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ANNUAL REPORT

**FY 2008
(October 1, 2007 – September 30, 2008)**

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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	\$ 14,667,415
Appropriation	72 – 19X1030
BPC	GGAX-05-21611-1G13

PROFIT PMP INDICATORS		BASELINE	FY07		FY08						
			TARGET	ACTUAL	TARGET	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	Year Total	
Trade/Exports related indicators											
1	Value of purchases from smallholders of targeted commodities (domestic agricultural trade)	\$46,870,313	\$51,674,520	\$25,737,563	\$54,258,246	\$0	\$420,000	\$0	\$41,217,131	\$41,637,131	
Production/Sales/Value Addition related indicators											
2	Value of Food and non Food Agricultural production by USAID supported groups.	\$5,523,455	\$7,001,270	\$10,352,500	\$7,341,334	\$150,000	\$210,000	\$0	\$29,569,001	\$29,929,001	
3	Value of sales of all goods and services	\$5,397,833	\$6,902,500	\$11,735,880	\$7,410,350	\$376,177.73	\$265,547	\$61,175	\$29,798,820	\$30,501,720	
4	Value of resources derived from sustainable natural resources or conservation initiatives.	\$714,978	\$865,123	\$4,564,154	\$951,635	\$190,635	\$210,000	\$971	\$33,886	\$435,492	
5	Value of production per unit disaggregated by commodity sector.	Cotton (ha)	\$163	\$190	\$347	\$205	\$347	\$347	\$424	\$279	
		Honey (hive)	\$4.44	\$4.90	\$6.08	\$5.14	\$7.50	\$7.5	\$7.50	\$3.70	
		Red meat (animal)	\$116	\$128	\$198.55	\$135	\$198.55	\$199	\$375	\$363	
		Dairy (animal)								\$824	
		High Value Crop - Pineapple (ha)	\$785	\$865	\$2,500	\$909	\$2,500	\$2,500	\$0	\$2,170	
		Red meat	\$94	\$104	\$251.10	\$109	\$251.10	\$251	\$375	\$363	
		Dairy								\$4,118	
		High Value Crop - Pine	\$628	\$692	\$1,250	\$727	\$1,250	\$1,250	\$0	\$2,170	

PROFIT PMP INDICATORS		BASELINE	FY07		FY08						
			TARGET	ACTUAL	TARGET	Q1Actual	Q2 Actual	Q3 Actual	Q4 Actual	Year Total	
6	Value of production per client	Cotton	\$192	\$212	\$640.81	\$222	\$640.81	\$641	\$1,102	\$418	
		Honey	\$35	\$39	\$61	\$41	\$75	\$75	\$75	\$271	
		Red meat	\$94	\$104	\$251.10	\$109	\$251.10	\$251	\$375	\$363	
		Dairy								\$4,118	
		High Value Crop - Pineapple	\$628	\$692	\$1,250	\$727	\$1,250	\$1,250	\$0	\$2,170	
7	Gross Margin per unit	Cotton (ha)	\$10	\$11.03	\$165.70	\$11.58	\$165.70	\$166	\$365	\$95	
		Honey (hive)	\$2.44	\$2.69	\$3.74	\$2.82	\$5.00	\$5	\$5	\$3	
		Red meat (animal)	\$7.11	\$8.60	\$191.88	\$9.03	\$191.88	\$192	\$365	\$353	
		Dairy (animal)								\$329	
		High Value Crop - Pineapple (ha)	\$547	\$603	\$1,958.34	\$633	\$1,958.34	\$1,958	\$0	\$853	
8	Volume of produce processed (mt)	Cotton	19,200	24,192	35,200	25,402	0	0	0	28,896	28,896
		Honey	347	437	15	459	15	265	0	19	299
		Red meat	0	255	171	510	171	0	0	64	235
		Milk (Lts)				6,222,000					6,300,000
		High Value Crop - Pineapple	0	1,000	109	2,000	0	n/a	n/a	26	26

PROFIT PMP INDICATORS			BASELINE	FY07		FY08					
				TARGET	ACTUAL	TARGET	Q1Actual	Q2 Actual	Q3 Actual	Q4 Actual	Year Total
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	31,440	n/a	n/a	1,484	32,924
		Vet contract/herd management	0	1,000	672	2,000	1,656	2,395	366	1,880	6,297
		Contract production	37,500	65,000	44,635	75,000	108,500	108,506	498	36,750	254,254
		Improved honey production	0	750	0	1,000	2,466	4,650	130	0	7,246
		Input products and services	10,000	100,000	21,974	150,000	10,778	8,497	16,624	7,548	43,447
10	Area or number of commodities under improved technologies	Conservation farming (ha)	3,200	25,000	43000	45,000	15,720	n/a	n/a	2,402	18,122
		Vet contract/herd management (hd)	0	10,000	7,780	20,000	411	5,799	4,435	8,901	19,546
		Contract production (ha)	32,000	60,000	43,015	70,000	108,500	n/a	498	18	109,016
		Improved honey production (hives/Q.C trainings)	0	1,500	0	2,000	60	36,625	1,040	0	37,725
		Input products & services (ha)	10,000	100,000	21,974	150,000	10,778	8,497	16,624	7,548	43,447
11	Improved technology adoption rate (%)	Conservation farming	10%	15%	15%	18%	39%	n/a	n/a	22%	
		Vet contract/herd management	0%	55%	43%	80%	43%	28%	18%	39%	
		Contract production	25%	24%	15%	26%	15%	14%	n/a	14%	
		Improved honey production	0%	10%	0%	15%	2%	16%	0%	19%	
		Input products and services	10%	15%	40%	20%	40%	128%	39%	48%	

PROFIT PMP INDICATORS		BASELINE	FY07		FY08						
			TARGET	ACTUAL	TARGET	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	Year Total	
12	Number of hectares under biodiversity conservation.	3,200	25,000	43,000	45,000	15,720	n/a	n/a	2,402	18,122	
13	Number of hectares under managed natural resource production systems	0	366,000	0	366,000	0	4,166,000	0	0	4,166,000	
Finance related Indicators											
14	Value of finance/capital accessed by USAID assisted groups (borrowers)?	\$1,845,045	\$4,000,000	\$1,612,750	\$6,000,000	\$5,066,870	n/a	n/a	\$2,000,000	\$7,066,870	
15	Number of loans by USAID assisted institutions disaggregated by gender	Male		42,014		86,811	n/a	n/a	94	86,912	
		Female		1,028		21,702	n/a	n/a	31	21,727	
		Total	32,000	60,000	43,042	70,000	108,513	n/a	n/a	126	108,639
16	Percentage of the number of loans on schedule for repayment	90%	90%	50%	90%	100%	n/a	n/a	80%		
17	Value of loans by USAID assisted institutions disaggregated by gender (lenders)?	Male	\$1,845,045	\$4,000,000	\$1,580,335		\$4,053,524	n/a	n/a	\$1,500,000	\$5,553,524
		Female			\$32,415		\$1,013,346	n/a	n/a	\$500,000	\$1,513,346
		Total			\$1,612,750	\$6,000,000	\$5,066,870	n/a	n/a	\$2,000,000	\$7,066,870
18	Percentage of the value of the lending portfolio on schedule for repayment	90%	90%	50%	90%	100%	n/a	n/a	80%		
BDS related indicators											
19	Number of clients/entrepreneurs receiving BDS disaggregated by category e.g smallholder farmers, agribusiness firms	Small holder									
		Male					52,906	7,128	93,614	14,284	167,932
		Female					27,552	2,824	60,975	8,521	99,872
		Total	37,500	100,000	118,979	150,000	188,958	9,952	154,589	22,805	376,304
	Agribusiness	2	200	234	300	694	135	516	687	2,032	

PROFIT PMP INDICATORS			BASEL INE	FY07		FY08					
				TARGET	ACTUAL	TARGET	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	Year Total
20	Number of farmers reached with extension/outreach services	Male					52,906	7,128	93,614	14,284	153,599
		Female					27,552	2,824	60,975	8,521	91,256
		Total	37,500	60,000	118,979	80,000	188,958	9,952	154,589	22,805	376,304
21	Number of people reached with HIV/AIDS A & B outreach programmes	Male	0	187,500	0					1,740	1,740
		Female								1,988	1,988
		Total				225,000	n/a	n/a	n/a	3,728	3,728
Policy related indicators											
22	Number of policy areas worked on or affected if any	0	0	0	0	0	3	3	4	4	
23	Policy progress milestones	0	0	0	0	0	2	3	4	4	
Training related indicators (disaggregate by gender)											
24	Number of people trained in	Agricultural production									
		Male					7,128	93,517	14,284		
		Female					2,824	60,942	8,521		
		Total	32,000	60,000	118,923	80,000	77,892	9,952	154,459	22,805	265,108
		Private sector growth	40,000	70,000	119,160	90,000	186,864	10,431	154,975	23,492	375,762
		NRM & Conservation									
		Male					26,952	13,169	84,097	1,187	125,405
		Female					6,488	6,605	56,033	297	69,423
Total	5,500	6,000	11,000	7,000	33,440	19,774	140,130	1,484	194,828		

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
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. 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
3.2 Financial Services						
1. Number of financial sector professionals trained in international standards	71	10	46	20	0	76
Male	60	7	28	12	0	47
Female	11	3	18	8	0	29
5.2 Private Sector Productivity						
1. Number of firms with improved management practices as a result of USG assistance	46,600	108,500	1,159	496	687	110,842
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
6.2 Agricultural Sector Productivity						
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
2. Number of rural households benefiting directly from USG interventions	57,760	116,345	15,643	5,163	22,805	159,956
3. Number of agriculture-related firms benefiting directly from interventions as a result of USG assistance	760	694	154	457	687	1,992

USAID OPERATING PLAN INDICATORS	FY 08 Target	FY 08 Q1 Actual	FY 08 Q2 Actual	FY 08 Q3 Actual	FY 08 Q4 Actual	FY 08 Year Total
7.3 Strengthen Micro-Enterprise Productivity						
1. Micro enterprises served by USG-assisted business development service providers	100,000	108,500	15,643	5,163	22,805	152,111
2. Number of clients of USG-supported micro enterprise business development service providers linked to larger-scale firms as a result of those services	140,000	110,966	4,650	130	36,500	152,246
8.1 Natural Resources and Biodiversity						
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
Male		26,952	13,169	84,097	1,187	125,405
Female		6,488	6,605	56,033	297	69,423

PROFIT Programme Highlights for the Year

FY2008 has seen a substantial increase in the breadth of PROFIT activities, and for the first time since the project started there has been a significant shift in the commercial markets that engage smallholders towards full private sector ownership and management of the process of change. Innovation is now coming from the market players themselves, particularly in the agricultural retail industry but evident in all the value chains in which PROFIT works, as is investment in the development and management of smallholder markets. The work of PROFIT has moved further 'behind the scenes', targeting key constraints to the process such as strategic management at firm level, and providing guidance and mediation as opposed to direction.

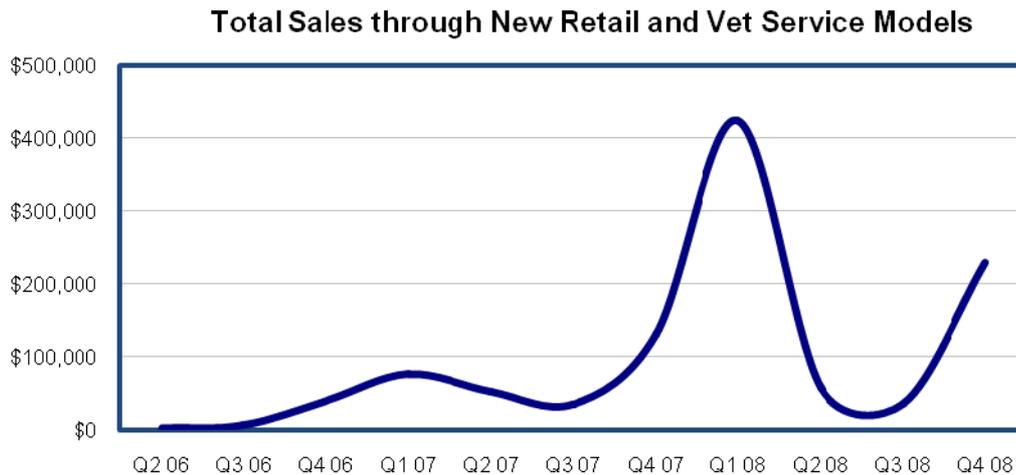
Key Achievements:

Some key developments that highlight this process and the systemic impact of PROFIT's work over the year include:

- The work that PROFIT is doing with the agricultural retail industry has yielded significant dividends, with thirteen clients, representing all the major seed and chemical retail companies, now managing a **combined network of agent and spray service providers totalling 1,400 personnel**;
- There is a corresponding dramatic **increase in sales of agricultural inputs**: just under \$750,000 worth of business will have been conducted through the agent network during the reporting year;
- PROFIT observes a **high level of innovation among the agricultural retail firms**, and initiatives such as the development of sub-agent networks, the formation of strategic alliances between companies, the integration of fertiliser companies and the expansion of the spray service platform have largely been innovations catalysed by the industry itself;
- PROFIT fostered an **unprecedented level of coordination within the agricultural retail industry** on issues such as safe use of chemicals and sprayer certification;
- In a demonstration that new farming technologies are better promoted from a commercial standpoint rather than one based solely on farmer training, there has been a **huge increase in the adoption of conservation agriculture** through the expansion of the tillage service provision platform;
- The **commercialization of the smallholder cattle service sector continues to make steady progress**; two key innovations are the integration of the agricultural retail sector into the cattle sector, and the rapid expansion of the one-off service as a complimentary alternative to the herd health programme;
- There is strong and growing interest from buyers and cattle communities in the **development of livestock output markets** linked to the provision of herd health contracts; an exceptional sales event held in Mumbwa mid-year demonstrated the value to all parties in such output relationships;
- A key measure of progress towards industry competitiveness can be seen in the **significant new investment by smallholders in productivity-**

enhancing products and services (see graph below), and surveys by PROFIT at household level have shown that this is already having an impact on the farming business:

- *50% increase in yields seen with farmers adopting new input and service technologies.*
- *Up to 50% decrease in cost of inputs through in-community networks.*
- *40% decrease in mortality and 70% decrease in morbidity among herds covered by new private veterinary outreach.*
- *Tens of thousands of farmers upgrading farming practices and tens of thousands of hectares coming under modern farm management practices.*



- **Three major cotton companies are now embracing third party service provision** and have internalized the process of identification and training of service providers. Dunavant, the largest ginner and out-grower manager, is finalizing the design of an innovative preferred supplier programme with the assistance of PROFIT;
- PROFIT assisted the initial development of a mass payment system for the out-grower industry that in turn facilitated **the launch of a groundbreaking e-transaction system** using mobile technology that is capable of transforming the way the rural economy does business. The system is now fully registered with the Bank of Zambia and will be operational in 2009;
- There has been a **dramatic increase over the year in the investment by commercial milk processors in smallholder supplied milk**, with one major processor recording a 100% increase in smallholder purchases and another shifting from no smallholder purchases to 6% of total supply during the year;
- **ZAMACE, the revamped Zambian Agriculture Commodities Exchange, completed \$8.5m of contracts for 22,200 tons** of commodities during the year. The expansion of the exchange through the entry of three new members, the establishment of comprehensive transaction risk mitigation measures and the growing acceptance of ZAMACE in the overall market all mean that substantial progress has been made during the year towards defining a critical role in the agricultural market place; and

- PROFIT's **finance sector work** involves providing ZANACO with demand driven assistance through ongoing short term consultancies and largely as a result will be launching a rural banking initiative next year. ICC leasing deal flow via the Farmnet vendor agreement is producing results with leases to three separate entities since its inception. Ongoing work to engage emergent farmers with ICC and other financial institutions has been frustratingly slow but progress is being made.

