ZADT
Zimbabwe Agricultural Development Trust

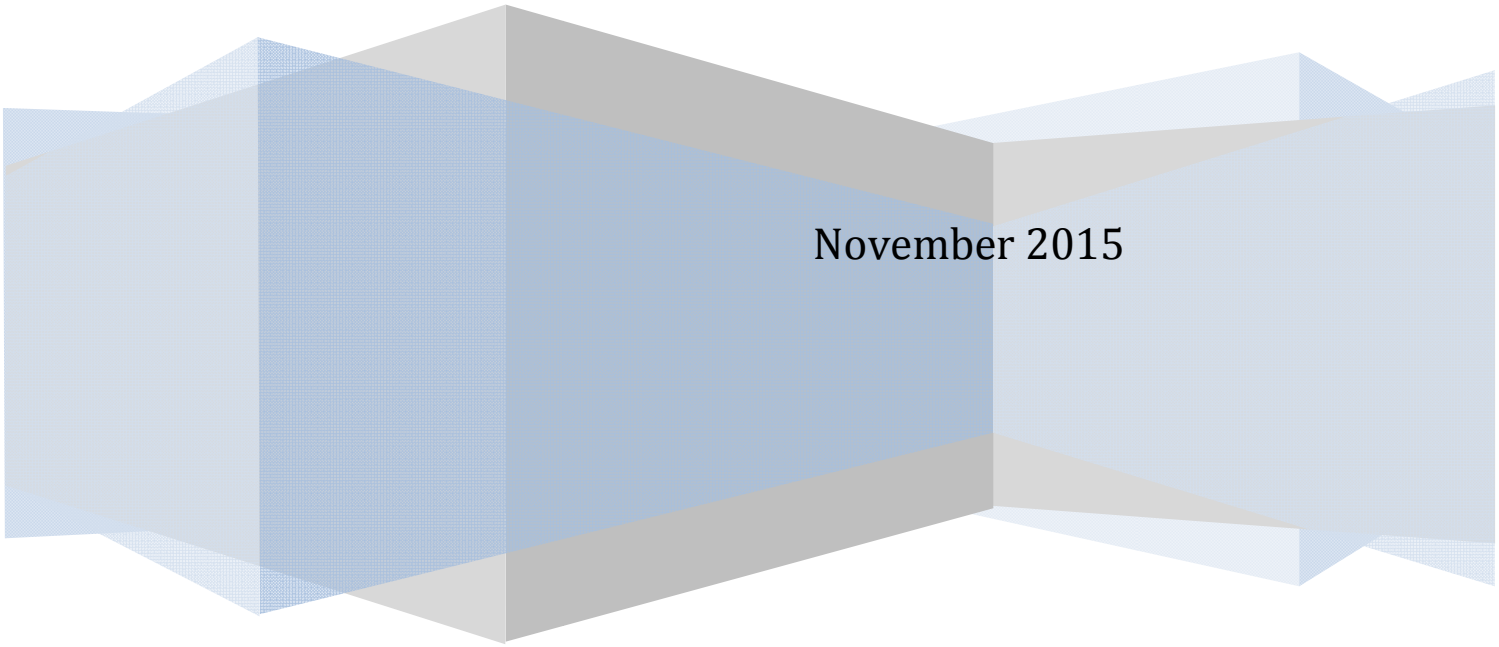
SNV SMART DEVELOPMENT WORKS

SMALLHOLDER AGRICULTURE VALUE CHAIN FINANCING

Sentinel Survey

ROUND THREE

Isaac Chaipa



November 2015

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ACRONYMS

CREATE	Credit for Agricultural Trade and Expansion
DANIDA	Danish International Development Organisation
FAO	Food and Agriculture Organisation of the United Nations
GDP	Growth Domestic Product
HH	Household
HIVOS	Humanistic Institute for Development Cooperation
IFS	Inclusive Financial Services
NGO	Non Governmental Organisation
RARP-CSF	Rural Agriculture Revitalisation Programme- Commercialisation of Smallholder Farming Programme
SHF	Smallholder Farmer
SNV	Netherlands Development Organisation
ZADT	Zimbabwe Agricultural Development Trust

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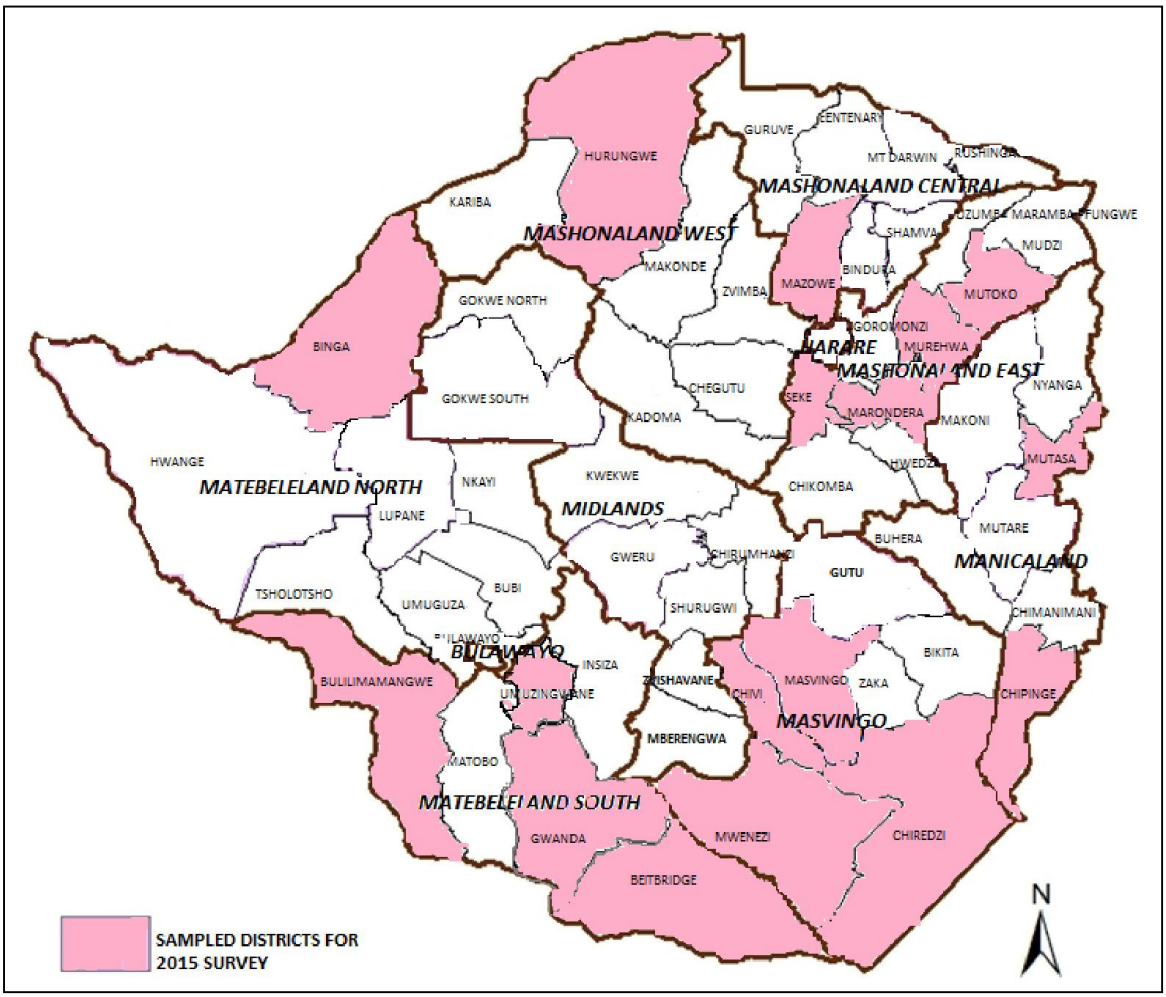
2015 Sentinel Districts



EXECUTIVE SUMMARY

Introduction and Background

i. This report presents key findings from the 2015 ZADT/SNV Sentinel Survey conducted during the period September/ October 2015. The 2015 Sentinel Survey constitutes the Third and Final Round of the surveys as planned under the DANIDA funded programme cycle for the *Rural Agriculture Revitalisation Programme- Commercialisation of Smallholder Farming*. The programme seeks to improve household food security, generate employment and improve household income through the commercialisation of smallholder farming in Zimbabwe.

ii. The main goal of ZADT is to reduce poverty through promotion of business growth, job creation and access to finance. This is measured through the following key performance and impact indicators;

- Percentage of people linked to the project living on less than $2 per day
- Percentage increase in annual household agricultural incomes of beneficiaries linked to borrowing intermediaries

iii. The primary goal of the Survey is to better understand and monitor impacts at the smallholder farmer level associated with Value Chain Financing and to provide decision makers with relevant information for steering the programme towards the achievement of set objectives on smallholder farming in Zimbabwe.

