual and potential TSPs within their Gold Club using training material designed by PROFIT.
- It is estimated, though, that fewer than 100 service providers were actually active within the cotton sector prior to the 2008 planting season, largely due to the fact that Cargill failed to facilitate the delivery of rippers to their potential tillage service providers. However, cultural and perception issues still persist within the farming community still persist in relation to ox-drawn tillage services, which have also hampered efforts to foster a widespread roll-out of the initiative. Adoption of ripping itself as a technology has been slow, primarily due to the weed pressure that ripping without herbicide application can bring. Also, the efficacy of the ox-drawn ripper used in hard soils prior to the rains is questionable, with farmers often reporting the need to re-rip once the rains have started.
- Prior to the 2009-10 planting season, however, numbers of TSPs active within the cotton sector had increased to over 150 by the end of the year, due to a promotional distribution on Magoye rippers by Dunavant on credit to eligible potential TSPs within their Gold Club.
- Over 400 rippers had been allocated to cotton farmers by the end of the year by Dunavant, so it is assumed that the number of TSPs will increase rapidly early in the next quarter.

**4) At least 10,000 ha of early land preparation carried out prior to 2009 planting season**

- By the end of the year, under 1,000ha of cotton lands had been ripped, almost all of which was attributed to the fourth quarter. Despite the fact that there are more TSPs within the cotton sector, demand for land preparation prior to the start of the rains is still low, and also those farmers with rippers focus on preparing their own lands before offering their equipment on a service basis if at all. The relatively low cash cost of the ripping equipment means farmers have less incentive to use this for service provision.
- As explained above, there remains some resistance to ox-ripper services. The opposite is true of tractor-drawn ripping services, which clients perceive to be of real benefit. As an example, it is interesting to note that during the last quarter of the year in Mumbwa, 98 oxen TSPs had prepared 58ha of cotton lands, whereas five tractor-based TSPs had ripped 90ha and ploughed another 130ha on contract. The cotton companies are currently investigating the possibilities of expanding the number of tractors within the cotton networks.

**5) At least five farmers affiliated to cotton companies receive finance for tractors for the facilitation of ripping and haulage services**

- To date, efforts by PROFIT to facilitate the integration of commercial equipment leasing facilities into the cotton sector have not yielded any success, despite the commitment by Dunavant to support some of their stronger distributors with forms of guarantee. The only tractor to have entered the cotton sector was one provided by Dunavant to a top-performing distributor in Mumbwa in October 08 as a demonstration of the viability of a ripping and haulage service-based business model.



**Nigel Seabrook, Dunavant MD, handing over a tractor to Fanwell Shambosha, Mumbwa, Oct 08**



**Shambosha's field of early-ripped cotton, Feb 09**

- Mr Shambosha managed to repay the tractor loan in one year, through a combination of land preparation and crop haulage contracts. Despite the short time between being given the tractor and the onset of the rains, he ripped 33ha for 40 farmers within his distributorship. The average yield of those forty farmers is traditionally 1.2t/ha, but this increased to approximately 2t/ha with tractor ripping and subsequent timely land preparation.

- On the back of the successful pilot initiative, Dunavant and PROFIT are working towards implementing a scaled up tractor loan project in 2010, targeting the company's top distributors in Southern, Central and Eastern Provinces with 45hp tractors and rippers.

**6) Achieve full implementation of the Dunavant preferred supplier programme**

- The final version of the Dunavant 'Gold Club' scheme, its criteria for membership and its various incentives was completed prior to the start of the 2008-9 season, including a 10% discount on input costs through the loan system, access to other forms of credit for oxen and rippers and special Gold Club pens and bags. .

**7) Involvement of at least two agricultural retail companies in at least two cotton production networks, either in agency agreements with the companies or directly with the farmers and spray service providers**

- Before the 2008-9 planting season, PROFIT facilitated three agency agreements between Dunavant and Seedco, ATS and Twiga to provide seed and herbicides through the Dunavant shed network. Sales were low during the trial year – mainly due to:
  - late delivery - sheds were stocked when farmers no longer had money for investment in chemicals
  - a nationwide shortage of herbicides affected availability
  - inappropriate packaging of chemicals in units unaffordable to a smallholder farmer
  - the shed clerks did not have sufficient information on the products they stocked to drive sales, or any incentive to do so.
  - distributors to whom farmers had been referred by the shed staff for product information had little in the way of relevant information and little in the way of incentive to seek it.
- The commissions earned by Dunavant were low as a result of both the above and stock accountability issues, and as a result, efforts to repeat and scale up the initiative for the 2009-10 season have not been successful.
- Birchand requested PROFIT assistance in facilitating a linkage between their cotton farmers and independent input retailers, and during the last quarter of the year, a Chipata-based retailer was engaged in product promotion and seed and chemical sales in the Chama area.

**Additional Achievements**

- In a similar fashion to the pre-planting initiative of 2007-8, PROFIT assisted the Zambian Cotton Outgrower Pre-financiers Association (ZCOPA) to publicise the dangers and illegality of planting uncertified cotton seed through a series of posters and radio campaigns in the first quarter of the year.
- In the third quarter, PROFIT conducted two training-of-trainer courses for the 15 Regional Yield Agronomists responsible for the actual training of service providers in small business management

## **Challenges**

- With farmers still leaving the sector and international cotton prices down 40% from last year at harvest, the industry is still in a serious crisis. Utilisation of ginning capacity is still below 30%, meaning Zambian cotton suffers from a very high overhead cost and affects global competitiveness
- Even with a major crisis within the industry which requires an equally robust and dramatic response, strategic decision-making within the industry remains slow.
- The credit culture within the cotton sector continues to dampen the 'entrepreneurial spirit' within many service providers.
- Cotton company staff is often distracted from long-term strategic action by the immediate needs of the cotton buying process.

## OUTPUT MARKETS

### Annual Summary

Good progress was made over the year in terms of the development of ZAMACE. Despite a market environment relatively hostile to new innovation, clouded by poor market information and heavy government intervention, the market grew quarter on quarter over the year, and ultimately recorded a 130% increase in traded volumes over 2008. An increase in the number of brokers and increased recognition by major market players and the government were also both positive signs, as is the fact that now all stakeholders (private sector actors, donors, public agencies and government) are all 'pulling in the same direction'.

A major development for the Exchange over the year has been the support of the World Food Programme, which has adapted its local food procurement procedures to use the Exchange. Not only did this process contribute significantly to the development of the operations of the Exchange in terms of security of transaction needed to satisfy UN requirements but it led to a number of market innovations, such as the 'reverse auction' and simultaneous bidding across the Southern African region, leading to not only national but regional price discovery. It also contributed to the national and international perception of ZAMACE as a credible market institution.

A major challenge still exists in bringing the benefits of the Exchange to the smallholder economy. The rural warehousing industry, which is critical to smallholder aggregation, is still in its infancy and is relatively high cost, and in 2009 ZAMACE had to compete in the perceptions of smallholders between the traditional 'spot-cash' market provided by traders for the fulfilment of immediate cash obligations, and the high price (but delayed payment) option offered by the Government. Attempts to foster smallholder participation on ZAMACE in 2009 were unsuccessful – although aggregation for exchange participation was successful, but over time and with increased support from Government in terms of recognition and legislation, smallholders will be brought into the workings of the Exchange. Not only is this engagement politically necessary but the smallholder economy, which traditionally suffers from multiple margin-takers between the farmer and end-market, has the most to gain from the Exchange eventually providing the Exchange with a strong business opportunity.

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## Output Market Pathway: Theme 1

### Supporting ZAMACE to maturity by fostering inclusion of smallholder producers

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#### Achievements against benchmarks

##### **1) At least \$50m of cumulative trades completed on ZAMACE, affecting a significant move towards self-sustainability**

- The fourth quarter of the year saw trading activity involving over 33,000t of commodities valued at over \$10.8m, representing a 180% increase on the previous quarter and almost 5,000% increase on the same quarter last year
- The annual total traded volume recorded for 2009 was 52,000t of commodity valued at \$19.3m, representing a 137% increase in volume and 127% increase in value over the 2008 figures.

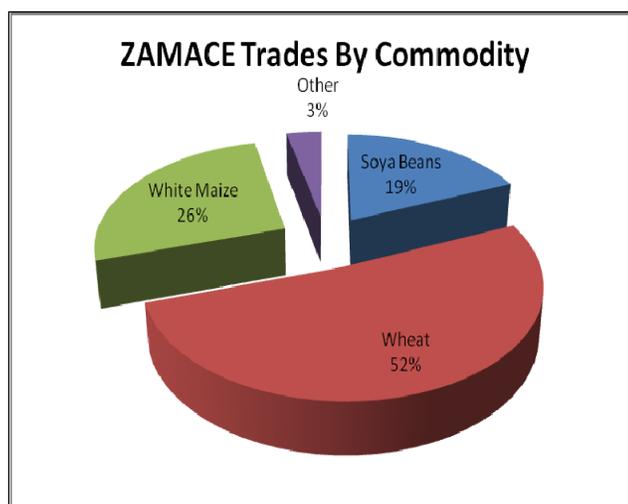


Fig 6. Combined input sales by Quarter since project inception

- Cumulative trade across ZAMACE since its inception now stand at 78,000t of commodity valued at \$27.7m, which is just over half of target volumes. Income generated by the trading platform in 2009 contributed only 17% to ZAMACE's operating costs, and clearly the Exchange is still a long way from economic sustainability.
- There are multiple reasons for the lower than anticipated trading volumes:
  - Both PROFIT and ZAMACE seriously under-estimated the length of time it takes to change market behaviour. Entrenched market positions on both demand and supply side and a reluctance to embrace transparency have both contributed to a slow adoption rate among market players.
  - Government intervention in the maize market has had a devastating effect on private sector market activity. Public maize imports in reaction to poor market information in the first quarter, state procurement of grain from traders and

delayed payment, public sale of heavily subsidised maize to the milling sector in the second quarter and the setting of a state procurement price for smallholder maize above market price for the 2009 marketing season have all contributed to a very sluggish commercial market. One impact was that in the first half of the year there was only \$4m of sales across ZAMACE.

- A bumper wheat crop combined with a significant drop in local demand for wheat as a consequence of the impact of the global financial crisis on Zambia, coupled with 40,000mt of illegal wheat imports effectively collapsed the wheat market for most of the year.
- However, in the second half of the year, some very positive signs were coming from the market in relation to ZAMACE that point to a change in perception by the market players.
  - Three new members were admitted to the Exchange during the last two quarters, with another three requests for membership under review by the end of the year. Increased membership (with its \$10,000 seat cost) is a sign that market players see ZAMACE as the long term market option.
  - The requirement by ZAMACE for its members to register trades conducted off-Exchange had a significant effect on trading volumes. While the benefits of public exposure of the positions are not realised in a registered trade, the arbitration clause within a ZAMACE contract and the public exposure of the deal contributes significantly to overall market transparency.
  - World Food Programme procurement activity, involving 7,138t of commodity worth \$2.2m, helped boost volumes. During the first quarter of the year, PROFIT worked closely with the agency to adapt its local procurement programme to utilize ZAMACE – the first time the agency has purchased across a commercial Exchange in Africa. WFP believes that ZAMACE is a necessary market mechanism that is required for smallholder farmers to be able to access output markets at competitive and transparent prices, and is keen to use its local procurement footprint to support and stimulate trade on the Exchange. The organization intends over the medium term to use the Exchange to procure ‘directly’ from smallholder groups through the market mechanism of the Exchange to both satisfy its local procurement needs and, importantly, stimulate the involvement of the smallholder sector in the transparent market environment provided by the Exchange.