Challenges:

The general constraints to PROFIT's work of facilitating competitiveness in the agricultural industry can be grouped into three major categories:

- **Strategic management issues in the commercial sector** are the source of the major stumbling blocks to progress, although demand-side issues have been surprisingly simple to address from the firms perspective.
 - Agricultural retailers have been slow to adapt their management systems to suit new business models, with a corresponding lack of attention to lower level management capacity building and forecasting;
 - Cotton companies have been surprisingly slow to react to the new industry landscape, and have not made sufficiently radical changes to their business models to cope with competition from other firms and other crops;
 - There are too few private sector vets, or commercially orientated public vets to engage the smallholder sector to sufficiently meet demand for livestock health services.
- **Government and donor policies** continue to be limitations to private sector growth:
 - The unpredictable nature of government policy in the agricultural inputs market rules out the integration of the fertiliser sector into the new agricultural retail market business models;
 - Unclear market signals in relation to commodity markets and in particular the maize market in a season of relative shortage have stifled attempts by ZAMACE to stimulate the development of a more transparent and long term commodity trading outlook;
 - PROFIT observes that donor market distortion continues to exist at field level, crowding out private sector participation; This is exemplified by the GOZ's continued subsidy of fertiliser utilising a distribution system parallel to the private sector.
- The **continued intransigence of Zambia's financial industry** represents a major constraint towards the development of the agricultural sector at all levels, preventing the build-up of liquidity in the market and constraining access to financial services by the class of emergent farmer that has the ability to drive Zambia's agricultural growth in the future.

SECTOR SUMMARIES

Agricultural Retail and Service Industry

Annual Summary:

It is one of the key pillars in the principles of the PROFIT programme that a robust agricultural retail sector that has strong links with the smallholder market is critical to broad-based agricultural development in general. In the first two years of the project, the key activity for PROFIT staff was demonstrating the in-community agent model as an efficient and profitable business model for engaging the smallholder market for agricultural inputs. The success of this 'groundwork' became evident over the reporting year with rapidly escalating investment by multiple retail firms in developing and expanding their agent networks, and the evolution of a 'sub-agent' network as a means to further expand the commercial outreach of the firms.

Consequently, the work of PROFIT evolved to focus on the lead firm itself and its ability to successfully manage this new form of business model. This change in approach became necessary as it became apparent that poor internal management systems featuring an inability to invest sufficiently in staff capacity, forecast and innovate were the key constraints to the competitiveness of the industry. PROFIT invested significant staff resources towards mentoring the firms to develop the capacity of the middle management, being the main interface between the firm and the agents themselves.

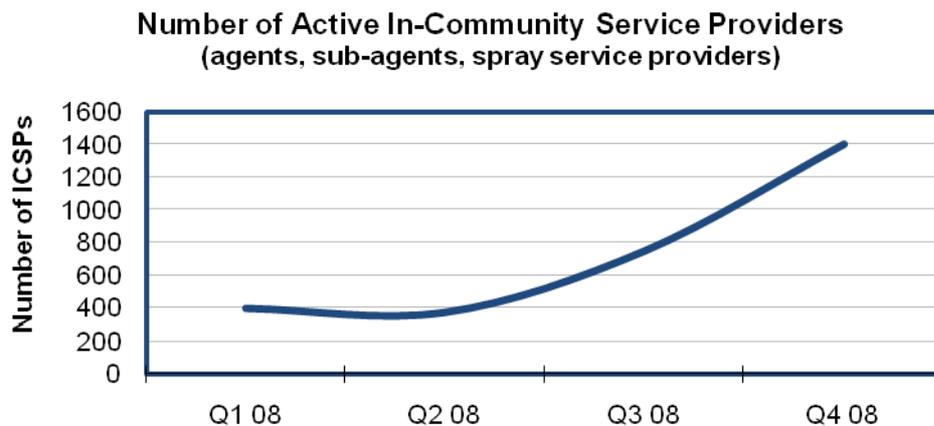
One major innovation that PROFIT has been promoting within the retail firms is the evolution from the sale of products to the provision of solutions to key productivity constraints, particularly through the development of a spray service platform. Tremendous strides were made within the industry towards this goal, along with unprecedented industry cooperation in defining standards and a certification process for the spray service providers affiliated to the firms.

Another successful innovation was the overlaying of promotional and marketing activities onto the wide range of cultural events and social activities that take place in rural areas to significantly expand the outreach of the firms and their interaction with a potential client base.

Closely allied to the retail industry is the development of the fledgling tillage service industry. In response to one of the key constraints to smallholder productivity, that of late and poorly executed land preparation, PROFIT has been working with the agricultural retail industry (and the cotton industry) to distribute the tools and skills necessary to develop commercial ripping services. Through these efforts, major strides have been made in the 'adoption' of early land preparation technologies this year in certain regions, which will certainly impact on productivity during the next agricultural season. Earlier efforts by NGOs to promote the use of rippers through farmer training have had limited effect, as it has been demonstrated that such technology adoption requires various levels of commercial incentive – from the retailers promoting and selling equipment to the service provider pushing adoption through the sale of services.

Achievements:

- The key indicator of a systemic shift within the industry towards the adoption of the decentralized rural retail model has been a **dramatic increase in the number of in-community agents** selected and trained by the retail firms. Over 500 new agents and sub-agents have been commissioned by the thirteen major agricultural retail firms, bringing the total number active in the communities to 1,130. These agents generated revenues of almost \$70,000 in sales commissions over the year, representing a significant new form of rural non-farm income reaching the communities.
- There has also been a significant shift this year towards **expanding the spray service platform** as a conduit through which to increase sales of chemicals. From a 2007 high of 93 active spray service providers affiliated to the lead firms, there was almost a 300% increase in this number to over 270 trained and active spray service providers. The majority of the identification and training process required to reach this number was conducted by the firms with little or no PROFIT involvement. Combined with the 1,130 agents active in the communities, the development of the spray service platform means over 1,400 in-community service providers are now serving the rural population with direct links to commercial retail companies.



- Through an Industry demand-driven process, PROFIT facilitated a series of meetings attended by representatives of all the major agricultural retail companies to develop common **standards of safe use of chemicals by the growing number of spray service providers**. Following on from these meetings, PROFIT also facilitated a training of trainers and certifiers course, conducted by Croplife International, in which nineteen firm representatives were trained to train and certify the service providers. Croplife Zambia has since adopted the process on an ongoing basis.

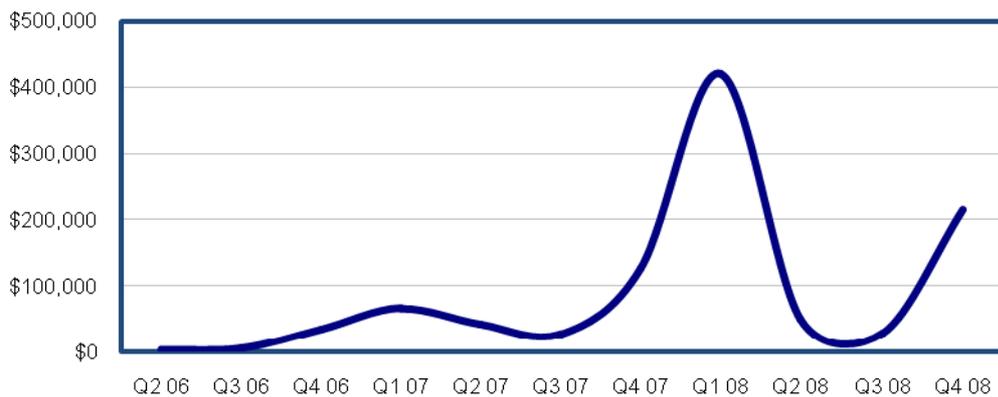
Immediately after the Croplife training, four companies trained and certified 120 spray service providers to the standards defined by the industry, using training modules and a simple Safe Use Manual both

developed by a combination of Croplife International, PROFIT and the lead firms themselves.

Realizing the benefit of simple pictorial booklet-form training manuals, some individual firms are now developing similar promotional materials to improve knowledge about specific technologies such as herbicides and their application.

- The national trend in **sales of inputs and services to smallholders continues to rise**, with key features being a growing trust of the pre-payment concept and also sales long in advance of the growing season, as firms take advantage of liquidity in the farming sector in the period immediately post-harvest. As an example, one Pannar Seed agent in Southern Province made sales of over \$8,000 in July – traditionally a 'dormant' month for input sales. Overall, the aggregated sales through the agent networks reached \$713,000 in 2008, representing a 270% increase on the total sales for 2007. Better marketing strategies, growing trust and confidence among farmers, the expansion of the agent and sub-agent networks and attractive agent commission structures (averaging 10%) are all responsible for this increase.

Total Sales Through Agricultural Retail In-Community Service Providers



- This year there has been a **dramatic increase in the number of in-community activities conducted by the retail firms** without any PROFIT support. Over 570 events have been conducted, providing excellent learning opportunities for the 35,000 participating farmers as well as significantly boosting demand for products and services

These events includes, earlier in the year, actual field demonstrations and field days at which the products of four major firms were demonstrated and tested in farmers' fields across the country.

- An interesting development over 2008 has been the **initiation of strategic commercial alliances** between non-competing firms in a bid to both take advantage of existing agent networks and offer complete solutions or bundled services to the communities. The key partnerships have evolved between seed and chemical distributors, but equally

significantly in terms of the development of the networks has been the alliances between fertilizer companies and those firms managing seed or chemical distribution networks. Examples include:

- Pannar and Omnia Southern Province
- MRI and Hygrotech Southern Province
- ATS and Zamseed Southern Province
- Mana-agro, Zamseed, Zambia Fertilizers Chongwe

- The **entrance of fertilizer companies** into the retail agent business environment has been an interesting development. While conflicting market signals from government and donors consistently prevents solid investment by fertilizer companies into servicing the smallholder market, the firms demonstrated a willingness to exploit the existing networks of agents to expand their outreach to those farmers willing and able to invest in commercial fertilizer. The volume of sales was still relatively small by the time of reporting (approximately \$27,000) but demonstrates a move on the part of the firms to move into emergent farmer markets in 'competition' to an increasingly beleaguered public sector distribution programme.
- There has been a steady **increase in the investment made by the firms in their agent networks**, with the ownership of the process now firmly in the hands of the industry. Overall, agent training methodologies have improved and the number and quality of review meetings between the firms and their agents, at which targets, challenges and sales plans are discussed, has improved markedly.
- With obvious benefits to engaging the smallholder market now becoming apparent to the wider industry, **six new firms** signalled enthusiasm for working with PROFIT to develop business models around serving this market in the latter part of the year.
- While overall investment in internal firm management processes remain at unsatisfactory levels, some firms have undergone **strategic planning and mid-level management training**, facilitated by PROFIT – and over the year, three firms and sixteen senior managerial staff were trained.
- The **targeting of cultural, religious and other traditional gatherings** as marketing platforms has greatly enhanced the profile of the agricultural retail companies. Well over 13,000 farmers have been exposed to marketing and promotional information over the year at such events, including:
 - *Chibwela Kumunshi traditional ceremony* Chongwe
 - *SDA DOCAS Mother's Rally* Southern Province
 - *Chikuni Tonga Music Festival* Monze
 - *Shimunenga ceremony* Namwala
 - *Lwiindi ceremony* Kalomo
 - *Lwiindi Gonde ceremony* Monze
 - *SDA Men's Self Reliance Rally* Choma
- The **commercialisation of conservation agriculture** through the promotion of ripping services facilitated by the private sector has taken

significant steps forwards during the year, with over 580 Magoye rippers being sold through the agricultural retail sector and its in-community agent network in the last two quarters of the year. Another 100 have been sold through the cotton networks, bringing a total number of service providers to 680. The agents have been promoting the sales of these rippers to potential service providers, some of whom have subsequently been given basic technical and business training by PROFIT and Conservation Farming Unit. While it is difficult to determine an exact impact of this initiative, it is estimated that by the beginning of the rainy season, the service providers will have prepared approximately 3,000 hectares of land on behalf of clients.