Methodology

iv. A total of 16 sentinel sites participated in the 2015 survey comprising 11 sites from 2014 and five new sites. From a total of 15 sites that participated in the first Sentinel survey in 2013, only 8 sites (53%) participated in all three rounds of the surveys.

v. Thirteen (13) intermediaries participated in key informant interviews whilst a household questionnaire was administered to 521 households. Intermediary key informant interviews largely served purposes for data triangulation and enhancing understanding of the intermediary operating environment rather than establishing their performance levels.

Key Findings

vi. Most of the intermediaries (56%) had some form of contractual arrangements with the smallholder farmers. Key challenges highlighted by the intermediaries relate to poor farmer organisation and market oriented planning, non adherence to contractual obligations and erratic rainfall patterns.

vii. The proportion of households with members providing paid agricultural work outside their households has remained constant (at 17% of total respondents) since the 2014 survey. However, there was a notable decline in the proportion of SHF households hiring permanent or temporal employees during the 2015 period. Only 5.5% of SHF households had permanent employees compared to 17% of households during the 2013 and 2014 survey periods. The proportion of households hiring temporal labourers also declined from 36% in 2013 to 28% in 2015.

viii. The average income from *all livelihood activities* for households that participated in previous surveys (i.e. excluding all new households interviewed in 2015) is $3,242.19. This is almost comparable to the 2014 household average income of $3,266.98.

ix. When the high earning livestock traders and new households interviewed in 2015 are excluded from the computation of household income (*from all livelihood activities*), an increase of 19.4% from the 2014 average income of $1,887.39 to an average income of $2,254.47 in 2015 is recorded.

x. The average household income from *crop production* for all SHFs that also participated in the 2014 survey declined from $1360.8 in 2014 to $1,200.86 in 2015. This is largely attributed to poor rainfall distribution patterns experienced during the 2014/15 season.

xi. Although the proportion of households living below $2 per day has been increasing over the three year period, without the programme the proportions could have been higher as a result of the deteriorating macro-economic environment exacerbated by adverse climatic conditions. The 2015 Survey data shows that 39.8% of households that participated in the 2014 survey had incomes below two dollars per day while 54.2% of new households interviewed in 2015 (excluding sugarcane farmers) had incomes below the threshold. In 2014, about 30.25% of households were living below $2 per day.

xii. There has been a significant increase in households earning at least $200 per annum from agricultural activities from a baseline proportion of 12.5% of households to 75.1% of households interviewed in 2015 (excluding new households interviewed for the first time in 2015).

xiii. Sugarcane farmers have the highest average income of $16,877.51, followed by livestock traders ($6,722), banana farmers ($2,125) and farmers involved in horticulture ($630). Despite erratic rainfall patterns experienced during the 2014/15 season, farmers growing maize under contract arrangements realized more than double average incomes when compared to farmers growing the crop without contract.

xiv. Area under crop production has been declining over the years for most of the crops (contracted and non contracted crops). The average area under crop production in 2015 for most of the crops grown is below three (3) hectares per crop. The only exception is for sugarcane farmers where the average area under production is 14 hectares.

xv. The average numbers of cattle sold by traders over the years have been on a declining trend with the average number of cattle sold in 2015 (48) being less than half the average number (98) sold in 2013. This can be attributed to changing cattle marketing conditions in some areas requiring all SHF cattle sales to go through the RDC auction system.

xvi. There has been an increase in the proportion of respondents happy with intermediary linkages from 62% in 2014 to 76% in 2015. For the respondents not satisfied with the linkages the main reasons highlighted include low product buying prices provided by the intermediaries, non fulfilment of promises, not buying farmer produce and high interest rates charged on borrowing farmers. However, only 12% of respondents, a decrease from 28% in 2014, indicated they will no longer be continuing with the relationship.

xvii. With regard to key livelihood changes attributed to the programme farmers have alluded to improved food security, high income and improved capacity to procure agricultural inputs as well as enhanced capacity to pay for children's school fees.

Conclusions

xviii. In view of the challenging macro economic conditions and climate change, the ZADT programme plays a critical role in addressing the gap in financing for agricultural value chain actors that promote timely provision of affordable inputs and product markets for the SHF. Over the three years, the surveys have confirmed that with functional linkages, there is high potential for SHFs to increase productivity and income generation leading to improved livelihoods.

xix. The uneven distribution of household incomes among SHFs participating in the 2015 survey demonstrates that the target group is a heterogeneous group with farmers at the different levels and scale in the commercialisation of their farming activities. This also entails that farmers in different categories and value chains have unique needs that may require special attention in programming or the nature of support to be rendered.

xx. The CREATE fund is primarily designed to be administered by financial institutions using laid down bank lending procedures and systems. Intermediaries have pointed out the limited consideration and adaptation by conventional banking systems to the unique agricultural requirements, such as particular crop farming seasons, in the determination of appropriate loan tenure and repayment schedules.

xxi. The non adherence to contractual provisions (written or verbal) by SHFs and intermediaries has continued to affect relations between the two parties. This often results in losses (crop or revenue) by either party contributing to defaults in loan repayments.

xxii. Whilst some intermediaries have been providing extension support services to SHFs, this has not been extended to improve farmer organisation, planning and sustainable link to markets. Consequently, some intermediary farmer relations have broken down upon the expiry of the CREATE Loan support to the intermediary.

Recommendations

xxiii. It is recommended that the programme be supported and strengthened to reach more farmers countrywide, with a basket of customised products and services meeting the diverse needs of smallholder farmers. To ensure sustainability of established linkages such support and extension should be coupled with enhanced intermediary and farmer capacity building. In this regard, the capacity building component provided by SNV remains critical.

xxiv. As the ZADT programme has reached out to a wide range of intermediaries and SHFs in numerous agricultural value chains, it is important to further categorise the participating SHFs to enhance programmatic targeting, assessment of programme performance as well as guide the design of appropriate financial products for the intermediaries working in different value chains.

A three pronged approach in which the farmers served by the intermediaries are categorised in three groups based on their level of commercialisation (i.e. those at the lower tier, middle and upper end of commercialisation) is recommended.

xxv. The programme is recommended to continue supporting the following agricultural activities and value chains that have demonstrated high potential towards commercialisation of smallholder agriculture especially under contract farming arrangements; Livestock trading,

Banana, Horticulture, Paprika, Maize and sesame farming. In addition support should be extended to new value chains as determined by market demand.

xxvi. Besides provision of funds to financial institutions and monitoring results at the SHF level, there has been an increasing call from intermediaries and farmers that ZADT plays a more active role that ensures the diverse agricultural concerns of intermediaries and farmers are taken into consideration in the design of appropriate lending products. This may include setting aside an innovative fund to identify and pilot test farmer or intermediary initiatives in some new value chains that may be considered too risky by financial institutions.

xxvii. Direct financing of smallholder farming by micro-finance institutions is an area that still requires further examination and support. Key areas that need to be examined include favourable interest rates that ensure a win-win situation for the intermediary and the farmer. Consideration should also be given to the period of loan repayment as well as the nature of farming activities that can be supported by micro-finance institutions.