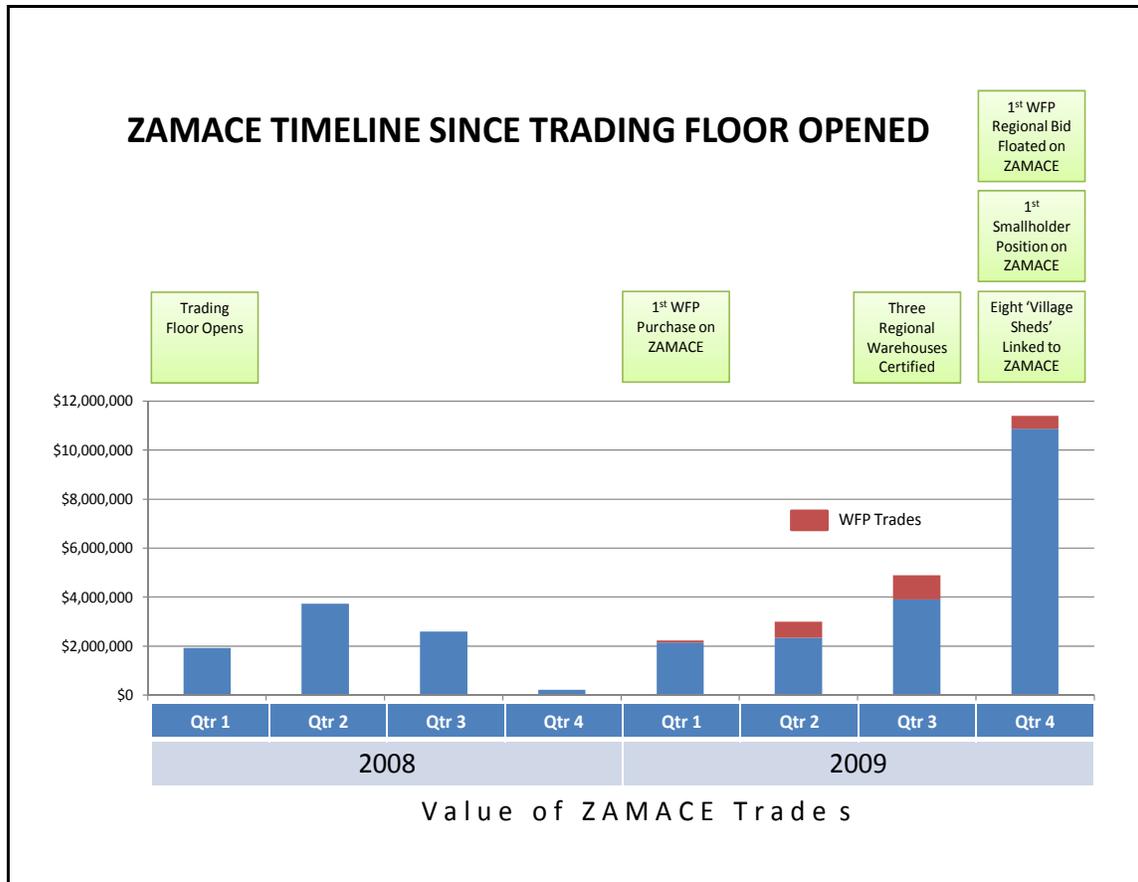


Fig 7. Zamace value and activity timeline from inception

- ZAMACE's growing profile in the market is attracting significantly more interest by potential clients, with a consequent increase in the proportion of bids placed by brokers on behalf of clients as opposed to their own account
- There is a growing perception within the milling sector that using ZAMACE provides a cheaper alternative to conventional procurement methods, removes the trader from their supply chain and provides a shield from the political perception of millers as exploiting the farming community. As a result the activity on the bidding side is starting to increase.
- While ultimately there was no bid to match the total offer, a group of commercial farmers placed over half the 2009 wheat harvest volume on the Exchange in the fourth quarter, which, coupled with growing recognition from the ZNFU, represents a shift in perceptions among the commercial farming community of the relevance of ZAMACE.
- Government recognition of ZAMACE is increasing, particularly at ministerial level, and promises of the passage of the Agricultural Credits Act Amendment and the Marketing Act early next year serve to cement ZAMACE into the regulatory framework of agricultural marketing. In the third quarter, ZAMACE and PROFIT were invited to present the concept of the Exchange to the Minister of

Agriculture, who gave it a very favourable commendation and assured ZAMACE of political support

**2) 5 mid-level traders offering ZAMACE-based pricing in their aggregation of crop, and offering a variety of value-enhancing services to smallholders and small traders in the districts**

- During the third quarter and from an initial batch of seven applicants, ZAMACE identified **three potential warehouse operators**, with trading operations and storage facilities in Mkushi, Kalomo and Monze that either met or were able to meet all of the following criteria for ZAMACE certification:
  - Registered business, holding a bank account
  - Storage facility in excess of 500t in good structural condition with comprehensive security measures in place and assized weighing scales
  - ZAMACE trained warehouse managers
  - All risks, ZAMACE-approved insurance for 500t maximum stored crop – ceded to ZAMACE

With their warehouses certified by ZAMACE, the small businesses were formally trained in May in both ZAMACE operations and approved warehouse operating procedures, rules and regulations and had full insurance packages in place by the start of the fourth quarter. PROFIT also facilitated access by the warehouse operators to comprehensive mini-laboratories for the scientific testing of grain.

- The business model that the warehouse operators adopted revolves around providing two distinct models allowing farmers and small traders to access the services offered by ZAMACE ,namely the issuance of warehouse receipts for parcels greater than 30t for trade by the depositor across ZAMACE, and the issuance of goods received notes that mandate the warehouse operator to aggregate crop on behalf of the depositors and sell across the Exchange



***The Citron Certified Warehouse in Mkushi, Aug 09***

- This initiative was planned to foster greater confidence within the commodities sector for dealing with the lower end of the market by allowing ‘sight unseen’ purchase with a quality assurance. The fact that crop is aggregated in secure and accessible sites would serve to reduce the transaction costs in trading smallholder crop and a quality and quantity certification provided by a certified warehouse would allow a depositor to trade his or her crop as commercial product, thus rewarding quality and eliminating the traditional discounting that is applied to smallholder crop of any quality. Critically, this initiative is the only way in which smallholders and emergent farmers can realistically access the Exchange
- However, while the warehouse operators placed some of their own purchased crop into the warehouses, there was no up-take of the facility by farmers and farmer groups. The

two key reasons for this was that, with limited buying activity across the Exchange, smallholder fears of delayed sale (and therefore delayed revenue with increasing storage costs) were valid, but the main reason was the perceived opportunity cost of selling to the Food Reserve Agency, which was offering a pan-territorial price of \$280/t, which was 25% higher than going market price. Despite pre-marketing season assurances that the FRA would operate only in isolated areas, in reality the agency's buying activity was across the country, and original buying ceilings were revised upwards by 200% in mid-season, further dampening demand for alternative market mechanisms.

**3) 5,000 tons of smallholder crop transacted across the ZAMACE trading floor with measureable benefits reaching the producer (300mt on limited budget)**

- There were no official deposits or sales through the ZAMACE certified warehouse network.
- However, alongside the district warehouses, ZAMACE developed, in a joint initiative with the JICA-funded Participatory Village Development in Isolated Areas (PaViDIA) project, a network of community-run warehouses in Chongwe District. Most of the 27 eligible community sheds were built under the PaViDIA programme, while some of them were run by cooperatives. During the third quarter, ZAMACE trained shed committees and shed management personnel and Government extension officers from these sheds in warehouse and grain management. The communities running these sheds were asked to clean the sheds thoroughly, remove non-grain items, and buy a scale, new maize bags and a groundsheet in order to be 'certified' and six sheds were able to fulfil these requirements. These sheds were provided with a sieve, sampling spear and recordkeeping book. Four sheds combined to engage a broker and place a position for 210t of white maize on the Exchange though due to price determination based on FRA pricing, there were no corresponding bids.
- While there was no business transacted through the community sheds (which in the long term will be lower level aggregation points feeding into a district warehouse), the biggest accomplishment of the Chongwe initiative has been the interest that it has generated amongst farmers on this new way of doing business. There has been strong commitment among the participating farmers to aggregate crop of good quality as a first step to entering the commercial market. At the end of the reporting period, the maize was still in storage, with the farmers willing to hold it until there is positive price movement.
- Total maize aggregated in community warehouses in anticipation of ZAMACE transactions – 266 mt



***The Susu Community Shed, Chongwe, Aug 09***

#### **4) An automated or semi-automated trading platform established**

- The development of an online solution to ZAMACE's current manual trading process was completed during year. While the new process does not match and complete trades, it allows the submission of bids and offers in a standardized format into a database from which trading information sheets are derived, trades monitored and matched, and SMS and email price information disseminated.

#### **5) The inclusion of two major banks in ZAMACE-related finance activities (warehouse receipting and other forms of commodity finance)**

- No banks have yet engaged fully with ZAMACE in warehouse receipt financing activities, though discussions with ZANACO and Rabobank related to the bank's efforts to build a product around warehouse receipt financing continued throughout the year.
- In the third quarter, ZAMACE assisted ZANACO and IFC in making their clients under the ZNFU co-managed Emergent Farmer Programme aware of the operations of ZAMACE, with a view to requiring participating farmers to place crop across the Exchange in the future.
- ZAMACE and PROFIT designed a ZAMACE warehouse receipting model with Lloyds Financials Ltd, a small and innovative financial services company, which intends in the future to manage a warehouse receipting portfolio
- PROFIT and ZAMACE worked with Stanbic at the end of the year to design a comprehensive settlement system for the Exchange, through with all transactions going across the Exchange on buyer and seller sides are guaranteed through performance bonds pledged by the broker members. It is believed that guaranteed settlement will be a strong draw card for farming clients in particular.

#### **Challenges**

- Perceptions of ZAMACE within the commercial farming sector are still mixed, with the result being that uptake and usage, while increasing, is still low. However, the ZNFU now fully endorses ZAMACE as a viable marketing option for the farming community and have agreed to undertake publicity on behalf of ZAMACE.
- Government market intervention has a very negative impact on the operations of ZAMACE
- The lack of regulatory status for ZAMACE prevents the Exchange gaining full market legitimacy. Technical assistance to the Securities and Exchange Commission in 2010 to design a legal framework for oversight by the Commission will address this issue
- The lack of enabling legislation around warehouse receipts hampers the development of a receipting initiative, but this constraint should be addressed through passage of the Agricultural Credits Act Amendment by the end of the 2009 calendar year.

#### **Achievements against benchmarks**

##### **1) At least 10,000 farmers engaged in either contracted or guaranteed off-take production with a non-cotton lead firm (2,000 on limited budget)**

- 5,500 producers were engaged over the year by Forest Fruits in North Western Province for the production of honey, which purchased over 260t of raw product with an approximate farm gate value of \$145,000 for both export of raw product and value addition through retail pack production for domestic and regional sale.
- Forest Fruits is also expanding its producer base to areas outside Mwinilunga to other areas of high potential honey production. This move serves to increase their intake of non-organic honey for the local and regional retail initiative that the company is currently undertaking. While only minimal volumes of honey were bought this year, beekeeping groups have been identified in Mumbwa, Eastern Province and the Chiawa area of Kafue District. PROFIT is assisting Forest Fruits to design an outgrower scheme for the Chiawa area, based on modern hive production from an estimated 500 beekeepers in the area for implementation during FY10.
- In the first quarter, 400 farmers were engaged by Freshpikt for the production of pineapples in North Western Province for canning and export to fulfil a large order to South Africa. PROFIT provided logistical support to the company in order to assist in the aggregation of produce and development of an efficient supply chain. However, cash flow problems meant the farmers were unpaid for three months with serious negative consequences for the development of trust in the relationship. As a result, the supply chain broke down and PROFIT has withdrawn support.
- In the run-up to the honey harvest in the second quarter, PROFIT provided limited technical and financial support to Lyunda Enterprises, a small honey processing company in Kaoma with a supply contract into two major Zambian supermarket chains.
- PROFIT has continued its support to the Chiansi Irrigation Project in the Kafue District of Zambia through the year. The project is implementing a new approach to bringing smallholder farmers into commercial agriculture, whereby 125 farming households have pooled their titled land into a block to secure funding to start a commercial farming operation. The smallholders are shareholders in the commercial farm, and so reap dividends from the operations. Four centre-pivot irrigation systems and a lateral line irrigation system have been installed, covering a total area of 178 hectares on which wheat, maize and vegetables are being grown, both under the management of the commercial operation and the smallholder cooperative.

PROFIT has worked with the Chiansi Irrigation Project since its inception, providing technical and logistical support to the establishment of the smallholder cooperative and its relationship with the commercial entity. During its first year of operation, the Chanyanya Smallholder Cooperative Society has managed to achieve the following:

- 60 ha of maize were collectively farmed by the cooperative members. There were challenges with late planting and drainage, but the cooperative managed to harvest 142t. Participation from the members in managing the crop was very high.



***Chanyanya Cooperative members pack harvested maize, Sept '09***



- A 30 ha lateral line irrigation system has been installed, and is now being managed by the cooperative to grow wheat, a high-potential variety of upland rice new to Zambia, winter maize, and vegetables. The cooperative has hired an experienced manager to guide the operation, and local labour is being engaged.
- The cooperative secured \$30,000 in grant funding from the Canada High Commission to build an office and community development centre.
- The cooperative successfully held its second annual general meeting. During the meeting, financial statements were presented, strategic direction was discussed, and new board members were elected.

At this early stage, the Chiansi model is proving to be a success, and there are indications that neighbouring communities in Kafue District are keen to incorporate themselves into the scheme, through the pooling of customary land. The model, to which PROFIT contributed significantly in terms of design, is increasingly seen in international infrastructural development terms as a 'best practise' for the commercial and equitable development of smallholder land.