A further 1,000 hectares has been ripped by mechanised service providers with whom PROFIT has been working to develop profitable business plans around the utilisation of their tractors.

- In an attempt to further extend the concept of early land preparation services, PROFIT has been making progress in **facilitating relationships between tractor and tractor equipment dealers and emergent farmers**. While tractor-driven services are more efficient, obviously faster and have a better impact on the soil structure than ox-drawn tillage, the shortage of tractor stock and the necessary ripping equipment in the rural areas poses a major supply constraint. PROFIT has been working with two major equipment dealers to extend their outreach into emergent farmer areas and establish constructive sales relationships with the farming clients. PROFIT has also been assisting a small equipment manufacturer to develop a sound business plan around the fabrication of low-cost rippers suitable for the emergent farming sector

Challenges:

- The key constraint to the scale up and maturity of the smallholder retail model remains the management capacity at firm level;
- Pre-payment, critical to reduce risk and facilitate scale, is still a challenge to some retailers and customers;
- Government and donor market signals curtailed a growing interest in commercial fertilizer purchasing opportunities;
- Forecasting remains a major challenge, with many firms marketing products through the agents that are unavailable due to poor inventory management practices;
- The lack of appropriate equipment and commercial relationships between equipment suppliers and farmers constrains the development of a vibrant tillage service provision industry.

Livestock Industry

Annual Summary:

PROFIT's livestock activities since the beginning of the programme have focused primarily on establishing private vet services as the first step to achieving broader industry competitiveness. Over the last 10 years, the wider livestock industry has suffered because smallholders, who make up to 70% of the production for the industry, have not been able to access effective disease management systems, largely due to the long-term demise of an effective public platform. To counter this constraint and to fill the void left by the withdrawal of the public sector, PROFIT is working to establish a sustainable and commercially viable system for providing preventative veterinary services to smallholders.

PROFIT's veterinary industry initiatives continue to move forward, but at a relatively slow pace due to serious supply side constraints in terms of private sector capacity and numbers of vets. However, over the year, there have been three major shifts in the veterinary industry that demonstrate that PROFIT's work is now on a solid footing. The first is the emergence of a serious class of fully private vets that are aggressively entering, expanding and innovating to meet the demands of the smallholder market. Initial entrants into the private market were often public vets, operating on a semi-commercial basis, and they were instrumental in pushing the initial growth phase of the veterinary industry, but they were never going to push the broader growth needed to achieve scale. Now PROFIT envisages that the next phase of maturity and growth in the veterinary industry will come from the new investment from private vets that has been evident over 2008.

The second change that is taking place is the growing alliance between the more substantial agricultural retail industry and the veterinary industry, which has the potential to rapidly scale up the commercial provision of the more basic livestock services, in the absence of a big private veterinary 'footprint' in rural areas.

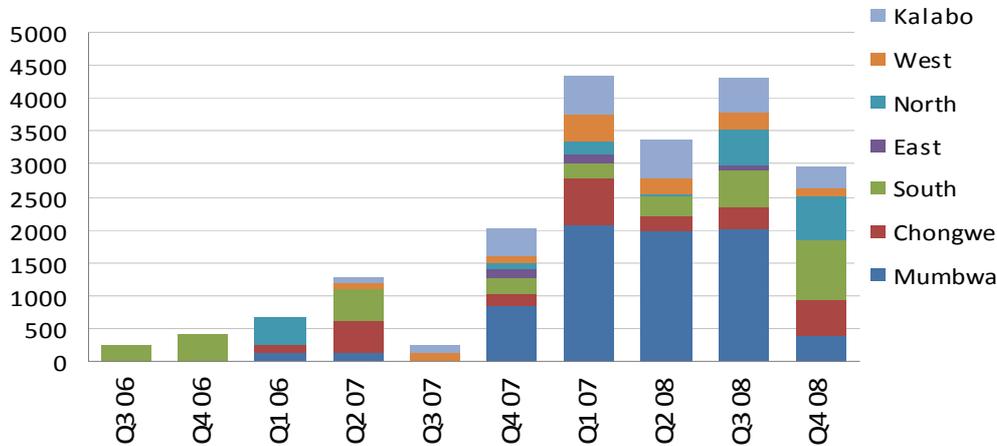
Thirdly, there has been strong progress in the government's commitment to a capacity building process that focuses their role in providing oversight and facilitation, and not directly competing or sabotaging the efforts of private service providers.

The growing private vet interest in the development of the broader industry is also starting to provide a critically important platform for reform that was also not present at the early stages of the development of the industry. The current participation as evidenced from vet network meetings in the last quarter shows an understanding of the unique characteristics of vet services, including a substantial public goods interest for which strong government oversight is essential.

Achievements:

- There continues to be **steady progress in the commercialization of smallholder cattle health across the country**, with another 2,652 cattle being added to contracts over the year, bringing the cumulative total over the last two years to over 13,000. While there is still some volatility at this early stage of the emerging private veterinary industry, trends are all positive with increasing sales, renewing of contracts, and increasing stability in the number of animals on contract.

Number of Animals on contract by region

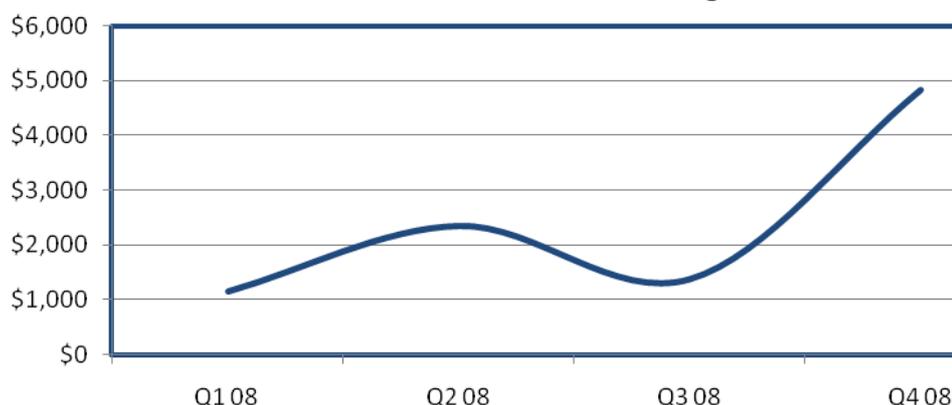


Commercial commitment to investment in developing the smallholder market is demonstrated by the fact that over 110 Community Livestock Workers are now active in cattle communities, acting as the point people and basic care providers on behalf of the vets themselves.

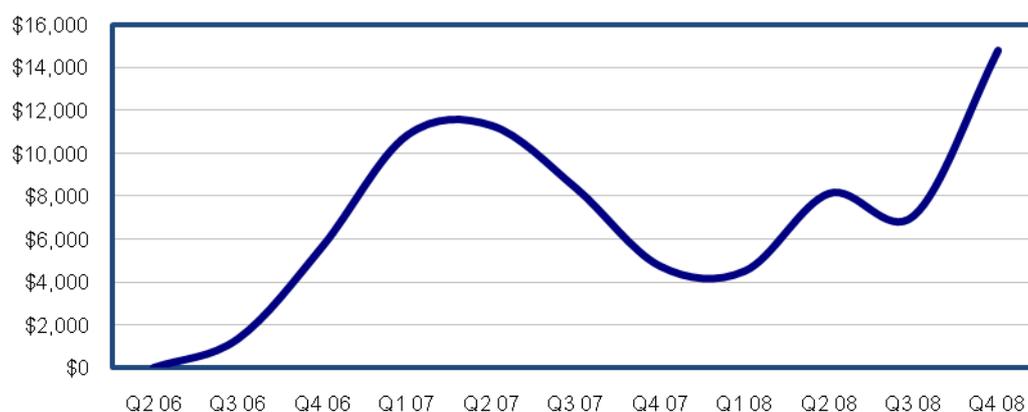
The growing commercial interest in the smallholder sector has attracted a number of new entrants, with five new firms requesting PROFIT assistance in addressing the smallholder market, bringing the number of veterinary clients to sixteen.

- While the HHP is demonstrating only slow growth, there has been a **significant increase in one-off services** over the year, with over 8,200 cattle accessing vaccinations and dipping services worth almost \$10,000. Now that the vets are actively marketing these services, it is likely that the proportion of cattle health sales undertaken through this means will increase, as the cash flow constraints to investing up-front in a semi-annual herd health programme are eliminated. While the individual services may be more expensive than under an HHP, often farmers prefer paying in smaller, more frequent tranches. The one-off services also give the vets a platform to market the HHP and other services to the smallholder farmers – for example in Chongwe, a vet vaccinated 5,000 local chickens through a one-off cattle service.

Growth in One-off Sales During 2008



Total Sales of Products and Services Through Private Vets



- Over the year, there has been considerable progress in **integrating the provision of livestock products and services into the agricultural retail agent network**. The agricultural retail industry has a significantly greater outreach than the veterinary industry, and is able to offer competitively priced livestock products through the same distribution network. While there are regulatory constraints to the sector offering vaccinations, dipping and deworming products (combatting the two key issues in smallholder cattle mortality and morbidity) are easily accessed through this sector. A number of agricultural retail firms have begun to invest in livestock services:
 - *In Chongwe, Minelands has employed a vet to lead on a livestock product intervention and service delivery platform*
 - *In Mkushi, Landserve and Leloisa Vet Services co-trained 6 agents to start providing cattle sprayer services*
 - *Twiga has involved a vet in Eastern Province to train its spray service providers in cattle dipping*
 - *Croppack is in the process of employing a vet to take the lead on a livestock product range*

- **Vetlab has continued to expand and diversify its commercial operations**, which have resulted in increased local sales, including exploration of strategic regional alliances to widen its service clientele base. Cattle diagnostic services, which include bacteriology, serology, parasitology and faecal flotation, have been offered much earlier than planned. Vetlab has continued to record increased business volumes in services sales and testing to both commercial and smallholders' clients. The year under review recorded over US\$111,000 worth of services sales including 530 tests on behalf of 80 clients (70 smallholders and 10 commercial farming entities).

Resulting from this increased business volume and the ever growing demand for multiple services from commercial and smallholder sectors, a new laboratory technician has been hired to spearhead milk testing both for disease detection and quality of milk. Milk quality testing equipment is being procured that will provide an independent service to the industry, and processors have agreed to utilise these services.

Over the year, Vetlab has also established itself as an important technical resource for private vets through its work with the vet network, and through the training services it has provided to a range of vets. The company is also taking the lead in organizing the vet network and fostering its formalisation.

- A major milestone in the last year is the **growing commitment from the Government to support the emerging private veterinary industry** by beginning to change their role in the veterinary market from provider to regulator. PROFIT has played a substantial role in promoting this policy change, and the government has been a willing and receptive partner.

In the second quarter of the year and with the support of Ministry of Agriculture and Cooperatives, PROFIT engaged a consultant on policy and regulation who was attached to MACO Livestock Development and Production Department (LDPD) to define a new facilitation rather than implementation role for government in relation to veterinary activities. The consultant facilitated a workshop on policy and regulation oversight role of the government, attended by top management of the MACO LDPD and resulting in the formation of a PROFIT-MACO working group which includes four top government management employees with a mandate to put into practise the policy recommendations of the workshop. The first working group meeting was held in April, and the first stakeholder meeting was successfully held in Mumbwa with the District Veterinary Office which resulted in resolving issues of misunderstanding between private veterinary firms operating in the district and the DVO.

- Over the year, and as a followup to PROFIT's successful engagement of the Government, PROFIT assisted the MACO LDPD and the Veterinary Association to design a **policy argument and advocacy effort** in reaction to the serious threat posed by the Pharmaceutical Act that dramatically restricts the distribution of animal health drugs by the veterinary sector. If enforced, the Act would effectively strangle the development of a private animal health industry. The policy argument will be presented in coordination with the LDPD to a range of Government officials to the start of the advocacy process.

- Having made solid progress in livestock input markets over the last two years, PROFIT began leveraging this progress into **establishing relationships in output markets**, and during the year, the programme started to foster relationships between smallholders and a range of commercial feed-lot and processors. PROFIT identified two potential output relationships that were initiated during the year and will be pursued further during the next year:
 - In Mumbwa, PROFIT facilitated a sale of animals on an HHP through Grasmere Farms, and 62 animals were sold for nearly \$30,000 at prices 75% higher than those the farmers attain through traditional avenues. In order to explore this initiative further PROFIT has engaged a consultant to train smallholders in fattening and improved finishing of cattle and breed improvement during the next quarter. Also, PROFIT has assisted the buyer and the cattle communities in Mumbwa to establish a formal sale yard for future sales.
 - In Chongwe, PROFIT has linked two cattle communities with herd health contracts to Savanna Beef, and the first sales through this process are expected in the next quarter.

Challenges:

- The supply side constraints to expanding the veterinary industry are still significant. There are not enough vets with the ability to engage the smallholder market active in the country, with very few coming through higher education, and those that are often seek employment with government or non-related service industries rather than in the private sector. Encouraging government vets to develop entrepreneurial skills has its limitations, and the case of the government vet in Chongwe leaving private practice further demonstrates the fragility of combining public and private roles
- Despite positive government attitudes at central level, there remains a significant conflict of interests between the expansion of the private veterinary industry and the commercial interests of the government Veterinary Assistants, who often attempt to sabotage private sector initiatives to retain the 'monopoly' on service provision at local level
- Livestock movement bans in reaction to disease outbreak seriously constrain efforts to develop output market relationships. For example, the Foot and Mouth Disease restrictions in Mumbwa have prevented the use of the cattle sale yard, despite the enthusiasm of both buyer and sellers.
- The escalating commodity costs in Zambia are impacting on the cost of stockfeed, which is now an economic constraint to firms wishing to pilot feedlotting and fattening services.
- The private sector vet network, originally facilitated by PROFIT with a medium term view of self-sustainability still requires substantial PROFIT support in terms of meeting facilitation and organization.
- The risks attached to expanding private sector animal health care into new areas and for new firms still appears to be too great for the private sector to bear, and PROFIT is still providing financial assistance and cost-sharing to this effort at a stage of the programme where ideally the model would have proven its commercial viability and the industry would be making its own investments.