1. INTRODUCTION AND BACKGROUND

1.1 Introduction

The Zimbabwe Agricultural Development Trust (ZADT) and Netherlands Development Organisation (SNV) have been commissioning longitudinal annual impact studies (Sentinel Surveys) since 2013. The surveys have been targeted at smallholder farmers (SHFs) linked with agricultural value chain actors or intermediaries that accessed loans under the Credit for Agricultural Trade and Expansion (CREATE) Fund. The main purpose of the studies was to systematically track livelihood changes at the SHF level that can be objectively attributed to the work of value chain actors.

The 2015 Sentinel Survey constitutes the Third and Final Round of the surveys as planned under the DANIDA funded programme cycle for the ***Rural Agriculture Revitalisation Programme- Commercialisation of Smallholder Farming (RARP-CSF)***. The main goal of the programme is to improve household food security, generate employment and improve household income through the commercialisation of smallholder farming across eight rural provinces of Zimbabwe.

This report presents key findings from the 2015 Survey conducted during the period September/ October 2015. The report begins by outlining the methodology applied followed by a presentation and analysis of results. The last section provides key conclusions and recommendations arising from the study.

1.2 Background

The 2000 Fast Track Land Reform Programme had a far-reaching negative impact on smallholder agricultural production in Zimbabwe. The ensuing economic challenges adversely affected the viability of all agricultural value chain actors. Due to the prevailing credit crunch it became increasingly difficult to attract funding for the revitalisation of the agricultural sector. Financial institutions have been facing liquidity problems that resulted in short lending periods and high interest rates. With poor loan performance, financial institutions have become extremely risk averse and have instituted stringent lending measures beyond the reach of most rural agricultural value chain actors.

It is under this backdrop that ZADT was established in October 2010 by SNV with the support of the Humanistic Institute for Development Cooperation (HIVOS). The main goal of ZADT is ***to contribute towards the recovery and improvement of smallholder farming, food security and incomes of rural households in Zimbabwe***. The specific objective is to provide soft capital to financial services providers for lending to agricultural input and output value chain actors who ultimately benefit smallholder farmers.

ZADT, through the CREATE Fund established in February 2012, provides value chain catalyst finance in the form of loans targeted at agro-input and output value chain intermediaries that promote the participation of SHFs. These include input manufacturers, wholesalers, traders, contracting companies, processing companies and transporters. The Fund is accessed through three funding windows:

- The Inputs window,
- The Output/Marketing window, and
- The Storage/Processing window.

ZADT works with selected financial institutions to enhance access to credit for intermediary technology upgrades and working capital so as to allow the agricultural value chain actors to increase the scope of their outreach. Table 1 presents a summary of ZADT results and indicators as reflected in the logframe.

Table 1: ZADT Key Results and Indicators

Key Results	Indicators
Impact: Reduce poverty through promotion of business growth, job creation and access to finance	i) Percentage of people linked to the project living on less than $2 per day ii) Economic growth in Zimbabwe (GDP)
Outcome: Improved access to finance for intermediaries in the rural agriculture and food value chains.	iii) Percentage increase in annual household agricultural incomes of beneficiaries linked to borrowing intermediaries iv) Cumulative number of intermediaries borrowing from the participating banks v) Number of beneficiaries linked to the borrowing intermediaries vi) Growth in turnover of agribusinesses as a result of the credit facility

This report focuses on programme performance as measured by impact and outcome indicators (i) and (iii). The other indicators are outside the scope of this survey.

2. STUDY METHODOLOGY

The Sentinel Survey seeks to track the impacts of ZADT financing of agricultural value chains at the smallholder farmer level. A sentinel survey is a longitudinal study of a representative sample of households within a given sentinel site[1] for purposes of tracking changes in smallholder farmers' livelihoods (that includes changes in income and production levels). The longitudinal study is crucial in tracking changes at the household level that can be systematically attributed to the programme interventions. The concentration of resources in defined geographical areas produces a rich source of information that would be cost-prohibitive if implemented on a national scale.

The primary goal of the ZADT Sentinel Survey is *to better understand and monitor impacts at the smallholder farmer level associated with Value Chain Financing and to provide decision makers with relevant information for steering the programme towards the achievement of set objectives on smallholder farming in Zimbabwe*.

2.1 Sentinel Sites

In 2013 a total of 15 sentinel sites out of a possible 89 sites were chosen for the household survey. In 2014, 16 sentinel sites participated in the survey. Two sites (Leo Marketing and Rosgate) were dropped for the 2014 survey whilst three new sites (Nico Orgo, Sidella Trading and Tanganda Tea Company) were added. For the 2015 survey, a total of 16sentinel sites participated in the survey. This comprises 11 sites from 2014 and five new sites (Hippo Crene, Inclusive Financial Services (IFS), Hippo Valley, Amani and Zero One Africa. Five sites from 2014 survey have been dropped based on recommendations from the 2014 sentinel survey[2]. Thus, out of the first 15 sites that participated in the 2013 survey, a total of 8 sites (53.3%) participated in all the three rounds of the surveys. This is still a significant sample to establish the programme's impacts and draw lessons for future programming. Whilst it may be too early to achieve impacts for new sites sampled for the 2015 survey, findings from these sites will be important in guiding future programming options for the benefit of SHFs.

A sentinel site in this study is the borrowing intermediary serving a selected group of SHFs within defined geographical locations. Selected farmers doing business with the intermediary are referred to as sentinel site participants. From the First Round of the Sentinel Survey, the sentinel sites were selected on the basis of a four point criteria i.e.:

i) The borrowing intermediary has or will have a long working relationship with the same small holder farmers (for at least 3 years).
ii) The borrowing intermediary has a direct relationship with SHFs e.g. through direct purchase of farmer's produce
iii) The SHF's relationship with the borrowing intermediary forms a significant part of the SHF's livelihood strategy
iv) The sentinel site is a fair representation of the value chain and ecological region of Zimbabwe

This criterion has continued to be applied in the identification of new sites for subsequent rounds of the surveys until 2015. Table 2 shows the list of participating intermediaries in the 2015 survey.

The intermediaries can be classified into four main categories;

[1]A sentinel site is a community from which in-depth data is gathered and the resulting analysis is used to inform programs and policies affecting a larger geographic area.
[2]Farmers had pointed the absence of linkages with the borrowing company that would warrant further participation in the survey.

i. Providers of Agro-inputs, implements and tillage services
ii. Output Marketing
iii. Contract Farming
iv. SHF Financing Options

Table 2: Sentinel Survey 2015 - Selected Intermediaries and Line of Business with SHF