***2) Five lead firms operating some form of out-grower scheme engaging farmers for specific production needs.***

- Forest Fruits, Lyunda and Freshpikt were three firms that specifically engaged small producers over the year
- PROFIT made significant progress in the first quarter with designing 'outgrower' schemes for two oil-seed buyers based on product aggregation through contracted top-

performing agricultural retail agents. Both Zamanita and Ndyabaluba started meeting prospective agents prior to the planting season, but both eventually failed to finalise production contracts, although Zamanita did supply sunflower seed of unknown origin to 10,000 farmers on open agreement to purchase at harvest. Production was very low as a result of poor seed quality, and the commodity price crash in the second quarter further reduced any incentive by lead firms to invest in smallholder oilseed production.

- PROFIT has been providing technical assistance to the establishment of a smallholder avocado export company linked to a major fruit buyer in the UK. The tree nursery was established during the third quarter, and two irrigation farmer groups identified as recipients of the trees at the onset of the rains.

### **3) Initial limited commercial trails of upland rice initiated with SCCI and producers**

- During the third quarter, PROFIT facilitated the planting of four trail plots of three varieties of upland rice. (NERICA 4, 10 and Suparica 1), under the supervision of the Seed Control and Certification Institute (SCCI). All sites were financed and managed by the farmers.
- Cold temperatures seriously affected yields, but dedicated trial results determined that Nerica 4 and 10 are suitable varieties for Zambian conditions.
- In the fourth quarter, SCCI 'released' NERICA 4 as a commercial variety and Zamseed is in the process of obtaining commercial volumes of the variety for planting during the summer months for specific seed production.
- The West African Rice Development Association has, as a result of PROFIT intervention, seen the utility in advancing funds sourced from JICA to Zambia Agricultural Research Institute (ZARI). This obligation was mediated by PROFIT and is in place to secure increased seed production of at least NERICA 4. This grant to ZARI included a significant allocation to ZAMSEED for the commercial production aspect.

## THE VETERINARY AND BEEF INDUSTRIES

### Annual Summary

During the year under review there have been significant changes in the Ministry of Agriculture and Cooperatives, with a new Ministry of Livestock and Fisheries being 'split' away into a separate administration. Due to a preoccupation with internal organisational issues, there has been slow progress in improving government oversight. However, there have been some positive steps towards the right direction. In the first quarter, the private vets had an opportunity to present the reviewed Pharmaceutical Act to the Parliamentary Committee on Livestock and a draft has since been presented to the Ministry of Justice, minimising the threat of it being enforced and completely paralyzing the already challenging vet industry. There have also been efforts by the government to improve the way they manage their regulatory role by inviting private vet service providers to participate in an implementation plan for a Disease Free Zone in Zambia. One of the herd health programme implementing vets has been asked to spearhead the design of this pilot project with full support of the Ministry of Livestock.

The year has also seen an increased interest from beef processors and feedlot owners in buying cattle from smallholder farmers. This year alone saw a total of 117 head of cattle with an estimated value of \$44,000 being purchased from smallholder cattle farmers through formal markets facilitated by PROFIT. Also during the year there has been positive movement by farmers in improving and intensifying their management by purchasing pedigree bulls and growing improved pasture to supplement their cattle in the dry winter months when there is a shortage of roughage. However, a lack of strong output market incentives still reduces confidence among progressive cattle farmers and prevents greater adoption of such productivity enhancing technologies.

In an effort to integrate vet services into the agricultural retail industry, PROFIT has facilitated four strategic alliances which take advantage of the larger and more commercially viable retail network to support veterinary product distribution. This removes the need for private vets to maintain their own agent network, which in the past has proved largely unsuccessful due to a low volume of product movement and the limited capacity of vets both in working capital and business acumen.

While multiple constraints to progress still exist, such as the limited number of private vets, disease issues and a difficult marketing environment, there has been a significant improvement in terms of volume of business moving through the private veterinary sector. In 2009, the total value of goods and services sold into the smallholder sector through private vets was \$94,000 (an increase of over 170% from 2008) and 24,000 cattle, owned by over 6,000 farmers, are now benefitting from regular contact with private vet services, which represents an increase of 68% over last year's figures. Whilst still small in comparison with the industry requirement, the increase in volume and value of business is beginning to drive competitiveness and innovation amongst particularly the newer private Vets.

2009 Indicator	Result	Increase on 2008
Number of Private Vet Companies Engaged	8	-33%
Number of Farmers Engaged	6,066	390%
Number of Animals Under All Private Vet Services	23,334	68%

Table 10. Vet Firms and farmers served FY09

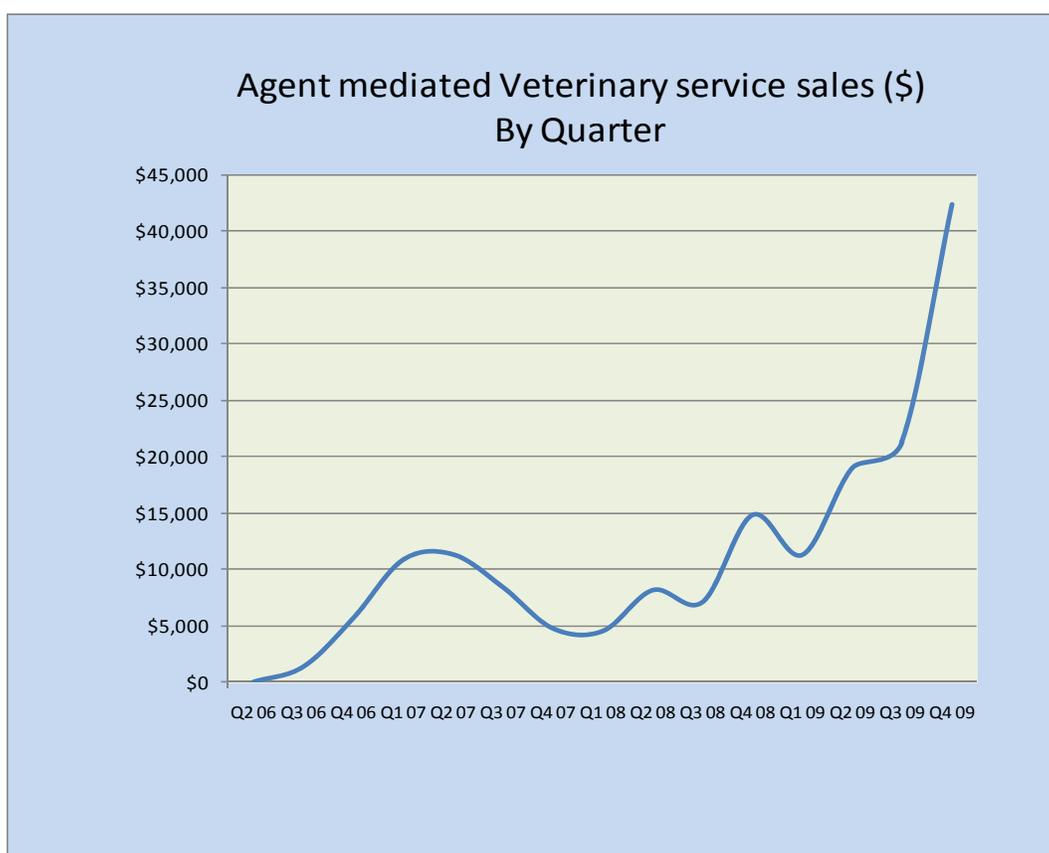


Fig 8. Vet sales mediated by private sector 06 - 09

Total	2006	2007	2008	2009
Sales Through Private Vets	\$7,023	\$35,251	\$34,521	\$93,874
% Increase on Last Year	n/a	402%	-2%	172%

Table 11. Sales through private vets FY09

PROFIT's attribution exercise determined that during 2009, the increase in asset value within the smallholder economy attributed to the purchase of veterinary products and services reaches over \$2.5m, as below:

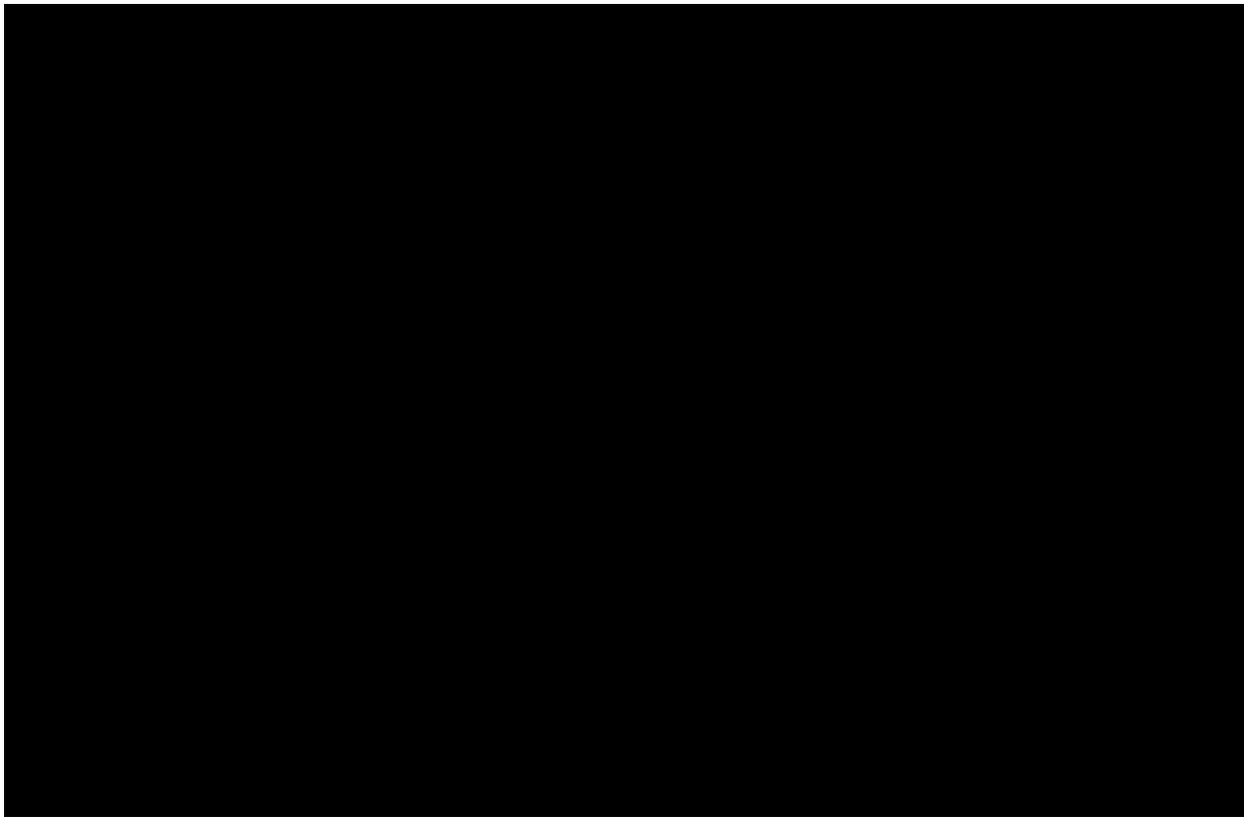


Table 12. Impact of Vet Service Provision

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## Vet Services and Beef Industry Pathway:

### Theme 1: Improving participatory government oversight as a key to private vet services provision

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#### **Achievements against Benchmarks**

**1) A pilot process implemented in a selected trial area of the 'critical' services and functions including the private and public sectors operating in their roles as defined by the Livestock Development Plan.**

- The pilot process to implement selected trials of the critical public services in line with the Livestock Development Plan has stalled due to the transformation of the Department of Disease Control and Livestock Development into a full Ministry, which is going through internal reorganisation and structure changes currently.
- Communication between the Ministry of Livestock and Fisheries and PROFIT is ongoing to maintain the focus on the task.

**2) At least four Vet Network working group workshops conducted, establishing clear oversight and regulatory framework/ roles for the public sector**

- During the fourth quarter, one stakeholder meeting was held in September, bringing the annual cumulative total to three. The main focus of the meeting was to facilitate the establishment of a clear oversight and regulatory roles of the Government.
- The target of four meetings was not achieved largely due to the Ministry of Livestock and Fisheries internal reorganisation and restructuring process.

**3) Pharmaceutical Act reviewed in support of the Vet Industry**

- In the fourth quarter there was no progress with the review of the Pharmaceutical Act in support of the vet industry as there was little opportunity to garner support from within the new Ministry structure.
- However, in the first quarter, with the help of Dr. Mtabini, a lawyer hired by PROFIT to help with the review, the act was reviewed in favour of the vets but it still pending a hearing by the Ministry of Justice.

**4) Clear Cattle Movement Requirements agreed upon and implemented**

- Not achieved as movement requirements have kept changing throughout the year with the nature of disease outbreaks. Furthermore, administrative changes within the Ministry have contributed to the lack of progress on this front.