Cotton Industry

Annual Summary:

The 2007 to 2008 growing period was another difficult season for Zambia's cotton industry. While international prices were relatively strong and exchange rates relatively stable, the combination of adverse growing conditions, especially in flood-hit Southern Province, and the destructive buying activities of some of the new entrants to the industry took a toll on overall productivity. Overall, production increased 8% during the 2007-2008 season (95,000t of seed cotton compared to a post-millennial low of 88,000t) but production recorded by the sector's two main players, Dunavant and Cargill, was significantly reduced as unchecked pirate buying took its toll. The continued poor profitability of the industry leaders is significant cause for concern but presents opportunity and stimulation for necessary for increased innovation and industry collaboration.

Despite the crisis (in fact partly because of it) PROFIT's efforts to work with the lead firms to improve the competitiveness of the sector have been well received and excellent progress has been made over the year. PROFIT increased its investment in the sector by providing dedicated staff to Dunavant, Cargill, Birchard and Great Lakes, and the industry has responded well by making significant investments of its own in the process of upgrading farmer productivity and improving out-grower management systems. Over the last six months, there has been a fundamental shift in the attitude of PROFIT's three main cotton clients from perceiving the interventions by PROFIT as being beneficial yet external, to becoming fully engaged in a process of internalizing them as integral components of their out-grower management process.

PROFIT has provided multiple interventions over the course of the year, at multiple levels within the industry. The development of improved management systems has been a key component, and PROFIT has continued its support to the industry in relation to good governance, but the overarching goal has been diversifying the channels of information and technology transfer reaching cotton farmers and 'opening up' the supply chain to third party input and service providers, in a bid to tackle one of the critical constraints to industry development, being that of low smallholder productivity.

Achievements:

- **Conservation farming training** continued over the first three quarters of the year in the final phase of the PROFIT grant to the Conservation Farming Unit. 80,000 cotton farmers were trained before the planting season in cotton planting techniques focused on early planting into rip-lines or basins and precise plant population management. Efforts were also concentrated on promoting the introduction of nitrogen-fixing trees (such as acacia faidherbia) into the cotton system
- PROFIT sponsored a local consultant to work with Great Lakes Cotton Company to develop a comprehensive **Integrated Pest Management** training manual targeting the industry's extension staff

- PROFIT's work to assist the cotton companies to scale up the local **spray service development** activities has expanded dramatically over the year. Prior to the 2008 planting season, PROFIT assisted Birchand, Dunavant and Great Lakes to train over 200 spray service providers, all of whom were active during the season, scouting and spraying the contents of the cotton input pack for an average of K30,000 per season per hectare. The cotton fields of over 1,400 clients were sprayed over the season, as seen in the table below:

Region	Cotton Company	Cumulative Total No of Certified SSPs	Cumulative Total No of Clients	% of Female Clients	Cumulative Total No of Hectares
Eastern	Dunavant	85	364	41%	437
Eastern	Birchand	57	503	32%	323
Southern	Great Lakes	67	570	30%	660
Total		209	1,437	34%	1,420

Since the end of the rains, and largely due to the success of the initiative, the cotton companies have been making their own investments in expanding the number of service providers to compliment and ultimately take over the activities of the PROFIT staff:

- Great Lakes Cotton Company has recruited a field manager to drive the rolling out of the programme,
- Birchand field staff have become the main agents for selection of new spray service providers, and currently over 500 farmers have applied to be trained in service provision
- Dunavant has internalised spray service development into their wider YIELD extension programme and 450 farmers have been selected for training during the next quarter.
- Cargill senior management have charged their field staff with the job of identifying and training spray service providers, and over 200 had been

Benefits of Contract Cotton Spraying Services

- Farmers claimed a **yield increase** due to spray services (despite the poor season) ranging from 30 – 100 %.
- The spray service provides a **regular and comprehensive spraying programme**, often not possible under previous operations
- Clients noticed a **considerable reduction in chemical usage and spraying costs**. Application by a trained sprayer means greater chemical efficacy, requiring less re-sprays, and reductions in chemical costs of up to 30%.
- This had a **positive impact on loan exposure**, for both the farmers and Dunavant.
- The spray service providers have evolved into the providers of **localised extension services**, with a commercial incentive to continue to provide a good service.
- There has been a **disproportionate benefit to female, elderly, infirm and widowed cotton farmers** – over 40% of the client base.
- One common comment among spray service clients relates to a dramatic increase in the amount of **time freed up to concentrate on other farm activities**.
- Many clients commented that the inability to spray adequately was a direct constraint on **increased area under cotton**.
- The use of trained and well-protected spraymen has a **positive impact on farmer and environmental safety**
- During the 2007-8 season, the spray service providers will have earned approximately K15m in fees, creating a **new form of rural business**.

(source: PROFIT farmer survey, Katete,

identified by the end of the year

- Failure to prepare land early has always been a key constraint to productivity. PROFIT, in conjunction with the cotton companies and the agricultural retailers, has been promoting the development of **ripping service provision**, whereby those farmers with oxen or tractors provide formalized land preparation services to their neighbours long in advance of the beginning of the rains. Ripping prior to the 2007-2008 season was confined to a few farmers, often under the Conservation Farming Unit's umbrella, but evidence points to over 50% yield increases on cotton attributed to ripping among those farmers. With the agricultural retailers now stocking and promoting Magoye Rippers in Southern and Central Provinces, and Dunavant and Cargill pushing them through their traditional input channels, over 680 service providers either now have or are in the process of receiving rippers for contracting, and are being trained by the cotton companies, CFU and PROFIT in the technical and business aspects of service provision. PROFIT is also working with six tractor owners affiliated to Dunavant in Central Province to be providing ripping services.
- The development of the **Dunavant Preferred Supplier Programme** has been a key achievement during the year. Dunavant have realised the benefits of streamlining their production base to eliminate the 25% of growers who produce only 7% of the crop, and reward those loyal farmers with good loan recovery and yield records to create a more stable, more competitive production base for mutual reward to both farmer and ginner. While the programme is still some way from final completion, the key principles are in place, and PROFIT has been heavily involved in the design of the programme.

One aspect of the Preferred Supplier Programme is the integration of the agricultural retail industry into the supply chain, and

Dunavant Preferred Supplier Programme

Objectives:

- To reward the best performing farmers within the Dunavant network encouraging them to grow more cotton, achieve higher yields and become more profitable, and at the same time make Dunavant more competitive in the cotton sector
- To encourage these farmers to retain their loyalty to Dunavant through introducing a series of services that improve not only the cotton crop but other crops in the farming system
- To reduce Dunavant management costs per ton of cotton over time to remain competitive in an increasingly competitive market place.

Incentives:

- Intensive extension training through YIELD programme
- Preferential access to ripping and spraying services
- Access to cash-purchase inputs through the sheds and discounts on these inputs that reflect in lower-cost cotton input packs
- Price incentives are being discussed
- Access to output markets for other crops (maize and oilseeds)
- Monthly prize draw
- Potential future access to agricultural machinery through financing schemes

Target Farmers:

- The distributor groups in Eastern, Central and Southern Provinces that have consistently performed in terms of yield and loan recovery
- Approximately 30,000 farmers in 2008-2009

PROFIT is working with Dunavant to develop a system whereby the company's area sheds are 'agents' for seed, fertilizer and chemical companies. Commissions earned through the sale of inputs will be used to 'fund' some of the incentives for the preferred suppliers such as discounts on cotton input packs and a price premium at harvest.

- The Preferred Supplier Programme is being made possible by significant advances in the Dunavant out-grower management system, through the **application of information technologies**. Early in the year, PROFIT engaged an IT company, CAD International (now Mobile Transactions Zambia) to design a full cotton supply chain management system and an integrated electronic payment system designed to improve information flow at all levels of the supply chain from input distribution to gin inventory control, and to reduce the high transaction costs associated with distributing cash to a wide network of widely dispersed farmers. The work was deemed to be of such importance to Dunavant that the company purchased an equity stake in Mobile Transactions Zambia and will be rolling out mobile payment services on a large scale in 2009 following a successful pilot scheme in 2008. The cotton industry provided MTZL with a solid market for their initial payment product development, but the company has now broadened its marketing to all companies dealing with a large number of rural, unbanked clients both in and outside the agricultural sector. MZTL has also developed a transactions system and a town transfer product off the back of the payment system, and, now that it has Bank of Zambia accreditation, is poised to offer a suite of financial services to the rural unbanked population.
- Progress continues in defining a strategy for Dunavant to assist the Preferred Supplier groups to provide marketing services for their secondary crops. PROFIT has facilitated **Dunavant's membership of ZAMACE**, with a view to the company providing a brokerage service for its farmers through a market facilitation service rather than direct trading, thus avoiding the attendant financial risks and, critical to the success of the Preferred Supplier Programme, risks related to company reputation.
- PROFIT's work to **integrate the financial sector** into cotton out-grower schemes, especially in the development of financial products for agricultural equipment, has not met with success – a number of Dunavant distributors with guaranteed sources of income and 'stop-order' assurances from Dunavant have been on the shortlist of several financial institutions for the funding of tractors for ripping and haulage services, but to date no farmers have received equipment through commercial financing channels. However, PROFIT assisted Dunavant to develop an internal lease for one of its Mumbwa distributors and the tractor was, by the end of the year, providing ripping services in the Choombwa area. Efforts by PROFIT to facilitate a lease by Birchand for four tractors for ripping services in Chama failed when ICC were not able to produce an attractive enough deal.
- PROFIT continues its work to assist the industry towards standards of **good governance**, supporting two related publicity campaigns. Before the rains, PROFIT sponsored a campaign to curb the distribution and planting of unregulated and uncertified cotton seed by some of the new entrants into the cotton industry. The campaign, which was in response to an appeal by

Zambian Cotton Out-grower Financiers Association (ZCOPA) and Cotton Association of Zambia (CAZ), was implemented by the Seed Control and Certification Institute (SCCI) of the Ministry of Agriculture and resulted in the confiscation and destruction of illegal seed stocks

During the 2008 harvesting season, PROFIT also assisted the CAZ and ZCOPA to run a publicity campaign against the rampant pirate buying and side selling issues that have again hit the sector during the onset of the buying season, exacerbated by further new entrants into the market and a lower than projected cotton crop.

Challenges:

- Another poor season, competition from other crops with greater potential financial reward and industry 'in-fighting' continue to maintain pressure on the number of farmers willing to grow cotton
- The failure to pass the revised Cotton Act for the third year running has allowed rampant side-buying and piracy, further denting the viability of those companies that adhere to contractual integrity.
- A managerial crisis and financial instability has made Great Lakes' continued participation in the market increasingly unlikely, potentially leaving Southern Province without its industry leader.
- Conflicting priorities, unclear objectives and the vestiges of a monopolistic approach to their position in the market have made progress towards finalization of the Dunavant Preferred Supplier Programme slower than anticipated, with the result that many of the opportunities for farmer and firm, especially in input provision, have been lost for this year.

Dairy Industry

Annual Summary:

The PROFIT dairy component is now ending its first year of implementation, and, despite the short time horizon, has fostered a significant improvement in the level of engagement of the commercial agricultural retail and veterinary sectors with the smallholder dairy production base. The greater engagement has occurred on a number of fronts, and in particular in the willingness of commercial input and service providers to provide embedded extension services. Equally encouraging has been the emergence of strategic alliances within the commercial sector with a determined view to address low dairy productivity.

Coupled with these developments in the input markets, the milk processing sector is, for the first time, actively working to secure the supply of milk from its smallholder suppliers by providing regularized milk collection and transport services, injecting sufficient output market confidence within the smallholder dairy community to warrant increased investment in productivity. Milk prices have also been very attractive, and increased margins at farm level have further stimulated smallholder investment.

Achievements:

- Over the year there has been a **substantial increase in the number of private sector promotional and training events** that directly engage the smallholder dairy farmer. Almost 1,950 farmers have attended these events across the country, organized by a combination of feed and nutrition and animal health companies. Such has been the response to these events that they are now being organized on an ongoing basis by private companies, with no further involvement by PROFIT.
- Traditionally, almost solely focused on the poultry sector, Zambia's **animal feed industry is increasingly responding to the needs of the smallholder dairy market**, actively promoting the use of improved feeds to extend the milking season and improve yields. Examples of this marketing shift include Olympic Milling producing its own dairy production guide for dairy farmers which was launched at the Ndola show in July, and National Milling presenting a 'Dairy Corner' on its stand at the Lusaka agricultural show in August. National Milling has also engaged the services of a vet, to provide ongoing training to its agents and field staff on dairy production and husbandry for the first time. These trainings are due to commence in October.

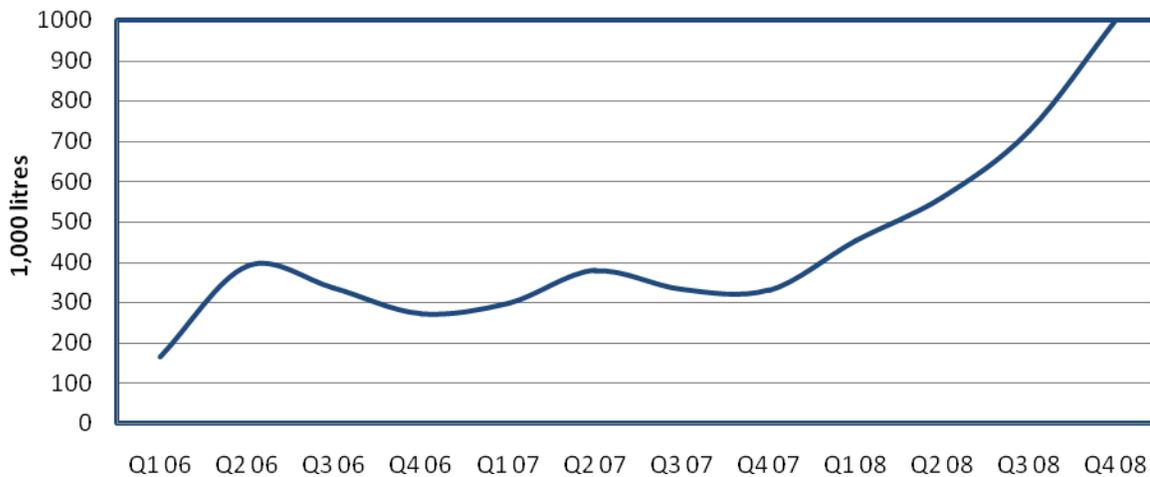
The feed and forage demos facilitated by PROFIT and now driven by the companies themselves have provided an excellent entrée for vets and feed companies to present their products and services and for farmers to see how critical it is to have available throughout the long season to maintain some level of productivity.