	Company/ Borrowing Intermediary	Business Concept	Link with SHF	District	Wards
	AGRO-INPUTS/ IMPLIMENTS/ TILLAGE SERVICES				
1	**Forster Irrigation**	Selling and servicing irrigation equipment	SHF produce horticultural crops using irrigation equipment supplied by company	Gwanda	11,12
2	**Jotham Zvidzai Chidavaenzi**	Tillage services and transport	Offering tillage services and transport to SHFs	Marondera Seke	14 9,16
3	**Tanganda Tea Company**	Tea production	Provides inputs and markets to smallholder tea out growers and buys SHF produce	Chipinge	14,19
4	**Hippo Crene**	Tea Production	Company provides fertilizers, chemicals and technical support to SHFs for the production of tea. Company is also pilot testing tea harvesting machines which they are giving to selected SHFs on credit.	Mutasa (Honde Valley)	1,3,28
5	**Hippo Valley**	Sugarcane Production	Company supplies inputs on credit to producers	Chiredzi	3,21
6	**Nico Orgo**	Organic and chemical fertilizer manufacturing	Sells organic and chemical fertilizers & other agric. inputs to SHFs	Goromonzi	17,18,19
	OUTPUT MARKETING				
7	**Montcase**	Horticulture retailing	Buys various horticulture products from SHFs	Murehwa	11
8	**Mupangwa/ Nzarayapera**	Mupangwa borrowed for banana irrigation development. Nzarayapera buys bananas from group.	Producing bananas. Provision of inputs on credit, technical and agronomic support as well as markets for the produce.	Mutasa	7
9	**Marcedale**	Buying cattle from SHF from all Districts in Mat North and South.	Selected farmers sell their own beasts. Provides platform through which others sell their beasts in various Districts	Binga	3,16, 17,21
10	**Carswell Meats**	Buying cattle through village middle man	Buys livestock. Provides market for the SHFs.	Mwenezi, Chivi,	3, 2 23,25,26
	CONTRACT FARMING				
11	**Aman O'brie**	Sorghum Contract Farming	Contract SHFs for the growing of Red Sorghum (Provides inputs & marketing services)	Binga	17,21
12	**Global Import and Export**	Processing canned food	Contract Farming - Farmers sell produce to company (provides ready market for horticultural produce)- company provides seed, transport and extension services	Bulilima Mzingwane	5 18
13	**Northern Farming**	Grain broking	Contracts farmers in maize production, provides inputs, technical and agronomic support, as well as market for the produce.	Mazowe/ Chiweshe	7,8
14	**Sidella Trading**	Contract growing of cowpeas	Provides inputs & markets to SHFs for sesame & cowpeas.	Muzarabani	3, 8, 9
15	**Zero One Africa**	Paprika Contract farming	Provides inputs and market for SHFs	Hurungwe	12
	OTHER				
16	**Inclusive Financial Services**	Micro-finance	Provide direct loans to SHFs involved in horticultural and livestock production	Matobo	15

2.2 Intermediary Key Informant Interviews

Unlike previous rounds of sentinel surveys that relied largely on the SHF Household Questionnaire methodology, the 2015 Sentinel Survey included intermediary key informant interviews. Annex 1 shows the Key Informant Interview guide used for the intermediary interviews. The target was to interview 16 intermediaries and establish their experiences, challenges and lessons learnt in working with SHFs. This also served purposes of data triangulation as well as addressing any gaps in information from the SHF questionnaire interviews. However, it is important to note that interviews with intermediaries did not seek to assess intermediary business performance but to enhance understanding of the CREATE Fund's impact on SHF livelihoods.

A total of 13 intermediaries successfully participated in the survey. These are as follows:

Amani Obrie
Forster Irrigation
Hippo Valley
Marcedale
Nico Orgo
Ryelands Agriculture
Tanganda Tea Company
Daeco
Hippo Crene
Inclusive Financial Services
Montcase
Nzarayapera
Sidella Trading

2.3 Smallholder Farmer Household Questionnaire Interviews

Number of respondents interviewed per site

Some minor modifications were made to the 2014 household questionnaire (Annex 2). For a longitudinal assessment, the questionnaire essentially remains unchanged throughout the various rounds of the surveys to enhance comparison of results. At least 35 households were targeted for new sites whilst in old sites targeted respondents were limited to those that participated in the 2014 survey. Table 3 presents the number of households interviewed in 2015 by site.

Table 3: Number of Respondents Interviewed by Site

Intermediary	Category of Respondents	Targeted # HHs	# HH interviewed in 2014	New HH Interviewed in 2015	Total HHs Interviewed (2015)
1. Amani	Farmers	35	0	36	36
2. Carswell	Livestock Traders	35	32	0	32
3. Forster	Farmers	36	36	0	36
4. Global Import	Farmers	34	32	0	32
5. Hippo Crene	Farmers	35	0	37	37
6. Hippo Valley	Farmers	35	0	35	35
7. IFS	Farmers	35	0	33	33
8. Jotham	Farmers	35	33	0	33
9. Marcedale	Livestock Traders	35	33	0	33
10. Montcase	Farmers	36	32	0	32
11. Mupangwa	Farmers	21	21	0	21
12. Nico Orgo	Farmers	35	0	41	41
13. Northern Farming	Farmers	33	31	0	31
14. Tanganda	Farmers	37	32	0	32
15. Sidella Trading	Farmers	37	27	0	27
16. Zero One Africa	Farmers	35	0	30	30
TOTAL		**549**	**309**	**212**	**521**

The survey team managed to interview521 households (95%)out of the targeted 549 households. Out of the 521 households interviewed in 2015, a total of 309 households (59%) participated in the 2014 Sentinel Survey. In 2014, a total of 483 households were interviewed and these comprised 397 households interviewed in 2013 and 86 new households identified in 2014. A total of 250 households participated in all three rounds of the Sentinel survey. This represents 48% of the total households interviewed in 2015.

Geographical Distribution of Respondents

A total of 521 SHFs were interviewed. These were drawn from 17 districts across 7 provinces of Zimbabwe (Manicaland Province, Mashonaland Central and East Provinces, Masvingo Province, Matabeleland North & South Provinces and the Midlands Province). Figure 1 shows the geographical distribution of respondents by province.

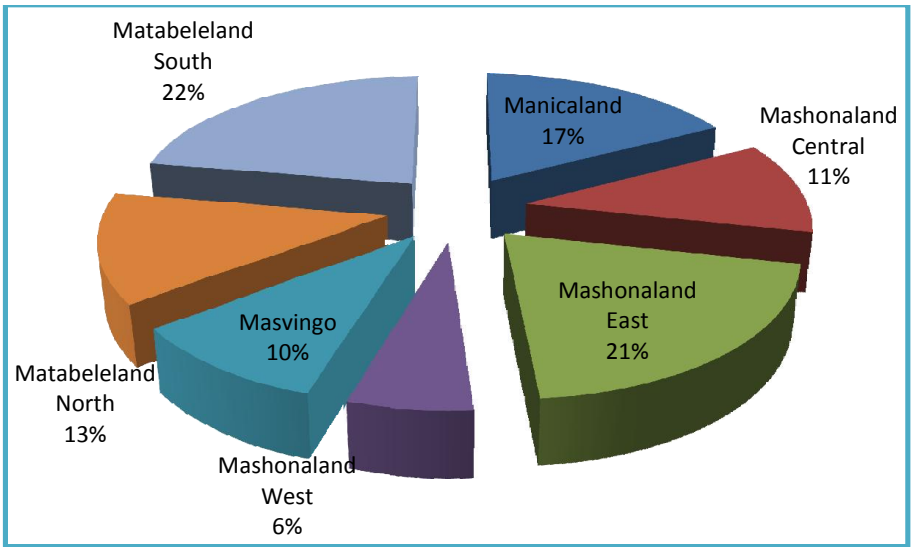


Figure 1: Distribution of Respondents by Province

Matabeleland South and Mashonaland East provinces had the highest proportion of respondents (22% and 21% respectively). The provincial distribution of respondents is similar to that of the First and Second Round Sentinel Surveys in which the two provinces had the highest number of respondents.

Respondents by Category

The 2013 and 2014 sentinel surveys had three broad categories of respondents; farmers primarily engaged in crop production, livestock traders and agro-dealers. In the 2015 survey intermediaries working with agro dealers have been dropped as there were no existing linkages. Moreover, the concerned intermediaries were no longer active borrowers of the CREATE Fund following the expiry of their loan facilities.

Figure 2 shows that crop farmers constitute 88% of respondents in 2015 while 12% of respondents were livestock traders. In 2014 crop farmers and livestock traders interviewed represented 69% and 22% respectively of the total respondents.