**5) Awareness of MACO Oversight & Regulatory Roles increased by publicity campaign**

- Not achieved as roles are still being defined within the new Ministry

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## Vet Services and Beef Industry Pathway:

### Theme 2: Fostering market output linkages as a key to private vet service expansion

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#### **Achievements against benchmarks**

##### **1) At least 2 commercial buyers buying from smallholders through centralised off take markets**

- During the fourth quarter alone a total of 64 head of cattle with an estimated value of \$24,000 were purchased from smallholder cattle farmers through a formal market mechanism facilitated by PROFIT in Mumbwa. This brought the annual total to 117 animals and a cumulative annual value of \$44000. This market mechanism was different in that it was organised by the communities rather than being organised by the abattoir or feedlot owners.
- During the quarter one processor, Majoru Butcheries participated in this process to compete with the existing buyers, Tchagara and Savannah Beef. The addition has broadened the choice of buyers among the farmers, especially as buyers now have different needs for either processing or feedlotting.
- The mechanism has the approval of the Department of Disease Control in the Ministry of Livestock and Fisheries, which sees these formal markets as a tool to controlling disease and cattle movements from the smallholder economy.



*Cattle at Nangoma Sales Yard, Mumbwa, Sept, 2009*



*Animal being weighed by the buyer on the scale, Mumbwa, Sept, 2009*



*Dr. Chazya, Mumbwa DVO, issuing Cattle Movement Permit at the sale yard*

##### **2) At least 5 emerging farmers start to improve their herds through proper management including purchase of commercial bulls.**

- In the fourth quarter, two Brahman bulls valued at \$1,400 were purchased by smallholder farmers from a pedigree farm in Kalomo, adding to the 11 Boran bulls that were purchased in December 2008 from a commercial ranch in Chongwe. Therefore a total of 13 bulls were purchased by ten smallholders from stud ranches with a total value of \$22,000.

- Also during the year, 37 farmers have started growing improved pasture in conjunction with Hygrotech to supplement their cattle in the dry winter months when there is a shortage of roughage



*Improved breed bulls awaiting sale, Chongwe, Sept 09*



*A Farmer cutting Kowkandy for silage making, Chongwe Sept, 09*

### **3) MACO supporting cattle sales and movement in HHP herds**

- Two cattle sales were successfully held in Mumbwa during the fourth quarter with the full support of the Ministry of Livestock, which included community sensitisation and organisation, communication with the buyers and issuance of livestock movement permits to buyers at the sale yard.
- For the first time, the District Veterinary Office, farmers, buyers and the police have worked together to find a way of improving methods of smallholder cattle marketing

## **Vet Services and Beef Industry Pathway:**

### **Theme 3: Integrating vet service provision through Ag-input firms**

#### **Achievements against Benchmarks**

##### **1) At least 3 agricultural input firms employ vets**

- During the quarter, no agricultural retail firm employed a vet as a way to broaden and improve the vet service delivery to the smallholder market.
- However, in 2009 Minelands Agro Services did employ a vet, but the graduate vet has since moved on to set up his own vet business.
- The target was challenging to reach because the agricultural retail firms are not seeing the business potential in the livestock sector and remain uncertain about the business case for hiring vets. This has been especially noticeable as HHP sales

have declined and organised one off sales have increased. This has favoured the individual vet rather than the vet as an overhead component of input firms.

## **2) At least 5 strategic alliances between vets and input firms established**

- This quarter, four strategic alliances were created as vets have taken advantage of the stronger agricultural retail agent networks to promote their products and services:
  - Agrivet has partnered with MRI, Seedco, Cropserve and Hygrotech in order to utilise the retail networks to promote their products
  - Twiga has taken advantage of the Dunavant spray services provider network to train 30 SSPs in Katete to deliver cattle spraying services and product sales
  - In Mumbwa and Kabwe, Minelands and Croppack have also started selling cattle products through their agents.
  - In Mumbwa Vethaven has made an alliance with Livestock Remedies Ltd, a firm which supplies livestock drugs as an agent in Mumbwa.
- In the second quarter, Leloisa and Landserve combined forces in Mkushi to promote the sale of vet drugs through the agricultural retail network provided by Landserve
- Therefore the total number of alliances totals five for 2009

## **6) At least 400 agricultural retail agents providing basic vet services and cattle sprayer services**

- During the quarter under review, a total of only 35 in-community retail agents were trained by vet firms to act as the marketing agents to market vet products. This reflects the lack of conviction of the business case by input supply companies.
- In addition 30 Sprayer Services Providers (SSPs) from Dunavant were also trained to provide vet services.
- 65 agricultural retail agents were trained to provide vet drugs as part of their sales portfolio in the third quarter
- The total number of agricultural retail agents actively delivering vet services and products is 130, and the shortfall is again related to the reluctance of agricultural retail firms to invest in a market they perceive as small and slow-moving with little to offer their bottom line in the short term as long as the key to vet service remains the hiring of an expensive Vetrinarian.

## **Additional Achievements**

- During the quarter, approximately \$6,545 was generated via the sale of herd health contracts, compared to \$4,860 worth of similar sales over the last quarter. This represents a 35% increase over the Q3 09 figure.
- The cumulative sales of HHP contracts for 2009 total \$25,426. From figure 9. below it is clear that pure HHP contracting remains a challenge however, Q4 results are beginning to show the results of renewed pressure from the young independent Vet entrepreneurs in both Southern Province and Mumbwa

- The number of animals on vet contracts as at the end of the quarter was 1,678. Of this number 990 (59%) were dairy type animals and 688 (41%) were beef animals. This depicts an important relationship between the payment for herd health services and the dairy smallholders' willingness and ability to pay for the services from their steady flow of monthly income. It also indicates the reason why pure HHP is a difficult concept in traditional beef herds with little or no planned offtake opportunity.
- The number of animals on vet contracts during the quarter rose as farmers' cash flow from crop production and sales improved.

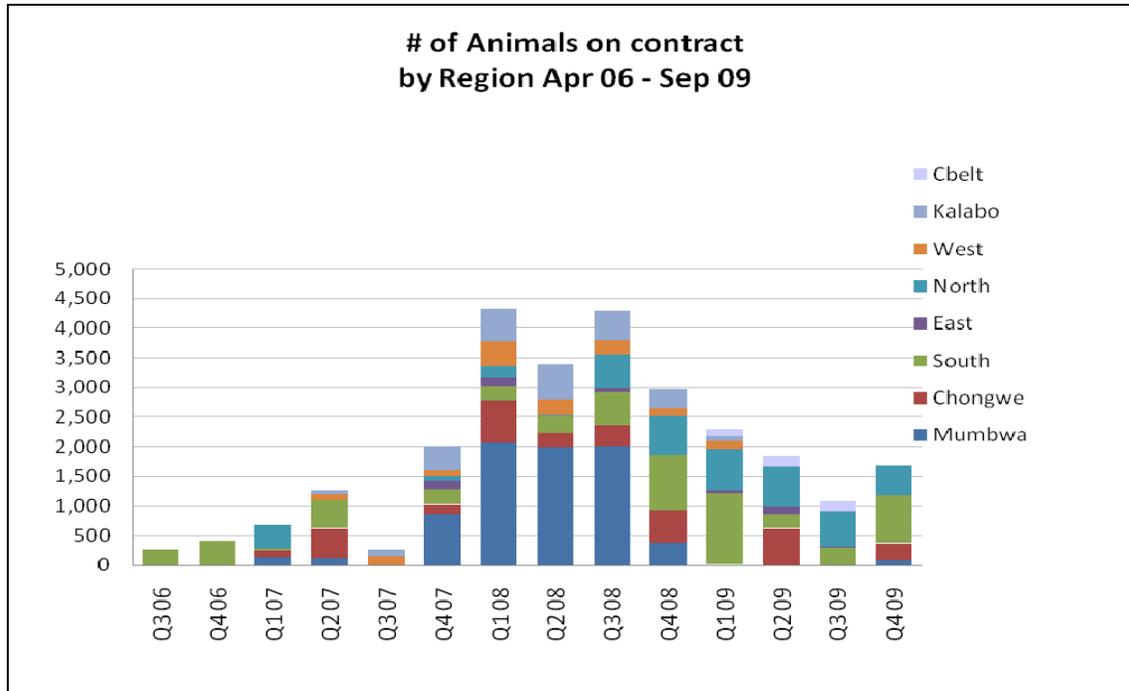


Fig 9. The challenge of HHP contracting – district performance

- Total drug and service sales for the fourth quarter 2009 were worth over \$42,000 compared to over \$21,000 in the previous quarter, giving an increase of over 100% over last quarter's figure.
- The total cumulative sales for drugs and herd health services for 2009 is over \$93,870
- The number of animals accessing one-off services during the fourth quarter was 23,334 compared to 7,672 for the third quarter. This gives an increase of over 200% over last quarter's figure. The increase in the sales of one-off services can be attributed to the increase in farmer cash flow during quarter four as well as the increased effort being made by Vet firms to market this form of service.

### **Challenges**

- The division of the Ministry of Agriculture and Cooperatives and the Ministry of Livestock and Fisheries has caused serious delay to PROFIT's attempts to facilitate change in the role that the government plays in the smallholder cattle health sector.

- The legislative process is long, meaning that affecting change to the Pharmaceuticals Act will take time and meanwhile the damage caused by existing legislation can continue
- A lack of transparent pricing and grading standards, coupled with an effective monopsony, movement bans and disease issues all combine to make effecting change to livestock output markets difficult. There is still a huge challenge in transparent pricing and grading standards as there is no incentive for the commercial buyers to implement these due to the relatively poor quality of livestock sold by small holder farmers.
- While in theory there is much to be said for the integration of veterinary products and services into the agricultural retail networks, the remains a perception by the retail firms that the market for vet products is difficult and weak hinders progress.

### **Additional Achievements**

- This year Vetlab has continued to expand and diversify its commercial operations, and is becoming an industry standard comparison platform for most private sector firms. The efficient services and reduced turnaround time of diagnostic tests has been a catalyst in enhancing the growth of this platform.
- Vetlab has applied for an international accreditation certificate so that the company can start to compete favourably with regional diagnostic facilities and it is also in the process of adding feed testing to eliminate the need for costly and time-consuming international tests. The proposal, which is well advanced, is to create a central, neutral feed laboratory which will be utilised by all feed millers and feed users to standardise quality of feed production. This feed laboratory will provide a centre of excellence which does not exist in the region north of Johannesburg.
- Recently Vetlab managed to sell shares to raise its capital base, with three major agricultural firms investing \$40,000 of equity in the company. Vetlab has continued to record increased business volumes in services sales and testing to both commercial and smallholders' clients with over US\$158,000 worth of services sales generated in 2009, involving 900 tests on behalf of 200 clients.

## THE DAIRY INDUSTRY

### Annual Summary

The integration of smallholder dairy producers into commercial input and output markets has progressed significantly over the year. Despite a general decline in local demand for milk products attributed to a drop in purchasing power as a result of mine closures and the global financial crisis, demand for smallholder milk by processors has remained bullish. Processors continue to make investments in securing milk stocks through the provision of extension, transport and aggregation services. Confidence in the ability of the market to absorb production has led to an increased demand for productivity-enhancing inputs by dairy farmers.

PROFIT's objectives within the dairy industry remain concentrated on three, inter-related pillars, namely increased milk collection by the formal processing industry, improved delivery of vet services and improved feed and fodder availability to the small and emergent dairy farmers. The number of clients in the sector engaged in PROFIT's market facilitation interventions numbered 1,300 by the end of the year.

The key to building confidence within the dairy sector is through guaranteed off-take by the processor. In the last twelve months PROFIT's processor clients have seen collection of milk increase by more than 60% in the last year, through a combination of new collection routes and new milk collection centres. Three processors have also engaged four dairy extension officers to service their dairy farmer clients, representing a significant progression from the 'hands-off' approach to smallholder milk production previously taken

Increased demand for off-take has driven the demand by dairy farmers for improved inputs and services. PROFIT continues to foster the emergence of a private sector response to this increased demand. In the veterinary sector, PROFIT is facilitating the delivery of pre-paid health services to dairy farmers through private vet firms. By the end of the reporting period 1,400 dairy type animals had accessed some form of organised pre-paid vet service from one of five vets offering this service along the line of rail. The Herd Health Programme has proved to be an excellent platform for the introduction of other products and services that can enhance dairy output; including artificial insemination, feed, forage, pasture management and dairy hygiene. The programme continues to have a positive effect on reducing mortality within dairy herds by up to 40% and critically, decreasing morbidity among herds, leading to increased milk production and income.

Food and nutrition form another critical support market to the dairy industry, and animal feed companies have reported a trend increase in sales of feed to the dairy sector with a slow but steady growth over the past two years.