- The **dairy herd health initiative continues to gain momentum** throughout the year, and by the end of the reporting period, four vets were providing pre-paid vet services to over 630 animals, mainly in Southern and Central Provinces. The herd health programme has proven to be an excellent platform for the introduction other products

and services that can enhance dairy output such as artificial insemination, feed, forage, pasture management and dairy hygiene.

- There is a very encouraging **increase in the constructive engagement of the processing companies with the smallholder production base** over the year. A shortage of milk from the commercial sector coupled with an increase in domestic demand has stimulated unprecedented moves to not only procure from but also upgrade the productivity of smallholder dairy farmers. The two major processors, Parmalat and Zammilk have seen additional volumes of milk delivered by smallholders into the formal sector by over 200,000 litres per month in some months, and the three largest processors procured a million litres from smallholders in the final quarter of 2008 (see graph below).

Smallholder Milk Purchases by Parmalat, Dairy King and Zammilk 2006-2008



Zammilk has traditionally sourced milk solely from its own herd, with little or no interest in external supply. Over this year, however, demand has outstripped the internal supply capacity of the company, and PROFIT has successfully facilitated the introduction of three smallholder collection centres and one small commercial farmer into the Zammilk supply chain, and this group have sold over 186,000 litres into Zammilk over the year. In conjunction with this move, PROFIT has facilitated the introduction of a transport service provider into the supply chain, providing regular milk collection services for Zammilk from its external suppliers in Central Province. The service provider has been in operation for the last quarter of the year, and has delivered over 82,000 litres of milk. The 100,000 litres of smallholder milk purchased in the last quarter of the year accounts for 6% of Zammilk's production figures.

In the last quarter of 2008, Parmalat has set up its own dairy discussion groups with smallholder farmers in Lusaka and Kabwe. These provide a forum for their small suppliers to come together on a regular basis for the first time with increased milk output being the primary objective. The groups are a direct result to the more active

engagement by Parmalat via their own dairy extension officer, who is cost-shared on a temporary basis by PROFIT.

- With the underlying objective of addressing extension, productivity, transport and quality constraints, the PROFIT **Dairy Industry Development Fund has now granted three awards** to individual companies.
 - Improved processing equipment for Dairy King
 - New equipment for a milk collection centre for Nice Products
 - Mobile tanks for milk collection for Parmalat

- Over the course of the year, **PROFIT initiated a number of commercially-orientated studies** aimed at generating information regarding Zambian milk markets, and the introduction of technology as a means of improving efficiency and access to information and services within the dairy industry.
 - A local consultant was hired to *investigate the informal milk sector* to determine whether and how the formal processors could capture some of the market which is estimated to be possibly as large as the current formal market. The study highlighted the inherent difficulties in formalizing this ‘illegal’ sector – not based on price, but due to strong consumer preference for raw milk and the strength of the marketing cartels apparent in the informal sector
 - A study was conducted by Agri-inspec on behalf of the ZDPA to monitor the *legal and illegal importation of dairy products*. The study exposed the illegal importation activities of two of the major supermarkets and one processor, but to date there has been inconclusive evidence produced that would allow the ZDPA to act.
 - A study was initiated in the last quarter by Mobile Transactions Zambia to explore the viability of *improving the product ordering system* for processors and their agents using SMS technology. The company will present its findings in October.
 - A study investigating the *viability of establishing a liquid nitrogen plant* to stimulate investment in private sector artificial insemination initiatives determined that the market was too small to justify a new plant but that options exist for bulk liquid nitrogen storage tanks to be managed by service providers buying directly from BOC in Ndola.
 - Through ZDPA a market research company has been commissioned to carry out a *market audit and consumer usage and attitude study* of the dairy industry. This study is still underway with an anticipated completion date of December this year. All results will be shared with the dairy industry stakeholders.

- PROFIT and the ZDPA, in conjunction with Zambia Bureau of Standards formatted a **Dairy Food Safety Programme** which is now under way in three processing facilities. This was set up in a modular format with the first two modules targeting factory managers and supervisors and the last two at factory workers. The feedback from processors has been very positive and to date eighteen factory workers received training.

- On the back of demand from the dairy processors, **Vetlab is venturing into the dairy market**, and commissioned an independent company to assist in identifying the

additional equipment required for testing milk products. The list of required equipment has been generated and they are now in the process of obtaining equipment quotations. This initiative is being supported by the Zambia Dairy Processors Association and is seen as critical not only for testing processors products but also as providing an independent reference point for farmers supplying processors.

- PROFIT worked with Mwachemi Investments, a private company training laboratory technicians within the processing facilities, to **develop the technical capacity of two processing firms to better quality control** over both raw milk and finished products. Stage two of this programme will see emphasis on microbiology, where the factories will test all finished product for bacterial loading and shelf life.
- ZDPA is working closely with a company called Agriconnect to formulate nine **comprehensive dairy farming training modules** that will be distributed to farmers through the milk marketing centres and processors. A local radio campaign is being formatted around each module and will be aired as each module is distributed, and it is planned that over a thousand farmers will be reached through this method.
- PROFIT organized an **industry field visit to Nairobi** in September to investigate and learn from the progressive private sector dairy activities in Kenya. The delegation included senior personnel from Parmalat, Zammilk, Tiger Feeds, National Milling, Agrivet, and Leliosa Vet services all of whom already play a significant role in the Zambian dairy sector. A major outcome of the visit is the real possibility of collaboration between these organizations to tackle low productivity among smallholder dairy farmers.

Challenges:

- While the private sector is now making strong progress in engaging and investing in smallholder production, there remains an inherent mis-match between the time horizons of smallholder uptake of new technologies and the speed at which the processors require a return on their investments.
- The considerable lack of knowledge on dairy production and husbandry at all levels within the industry provides a major challenge to the delivery and ultimate uptake of 'new' productivity enhancing products and services. This is a systemic problem which can only be properly addressed by time using a coordinated industry approach
- The fundamental shortage of private vets that operate in Zambia and that are both willing and able to expand the herd health programme continues to provide a bottleneck to improving smallholder dairy herd health.
- A slow response by processors to adopt and implement new ideas and techniques delays progress in the programme implementation.
- The short time horizon of the PROFIT dairy programme means there is the threat of 'forcing' change at various industry levels to suit the needs of the programme.

Finance Industry

Annual Summary:

In mid-2007, PROFIT initiated its Financial Sector Development Programme, but the response to the programme from the banking community was disappointing, and reaffirmed that the industry is still not willing to take on the challenge of embracing new markets. Limited competitive pressure and the ability to still make substantial profits from the large corporate market and government bonds have reduced the appetite for new business, especially at the lower end of the client market, and the industry still suffers from a lack of experienced credit analysis resources as a result of years of reliance on treasury bills.

However, the takeover of ZANACO in 2007 by Rabobank of the Netherlands provided an opportunity for one bank to make in-roads into the agricultural market, and the bank expressed enthusiasm for technical assistance to bring its staff and policies up to speed. As a result, PROFIT invested considerable technical resources in this institution and while the evolutionary process from parastatal to private institutional culture has been slower than expected, the results of PROFIT's assistance is beginning to show.

With continued intransigence and conservatism in the traditional banking sector, PROFIT has been exploring other financing options, with leasing for agricultural equipment being an area where progress has been made, and work has begun on an innovative model that would allow SME access to the Zambian bond market.

Achievements:

- PROFIT provided **technical assistance to ZANACO** at a number of levels to address weaknesses in the company's internal systems that would constrain its ambitions to upgrade and change the competitive landscape of the financial sector.
 - In the first quarter of the year, PROFIT assisted ZANACO to re-write its credit policy manual, and the revised manual was presented to the board at the end of the quarter for approval.
 - PROFIT has been heavily involved in the design and establishment of a new ZANACO Agricultural Department, with technical assistance being provided to the new team on a continual virtual basis. Subsequently, ZANACO have developed plans to roll-out a rural banking programme in 2009
 - PROFIT initiated technical assistance to ZANACO on market research to determine the range and delivery mechanism for servicing rural population using a variety of models including mobile truck-banking.
 - PROFIT assisted in launching of process to implement ZANACO's corporate social responsibility program that has three components: 1) SME training at branch level, 2) grade school business and banking simulation game, and 3) Public Education program on financial literacy. PROFIT also provided three SME training modules to ZANACO on marketing, financial management, and inventory management

- PROFIT provided **technical assistance to two other institutions** under the auspices of the Financial Sector Development Programme.
 - African Banking Corporation requested and received assistance in understanding agricultural lending.
 - First Alliance received assistance to review their credit policies and upgrade their credit analysis and administration capacity, having indicated that the bank needs to grow its credit portfolio and is interested in focusing in on its wholesale lending products to leasing firms as well as direct lending to quality mid-range firms including ag-businesses.

- Over the year, PROFIT worked to **facilitate the development of leasing products** as a means for contract service providers within the emerging farming sector to access new tractors, as part of a larger push to develop a robust market for tillage services in rural areas - a market that is seriously constrained by the chronic shortage of viable tractor stock in the smallholder economy. PROFIT provided technical assistance in this regard to three firms:
 - Sapitwa Finance, a leasing agency, expressed an early interest in the agricultural leasing market, and five emergent farmers signed term sheets and placed deposits worth \$36,000 with Sapitwa in October 2007. Unfortunately, the company had failed to source funding to honour these deals, and to date, over \$22,000 of down-payments are still with Sapitwa and the issue is now being dealt with by the Bank of Zambia.
 - PROFIT investigated options to build a vendor agreement model that pushes the incentives to make deals into the retail sector and away from the finance sector, which has demonstrated both a lack of pro-activity and a lack of understanding of the workings of the agricultural sector. Farmnet, a progressive tractor and agricultural equipment retailer, was keen to develop an 'in-house' finance desk linked to one of the large leasing companies to promote the sale of its equipment to the emergent farmer market and PROFIT facilitated a vendor agreement between themselves and Industrial Credit Corporation (ICC) in March 2008, and assisted in the design of the application and screening procedure. To date, three deals worth almost \$250,000 have been pushed through the system, but these are all to commercial farmers. Several emergent farmers have submitted their applications which are expected to be reviewed early in the next year.

PROFIT is assisting Farmnet to develop its internal capacity to meet its side of the Vendor Agreement, and develop skills around the identification and screening of potential clients including providing assistance to clients to meet basic financial application requirements for ICC's lease consideration. Requirements include establishing proper financial record keeping processes, developing cash flows and financial statements, and organizing other documentation.

While no emergent farmers have yet to be extended finance by the commercial finance sector, PROFIT facilitated a tractor lease by Dunavant to one of its most progressive distributors in Mumbwa for ripping and haulage contract service provision.

- PROFIT is working with the International Finance Corporation (IFC) and ZANACO to facilitate access to leasing finance to emergent farmers for the purchase of agricultural equipment, and by the end of the year, it is reported that the applications of a number of clients have been selected for final credit analysis by ZANACO.
- The investments that PROFIT made over the year in the **development of an M-banking platform** have been highly effective and a major contributing factor to the success of Mobile Transactions Zambia (MTZL) in securing a license from Bank of Zambia late in the year to operate a mobile payments system.

Started as an initiative to reduce some of the very high transaction costs to out-grower companies to a large number of un-banked smallholder farmers, PROFIT's work with MTZL has evolved into the facilitation of a full m-funds transfer and payments system. Key technical upgrades have allowed the system to be used by non-phone owners who can be paid via rural agents, thus significantly widening the potential client base. 480 agents have been selected and training and certification was awaiting Bank of Zambia approval and can now proceed. The platform has created a sustainable and viable access channel for suppliers, financiers and brokers to engage the rural community and its commercial roll-out will start over the next quarter.

The purchase of equity in MTZL by Dunavant is a significant boost to the start-up company, and has assured Dunavant of access to the m-banking platform for its farmer payment system and its agricultural inputs sale initiative in the future.

- PROFIT continues its efforts to **integrate the financial industry into the functions of ZAMACE**. Unfortunately, the 2008 crop harvest was poor and limited stocks and high prices lowered the value of storage to the point where there was very limited demand for warehouse receipt finance. One deal was completed with some stored honey, albeit after a slow and cumbersome process and another fertilizer deal was put on hold due to lack of available stock. However, PROFIT, in conjunction with ZAMACE, held two well-attended and well-received seminars during the year to the banking sector on the benefits not only of warehouse receipts but the opportunity that ZAMACE presents as a partner in commodity financing.

By the end of the year, ZAMACE was in the process of finalizing a deal with a leading bank on developing a web-based settlement bank function whereby pre-payment for contracts would be lodged with ZAMACE thus assuring sellers of swift and 'guaranteed' payments. This provides an opportunity for the settlement bank to 'affiliate' itself to the exchange and market its agricultural products and services through ZAMACE.

- With traditional bank finance still presenting an access problem to the agricultural and SME sectors, PROFIT has been researching an **alternative commercial funding source via the Zambian debt market**. A consultant was engaged in the latter half of the year to work with a number of agricultural firms seeking substantial long term finance to develop a product that would allow access at reduced cost to institutional

finance through a bond issuance. By the end of the reporting period, progress was being made towards the development of a Special Purpose Vehicle (SPV) by which financing requirements, along with assets and liabilities could be 'bulked' into one shell company for the issuance of a single bond.