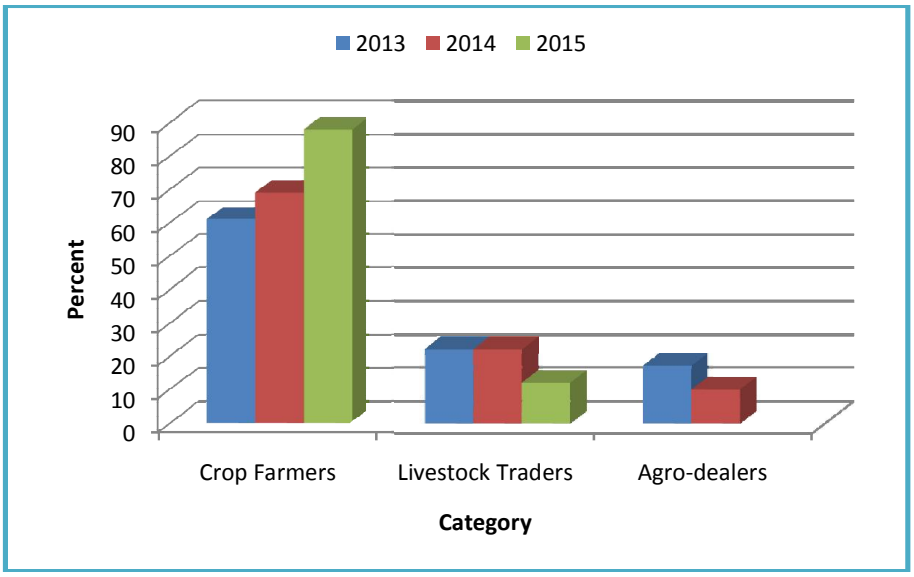


Figure 2: Proportion of Respondents by Category

In 2015, 6 new groups of farmers from six intermediaries (Hippo Crene, Nico Orgo, IFS, Hippo Valley, Amani Obrie and Zero One Africa) have been interviewed. These farmers are involved in the production of the following crops; tea, horticulture, sugarcane, sorghum and paprika. In total 212crop farmers have been interviewed from these intermediaries. This represents 41% of the total respondents in the 2015 survey.

Figure 3 shows that 33% of the SHFs interviewed are involved in horticulture, 12% livestock, 13% tea,7% sugarcane, sorghum contract farming whilst those involved maize or paprika contract farming constitute 6% of the respondents. The other field crops grown by respondents include potatoes, cowpeas and groundnuts.

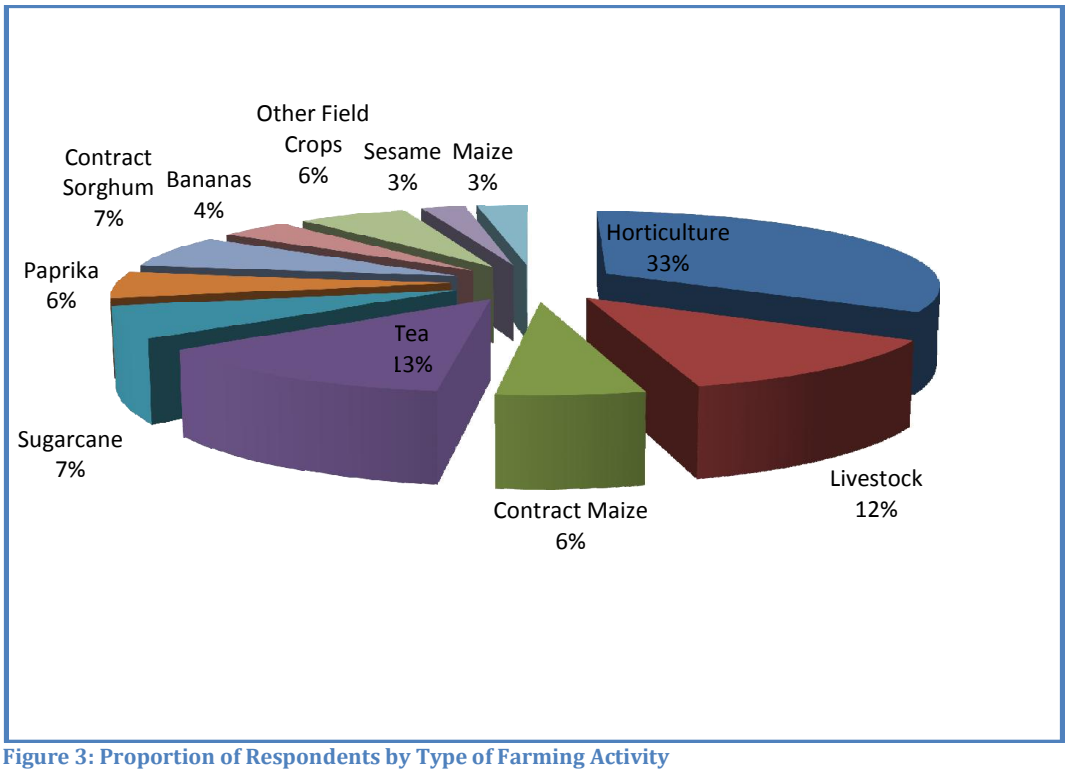


Figure 3: Proportion of Respondents by Type of Farming Activity

Data Capturing and Analysis

The data from household questionnaire interviews was captured by enumerators using CSPro. The data was then exported to the Statistical Package for Social Sciences (SPSS Version 16) to enhance analysis. To establish trends in programme effects/ impacts, results from the 2015 survey were compared to the findings from the previous surveys conducted in 2013 and 2014.

2.4 Limitations and Challenges of the Study

Each and every study has its own shortcomings and strengths. The advantages and disadvantages of longitudinal studies are well documented in literature. The purpose of this section is to highlight key challenges applicable to the ZADT Sentinel Survey.

One of the key challenges of the sentinel survey approach encountered during subsequent phases of the survey was the high attrition rates of research subjects. Attrition results from dropping of sites (intermediaries) and consequently households from the initial sample following the breakdown of linkages between the farmers and intermediaries. From the initial sample of households interviewed, only 48% were interviewed in Round Three of the Sentinel Surveys.

In addition, multi-year studies targeting the same set of respondents are prone to experiencing general fatigue by respondents that affects the quality of responses. To address this, the 2015 survey provided t-shirts to respondents as a token of appreciation for their continued participation in the survey.

In the absence of income and expenditure records, reliance is on the capacity of the respondent to recall and provide accurate income and expenditure reports over a 12 month period. This shortcoming was mitigated through probing by the trained and experienced enumerators. In addition the use of different indicators that measure the well-being of farmers (such as asset accumulation and disposal) was important in determining the correct status of households.

One other limitation experienced is the limited flexibility in the design of the survey to incorporate new variables as and when considered necessary in subsequent phases of the survey. For instance, when a need arises to track other indicators such as the food security of households, this will not be easily incorporated in subsequent data collection and analysis tools.

Whilst longitudinal sampling with rotation allows the entry of new subjects, this also results in complex data analysis and reporting processes. Due to the nature of the ZADT programme, new intermediaries and smallholder farmers join the programme each year and there is need to track programme impacts on the new groups as well.

3. FINDINGS

3.1 The Intermediary Context

This section highlights the key operations, experiences and challenges faced by intermediaries in working with SHFs across different value chains. Annex 3 shows intermediary operations, experiences, lessons learnt and recommendations by agricultural activity, crop or livestock sector. The aim is to understand the environment of the intermediary and implications on SHF livelihood outcomes. The first two rounds of the sentinel survey focused exclusively on SHFs and thereby could have missed out on some key processes/ developments at the intermediary level that can affect results at the SHF level. As pointed out in the previous section, the focus is not to provide an in-depth quantitative analysis of intermediary operations or performance, but to highlight critical variables in the commercialisation of smallholder agriculture in Zimbabwe. For a comprehensive understanding of intermediary performance, in-depth research targeting a statistically significant number of intermediaries within particular value chains would need to be conducted.

The intermediaries interviewed in the 2015 survey are involved in the following activities;

(i) Contract Farming
(ii) Marketing of Horticulture Produce
(iii) Provision of Farming Inputs and Services
(iv) Livestock Purchases & Processing
(v) Direct Financing of SHF activities

For purposes of ensuring the confidentiality of respondents, the names of intermediaries have not been disclosed in most cases. Nevertheless, intermediaries can be identified by the value chains or farming activities they are involved in.