However a serious gap still exists in one of the most critical production elements in Zambia dairy farming: that of pasture management and fodder conservation. PROFIT has worked closely with private companies over the past twelve months to fill this gap, with the result being seen most

visibly in more consistent milk supply into the commercial processors as animal nutrition levels remain high over the dry season. Attempts to introduce silage and fodder production have been particularly encouraging. For example, one processor received over 30% more milk in the fourth quarter than in the same period in 2008.

Improved fodder options require the introduction of appropriate rural mechanisation for on-farm processing, and PROFIT has been working over the year with two agricultural equipment retailers to promote fodder choppers into the smallholder sector.

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## Dairy Industry Pathway:

### Theme 1: Improving Inter-firm cooperation – strengthening commercial relationships

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#### **Achievements against benchmarks**

##### ***At least 4 alliances/ partnerships between private sector companies established***

- A formal alliance was created in the third quarter between Agrivet, a private veterinary company, and Dairy King, a Lusaka-based processor, in order to jointly engage a dairy extension officer
- In the fourth quarter, Agrivet formed an alliance with American Breeding Sires, one of the world's largest suppliers of cattle semen, as the official Zambian agent.
- Fens Investment, an agricultural equipment manufacturer, has signed an agreement in the fourth quarter to act as the Zambia agent for Taltec, a South African manufacturer of mobile cattle spray race technology.
- There are, however, multiple examples of informal local alliances between processors, vets and input providers being formed as the smallholder dairy industry gains maturity:
  - Parmalat has engaged several feed companies in its roll-out of the Basic Guide to Dairy Farming
  - Leliosa Vet Services has trained AI technicians and junior vets in conjunction with A&P International, an agricultural hygiene company
  - Hygrotech has initiated an improved pasture demonstration programme in conjunction with Zam milk, Parmalat, Tiger Feeds and GVART
  - Saro and Camco, two agricultural equipment vendors, are working with a seed company on cross-selling maize silage varieties in conjunction with on-farm fodder processing equipment.
  - There have been several instances of dairy processors selling milk to each other in cases where shortage in one company coincides with over-production in another.

#### **Challenges**

- Level of trust between many of the players, especially those in direct competition with one another, is still low.

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## Dairy Industry Pathway:

### Theme 2: Stimulate the development of industry-critical support markets

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#### **Achievements against benchmarks**

**1) *An increase in productivity per small holder dairy cow of at least 10 % over base line levels.***

- A PROFIT household survey of farmers with animals on herd health programmes and utilising improved feed management techniques revealed an average of 7.7 litres per cow daily milking average representing an increase of 28 % over last year's figure.

**2) *An increase in profitability per small holder dairy cow of at least 10% over base line levels***

- The same PROFIT survey revealed a gross margin of \$505 per cow, which represents an increase of 53 % on last year's figure
- Yields per lactation have increased by more than 15% over the PROFIT intervention period as a result of improved nutrition especially during the drier period; improved herd health as well as improved calving interval due to all the above. The presence of a reliable off take market has also helped to stimulate farmers to make the necessary investments in upgrading.
- A survey by Parmalat highlighted an increase in average annual household income derived from formal milk sales to \$1,152 from an average of \$500 in 2007

**3) *An increase volume and value of productivity enhancing inputs sold to dairy farmers by at least 10 % over base line levels.***

- Input suppliers have reported an increase of over 10% in inputs and services sold to dairy farmers comprising the delivery of herd health, feed, improved nutrition options and AI. While exact figures of the number of farmers engaged in input markets is difficult to ascertain, sales into the smallholder sector show a positive trend.
- A new feed company, Nutrisure, introduced a new range of dairy concentrates onto the market in the third quarter, designed to be mixed on-farm with locally-procured maize bran and a protein source. In the first quarter of its release, Nutrisure recorded sales of over \$54,000 into the dairy sector.

- Hygrotech reported a tenfold increase in sales of pasture seed to the emergent dairy sector, largely off the back of a widespread demo plot initiative involving almost 200 farmers. Subsequently, demonstrations were held on improved pasture management and pasture options with sorghum (sudan grass), banner grass, star grass and forage conservation, i.e. silage production from maize silage and fodder banks from post-harvest maize stalks.



***Dairy animals being fed silage on a smallholder farm in Chisamba, May 09***

- Camco reported ten sales of fodder choppers into the dairy sector in the third quarter
- PROFIT has collaborated with Fens Investments; a Kafue based company, to develop a “mobile” spray race for cattle. The prototype, based on a South African design, was launched at the Lusaka Trade Show in August with considerable interest from both dairy and beef farmers. Fens has since become the official agent for the South African design company. With assistance from PROFIT a demonstration model of the spray race has been set up just south of Lusaka with the Mapepe dairy community. The spray race was run successfully for the first time in late September and it is anticipated a regular weekly dipping service can be operational during October.



***The Fens Investments mobile spray race being trialled in Mapepe, Sept 09.***

**4) At least 1,000 dairy type animals accessing dairy herd health services**

- During the fourth quarter 1,950 dairy type animals were accessing some form of Herd Health Programme in various dairy areas along the line of rail. The figure for the year has fluctuated between 1,200 and 1,950 throughout the year.
- Service development in the Copperbelt continues to be slow due to a lack of private vet capacity, but it is anticipated that this situation will change when Leliosa Vet Services, based in Mkushi, opens a branch in Kitwe early in 2010. Leliosa has already located one of its full time Community Livestock Assistants to Ndola to continue to cement relationships with farmers on herd health programmes in the area.
- Southern Province represents a major growth area with both commercial vet capacity and a concentration of emergent dairy farmers committed to improving dairy output. This has been buoyed significantly by improved collection efforts by Parmalat.

#### **5) At least 2,000 farmers trained in dairy herd health and productivity management**

- In the fourth quarter 1,035 farmers (588 men and 447 women) were trained taking the annual farmer trainings total to over 3,500 farmers. The two training themes attracting the highest attendance were the Parmalat trainings using the Basic Guide to Dairy Farming and trainings related to forage and fodder management.
- Emerging dairy farmers are very open to new production enhancing technologies, but a challenge has been the dissemination of information when no obvious private sector intermediary has been available. However, it is anticipated that increased demand through PROFIT-facilitated awareness around certain technologies will continue to stimulate direct private sector involvement in supply of these goods or services.

#### **6) At least 90 farmer training sessions organized by private sector input/service providers**

- Documented training sessions facilitated by private sector actors throughout the year numbered over 80, with many more occurring without the knowledge of PROFIT staff as private sector takes on full responsibility for farmer training and support.
- Probably the most exciting of the private sector training initiatives has been Parmalat's delivery of the new industry developed dairy handbook training modules. It is notable that the clients are paying for these extension sessions, at a cost of \$32 for a nine module course. The majority of the course is delivered by Parmalat but certain modules have been outsourced to vets and input suppliers.
- National Milling presented two 30 minute episodes on dairy health topics on FM Radio 2 in September. The guest presenter was a private vet based in the Lusaka area.

#### **Additional Achievements**

- Finca, a micro-finance institution, is in the process of designing a loan programme for emergent dairy farmers. Finca interviewed several farmers during this last quarter in Southern and Central provinces to establish how best to serve this market and it is hoped that a small/medium loan product will be available before the end of 2009.

#### **Challenges**

- With smallholder dairy farming in Zambia at such a low level of productivity and relatively small numbers of animals, it is critical for emerging dairy farmers to adopt multiple and related productivity enhancing technologies simultaneously, including correct feeding, nutrition, health and hygiene. Fostering adoption of all of these requires both farmer and private sector partner capacity.

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## Dairy Industry Pathway: Theme 3

### Improving output markets by developing and enforcing process standards

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#### **Achievements against benchmarks**

#### **1) At least 6 processors engaged in improving and /or value added processing and production of dairy products.**

- Dairy King has begun formulating a higher quality yoghurt product marketed with a unique shrink label, which will command a premium price.



***The Dairy King Premium yoghurt processing line, Sept 09***

- Nice Products continue to experiment with their steri-milk line with time and temperature profiles. Both drinking yogurt and flavoured milk are soon to be added to their product range.

- Discussions have begun with Tetra-Pak, two processors and Zain, focused on the selling of advertising space on

cartons produced by the processors with the objective of promoting a

cheaper source of fortified dairy product available to either schools or the mass market.

- Finta Farms in Livingstone have entered into a contract packing agreement with Clover South Africa whereby Finta will process milk into UHT and pack it in Clover packs. By strategically placing themselves in Zambia, Clover hopes to export to both Zimbabwe and the DRC in the coming months.

#### **2) At least four processors adopting improved process technologies.**

- A total of seven processors were engaged in improving process technologies over the year.
- Dairy King has reached new milk intake levels since introducing its new bottle packaging line and continues to look at other ways of both improving and increasing production. The latest equipment addition is a FFS machine (Form Fill and Seal) which will be used to pack all sachet products, further reducing packaging time and increasing shelf life and product quality.
- Nice Products has invested in upgrading its processing facility with a view to develop and market several new product lines.
- Parmalat invested in five 1,000 litre insulated transportation tanks to increase the collection capacity on existing transportation routes.

- Diamondale continues to upgrade its process operation with the procurement of a new boiler and pasteuriser unit to enhance product quality and ultimately extend product shelf life.

**3) At least four processors will have functional in-house laboratories.**

- No new processors established laboratories during this quarter, but Finta, Parmalat, Dairy King, Nice Products and Zammilk all have functioning in-house laboratories. Mwachemi Investments, a local laboratory equipment supplier, continues to train and support the processors.

**3) One independent laboratory commissioning a dairy testing service.**

- Due to budget constraints this programme with Vetlab was put on hold during the year.

**Additional Achievements**

- Zambia Bureau of Standards, in conjunction with both Parmalat and Zammilk, held six food safety training sessions with both farmers and ten milk collection centres. A total of 230 people attended these trainings and feedback has been very positive.
- The Zambia Dairy Processors Association (ZDPA) hired a new Administrative Executive who commenced work in the third quarter. With the new board in place, and in the absence now of dedicated PROFIT support to the association, the association continues to gain credibility within the processors and input suppliers, and it is currently looking at areas such as marketing improvements for dairy products and how to stem the flow of illegal dairy imports into Zambia

**Challenges**

- Processors are slow to adopt new technologies.
- Poor regulatory practices reduce the incentives for processors to improve products

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## Dairy Industry Pathway: Theme 4

### Increasing the contribution of smallholder suppliers to the formal milk market

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#### **Achievements against benchmarks**

##### **1) Increase the volume of milk collected by processors from small scale dairy farmers by at least 250,000 litres**

- During the quarter, 1,272,703 litres of milk was collected from smallholders by the three main commercial processors working with smallholders – Parmalat, Dairy King and Zammilk. This represents an increase of 143,700 litres over the last quarter. With an annual total of 4,170,025 litres, there has been an increase of 1,584,920 litres over the 2008 total.
- The total volume of smallholder milk entering the formal processing sector through the 12 processing firms is estimated to be slightly over 7,000,000 litres for 2009, representing an increase of 11% over last year's figures. The value of these deliveries is approximately \$3,288,000 depending on exchange rate over the year.

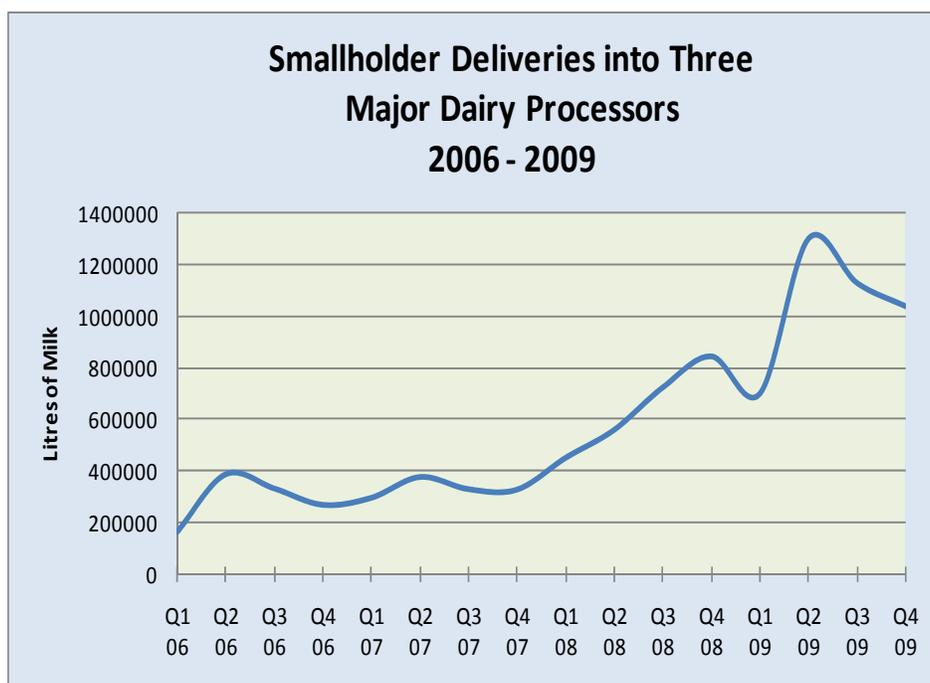


Fig 10. Formal processor procurement – smallholder volumes (Litres)

**Smallholder Milk Sales into Three Major Processors**

Milk Sales	2006	2007	2008	2009
Annual Milk Sales (litres)	1,160,894	1,339,254	2,585,105	4,170,025
Annual growth (litres)		178,360	1,245,851	1,584,920
Value of increased commercial sales	n/a	\$77,548	\$541,674	\$689,096

Table 13. Annual Milk Sales to processors

**2) Increase the proportion of raw milk sourced from small holder by targeted processors by at least 12 %**

- The targeted processors collected 4,170,025 litres representing an increase of over 60% over last year’s collections.
- In September 2009, 8.5% of Zammilk’s raw milk intake was from its smallholder farmer production base with an industry average of 11.5%.
- Parmalat alone has seen an increase of 150 new farmers joining existing co-operatives in the past 12 months.