- Early in the year, PROFIT provided assistance to the Bankers Association of Zambia by assisting with comments on a **white paper on SME financing** and how the banking sector can fulfil its intermediation role in this regard after BAZ was asked to take the lead for the banking industry in response to calls by the government to make Zambian financing more inclusive. PROFIT will continue to assist BAZ as needed and requested with the hope that through political pressure a few banks might try new ways to conduct business.

Challenges:

- The banking sector remains reluctant to engage in the necessary upgrading resulting in limited internal capacity among banks to perform proper analysis and effective operations. The reluctance comes from the fact that banks are still achieving acceptable margins from their Treasury bill investments and fees, and these limit the market for loan products;
- The transformation of ZANACO is taking longer than anticipated as Rabobank learns how to manage the cultural change from a stagnant state owned bank to an aggressive commercial bank;
- The lacklustre financial services sector has fostered highly ineffective supporting organization such as the banking association and bank training services;
- The long-awaited initiation of the Lusaka Stock Exchange's 'third tier' equity market for SMEs has been delayed for months, limiting efforts to foster alternative sources of capital for smaller businesses.
- The failure of Sapitwa to honour its leases or reimburse its clients for their down-payments significantly set back PROFIT's efforts to facilitate a strong leasing market for emergent farmers;
- While there are major supply constraints to the access by emergent farmers to finance, it needs to be borne in mind that the financial 'illiteracy' of potential clients also poses a serious problem. Even some of the semi-commercial farmers that run sound businesses lack the necessary financial documentation (balance sheets, bank statements, cash flow records) that are pre-requisites to an application for credit to the formal financial sector;
- The lack of legislation that specifically addresses the needs of the leasing industry presents a major constraint to access to leasing services for customer's "lower down" on the commercial scale. Value Added Tax in particular still remains a major challenge in leasing arrangements because VAT significantly increases the initial cost of repayment for the facility to entities that are not VAT registered.

Non-Policy Enabling Environment

Annual Summary:

PROFIT started the year with four major grantees, though which the majority of work in facilitating improvements to the agricultural business environment was conducted. However, the attempt by PROFIT to develop the capacity of two major business associations (the Zambia National Farmers Union and the Agribusiness Forum) to replicate and enhance PROFIT's market development work proved to be largely unsuccessful, and the ZNFU grant was significantly reduced and the ABF grant terminated as a result.

The ABF failed to prove itself to be proactive in marketing the Forum as an information resource or advocacy body for outgrowing firms as was the specified aim of the PROFIT grant, and the industry failed to 'adopt' the ABF to suits its own needs. While the stated goal of the ZNFU PROFIT grant was to improve the local environment for the stimulation of private sector development, the Union either turned a blind eye or encouraged its District Farmers Associations to crowd out the private sector through aggressive engagement in input and output markets, making further PROFIT engagement with the DFA's untenable.

In contrast, the two private sector vehicles through which PROFIT is seeking to foster improvements in the non-policy enabling environment have, over the course of the year, demonstrated significant strides towards maturity. The Zambian Agricultural Commodities Exchange (ZAMACE) is making good progress towards increased transparency and shifting the commodity market from a short term, adversarial and margins-based trading environment to a strong and transparent one in which all players in the commodity market including smallholders can ultimately benefit. The key to smallholder participation in commercial commodity markets is the lowering of transaction costs that is possible within the standardized trade parameters offered by an exchange.

In a similar way, Vetlab, in its first year of operation, made major strides towards economic viability and was able to begin to foster an industry-level understanding and interest among vets in a way that PROFIT was unable to do as a donor project. Vetlab also provides an underlying push towards localised innovation and knowledge generation.

One key development with both ZAMACE and Vetlab over the year is the obvious graduation from PROFIT-dependancy in terms of direction to fully-fledged companies in which the private sector shareholders have taken full 'ownership' and responsibility for corporate decision making..

Achievements:

- The **SMS market information system** developed by the ZNFU and funded through the PROFIT grant has proved to be a significant form of price discovery for farmers, and the one major success of the PROFIT support to the Union.

ZNFU SMS Market Information System

- Started in October 2006
- Average of over 1,500 SMS 'hits' per month
- Almost 100,000 website 'hits'
- 94 buyers across the country submitting market data per month
- 61% of users are small scale farmers
- 15 different products listed

- **\$8.5m of contracts for 22,200 tons** of commodities were completed across the ZAMACE trading floor during the year.
- While trading activity is slower than anticipated, it is widely agreed within the agricultural industry that the **independent price discovery offered by ZAMACE** has played a critical role in determining Zambian commodity pricing, with the ZAMACE prices being used as points of reference by commercial and smallholder farmers, millers and traders alike.
- ZAMACE issued **comprehensive quality standards** for wheat, soya and maize, which have all been adopted as universal standards across the agricultural commodities industry.
- Three **new brokers were admitted to the exchange**, bringing the number of active brokers to ten. Dunavant is one of the new entrants, which represents an opportunity, through their large rural warehousing network, of bringing smallholder crop across the exchange in future years.
- Negotiations with **World Food Programme**, initiated in November 2007, towards bringing the institution to the exchange for their local procurement needs had reached an advanced stage by the end of the year, with a pilot procurement being planned for early in the next quarter. WFP is potentially an important partner for the exchange in its endeavours to make ZAMACE more inclusive and push the benefits of a strong and transparent market down to the smallholder and small trader levels.
- Efforts to bring large institutional buyers such as WFP onto the exchange lead ZAMACE to develop **comprehensive risk mitigation measures** that will, when they are finalized and operational in the next quarter, effectively 'guarantee' the completion of a ZAMACE contract once signed. A settlement bank system will ensure speedy payment to sellers and a wide-ranging insurance package will cover risks of non-performance by brokers and default by their selling clients.
- **Internal systems and controls** within ZAMACE were upgraded with independent broker training (accredited to the Securities and Exchange Commission (SEC)) and an internationally accredited arbitration course for staff and management, and the finalization of a comprehensive set of rules and regulations
- Vetlab established itself as a **strong independent diagnostic resource** over the year, with over \$100,000 worth of testing business conducted, making the company a small operating margin in its first year of business.
- While poultry continues to be the client industry of dominance, **expansion into milk testing** for both disease dictation and milk quality has proved a successful venture with a new technician employed specifically for this sector.

- Vetlab established itself as an important technical resource for private vets through its work with the vet network and training services it has provided to a range of vets and is **taking the lead in organizing the private vet network** and fostering its formalisation.

Challenges:

- The disappointing performance of ABF and ZNFU in their respective grant programmes was a set-back to PROFIT's efforts in fostering improvements to the non-policy enabling environment.
- Confusion over the extent of the 2008 harvest, uncertainty over government food balance predictions, indications of a maize deficit and rumours of very high commodity prices later in the year have all contributed to reduced commercial crop sales and thus volume of trade through ZAMACE was much lower than anticipated.
- Distrust of ZAMACE through poor awareness and a distrust of the trader brokers have led the commercial farming community to keep offers off the exchange and, unsurprisingly, the milling industry has not been keen to embrace the transparency offered by the exchange. It is worth noting, however, that both SAFEX in South Africa and ZIMACE in Zimbabwe, both successful private sector driven exchanges, took three to four years to overcome the traditional and mutual distrust that exists within the commodity sectors to a point where the exchanges were well utilized by farmers and end-users alike.
- High prices and limited commodity stocks have reduced the demand for warehousing and receipting of both commercial and smallholder maize.
- The narrow focus of the existing Securities Act prevents SEC from being able to offer oversight over ZAMACE, which is a minor setback to developing the credibility critical for the successful functioning of the exchange, although amendments to the Act are currently being made to include commodities in the regulatory mandate of SEC.
- The escalating price of stock feed has caused a slowdown in the poultry industry, threatening to impact on the demand for poultry diagnostic services at Vetlab, which comprise the major share of Vetlab's turnover.

Sustainable Natural Resource Management and Environment

Annual Summary:

PROFIT's work in this sector focuses on improving competitiveness in the honey export industry, which engages about 10,000 producers in the remote North Western Province. Following a disastrous season in 2006-2007 brought about by a combination of a strong local currency and a very poor tree flower crop, the 2007-2008 honey harvest was considerably larger, with over 400 tons exported by various companies out of Zambia. The 2007 crisis, however, further underlined the need for greater production and processing efficiencies and value addition if the industry is to be able to absorb future shocks and continue to provide commercial benefits to producers in isolated areas of limited alternative competitive advantage.

Financial support was provided to an export company operating under similar conditions, Kalahari Natural Oils, to develop a supply chain in Western Zambia (from Mongu to Livingstone along the Zambezi ecological corridor) around the market for organic natural tree oils and to develop some primary processing capacity at village level. The premise for both honey and oil extractive industries is that sensitive economic utilization of the forest resource should mitigate the need by communities living in the forests to exploit the resource in a more destructive fashion.

PROFIT continues to provide support for African Parks and the organisation's management of Liuwa Plain National Park in Kalabo, Western Province. PROFIT implements a community economic development programme on behalf of, and closely tied to the African Parks conservation initiative aimed again at using commercial markets and market signals to ensure responsible use of natural resources in an ecologically fragile area while providing systemic economic benefits to the communities living in and around the National Park.

Achievements:

- **PROFIT's investments in Forest Fruits paid significant dividends** in 2007-2008 to both producer and processor. Through its grant, PROFIT assisted in the development of better processing technologies to improve extraction efficiencies and quality standards at the firm level, and these technologies contributed significantly to a higher quality product over the 2007-2008 season, combined with a 10% improvement in honey extraction rates.

Confidence in a higher value end honey product and by-product (mainly wax) as a result of the new equipment encouraged the company to increase its farm gate price from K2,000/kg to K3,000/kg for the 2007-2008 purchasing season. Over the previous season, Forest Fruits had purchased 100t of honey from producers, whereas by the end of the main honey collection season in March 2008, the company had purchased a total of 280t, bought from 4,500 beekeepers, with a farm gate value of approximately a quarter of a million dollars. From this raw honey volume, 5 tons of wax was also processed for export at prices 20% higher than in previous years. A further 19t worth \$19,000 was purchased during the low season in Mwinilunga to feed an increased international demand.

Forest Fruits is now consolidating its value addition process to further stabilise the company through the development of a retail packing plant and has initiated research, supported by PROFIT, into the product characteristics of propolis, a very high value by-product used in the pharmaceutical and cosmetic industries. Such developments will further diversify the income streams available to Forest Fruits with subsequent benefit to the producers.

- The **60 top-bar hives distributed by North Western Bee Products** to its highest performing growers through the revolving fund facilitated by PROFIT were occupied during the main Kabompo honey season (May to July), and the beekeepers expect to be able to pay off their loans by the end of 2008. Initial harvest results from the top bar hives issued under the North Western Bee Products revolving fund scheme in Kabompo District have shown a 150% increase in yield and a dramatic increase in quality from traditional bark hive management practices.
- The **supply chain development manager at Lyunda Enterprises** in Kaoma, cost shared by PROFIT, trained a total of over 600 beekeepers in productivity and quality issues, with a view to procuring raw material from them to meet a German export order in early 2008. Unfortunately, financial constraints prevented the order from being met, but the small company has now won a supply contract with Spar Supermarkets for the on-going sale of retail packs across the network of Spar stores, and production will start early in the next quarter.
- **Kalahari Natural Oils** began its purchases of mungongo nuts from producers along the Zambezi ecological corridor during the last quarter of the year, buying 10 tons worth \$10,000 from approximately 500 producers, of which over 400 were women. The grant from PROFIT also supported a complete ecological survey and traceability and quality assurance system necessary for organic certification of the forests from which the nuts are gathered and processed and the compilation of a GIS database of the company's production locations.
- The PROFIT team working alongside African Parks in and around the ecologically sensitive Liuwa Plains National Park worked closely with the **community campsite** committees to build from the lessons from the previous year in terms of improving the 'value added' tourist products (fishing, canoeing, traditional dancing, crafts etc) and reinvesting income into infrastructure improvements (solar pumps, wells etc). However, tourist numbers have been low during the year, with only 166 bed-nights worth \$3,200, recorded at the campsites since the end of the floods in May.
- The **livestock development programme** in the Liuwa Plains area continues, with the commercial vet in the area investing in agents and community livestock workers to promote and sell both one-off services and the herd health plans, with over 3,000 head of cattle in the area benefitting from preventative health care.
- By the end of the reporting period, a groundbreaking **Land Use Management Plan** for the Liuwa Plain National Park and surrounding areas was completed. African Parks, in consultation with the Barotse Royal Establishment, ZAWA and the local communities,

engaged a PROFIT-funded consultant to draw up a map that divides the area into zones with the intention of maximizing the benefits for all stakeholders while maintaining the biodiversity of the park. The process has resulted in the creation of the following zones:

- *Intensive Cultural Use Zones:* Areas where existing cultivation/ agricultural activities and community uses will continue
 - *Cultural Use Zones :* Areas where existing community uses will continue, (excluding cultivation/ agricultural activities), such as fishing or reed harvesting
 - *Exclusive Use Zones:* Concession areas for proposed high-end tourist lodges
 - *General Use Zones:* Areas for self drive tourists and private lease sites which will overlap with all three cultural zones.
 - *Buffer Zone:* This would include the Game Management Area comprised of cultural based activities and both consumptive and non-consumptive wildlife utilization.
- PROFIT facilitated some reasonably successful **agricultural diversification and productivity enhancement** activities in the Kalabo area. Due to the success of the 2007 pilot project, some progressive farmers took advantage of dambo water availability in the area to plant winter wheat with a successful outcome, and PROFIT continues to promote the use of ripping in rice and maize culture, and the expansion of the limited Western Province agricultural retail industry into the Kalabo area..