3.1.1 General Outlook of Zimbabwe Business Environment

Zimbabwe's economic challenges have continued to intensify since the start of the Sentinel Survey in 2013. The manufacturing sector was reportedly performing below 40% due to viability problems, competitiveness and liquidity crunch[3]. At the start of the programme in 2013, the situation was critical. The SNV RARP-CSF Baseline report recorded 17% of companies targeted by the programme operating as low as 10% of production capacity. A number of companies were closing shop due to high cost of doing business and failure to pay loans to financiers. However, despite some increase in production capacity, especially for companies that accessed the CREATE Fund, the macro economic situation remains volatile. The 2015 Mid Term Fiscal Policy Review has projected economic deceleration largely attributed to poor performance in the agricultural sector as a result of the late onset of the rains and its poor distribution.

3.1.2 Operations of Intermediaries

(a) Contract Farming

Most of the intermediaries (56%) involved in the 2015 Sentinel Survey had some form of contractual arrangements (written or verbal) with SHFs. According to Food and Agriculture Organisation of the United Nations (FAO) Contract Farming can be defined as;

[3]http://www.zimbabwesituation.com/news/zimsit-m-govt-to-improve-business-environment-newsday-zimbabwe/

".. Agricultural *production carried out according to an agreement between a buyer and farmers, which establishes conditions for the production and marketing of a farm product or products. Typically, the farmer agrees to provide agreed quantities of a specific agricultural product... In turn, the buyer commits to purchase the product and, in some cases, to support production through, for example, the supply of farm inputs, land preparation and the provision of technical advice*[4]".

Intermediaries were involved with farmers in the production and marketing of the following crops under contract farming arrangements; Tea, Bananas, Sugarcane, Maize, Paprika, Sorghum, and Sesame. The intermediaries provided farming inputs on credit that included seeds, fertilisers and chemicals. Some provided extension services as well as transport for farmers' produce to the market. The payment of inputs was effected at harvest time upon delivery of products by farmers.

(b) Marketing of Horticulture Produce

Two intermediaries in the 2015 Sentinel Survey were involved in the buying of SHF horticultural produce. However, during the 2014/15 period, the intermediaries have not been consistently buying and paying for the farmers' produce. During the period under review, the two companies had no active loan facilities. For one of the two companies, due to liquidity challenges, farmers were being paid after at least one week following the delivery of their produce. In the past, when the company had an active CREATE Fund loan, the payment of farmers was immediate on delivery of produce. For the other company, farmers interviewed indicated that they were still to be paid for deliveries made last year.

In addition horticultural production by SHFs in some targeted areas has been too low for companies to continue providing marketing services. A gap in market information was also highlighted where the SHFs were producing particular crops without prior knowledge of new market requirements following the breaking down of intermediary linkages. The farmers end up taking their products to less lucrative open markets such as Mbare Musika. Some farmers have experienced heavy losses following the failure by intermediaries to purchase or collect their produce.

(c) Provision of Farming Inputs and Services

Four intermediaries interviewed worked on provision of inputs and farming services to SHFs. Two intermediaries had active CREATE Fund loans whilst the other two were still struggling to settle long overdue loans with the banks. Two of the companies were involved in the supply of farming inputs (fertilisers and seed) whilst for the other two, one intermediary focused on provision of tillage services with the other supplying irrigation equipment and provision of respective maintenance services.

The intermediaries providing farming inputs have made use of the agro-dealer network as a distribution channel. Due to challenges encountered when working with agro-dealers in the past, the companies were in the process of instituting new input distribution strategies that would minimise defaults in payment. These included making use of established wholesale/ retail outlets and small farmer saving groups that were being supported by NGOs.

The provision of tillage services to SHFs was largely on a cash basis with the farmers directly paying the intermediary upon receiving the service. The intermediary providing irrigation

[4]http://www.fao.org/ag/ags/contract-farming/faq/en/

equipment and maintenance services was supported by NGOs thereby sparing the farmer from paying for the equipment and services.

(d) Livestock

Three intermediaries in livestock trade were interviewed. The intermediaries work with agents who mobilise cattle from SHFs for sale to the intermediaries. Although most of the agents do not have contracts with the intermediaries, a new approach has been noted where the intermediaries were beginning to forge contracts with the agents. Those with contracts and some few selected agents were being provided stock feeds by some intermediaries to improve the grade of their beef. The stock feed costs were to be deducted by the intermediaries upon sale of the beasts.

(e) Direct Financing of SHFs

One intermediary in the financial services sector participated in the 2015 survey. The intermediary provides short term loans directly to SHFs in the horticulture and small livestock sectors. The farmers interviewed where involved in horticulture. These accessed loans ranging from $200.00 to $1,500.00 mainly to support irrigation of their horticultural crops. The loans were to be repaid on instalments over a period of 4 months on agreed interest rates. The farmer was required to pay the interest and loan settlement fees upfront, and often deducted from the principal amount applied for.

3.1.3 Intermediary Key Challenges

(a) Contract Farming

Markets and Pricing: Intermediaries interviewed indicated that prices of agricultural products such as tea and bananas have been on a downward trend whilst the cost of inputs has been going up. This has resulted in contracting companies passing on the burden to SHFs with the companies' purchase price of the farmers' produce remaining constant or declining over the years. For instance, one contracting company for bananas used to buy bananas in 2013 at $0.35/ kg, in 2014 the company paid $0.30/kg whilst in 2015 the price dropped to $0.22/kg. The buying price for tea has remained at $0.14/kg since 2013 for one major tea processing company. With some commodities having limited or no competition amongst the buyers, the SHF has limited options besides stopping the production of the crop or seeking adaptive strategies enabling him to survive under the prevailing price regime.

Side Marketing: In an effort to maximise returns from farming, SHFs end up selling contracted produce to other buyers offering higher purchase prices (*extent of side marketing by SHFs was not established as no figures were made available at time of survey*). Side marketing affects the contracting company's financial position especially after having invested in the production of the commodity through providing inputs to the SHFs. Outside buyers are able to offer higher purchase prices as these do not have any costs (e.g. input costs and provision of technical services) linked to commodity production.

Contracts: About 57% of contracting companies interviewed do not have written or binding contracts with SHFs. This has often resulted in agreements not being followed by both the companies and SHFs. According to the companies, SHFs do not adhere to contractual obligations that prohibit side marketing. On the other hand, SHFs are often not happy with the prices offered by companies and at times allege that companies end up giving lower prices than originally agreed. On some occasions, companies have not been able to purchase all the farmers'

produce leading to farmers having to seek alternative less paying markets or incurring high product losses.

Poor Rainfall Patterns and Late Delivery of Inputs: Smallholder dryland farming is vulnerable to adverse climatic conditions. According to the 2016 Budget Strategy Paper, a combination of late onset of the rains and its uneven distribution resulted in about 20% of the area under cropping being written off. In the absence of irrigation technology, poor rains lead to low crop yields with the farmers failing to pay for the inputs provided by the contracting companies.

Poor Infrastructure: Poor access roads to smallholder sites make it difficult for contractors to collect the farmer's produce in a cost effective manner. With small quantities produced by SHFs, it will not be viable for the contracting company to collect produce from individual farmer plots. This results in some farmers located in remote sites in areas such as Muzarabani and Hwange districts not being effectively served or having to incur high transport costs when transporting produce to a central collection point.

(b) Horticulture

The loose agreements between Intermediaries and SHFs often results in either party abandoning the relationship without due consideration or recourse for the adverse effects experienced by the other party. This has been a common phenomenon between the intermediaries and SHFs interviewed in 2015. The intermediaries do not find it prudent to bind themselves to particular farmers in the light of irregular and inadequate supplies from the farmers. Furthermore, one intermediary pointed out that agricultural commodity market prices change in response to demand and supply, hence it is not reasonable to fix buying price in a contract. However, it is important to note that there are many variations of contract farming which are largely informed by the desire to have a win-win situation.