**3) At least \$ 200,000 of finance/capital granted to processing sector by PROFIT Dairy Industry Development Fund in support of smallholder integration.**

- Due to the budget constraints the Dairy Industry Development fund reported no activity in the last quarter.
- However, the Dairy Industry Development Fund (DIDF) has leveraged almost \$300,000 of direct investment into the dairy sector over the past 12 months, including \$140,000 of direct PROFIT cost-share. This has allowed processors to expand transportation routes, set up more milk collection centres and increase production capacities with new equipment and technologies ensuring that the guaranteed market continues to grow as farmers increase milk output.

**Additional Achievements**

- Processors continue to invest in new transport routes and aggregation points to facilitate greater volumes of milk intake from the smallholder sector:
  - The presence of a regular collection service by Parmalat in the Mkushi area is stimulating new interest in dairy production in this previously un-served market. Almost 50,000 litres was collected via the Mkushi collection route in the fourth quarter.
  - The Sikiwili farmers’ group near Monze have completed the structural work on their new milk collection centre at the end of the year. Milk collection will commence before the end of 2009.
  - Zammilk have identified a group of farmers about 20 km south of Chisamba interested in establishing a milk collection centre
  - Dairy King has now identified a location for its new milk collection centre and hopes to be up and running by late October 2009.

- Processors have also invested in extension personnel over the year in a bid to increase productivity from their clients:
  - Zammilk employed its first dairy extension officer in August.
  - Parmalat identified its second dairy extension officer, to be based in the Copperbelt area and will start work in October. Parmalat now has two full time dairy extension officers.

### **Challenges**

- As milk collection centres begin to generate volume, some NGOs are encouraging a progression from aggregation point function to local processing of milk as added value. Whilst laudable, milk processing in any environment is not an easy option and it is PROFIT's belief that these emerging centres should concentrate on the business of milk collection and encouraging their members to be more productive dairy farmers. In the long term, greater enhancement of rural incomes will be achieved via improved production and milk output rather than going down the value added/processor route at 'village' level.

## THE FINANCIAL SERVICES INDUSTRY

### Annual Summary

The lack of accessible and affordable financial services is a major constraint to economic growth and poverty alleviation in Zambia and PROFIT interventions in the financial sector have been aimed at developing the ability of the financial industry to offer and manage a portfolio of suitable products to small and medium enterprises, in particular in the agricultural sector. With the effects of the global financial crisis having a serious impact on the liquidity and risk management practices of the commercial banks over the year, PROFIT continued to explore non-traditional market opportunities for financial service providers in its efforts to stimulate broad-based growth in the sector. PROFIT interventions in the financial sector can be divided into six components

**1) Upgrading Lender Capacity:** This year, through efforts to improve financial sector capacity, PROFIT trained 34 financial sector professionals from two institutions in agricultural risk assessment and the management of an agricultural loan portfolio – skills which will assist the targeted financial institutions to expand their reach to serve untapped markets in the sector. A further 30, including high-level Bank of Zambia officials, were brought into discussions on resolving some of the current crises in agricultural lending, following a ground-breaking survey conducted by PROFIT and the Zambia National Farmers Union (ZNFU) into the supply of agricultural credit and constraints to access.

**2) Upgrading Borrower Capacity:** During the year, 109 rural SMEs were trained in financial literacy in conjunction BancABC, which was seeking to expand its portfolio into the SME market, and a more specific course in agricultural financial literacy for emergent farmers was designed for delivery next year in conjunction with ZANACO, which is making significant progress towards developing financial products for the emergent farming sector.

**3) Improving the Policy Environment:** In many other developing countries, the practice of leasing is a primary avenue for accessing capital equipment without recourse to onerous collateral requirements. In Zambia, one of the binding constraints to the development of leasing and in particular its relevance to the small and emergent farming sectors is the lack of any enabling legislation around leasing. Over the year, PROFIT provided technical assistance to the Bank of Zambia to draft a leasing law which by year-end was going through the Bank of Zambia internal review processes.

**4) Risk Mitigation Activities:** In addition to the monitoring of the DCA Guarantee Scheme, now covering \$13m of loans across three commercial banks, PROFIT designed an innovative Credit Enhancement Scheme in conjunction with Lloyds Financials Ltd, targeted at alleviating some of the negative repercussions on credit resulting from the global financial crisis for agricultural equipment and input retailers, and finalised the implementation of the settlement bank structure ensuring guaranteed settlement of contracts traded on ZAMACE.

**5) The Development of an M-Payment System:** After three years of development facilitated by PROFIT, a transformational, commercial m-payments platform became active in 2009 having won final Bank of Zambia approval in November 2008. The platform, designed and managed by Mobile Transactions Ltd, is targeted at providing basic financial services such as payments, transfers and account holding to the rural unbanked population and by year-end \$140,000 per month was passing through the system in over 2,200 transactions. The same mobile phone-based technology backbone was re-engineered to support an innovative e-voucher system initially designed within the context of the reform of the government fertiliser subsidy programme but then adopted and implemented by three donor programmes for the delivery of subsidised inputs and food.

7) **Exploring New Financing Opportunities:** Over the year, PROFIT's efforts continued to be applied in the quest for new financial products and services that have the potential to add value to the lower end of the market. While research into the feasibility of a Special Purpose Vehicle for long term SME financing was dropped due to cost constraints, the development of a Zambian-based Carbon Credits Exchange, facilitated with PROFIT assistance, presents a number of exciting opportunities for small businesses in the future, including the inclusion of smallholder farmers into the carbon financing sector.

**Achievements against benchmarks**

**1) One or more banks making significant efforts to engage the agricultural and SME markets, and investing in staff capacity to operate in these markets**

- During the first quarter, ABC Banking Corporation (now BancABC) requested PROFIT assistance to develop a short course in business planning and strategic management for their potential SME clients in their national expansion for retail and SME products. 109 SME clients were successfully trained by ABC and PROFIT staff in Chingola, Solwezi and Mazabuka with very positive feedback.
- During the second quarter, PROFIT engaged two international consultants to design and deliver a training course on agricultural credit to 30 ZANACO staff, including credit analysts, agricultural relationship managers, rural branch staff and senior managers. The two, two day courses focused on:
  - Marketing and Prospecting for Agricultural Loan Prospects
  - Agricultural Credit Analysis
  - Credit Administration for Agricultural Loans
  - Loan Monitoring and Portfolio Analysis
  - Loan Workout and Loss Prevention in the Agricultural Sector
  - Service and Cost Issues for Rural Customers
  - Agricultural Leasing and Other Innovative Products

The feedback from the courses was very positive, coming as they did shortly before ZANACO launched its rural banking initiative with the support of the International Finance Corporation (IFC) and ZNFU, with a focus on improving emergent farmer access to finance.

- Also during March, PROFIT delivered the same course in a one-day format to four senior staff at African Banking Corporation. The bank requested the training as part of efforts to incorporate agricultural lending into their new SME and retail division.
- PROFIT has continued to work closely with ZANACO and IFC on the Emergent Farmer Programme. Also, by the end of the year, PROFIT was in discussions with both parties over how to evolve ZANACO's Munda Scheme, currently managed at 'arm's length' through the ZNFU, into a more innovative direct lending scheme involving a well-trained and smartly incentivised team of loan officers and non-land based securities.
- Preliminary discussions were held with Standard Chartered Bank on their intentions to engage the lower end of the agricultural market, but by the end of the year no concrete progress had been made.

- In recognition of the difficulties faced by the agricultural sector in accessing commercial credit, PROFIT and Lloyds designed a finance mechanism that will effectively unlock liquidity in the agricultural retail sector without creating market distortions. The result has been the establishment of a credit enhancement fund which is a capital market instrument that has the potential to radically improve the credit environment for agricultural importers through its series of risk mitigation measures ranging from collateral analysis to a trade insurance package. The scheme has the endorsement of several of the major local banks.
- PROFIT and ZAMACE worked with Stanbic at the end of the year to design a comprehensive settlement system for the Exchange, through with all transactions going across the Exchange on buyer and seller sides are guaranteed through performance bonds pledged by the broker members. It is believed that guaranteed settlement will be a strong draw card for farming clients in particular.

**2) Two leasing vendor agreements in operation with at least 10 deals completed with emergent farmers seeking to develop a service-based revenue stream.**

- The global financial crisis hit severely the financing capacity of ICC, with whom Farmnet operated a vendor agreement. As a result the leasing company has made no further effort to extend leases into the SME market.
- Efforts to identify another willing partner in the leasing sector failed, largely due to the poor regulatory and taxation environment that discourages clients that fall below the various taxation thresholds to adopt leasing as a means of acquiring capital assets.
- In a bid to address these constraints, during the first quarter of the year, PROFIT provided a legal expert to assist the Bank of Zambia's Financial Sector Development Programme to develop legislation that supports the expansion of the leasing sector, and specifically address some of the constraints to engagement with the lower end of the market. After an initial scoping intervention in November, the PROFIT consultant drew up a drafting report setting out some of the parameters for new legislation and/or regulation around leasing and returned to Zambia in February to present his report to a wider selection of stakeholders, including the Attorney-General and the Law Association of Zambia, members of the judiciary and the Ministry of Finance and National Planning. At the end of the year, his draft leasing law was going through the Bank of Zambia internal review processes and will soon be tabled to the FSDP Legal Working Group for final input, with the intention of submitting it to Government early in the next year.

**3) At least one alternative financing model developed through which smaller businesses can access longer term developmental financing**

- In the first quarter, PROFIT began working with a small financial company on the development of a Special Purpose Vehicle for the issuance of a bond for longer term financing for several clients in the agricultural sector. However, due to the excessive costs and complexity associated with the project, three potential 'shareholders' seeking finance through the SPV pulled out, making further effort to pursue this option unviable
- Over the year, PROFIT has provided technical assistance to the establishment of the African Carbon Credit Exchange, managed by Lloyds Financials. PROFIT provided the

Exchange with two short term consultants, both experts in the carbon market, to assist the Exchange to define its role in the African carbon market, and to assess the market-readiness of Zambia in relation to the carbon market and as a primary 'pilot' country for the development of the services provided by the Exchange (illustrated below)

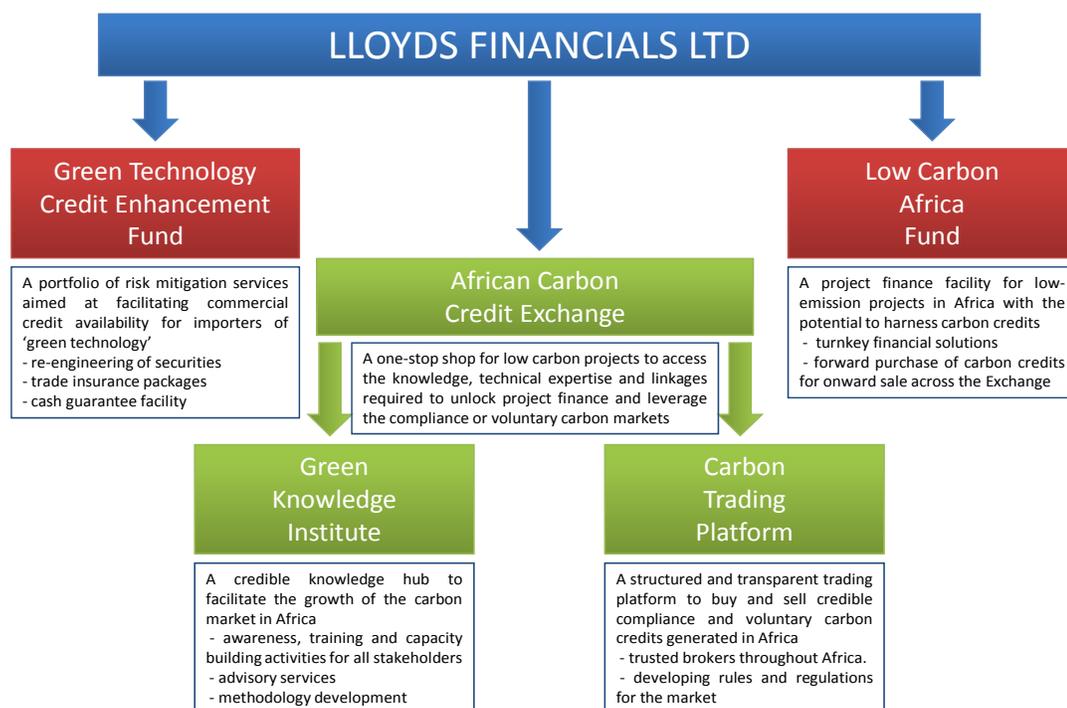


Fig11. Lloyds Financials – African Carbon Credit Exchange and Credit Enhancement Fund