Challenges:

- Historical financial difficulties, a strong kwacha and a poor 2006-7 harvest have meant that North Western Bee Products, the second largest export company with a producer base of approximately 10,000, was severely constrained in its attempts to purchase honey over the 2007-2008 season. The potential loss of the company would negatively impact the development of the bee product industry in North Western Province
- Financial sector conservatism and risk aversion ruled out the commercial financing of Lyunda Enterprises and prevented their participation in the 2007/8 marketing season
- Donor distortion in honey purchasing efforts negatively affected Forest Fruits' ability to create a stable marketing environment for the beekeepers affiliated to the company over the 2007-2008 harvest period.
- Low tourist numbers to Liuwa Plain dampen the potential of the communities living within the park to earn an income from their campsites sufficient to encourage further investment and participation in their management.

New Business Development

Annual Summary:

While the main intervention areas within PROFIT have long been defined, the programme is continually scanning the market for any potentially significant developments in terms of rural market development and innovative initiatives that enhance smallholder participation in, and benefit from, commercial markets. Over the year, PROFIT investigated a number of projects, and has targeted resources at those which the project believes can, with a minimal level of intervention, prove commercially viable.

Achievements:

- PROFIT continued its support to the development of the **Chanyanya Irrigation Scheme** in Kafue District. Over the year, the project evolved from a large, integrated smallholder and commercial sugar production unit into a smaller commercial irrigation project in which the 120 smallholders, on whose titled land the project is situated, have a large equity stake in the commercial unit. PROFIT sees considerable opportunity in the model, whereby land under the tenure of smallholders (an asset that the smallholder community has in abundance) forms an equity stake in a partnership with the commercial sector which brings to the table its financial and managerial capabilities. While progress with Chanyanya has been slower than expected, due to funding constraints and the negative reaction of some of the communities involved in the 3,000ha original scheme, PROFIT sees value in its continued technical and logistical support for the venture to demonstrate the viability of this innovative development model. Over the year, significant progress was made towards making the Chanyanya Scheme a reality:
 - The 120 smallholders have ceded their title deeds into a cooperative structure that has then ceded the management of the land to the commercial farming venture.
 - The cooperative has been formed and title-bearers elected
 - A commercial company has been formed, with an equity stake by the cooperative, and a farm manager appointed.
 - \$2m of finance has been raised to develop phase one of the project
 - Infrastructural development has started, with a view to the planting of the first commercial crop during the 2008 planting season
 - PROFIT continues to work with the community to define their obligations, organization and role within the commercial operations, and assist the newly formed cooperative to relocate affected members
- With an increased international demand for Zambian pineapple products and with its processing capacity now installed, Freshpikt is now developing a **pineapple supply chain in North Western Province**, through limited logistical support to the initial start-up phase provided by PROFIT. Over the last quarter of the year, 109t of fruit, worth \$38,000 was aggregated and transported to Lusaka, with a view to ramping up supply during the main November to February season. PROFIT is working with the Freshpikt staff to develop efficient, commission-based aggregation and quality control structures.

- In the second quarter, PROFIT investigated an **innovative cattle production model** in Masaiti District whereby a partnership would be developed between a commercial cattle company and a community that would contribute land in return for an equity and employment stake in the company. The scheme is currently on hold due to financing constraints.
- Technical assistance was provided to a proposed Trust in the Chiawa area of Kafue District that will manage a Conservation Area adjacent to the Lower Zambezi National Park. The trust is essentially a **partnership between a number of commercial tourism enterprises and the Chiawa community**, and dividends from the utilization of the conservation area will be returned to the community in the form of targeted grants and agricultural infrastructure (irrigation, wildlife fencing and poultry housing, for example), managed by the trust and leased to community members.

HIV/AIDS

Annual Summary:

At the beginning of the year, a contract was signed with Afya Mzuri, a local NGO, to undertake PROFIT's HIV/AIDS awareness and sensitisation programmes. The organisation spent the early part of the year mapping the activities initiated by CHAMP under a previous PROFIT grant, with a view to utilising the network of Peer Educators trained under CHAMP. This exercise provide more difficult than anticipated and thus initial progress was slow. Efforts were also made to bring the PROFIT HIV/AIDS programme more in line with the wider PROFIT programme, through the use of the wide network of in-community agents managed by the agricultural retail and veterinary industries to promote HIV/AIDS awareness alongside their commercial community activities.

Achievements:

- The programme trained 127 Peer Educators (PE's) over the year.
- The PE's trained a total of 3,728 clients aspects of awareness and behavioural change in relation of the threat of HIV/AIDS in the following districts:

District	Number of PE's Trained	Number of Females Reached	Number of Males Reached	Total Number of Clients
Chama	50	522	702	1,224
Mkushi	27	1,131	761	1,892
Mumbwa	50	335	277	612
Total	127	1,988	1,740	3,728

- A mapping exercise in Mumbwa District was undertaken to identify health centres providing ART services. Seven clinics were identified and information regarding these centres is now being used by the Peer Educators in their work

Challenges:

- The targets were set on the premise that CHAMP PE's were available to initiate renewed community discussions. This was an erroneous assumption and Afya Mzuri has had to train from scratch the PE's that are effecting the message transfer currently. It is anticipated that now these are fully trained and active that exposure numbers will increase rapidly in the first quarter of next year.
- With an orientation towards training the retail agents as Peer Educators, there is difficulty in achieving a good gender balance in agent trainings.
- Many Peer Educators expected sitting allowances and other cash payments from the facilitators, reflecting the degree of dependence being developed by other interventions.

Project Administration

Achievements:

- Completed re-structuring of PROFIT staff organization to reflect the desired flat management structure required for optimal performance. This involved reconfiguring the Regional manager/District facilitator relationship into the tiered Business Advisor (BA) structure. This acknowledged that fact that all field staff acted as business catalysts and assumed the same titles. The restructuring created BA grades and associated salary levels. The final organizational restructuring took place with the head office management – with staff assuming specific roles as they supported the field BA structure. Salary grades are now consistent throughout the organization. All assignments had full job description reviews.
- NCBA Headquarters – PROFIT field communication was enhanced which resulted in improved turnaround in project decision making and administration
- Regional training of staff has been established on a quarterly basis to ensure that full advantage of BA experiences is achieved
- PROFIT M&E has further refined the “PROFIT learning loop” to reinforce learning and maximize staff incentives to innovate with clients in the field.
- PROFIT component advisors have become directly responsible for their own work plan and budget allocations – further enhancing management of project resources.
- The Admin team has become fully compliant as far as accounting deadlines are concerned, despite a complete restructuring of the project finance team following the departure of the project account.
- All grantees are now up to date with their financial reporting
- Successfully managed project burn rate to achieve results while keeping within budget limitation imposed by timing of obligation.
- Initiated new monthly budget structure, accepted by NCBA HQ and used to present to USAID SO5 effects of delayed obligation through to end of project. This has assisted planning and resource optimization at all levels.
- Closed all PROFIT up-country offices without sacrificing efficiency of the field operations.
- Instituted new Other Direct Cost budget management policies and procedures to successfully manage ODC expenditures.
- Provided support to the SO5 internal evaluation process, stimulating discussion regarding new opportunities for activity post-PROFIT.

Challenges:

- Budget allocation during the year was a significant challenge but management of this issue resulted in enhanced awareness of efficiency of resource utilization by all team members.
- Continued uncertainty regarding future obligations may impact project output early in the new FY.

ANNEX I – Notes from the field

During this workplan year, PROFIT introduced a regular summary article featuring activities highlighting successful outcomes of the PROFIT model. These articles demonstrate the benefits of targeting and supporting the private sector. The articles have been circulated through USAID, private sector and NGO's. The articles produced are presented here in their original format which has changed over the course of the year.

USAID/PROFIT - NOTE FROM THE FIELD



April 4, 2008

Making Connections

Getting agricultural inputs such as fertilizer to the rural communities of Chongwe District in Lusaka Province, Zambia is not an easy task. Many of the villagers in the district, who rely on agriculture for income and subsistence, cannot afford the costly and time-consuming trip to procure inputs, nor has the traditional private sector input suppliers been able to find a profitable way of servicing these communities. The independent agricultural input dealers who do find their way to these communities have been known to charge exorbitant prices or sell poor quality products. Finding a way to connect such communities to credible agricultural input suppliers could help the farmers increase their yields and improve their livelihoods.

The PROFIT project seeks to reduce poverty by linking smallholder farmers into competitive, sustainable value chains. As part of its work towards this goal, PROFIT staff has been working with smallholder farmers and Minelands, an agricultural input supplier operating in Zambia, to encourage and facilitate the adoption of an innovative business model, the agent network, that will benefit both groups. Through the model, Minelands will be able to expand into a profitable new market and rural farmers will receive agricultural inputs at reasonable costs and guaranteed quality along with the essential technical information relating to the products.

The agent network model involves having agents positioned in the various communities to represent Minelands and its brand. The agents are chosen from the communities themselves by Minelands, and so have intimate knowledge of the location-specific challenges and opportunities and have existing relationships and trust within the community. Agents are trained by Minelands to help coordinate the link between the firm and the community, to market products, and to serve as a knowledge source for the community.

Working with PROFIT, Minelands began to develop its agent network in **September, 2007** in Chongwe District. Minelands identified and trained **17 agents from the communities**. In the first season, Minelands through these agents sold agricultural inputs and maize seed to 1728 farmers valued at ZK78 million. Besides these new sales, the agents have helped Minelands build a strong reputation and learn about the communities, improving their interaction with them, helping the firm tailor their marketing efforts for the future season.

Benefits were not only experienced by Minelands, farmers too saw benefits in the agent network. Communities told of having their **costs of production reduced** and yields improved while they gained useful knowledge from the agents on the products they bought. Perhaps most importantly, the rural farmers expressed confidence in the network and hoped that Minelands would continue to expand their operations in their communities.

Minelands **saw the potential** of the smallholder market and is now more proactively and aggressively expanding its agent network. By January, 2008, Minelands had applied its learning in Chongwe to successfully expand into **four other districts**, Mumbwa, Kapiri, Mkushi and Serenje, **training 57 more agents**. Clearly the agent network business model has begun to prove its worth with the inputs supply industry in Zambia.

THE DUNAVANT/PROFIT SPRAY SERVICE DEVELOPMENT PROGRAMME

Following the success of a small pilot project in Katete and Chipata over the 2006-2007 agricultural season and with the technical assistance of PROFIT, Dunavant embarked in 2007 on a wider programme of expanding the use of commercial spray services within their Eastern Province farmer networks.

The aim of the programme is to address one of the key constraints to cotton production, that of inadequate pest control, through creating the conditions for the development of a commercial spray service platform. It attempts to harness the ability and the improved spraying equipment of the better performing farmers, for the benefit of their peers, while at the same time providing an additional source of income for the better farmers.

The integration of a spray service platform into cotton production networks stands to benefit the smaller, less able farmer by transferring the responsibility of pest management to a better equipped and trained individual within the locality. It benefits the service provider, through increased, 'off-farm' income, and the cotton company stands to benefit from increased yields and quality as a result of improved spraying.

Currently there are 85 trained and certified spray service providers affiliated to Dunavant operating in Eastern Province, servicing 364 farmers, with 437ha of cotton under contract. These form part of the total of 209 service providers servicing 1,437 clients on 1,420ha in the broader PROFIT initiative involving three major cotton companies

The development of this localised service platform has, even at this early stage, had a number of significant benefits to the cotton farmer:

- There are strong visual indications that crop under spray contract is capable of **higher yield and quality** than that not on contract
- Previously, farmers without access to sprayers would rent on an ad hoc basis, sometimes only managing three out of the desired seven pest control sprays. The spray service provides a **regular and comprehensive spraying programme**
- Clients are noticing a **considerable reduction in spraying costs**. They are no longer hiring equipment of questionable quality (often at over K30,000 for the season), and application by a trained sprayer means greater chemical efficacy, requiring less re-sprays, and reductions in chemical costs of up to 30%.
- **Chemical usage has also reduced**, through scouting to ensure the necessity of spraying, correct chemical mixing and the efficient use of the ULVA+. At the time of the survey, no client had needed to return to Dunavant to purchase additional pesticides
- This has obviously had a **positive impact on input loan exposure**, for both the farmers and Dunavant.

- The spray service providers have evolved into the providers of **localised extension services**. They are present in their clients' fields three times a month, scouting for pests and advising on improved management, and they have a commercial incentive to continue to provide a good service.
- There has been a **disproportionate benefit to female, elderly, infirm and widowed cotton farmers**, for whom comprehensive spraying has traditionally been unachievable, with the result being lower yields and concentration on smaller areas. Such farmers make up over 40% of the client base, and are now able to contemplate planting larger areas in future years
- A common comment among spray service clients relates to a dramatic increase in the amount of **time freed up to concentrate on other farm activities**. Not only was time spent actually spraying in the past, but the haulage of water required for spraying with a conventional applicator was a significant burden, mainly to the female members of the household, who could spend five hours hauling water for spraying one hectare. A knapsack sprayer uses up to 150l/ha, whereas the ULVA+ uses between 10 and 20l/ha. This time saving should translate into better weeding, and higher yields in both cotton and secondary crops
- While still only an indication, many clients commented that the inability to spray adequately was a direct constraint on **increased area under cotton**, and that assuming the continuation of the service, and particularly if herbicide application can be integrated as it is planned in 2008, they would plant more cotton in years to come.
- The use of trained and well-protected spraymen has a **direct and positive impact on farmer and environmental safety**
- By the end of the 2007-8 season, the spray service providers will have earned approximately K15m in fees, creating a **new form of rural business**

Since the inception of the programme, many farmers that were initially sceptical have requested services, and there are strong indications that the demand for services next year will be significantly higher. Dunavant is now committed to expanding the programme, both in Eastern Province and across their national catchment area and the process of selecting new service providers for the next round of training has already started. To this end Dunavant has incorporated the development of spray services as an integral part of the YIELD extension programme, and it now forms one of the 'pillars' of the innovative new 'Preferred Supplier model'.



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Note from the Field March 2008

Expanding the Business

PROFIT facilitates the links between agricultural input retailers and rural communities in Zambia



Agricultural spray service providers are working hard to keep up with the rising demand for input spraying.