The other challenge faced by intermediaries is poor organisation and planning by SHFs. This results in the farmers producing some products in excess thereby over-flooding the market. In the past intermediaries have benefitted from Non Governmental Organisations' (NGO) market oriented programmes that focused on building the farmers' production, organisational and planning capacity as well as market linkages. The NGOs further strengthened market linkages through ensuring regular contact and information sharing between the SHFs and the intermediaries/ market. SNV's capacity building role is critical in ensuring that established market linkages are sustained well beyond the end of any complementary/ supportive NGO programmes.

(c) Farming Inputs and Services

The intermediaries dealing with farming inputs faced critical challenges in repaying their loans following massive defaults by agro-dealers. Most agro-dealers who received agricultural inputs on consignment stock arrangements with intermediaries failed to remit funds to intermediaries upon purchase of inputs by SHFs. One intermediary interviewed who faced serious challenges of repaying bank loan amounting to $200,000 was at the risk of losing assets submitted to banks as collateral security.

The main challenge faced by the intermediary providing tillage services was limited capacity to meet farmers' demands. This was exacerbated by the fact that the farmers were not requesting for the services in a coordinated and planned manner resulting in most of them demanding for the service almost at the same time, especially at the onset of the rainy season. Whilst it is the responsibility of farmers to organise and coordinate their activities, support from partners is important in the early stages of farmer mobilisation and organisation. For intermediaries that provide services at the farm level, such as tillage or collection of produce, coordinated/planned

demand for services by farmers is critical for cost effectiveness and for the parties to benefit from economies of scale.

(d) Livestock Trading

The merging of two intermediaries in the livestock industry, Carswell Meats and Montana Meats, led to reduced competition and lower prices to the farmer. Transport costs and poor road networks to some remote livestock farmers by traders are some of the major challenges affecting the sector.

(e) Direct Financing of SHFs

The drought adversely affected farmers' production and loan repayment plans. With limited water for irrigation the farmers' horticultural produce was of poor quality and it became increasingly uneconomical to transport produce to the market.

The design of the loan facility, that required upfront payment of interest and loan settlement fees with the first instalment being paid in the first month and the total loan amount having to be fully repaid over a period of 4 months, was deemed by the farmers as being inappropriate for their farming activities. Farmers can only be able to repay after harvesting their produce. The upfront payment of interest resulted in farmers getting less capital than originally applied for. Consequently, some farmers were not able to procure the irrigation equipment that they intended to buy through the loan.

3.1.4 Key Lessons Learnt

The lessons learnt are critical considerations when assessing programmatic impacts on the livelihoods of SHFs linked with intermediaries that accessed CREATE Fund loan. The following are key lessons drawn from key informant interviews with intermediaries that have provided services to SHFs over the years.

(i) *Transparency*: In order to build trust and lasting relations, the intermediaries need to be more transparent in their operations with SHFs. This requires the intermediary to recognise and work with the local leaders (traditional leaders and local AGRITEX officials). With clear disclosure of business objectives, strategies and benefits to SHFs community support is imminent.

(ii) *Crop Insurance*: To avoid crop losses arising from adverse climatic conditions, SHFs need to insure their crops. This also ensures that the intermediary is protected from loss of income arising from the farmer's failure to service the loan or pay for inputs advanced.

The Northern Farming Crop Insurance Scheme is a good example where contracted farmers were cushioned against adverse weather conditions. Farmers received fertilisers, seeds and pesticides which they pay back through their harvest. For inputs provided per hectare, a farmer is expected to payback two tonnes of maize. However, following the poor rainfall distribution experienced in the 2014/15 season, the farmer ended up paying 0.5 tonnes per hectare with the insurance covering the remaining 1.5 tonnes.

(iii) *NGO Facilitated Farmer Organisation and Market Linkages:* Most intermediaries do not have resources for supporting farmer organisation and capacity building. Over the years, some intermediaries have benefitted from NGO programmes building the SHF's capacity to plan and produce crops for the market. However, when the NGO

programmes come to an end, established market linkages for SHFs have also crumbled. Only a few farmers continue linked to the intermediaries and produce crops as per market requirements.

(iv) Donor Dependency Syndrome: Some support provided to SHFs by some NGOs has culminated in a donor dependency syndrome. An intermediary contracting SHFs for tea production indicated that farmers with a background of receiving free inputs from NGOs have a challenge in paying for the inputs received under contract arrangements. In Binga SHFs in Kokoloza area that were contracted to grow red sorghum expressed unwillingness to continue the linkage with the intermediary in favour of a new NGO programme promising to provide free inputs to farmers. Whilst this is an area that may require further research, the discrepancy between some NGO approaches and private sector supported interventions may be retrogressive to the commercialisation of smallholder agriculture if not carefully managed.

(v) Field Monitoring of Farmer Activities: A number of intermediaries have weak monitoring systems for their field operations and farmer production and marketing processes. Where an intermediary provides inputs on credit, there is need to monitor the utilisation of the same by the farmer. Provision of such inputs should not be solely based on size of land but also on the basis of a farmer's production history.

3.1.5 Intermediary Key Recommendations

The following recommendations are drawn from key informant interviews with intermediaries.

(i) Agricultural Perspective versus Financial Orientation: There is need for the CREATE Fund to adopt a more agricultural friendly approach rather than be solely driven by financial management principles. For instance, loan tenure and repayment schedules have not been aligned to harvesting/marketing seasons of particular agricultural undertakings. This requires ZADT to play a more active role, besides fund management, and develop viable products favourable to the prevailing situation in the agricultural sector. During the time of the survey, ZADT was in the process of recruiting a consultant to develop other financial products for the sector.

(ii) Irrigation Support: In view of climate change effects, characterised by erratic rainfall patterns, it is important that development partners assist SHFs in setting up irrigation systems.

(iii) Crop Insurance: In the absence of reliable water sources, farmers are encouraged to insure their crops.

(iv) Farmer Training: Intermediaries recommended SHF training focusing on contract and financial management. Absence of binding contracts or violations of contractual provisions may be emanating from limited appreciation of the contracts or limited capacity by SHFs to negotiate for favourable contracts.

Training on financial management is critical for farmers handling large sums of money such as those in sugar plantations. These farmers are also receiving loans directly from banks.

(v) Organisation of SHFs: There is need to improve the organisation of SHFs, for instance in the form of small affinity/self help groups. This is important for pooling resources (such as through internal savings and lending) and collaborative planning that

enhances value for money and cost effective provision of services by intermediaries. Through enhanced farmer organisation and planning, the farmers can establish and sustain viable linkages with lucrative product markets.

3.2 The Smallholder Farmer Context

3.2.1 Demographic Profile of Participants

Respondents by Gender and Age

In 2015, about 38% of respondents were female. This is similar to the proportion of respondents interviewed in 2014. The proportion of respondents by gender may be indicative of the actual participation of women and men in various value chains. Most female respondents were involved in such activities as horticulture (55%), paprika and banana production (53% and 52% respectively). Male respondents were predominantly involved in livestock trading (95%), sugarcane (83%), Tea (67%) sorghum and maize contract farming (72% and 58% respectively).

The average age of respondents was 50.7 years, whilst the age range was from 20 years to 90 years. This is also comparable to the 2014 survey age range (19-88 years) and average age (49.8 years).

Household Size

The 2015 average household size of 6.0 is almost the same as that of 2014 (which was 5.9 people). In 2013 the average household size was 5.5 people. Thus, there are no significant differences in household sizes that can influence programme impact across all the three rounds of the sentinel survey. The average number of adults in the household is 3.3whilst the average number of children per household is 2.7.

3.2.2 Smallholder Agriculture and Employment Generation

Smallholder farmers depend largely on household labour whilst some few households manage to have permanent employees. Other SHFs employ temporal workers during the peak agricultural season.