The long term goal of ACCE is to provide a transparent and credible market-making exchange and trading centre, whereby local projects with emission reducing/sequestering potential can access the full range of resources required to benefit from the compliance or voluntary carbon markets. The concept of ACCE is to provide a resource whereby potential project developers will be able to garner credible carbon markets information, technical assistance, appropriate project financing, and ultimately develop into a one-stop shop for potential African carbon credit generating project owners to develop legitimate carbon credits and optimize selling prices. A critical constraint to the development of the carbon market in Africa is a lack of supply of credible carbon credits, without which no exchange can operate and therefore, unlike a 'traditional' exchange, ACCE will operate as a market-maker and facilitator of supply as well as a trading platform.

As a result of PROFIT's interventions, the international profile of ACCE is growing rapidly, with a presence at several major climate change conferences in the fourth

quarter of the year and, critically, a place at the key Copenhagen talks in December 2009 in an advisory role to the Zambian negotiating team.

The development of financial products for the agricultural sector holds the most interest for PROFIT, and ACCE is currently examining ways in which methodologies can be created around conservation agriculture whereby practitioners can, through an intermediary, 'sell' credits and benefit financially through long term adoption and compliance.

**4) At least one outgrower scheme is completing the majority of its transactions with smallholders across the m-banking platform.**

- While the payment system was fully operational by the beginning of the cotton marketing season, its roll-out with Dunavant has been hampered by a lack of Mobile Transactions agents through which farmers can redeem payments, and also the relatively cumbersome nature of the actual transaction. By the end of the year, the payment system had been refined, and the majority of distributors and transporters had been paid through the system.
- However, the m-transactions platform designed and implemented by Mobile Transactions (MTZ) with assistance from PROFIT, which won final Bank of Zambia approval in November 2008, was fully operational with approximately 100 agents across the country engaged in the sale of the various products using the platform (town transfers, bank-less accounts and e-payments).

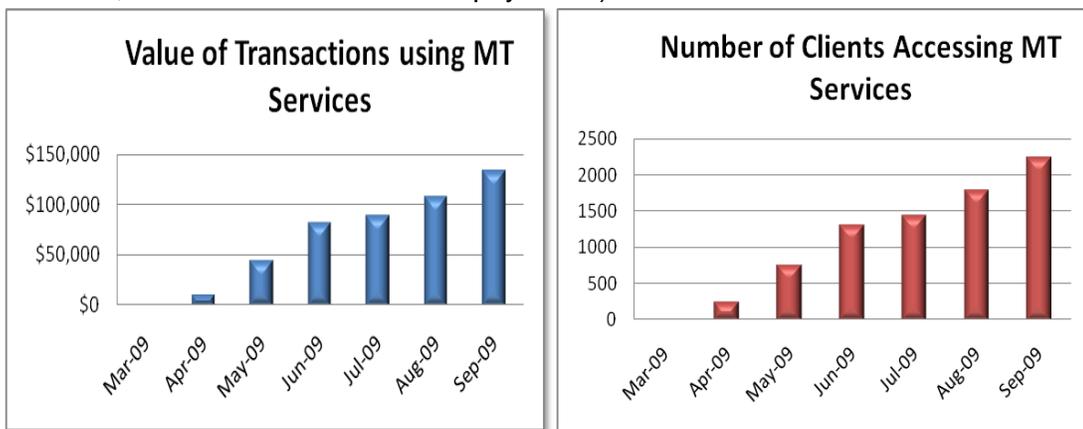


Fig 12. M-Banking transaction performance since launch

- In the second and third quarters, PROFIT was heavily involved in canvassing the Government to implement reform to the Fertiliser Support Programme to evolve it from a direct subsidy programme to a private sector-driven system based on e-vouchers being transacted through the same technological platform as the m-transactions. PROFIT facilitated the funding for MTZ to design the voucher system, but due to a number of factors, the FSP reform programme was not implemented. Since then, PROFIT has been working with MTZ and three donor clients, Conservation Farming Unit, CARE and World Food Programme to implement a pilot programme based on voucher payments

for services rendered or as a replacement for direct food provision in the case of WFP. By the year end, 1,000 voucher transactions by the CFU system had successfully been completed, the AFP system had been successfully field tested, demonstrating the viability of the technology and providing a useful pilot to a larger agricultural subsidy programme in the future.

**5) At least 3 ZAMACE warehouse receipts issued and financing secured against them**

- Despite numerous attempts by PROFIT and ZAMACE to stimulate interest from the banking sector in warehouse receipting, no warehouse receipts were issued during the year, for a number of reasons:
  - The commodities market throughout the year was sufficiently confused (through conflicting stock information and heavy government market intervention) to provide a major disincentive to speculate on stored crop
  - Liquidity problems caused by global financial factors and late government payment for crop purchased from the private trading sector suppressed the trade across ZAMACE, creating a stagnant market for much of the year.
  - Issues of the absence of regulation continue to hamper efforts to develop a warehouse receipting programme, though government assures that the Agricultural Credits Act Amendment, that enshrined warehouse receipts in law, with the passed before the end of 2009.

**Additional Achievements**

- In conjunction with the ZNFU, PROFIT commissioned a major study on the supply of agricultural finance in Zambia and barriers to access. Top-line findings included:
  - Zambian commercial banks have an agricultural loan portfolio worth \$480 million (20% of total portfolio) but if non-performing loans and loans to agriculture-related sectors such as processing are removed, the amount of available capital is dramatically less.
  - Non-performing loans amount to 37% of the total portfolio.
  - Agricultural finance is non-inclusive - smallholder and emergent farmers access no more than \$15m per year (6% of total finance) yet produced over 60% of the Zambian maize crop sold.
  - Of the approximate 3,000 agricultural banking clients in Zambia, a large proportion of finance goes to the largest 50 clients.
  - Out of the total financing going to agriculture, an estimated 75% is 'short term'
  - Due to excessive input and output price volatility, agriculture is viewed as a very high risk sector by the banking sector.
  - Government market intervention further heightens banks' risk perceptions related to agriculture.
  - The banking sector does not possess sufficient in-house technical capacity to provide a comprehensive credit analysis service related to agriculture.
  - There is an urgent need for initiating a three way dialogue between the ZNFU, the banking sector and the Bank of Zambia

- The draft findings were presented to 35 farmers and 30 bankers, including Bank of Zambia officials in two meetings in September 09, which culminated in a positive sentiment in the agricultural, financial and regulatory sectors to begin dialogue on resolving some of the critical issues affecting agricultural finance.

### **Challenges**

- The global financial crisis is having a serious impact on liquidity within the Zambian banking sector, with commercial finance more and more difficult to obtain.

## **ADMINISTRATION AND FIELD TEAM MANAGEMENT**

### **Annual Summary**

During the year under review, a number of interventions were conducted as a way to foster improved knowledge management within the market facilitation field team. Two staff management trainings, seven regional team meetings, an staff annual evaluation, 58 man-days field technical backstopping and staff exchange visits were conducted to achieve the years' objective of building a proactive project team with the capacity to facilitate the various industries pathways using the market development facilitation approach.

Over the year, the PROFIT team has deepened and broaden its understanding and implementation of sustainable market oriented interventions that requires behavioural change at multiple levels within an industry, including key supporting markets. As a result PROFIT has established a more systematic management tool to closely track the progress, target high – returning investments and implement programmatic learning loops. This has helped the staff to ensure that the firms take on the desired behaviour changes that are critical to their success.

Systemically, the project worked to:

- Foster supportive commercial relationships
- Stimulate innovation-based competition
- Develop benefits that support and drive more effective relationships and innovation
- Support key end market factors – product, operations, and branding

The team ultimately worked within the budget constraints. PROFIT developed a management system whereby each staff member had a budget attached to the workplan output targets and was more actively involved in ensuring that resources are handled effectively.

During the fourth quarter, PROFIT staff at Head Office and in the field conducted a comprehensive evaluation exercise to determine the impact of PROFIT market facilitation in terms of increased income and profitability within the smallholder economy. This was the first exercise of its kind, and determined that across selected programme interventions, \$14m of increased profitability and household asset growth can be attributed to PROFIT for the 2009 reporting period.

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## Administration and Field Team management: Theme 1:

### Fostering improved knowledge management within market facilitation field team

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#### **Achievements against benchmarks**

##### **1) At least 2 Staff management trainings conducted**

- The second staff management training of the year was conducted from 26 – 28<sup>th</sup> August 2009, giving us a cumulative total of 2 staff management training meeting conducted during the year under review.



*PROFIT Staff Management Meeting, Lusaka Aug 09*

##### **2) At least 16 Regional Team meetings conducted**

- Due to budget constraints, the regional staff meetings for the fourth quarter were pushed forward to coincide with the staff management and training meeting in Lusaka. However, the focus for this quarter was to build the capacity of the team members to strengthen their 'coaching' approach. This has improved the ability of the firms to enhance team work as the platform to develop improvements to their competitiveness. To date 7 regional meetings have been conducted.

##### **3) Staff Annual evaluation conducted**

- Achieved in the first quarter in December, 2008.

##### **4) Staff performance incentives/awards schemes implementation**

- The staff performance incentives/awards scheme progressed well, and during the quarter under review were as below:

Staff	Award	Description
Kenny Silwimba	Excellence in Vehicle Maintenance	Administrative
Alexander Hansingo	Excellence in Motorcycle Maintenance	Administrative
Mainecy Hampeyo	Excellence in Equipment Maintenance	Administrative
Cholwe Kagoli	Most Organized in Fuel and Petty Cash Liquidation	Administrative
Isaac Soko	Most Timely Advance Liquidation	Administrative
Mabvuto Chisi	Most Improved in Financial/Administrative Reporting	Administrative

Table 14. Annual Awards PROFIT field staff

The cumulative awards scheme results for the year are as follows:

Staff	Award	Description
Kenny Silwimba	Missed the Net Award	Leveraging Partners to Scale Demo Distribution
Enock Siankwilimba	Innovation of the Months Award	Opportunities for Spray Service Providers
Alex Hasingo	Innovation of the Months Award	Opportunities for Spray Service Providers
Cholwe Kagoli	Innovation of the Months Award	Community Sales Days
Bernard Hauma	Innovation of the Months Award	Market day concept
Kenny Silwimba	Excellence in Vehicle Maintenance	Administrative
Alexander Hansingo	Excellence in Motorcycle Maintenance	Administrative
Mainecy Hampeyo	Excellence in Equipment Maintenance	Administrative
Cholwe Kagoli	Most Organized in Fuel and Petty Cash Liquidation	Administrative
Isaac Soko	Most Timely Advance Liquidation	Administrative
Mabvuto Chisi	Most Improved in Financial/Administrative Reporting	Administrative

Table 15. Annual Awards Administrative



**PROFIT Staff Awards Presentation, Lusaka, Aug 09**

### **5) Conduct regular field technical backstopping**

- The technical team intensified its backstopping of the field staff as a way of providing both technical and supervisory roles. The Head Office team used a total of 58 man days to directly backstop the field staff focusing on building the staff skill base to facilitate the internal firm management capacity building, forecasting, strategic planning and in-community promotions.