With the knapsack sprayer she received for her excellent work as an agricultural input agent, Rhoda hired her husband to provide input spray services in her community. Since joining the agent network, Rhoda's income has increased by over 300%.

Mrs Rhoda Kabamba Simukonda is a small scale farmer in Momboshi village in central Zambia. By growing maize and tomatoes, her family was generating around K2.9 m (US\$725) per year. Rhoda's community is far from the nearest town, Mkushi, and has typically had poor access to agricultural inputs and production information and few economic opportunities beyond farming. PROFIT has been working with Landserve, an input retailer in the area, to create an agent network that will link the retailer to the community.

Last year Rhoda was selected as a Landserve agent. She was trained and signed a contract to service her community. Rhoda works with farmers to bulk their orders for inputs, and then she passes these orders on to Landserve. She has proven herself to be an able entrepreneur.

For Rhoda, business is booming. During the peak period of November/December she was taking in orders of ZK 2 million per week. Over the year, she received on average a commission of K800,000 (US\$230) per month. In January 2008, Landserve rewarded her with a knapsack sprayer for agricultural input application. With it, she employed her husband as a sprayer service provider for her village. He is not only providing a much-needed service to the community and earning K120,000 (US\$30) monthly, but also promoting Rhoda's input supply business. Rhoda's sales have since increased by 15%. With the profits, she has opened a community shop to expand her business even further.

Demand for inputs and spray services is increasing dramatically. Landserve has responded by training five new agents and seven new spray service providers in the Mkushi area over the last quarter. The growing agent network is benefiting the community with critical production knowledge and appropriate product while empowering agents like Rhoda.



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Note from the Field 4.08

Investing in Cattle: Bringing Back the Days of Saka Yamali

PROFIT works with private veterinarians to improve cattle health and links smallholder cattle farmers to commercial buyers



Cattle are led through a crush pen towards the mobile scale.



Cattle being weighed on the mobile scale.

At the mobile cattle sale, “I got double the price I would get selling within the community,” says Wisdom Shabosha

Saka Yamali—a Tonga phrase meaning ‘bag of money’—was the expression people in Nalubanda area of Southern Zambia used to describe selling their cattle to well-equipped mobile buyers. For year, the days of Saka Yamali had disappeared. Commercial farmers became unwilling to engage with smallholders, citing poor herd health, breeding and production management. But times are changing...

“It is like back in the old days” said a cattle farmer as he led his cow towards the mobile scale brought to Nalubanda by a mobile cattle buyer. PROFIT arranged for the buyer to visit the community to take advantage of a new opportunity. Since 2005, PROFIT has been working with Agrivet, a private veterinary service, to improve the health and management of cattle herds in the community. The work has paid dividends. With healthier herds, cattle farmers are reaping dramatically higher profits from selling their cattle.

“At first I didn’t want to sell,” said Wisdom Shabosha, a local farmer, “but after seeing the sale prices I wanted to bring my best cattle. I got double the price I would get selling within the community—K1,600,000 instead of K800,000!” During the day, 19 cattle were sold with a total value of K34,000,000. A few days later another 34 animals were sold for K54,200,000. Charles, the mobile buyer, took time to explain to the farmers why or why not he was buying specific cattle and why he was giving a certain price. A K400,000 premium was paid for cattle on the Agrivet Herd Health Plan, a preventative veterinary program. After seeing how much they could get paid for healthy cattle on the Herd Health Plan, farmers said they wanted to start investing more in their animals.

The farmers are eager to put more of their animals on the Herd Health Plan and get additional services from Agrivet. As the farmers are taking advantage of the burgeoning private veterinarian industry, commercial buyers are taking notice. The days of Saka Yamali—bags of money from cattle sales—are returning.



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Note from the Field 5.08 From Critic to Champion

PROFIT is assisting agricultural input firms to build networks of spraying service providers as a platform for expanding their businesses.



Sprayer service providers being certified in Chikupili, Zambia

After trying the herbicide spray service, Editor Mweene was so pleased with the increase in yields and decrease in costs that he encouraged his son to become a certified spray service provider.

Mr. Editor Mweene, a smallholder of Mukankamano village in the Mkushi District of Zambia, used to be critical about using herbicides on his 7 ha field of maize. At a Cropserve promotion in 2007, Editor spoke out to discourage other farmers from using the spray services, saying that they were ineffective. PROFIT has been assisting Cropserve, an agricultural input retailer, to build a network of certified community spray service providers for herbicides and pesticides. Herbicides and pesticides applied properly and safely by certified providers help improve yields and cut farming costs.

In response to the comments at the promotion, Cropserve set up a demonstration maize plot at a central place near the area where Editor lived. He saw the positive results of using the spray services and decided to try out the service. He purchased 16l of Blazine at K480,000, which he used on 4 ha of his land. Cropserve sells the inputs through agents and spray service providers in the community. Using the spray service, Editors' yield improved by 40% while his costs were reduced by 15%.

Editor heard that spray service provider training was going to take place in his community. The spray service providers are chosen from the communities and trained in the safe and effective application of herbicides and pesticides by Cropserve. Enthusiastic about the spray service program, Editor sent his son to be trained. Editor's son was one of the 11 members of the community that have successfully completed the spray service provider training and are now providing independent fee-based services to their fellow farmers as agents of Cropserve.

At a Cropserve promotion this season, Editor stood and testified to the effectiveness of the herbicides and the spray service providers to his fellow farmers. Both father and son have discovered the value of PROFIT and Cropserve's work promoting spray services.



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Note from the Field

The Broad Impact of a Little Spark

PROFIT is facilitating the use of innovative new business models to meet the needs of rural farmers in Zambia.



Top community agents received bicycles to reward their performance and help their work.



"Farmers who did not plant AFGRI seed started demanding the seed after being attracted by good germination and big yields" says agent Belly Mafwafwa.

In Zambia, there is a market worth in excess of ZMK210b (US\$60,000,000) that is largely untapped: the rural smallholder market for agricultural inputs. After discussion with PROFIT, AFGRI Corporation, an agricultural retailer traditionally focused on providing inputs and equipment to commercial farmers, realized it was missing a massive opportunity. Now with PROFIT assistance, AFGRI is investing in a network of agents chosen from and operating in rural communities, an innovative new business model that will help them tap into this growth market.

To enter the market successfully, AFGRI has recognized that it must build strong relationships with both the agents and the communities. The investments are already paying off. AFGRI's first steps into the smallholder market in the 2006/2007 season led to ZMK142m (US\$40,000) in sales of maize seed through 12 community agents. The company is now planning to expand its agent network and the range of products it offers.

The benefits are spreading beyond the company itself. In just two months, the top two agents earned US\$400 each in sales commissions. To boost motivation, AFGRI rewarded the top five agents with bicycles, and the top two agents also received cell phones. The selection of the top agents was based not just on sales volume but also on communication and customer relations, to emphasize the importance of building relationships with customers.

The smallholder farmers are also benefitting. According to one farmer, with AFGRI maize seeds, "the size of the cobs was impressive, big and well compacted with good weight." Far from being passive buyers of product, the smallholder farmers are actively engaging with the agents and company representatives at community promotions, voicing their desires and providing feedback on products and service.

PROFIT's worked has sparked new, mutually beneficial relationships. As AFGRI expands its investment in the rural smallholder market in Zambia, the company, the community agents, and the smallholder farmers all agree that each will see a big return.



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Note from the Field

An Industry Evolves: Overcoming a Common Challenge

PROFIT is seeking to improve the competitiveness of the agriculture industry in Zambia to improve the livelihoods of Zambian farmers.



Firm representatives with the CropLife facilitator at the end of the first meeting of the major Zambian agrochemical firms – Lusaka (Jul 08)

“The facilitator did less of the talking and we did most of the talking. The practical approach to the training was good.” said Mathew Chisakuta of Syngenta.

The agrochemicals industry in Zambia has reached a milestone. For the first time, the major agrochemical firms, 13 in total, met together to discuss and find joint solutions to a common problem. The challenge was to ensure that users of agricultural chemicals understood how to apply the chemicals safely and effectively – poor usage by a customer of one firm would tarnish the reputation of the industry as a whole. To secure the reputation of the industry and maximize benefits to Zambian farmers, the firms met at an event catalyzed by the USAID-sponsored PROFIT project to craft industry-wide standards for training chemical users.

The meeting was described as “the first one of its kind in Zambia” by the facilitator brought in for the event, Herman Louw of CropLife, an international association of plant science firms and organizations. Initially, there was some skepticism about the benefits of the event. But after the representatives of the firms saw that they could all benefit without compromising competitive advantage, opinions changed. The representatives created new relationships and left with a clearer sense of the industry’s future.

The event led to concrete plans for the development of standards for the agrochemical industry, including certification of spray service providers. Herman Louw facilitated the event as a guided dialogue rather than a one-way transfer of information. The participatory nature of the event fostered a sense of ownership amongst the firms and led to standards that were especially relevant to the Zambian context.

The PROFIT project has been active in working with the agrochemical firms to improve the industry’s competitiveness in Zambia and to help firms link to smallholder farmers, which will ultimately improve farm productivity and farmer livelihoods. The meeting of the agrochemical companies to create standards and form relationships was the latest effort to ensure that PROFIT’s contributions will last long after the project has ended.



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Note from the Field

Idle to Active: The Benefits of a New Approach

PROFIT has facilitated the creation of new rural income generation opportunities and the spread of improved tillage technologies, boosting agricultural yields and incomes in Zambia



A woman sows seeds in a field that has been tilled by a Magoye ripper



Community agents are trained on how to market Magoye rippers in their communities

An appropriate technology full of promise to boost agricultural yields in Africa sits idle in a shed. This was the fate of the Magoye ripper, an alternative to the traditional plough. Then something changed. Last year less than 20 rippers were sold to smallholder farmers in Zambia; this year 216 rippers have been sold to date, at a commercial price. What happened?

Using the ripper has two main benefits over the plough. Firstly and most importantly, the ripper helps ensure planting happens on time. Every day of delay after the first rains lowers yields – planting a week late will lower yields by over 10%. Unlike the plough, the Magoye ripper allows farmers to till their fields throughout the dry season, instead of waiting for the first rains. Second, ripping a field instead of ploughing better concentrates important soil nutrients around the seed when fertilizers are used. Using rippers instead of ploughs can improve yields by over 25%.

Although the technology has been shown to work, uptake of the ripper was slow. Tilling fields with a plough or hoe after the first rains is customary for smallscale farmers in Zambia, and customs are hard to change. Years of efforts by development organizations to stimulate commercial adoption of the ripper through training events and promotions have been largely unsuccessful.

The USAID-sponsored PROFIT project initiated a new, two-component approach that has helped spread the Magoye ripper. First, PROFIT worked with agriculture retailers to sell the ripper through shops and community agents at a commercial price. Second, PROFIT facilitated the creation of Tillage Service Providers; rural community members who buy a ripper then offer to rip others' fields for a fee. Making it easier to buy the rippers plus the possibility of new income generation opportunities has created greater incentives for rural farmers to buy the rippers. The charge per hour is K28,500 (\$9) and it takes 3.5 hours to rip one hectare. A ripping tillage service provider can do up to 40 hectares in a season, with an income in excess of \$1000.

Rose, a smallholder farmer in the Mumbwa district of Zambia, bought a ripper from a community agent in June 2008, and is now using it to rip her field. She is also providing tillage services for others in her community. Currently she has 14 customers lined up for ripping, she expects to make over K1,000,000 (USD\$300) this season through ripping activities, easily enough to cover the initial cost of the ripper. With PROFIT's help, the Magoye ripper has been taken out of the shed and is finally contributing to boosting agricultural yields and incomes in Zambia.



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Note from the Field

Broadening Income Horizons

PROFIT has been fostering the engagement of smallholder dairy farmers in the dairy value chain in order to enhance milk production and smallholder incomes



Mpima Dairy farmers take notes during a visit to Parmalat



Mpima Dairy farmers tour Parmalat during a recent visit (Jul 08)

***“If Parmalat can buy all the milk when I produce it, then I will increase my production”
said one Dairy farmer***

Despite encouraging demand, dairy farmers have failed to satisfy the increasing milk demand in Zambia from the formal processing sector. This demand has stimulated the integration of small holder dairy farmers into the dairy supply chain, where previously they were generally engaged in informal supply.

Parmalat buys milk from small holder dairy farmers through centralized collection centres and depots in Choma, Monze, Magoye, Mazabuka, Lusaka and Kitwe. In December of last year Parmalat made the strategic decision to collect directly from collection centres; previously the farmers were delivering themselves to the nearest depots. As a direct result, milk purchases have increased by 74 % on the same six month period of last year.

Encouraged by this response, Parmalat opened a new depot in Kabwe in May and expectations have been exceeded. In excess of 120,000 litres were collected in June of which 24,615 was from the Mpima dairy group of smallholder dairy farmers. Eighteen farmers from Mpima dairy cooperative recently visited Parmalat. The first objective of the trip was for the farmers to see where the milk produced goes and secondly to find out the demand and quality requirements for their milk.

Dairy farmers are becoming more enthusiastic about the delivery of their milk to the formal sector milk as it provides a guaranteed price and a certainty that their milk will be sold. Although the price of milk per litre may be lower than on the informal market, many feel that a guaranteed market throughout the whole year is worth the difference. The PROFIT dairy component uses three major interventions to improve productivity and profitability, i.e. dairy cattle health, the feeding of the dairy cow and milk quality control.

On the health component, PROFIT linked the Mpima farmers, mentioned above, to Leloisa vet services, a private vet service company. Their animal health is now being managed under the herd health plan (HHP). A total of 490 animals are currently accessing vet services including vaccinations, deworming and dipping services. Dry season forage demonstrations are also in place which act as a platform for both the health provider and a national animal feed manufacturer, Namfeeds, to use forage intake demonstrations as a key to increasing productivity which compliments and assists uptake of their goods and or services. Progress is being made through tangible private sector collaboration to achieve much needed productivity gains.