### **6) Staff exchange visits continue to be implemented**

- Staff exchange visits continued to be implemented both internally within the project and externally as a way to educate other projects in the PROFIT methodology. During the fourth quarter, PROFIT staff was engaged with the EU-funded MORE project to build the capacity of their staff in the facilitation of the agricultural retail agent model through the service provider using the market facilitation approach. During the year under review PROFIT project hosted five key staff from the Oikonomos Foundation of Malawi in the quest to influence other donor projects to engage in market facilitation approach.
- Research In Use, a DFID-funded project, had approached PROFIT to collaborate in the implementation of a conservation farming initiative to facilitate the private sector to achieve the following;
  - Enhance the legume seed supply and demand system using the e-voucher system
  - Enhance the supply of and demand for conservation agriculture implements
- Internal staff exchange visits continued to be implemented as a way to learn from one another. During the year under review a notable staff exchange resulted in new opportunities for spray service providers both in the South and Eastern Regions. SSPs are now being engaged to spray herbicides along ZESCO pole lines and around substations, to spray house interiors to kill mosquitoes, and to spray cattle with acaricides. In the third quarter, an exchange visit resulted into the creation of new agent network among the seed companies such as PANNAR, ZAMSEED and Pioneer, and the opening of new business opportunities through the service platform in Kabwe and the surrounding areas.

### **7) All component managers maintain effective performance and budget management practice**

- The entire PROFIT staff is now more aware of budget and budgetary constraints. Each staff member has a budget attached to the work plan output targets and is more actively involved in ensuring that resources are handled effectively.

### **8) Full accounting and budget MIS developed and implemented as standard field practice**

- Achieved while still working to speed up full budget monitor reports to more fully report budget actual on a timely basis.

**8) Monthly accounts files submitted by 5<sup>th</sup> of each month with hard copy transmission by 15<sup>th</sup>**

- Achieved

**10) Continued implementation of ODC cost management systems complimenting monthly MIS reporting**

- Achieved

**11) Conclude auction of obsolete equipment during Q1 FY 09**

- Awaiting ZRA approval of the auction process

## MONITORING AND EVALUATION

### Annual Summary

USAID-PROFIT considers learning to be a critical part of its project implementation. The learning is encouraged at different levels of the project. Learning is done at regional team, head office, and at industry level. This is done through a learning loop where all staff are involved in the learning and feedback is provided to the business advisors and head office staff. Further, the lessons learnt are shared with the industry players as a way of enhancing the ownership of the process by the industry players. Learning remains pivotal to the future of the PROFIT project as it provides a basis for decision making.

During the year under review, there has been an improvement in the attainment of the benchmarks that were set for the 3 thematic areas. On ***fostering the culture of learning at every stage of the pathway***, a number of activities were done to bolster the learning. The activities done included data quality assessments, regional team meetings as well as staff management trainings. The BAs have been receiving regular oral and written feedback on a monthly basis to ensure their skills are sharpened so that the quality of reporting is enhanced. On the job training for BAs by the M and E department, FOM and sector coordinators was also effective during the year under review. The successes in achieving what was set out in the benchmarks can largely be attributed to the complimentary working of the technical team.

Theme two which was looking at ***improving private sector firms ability to monitor and evaluate their own agent networks***. During the year, there was a marked improvement among some firms in taking ownership of the process. Firms took up the challenge of developing systems to manage their agents and also use well documented performance assessments to reward their staff.

Much progress was attained in the theme area involving evaluation. Various surveys were conducted, the findings being used to input into the annual reporting process as well as the end of project report and learning feedback. Further notes from the field have been produced and used as an important tool in helping to tell the story better with respect to the work that has been done by the profit project. A video is also in the process of being produced to document the PROFIT implementation methodology and impacts..

**Achievements against benchmarks**

**1) *Data quality assessment reports concluded which will identify data collection gaps and data collection training needs.***

- Data quality assessments conducted in Chongwe and Mumbwa in Q4 09. This brings the number of DQAs conducted to a total of 6 for FY 09. The areas covered over the included Eastern, Copperbelt, Central, Southern and Northern regions. The rest of the areas include Mumbwa and Chongwe. A DQA in conjunction with Mission staff was carried out in the east during the last quarter.
- Monthly communications and feedback with all BAs continued to be done in Q4 09 following on from the last 3 quarters as a way of regular checking and verification of monthly data submitted to head office, to ensure consistent and quality data is being collected.
- Written and verbal feedback given to the business advisors as a way of enhancing learning.

**2) *Quantitative tool revised and in use***

- Monthly quantitative tool in use and BA performance in use of the tool very good.
- Regular feedback given to the BAs on monthly basis to ensure proper and consistent use of the reporting tool.

**3) *Qualitative tool revised abridged and in use***

- Qualitative tool fully in use by the BAs. Regular feedback provided within regional teams and Head office to ensure data collected using this tool is used for decision making at regional team and head office levels. Additional feedback is given to the BAs at the time of reporting at the end of every month. The feedback facilitates the proper and consistent use of the tool.

**4) *At least one formal assessment of how BA's are utilizing the skills and knowledge to facilitate the development of the private sector***

- Sector coordinators, FOM and M and E involved in the on the job training of BAs as they continue to do their work. BAs are assisted to understand what roles they need to play at this time in the project as well as the stage of the pathway. During the year assessments were done via team meetings and individual business advisor visits.

**5) *Quarterly and annual reports concluded on time***

- One quarterly/Annual report concluded for the fourth quarter of 2009 bringing the number of quarterly reports done for FY 09 to four (4).

### **Additional Achievements**

- Pannar, MRI and Zamseed have continued to improve the way they manage their database of the agent networks. In addition, Cropserve improved on the incentivization of the agents by adopting a clear incentive structure for the rewarding of agents using performance data and has agreed to take their agent management to the next level by developing a mobile platform for agent management, ordering and incentive deliveries.

### **Challenges**

- The quality of data though improving still needs attention. The BAs still require training and need to appreciate the importance and value of good quality data for themselves and other users of the data.
- Inadequate use of administrative and monitoring tools by the firm staff to aid in agent network monitoring. This has continued to be a challenge for many firms and vet companies

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## **Monitoring and Evaluation: Theme 2**

### **Improving private sector firms' ability to monitor and evaluate their own agent networks**

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#### **Achievements against benchmarks**

##### ***1) At least 20 firms will have implemented internal monitoring and evaluation systems***

- 10 ag-firms conducted review meetings with their staff and also with their agents. The number was consistent with the number attained for Q3 09. In the vet sector, 4 more vets did reviews of their agent networks bringing the annual total of vets that have done reviews to 7.

##### ***2) Complete the firm agent network management manual***

- Firm agent network manual completed and awaiting circulation to the firms

##### ***3) Integration of firm Monitoring and Evaluation section into the agent network manual***

- Firm M and E agent network monitoring segment finalized and incorporated in agent network manual. This was achieved during Q3 09.

### **Additional Achievements**

- Firms continue to monitor their agent networks using performance reviews as a way of rewarding the best performing agents. For example, Zamseed rewarded their agents using the performance criteria

## **Challenges**

- How to ensure that the firms are following the agent management systems that they come up with – in other words to value the system and internalize its use.
  - Inadequate monitoring of the agent and CLW networks by ag-input firms and vets leading to failure to get a more accurate picture of the system.
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## **Monitoring and Evaluation: Theme 3**

### **Intensify internal evaluation of impact as measured by results of behaviour change and develop improved methods of knowledge dissemination**

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## **Achievements against benchmarks**

### ***1) Four household surveys completed***

- One dairy survey conducted over the quarter and report to be finalized and circulated in the next quarter. The findings from the dairy survey show that there is an increase in value of production for farmers who are working in the areas where PROFIT is working. The milk yield per animal per day has also increased from 6l per day to 7.7litres per day giving a 28% increase above last year's figure, with an average over the whole sector estimated to be closer to 15%. The gross margin per cow has gone up to \$504.86 from last year's \$329 per cow per year. This represents a 53% growth over last year's gross margin.
- One household income use survey conducted during the quarter. The findings indicate that the top-most priorities for farmers in the areas where PROFIT is working have a mindset shift and opt to purchase agriculture inputs and implements and then spend on the children's education and household assets in that order.

### ***2) One detailed report on the household surveys compiled – feeding into the documentary process***

- Household surveys were conducted during Q4 09 to assess the impact of our interventions on the households of smallholder during the Q4 09. Findings from the household surveys were compiled and have been incorporated into the annual report and will be used in the documentation of the benefits of the project.

### ***3) Increased knowledge among BAs and firms staff in answering the “so-what” question***

- In trying to answer the “so what” question, cost of production surveys were also conducted in Q4 09 as a way of knowing the return on the farmer's investment in order to ascertain the impact of the project. In addition monthly impact surveys were done as part of the process aimed at answering the so what question. Findings from the monthly surveys have been shared and used to confidently confirm the impact of the project at both business and industry levels.

- Individual agent survey and database analysis done to assess the impact of the private sector firms on the household of the smallholder farmers and the additional contribution of the private sector towards the economic development of the country

**4) At least one digital video documentary produced highlighting PROFIT intervention method and results**

- The video production team has continued to film project activities from the various project operational areas to input into the final end of PROFIT project documentary. The production team is almost concluding with the field filming so that they can start final editing.

**5) At least 20 notes from the field produced and disseminated**

- During the course of the year, 12 notes from the field have been produced.

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## HIV and AIDS support development: Theme 1

### Increasing Community Awareness about HIV and AIDS – Implementation of a peer education programme

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#### **Achievements against benchmarks**

**1) At least 10,000 people will be reached through the peer education programme in each district by the end of the project period – cumulative at least 30,000**

District	Males reached	Females reached	Total reached	Cumulative Total
Mumbwa	1,070	1,254	2,324	8,112
Mkushi	213	256	469	5,378
Chama	2,955	3,429	6,384	16,559
Kabwe	109	99	208	208
<b>Total</b>	<b>4,347</b>	<b>5,038</b>	<b>9,385</b>	<b>30,257</b>

Table 16. Peer Educator Outreach

#### **Additional Achievements**

- During the fourth quarter, peer educators continued to hold one-on-one discussions, as well as group discussions, with the various communities where they have been trained.
- Reports were collected from Mumbwa, Kabwe, Mkushi and Chama

#### **Challenges**

- During the supervisory visits, it was clear that some peer educators are not conducting discussions in their allocated zones, but instead conduct sessions on an ad-hoc basis. During all of the supervisory visits, the importance of planning was emphasized, and the report formats re-distributed.
- Many of the peer educators raised concern over the lack of supervisory visits, lack of reporting forms, lack of t-shirts, and lack of bicycle transport to conduct activities.
- The issue of lack of monetary incentives arises in almost all supervisory visits.

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## HIV and AIDS development: Theme 2

### Building the capacity of the program implementers within the community

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#### **Achievements against benchmarks**

##### **1) *At least five supervisory visits in Chama, four visits in Mkushi and four visits in Mumbwa***

- Supervisory visits were conducted in Chama, Kabwe, Mkushi and Mumbwa during the fourth quarter.
- The annual total of supervisory visits is as follows:
  - Mumbwa                    2
  - Mkushi                    2
  - Chama                    3
  - Kabwe                    1
- The reason for not achieving the target was primarily related to the budgetary constraints imposed on grantees by PROFIT for the majority of the year, but a change of management personnel within Afya Mzuri compounded the problem
- Furthermore, the Afya Mzuri contract determined no need to identify and train new peer educators since the previous contractor, CHAMP, had trained 500 PEs already. Unfortunately only 50 of the 500 PEs were found so AF had to identify new PEs and provide first time training, and supervisory visits could only start once the team of PEs had been identified and trained.

##### **2) *Ongoing technical support provided to 123 peer educators***

- Achieved

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## HIV and AIDS development: Theme 3

### Increasing uptake of treatment, care and support services by community members

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#### **Achievements against benchmarks**

- Peer educator session records have now been revised and data is being collected on referrals. During the quarter under review, data was collected from Mumbwa, Kabwe, Chama and Mkushi as follows:

District	STI	VCT	ART	PC	OVC
Chama	219	591	205	97	461
Mkushi	26	52	11	12	1
Kabwe	0	4	0	0	173
Mumbwa	235	416	23	7	154
<b>TOTAL</b>	<b>167</b>	<b>746</b>	<b>155</b>	<b>118</b>	<b>420</b>

Table 17. Referrals resulting from Peer Educator Activity

- In total, 2,687 referrals were made for sexually transmitted infection (STI) diagnosis and / or treatment, counseling and testing for HIV (VCT), anti-retroviral therapy (ART), palliative care (PC), and support and / or more information regarding care for orphans and vulnerable children (OVCs)
- During the last quarter, the total referrals were 1,606. This therefore means a cumulative annual total of 4,293

#### **Challenges**

- There has been no training or support for follow-up to see if people referred actually use available services – this is not within the project plan and is perhaps for future consideration.
- One of the major challenges in almost all districts is the distance to the nearest CT and ART service providers. In one part of Kabwe, the nearest CT centre is 35km away, and the mode of transport used is the train which only passes through three times per week. The peer educators have been advised to collaborate with the RHC committees and advocate for mobile services.