Household Members involved in Agricultural Activities

On average 3.1 household members are involved in agricultural activities. Survey data also shows no gender differences in participation with an equal average of 1.8 (men or women) participating in agricultural activities.

The proportion of households with members providing paid agricultural work outside their households has almost remained constant since the 2014 survey. About 17.1% of respondents in 2015 (compared to 17.2% in 2014) indicated having members involved in paid agricultural work. The absence of change may be indicative of static or declining conditions in the sector that do not warrant increased demand for labour.

Employment Generation

Survey data shows a significant decline in the proportion of SHF households hiring permanent or temporal employees during the 2015 survey period. Table 4 shows that only 5.5% of SHF

households had permanent employees compared to 17% of households during the 2013 and 2014 survey periods. The proportion of households hiring temporal labourers also declined from 36% in 2013 to 28% in 2015.

Table 4: Average Number of Employees Hired in 2013, 2014 and 2015

Variable	Households with Permanent Employees			Households Hiring Temporal Employees		
Year	**2013**	**2014**	**2015***	**2013**	**2014**	**2015***
N (Number of respondents)	84 (17%)	84 (17%)	17 (5.5%)	172 (36%)	167 (35%)	88 (28.5%)
Average employed	2.06	1.61	1.4	4.59	4.29	2.7
Minimum	1	1	1	1	1	1
Maximum	8	5	3	25	20	8
Std. Deviation	1.434	0.822	0.6	3.840	3.538	1.5

** 2015 data excludes new households that did not participate in any other rounds of the survey besides the 2015 survey.*

The average number of permanent employees (1.4) and temporal workers (2.7) hired in 2015 is also lower than figures recorded in 2013 and 2014 periods.

As regards new households interviewed in 2015, about 89% (31) of farmers linked to Hippo Valley indicated having permanent employees with an average of 3.6 permanent employees per farmer. All the farmers interviewed hired temporal labourers at an average of 10 temporal workers per farmer. In the absence of baseline data, it is not possible to establish contribution of the linkage to SHF employment generation.

Table 5 shows a comparison of employment generation between farmers that participated in the 2014 sentinel survey (309) and the new farmers (177) interviewed in 2015 whilst excluding the high capital and labour demanding sugarcane farmers. The intermediaries engaged in 2015 (Hippo Crene, Amani, IFS, Nico Orgo) have relatively higher proportions of households with permanent and temporal employees as compared to households that participated in the 2014 survey.

Table 5: Comparison of employment figures between SHFs that participated in 2014 survey and farmers interviewed for the first time in 2015

Variable	Households with Permanent Employees		Households Hiring Temporal Employees	
Year	**SHFs that Participated in 2014 (N=309)**	**New 2015 SHFs* (N=177)**	**SHFs that Participated in 2014**	**New 2015 SHFs***
N (Number of respondents)	17 (5.5 %)	4 (2.3%)	88 (28.5%)	44 (24.9%)
Mean Employment Figures	1.4	1.8	2.7	3.0
Minimum	1	1	1	1
Maximum	3	3	8	7
Std. Deviation	0.6	0.9	1.5	1.5

* *New 2015 SHFs excludes sugarcane farmers*

The new households have higher average numbers of permanent and temporal employees when compared to households that participated in the 2014 survey. To correctly attribute socio-economic changes to the programme, it is therefore important to differentiate between new farmers engaged in 2015 and those that have participated in the past sentinel surveys.

The adjusted averages of employees permanently or temporarily employed in 2015 show a declining trend since the first 2013 sentinel survey. In 2013 households employed an average of 2.1 permanent workers whilst in 2014, the average number of permanent employees decreased to 1.6 and in 2015 this further decreased to 1.4 workers. Average number of temporal workers has decreased from 4.6 workers in 2013 to 2.7 workers in 2015.

This situation may be reflective of the depressed situation in the sector that can be due to a number of external factors including climate change. With the new farmers interviewed in 2015 having higher employment levels compared to older farmers it is also important to consider the type and magnitude of farming activities that may withstand adverse external conditions. The section on agricultural production assesses production levels of farmers in different value chains.

3.2.3 Household Livelihood Activities and Income

Figure 4 shows the proportion of households interviewed involved in particular livelihood activities. There has been an increasing trend (on an annual basis) in the proportion of households involved in crop production, livestock and gardening activities.

Livelihood Activities

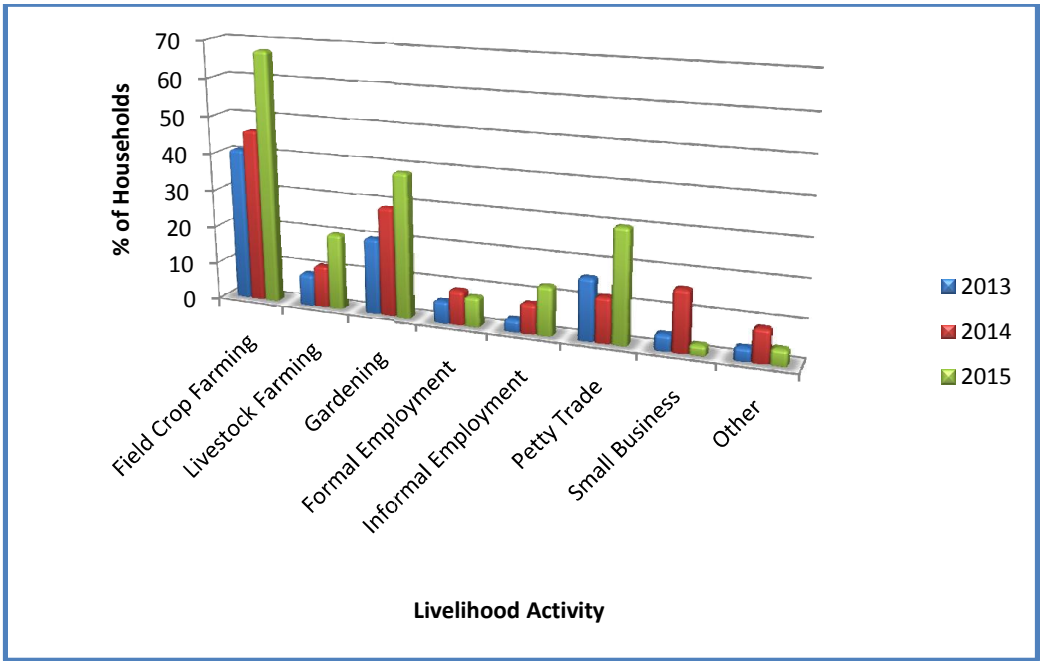


Figure 4: Proportion of Respondents Involved in Particular Livelihood Activities by Year

Households dependent on formal employment have been very few (below 10%) over the years, whilst informal employment has been on the rise with 12.9% of households involved in 2015.

The proportion of households engaged in petty trade almost doubled (30.1%) compared to 2013 levels.

Whilst these figures reflect the thrust of the programme (with emphasis on improving smallholder farming), they also reflect the general trend in the national economy. With the high levels of company closures, formal employment is increasingly becoming scarce. Focus is increasingly shifting towards farming and informal sector activities.

Average Incomes by Livelihood Activity

Annex 4A to 4C show average livelihood incomes by three respondent categories (All households interviewed in 2015, Households that participated in the 2014 survey and All New households that participated in 2015 survey).

Although most participants are involved in farming activities, these are generally less paying compared to other livelihood activities such as formal employment. Figure 5 shows that the average incomes from farming activities (crop & livestock production and gardening) are well below $3,400 per annum. When new SHFs interviewed in 2015 are excluded from the analysis, the average household income from crop production for older participants is $1,200.86. This is actually less than the 2014 average income of $1,360.80. High earning sugar cane farmers have resulted in the significant rise of the average crop production income for all 2015 respondents to $2,475.93.

The few households involved in formal employment have been increasingly getting higher incomes since 2013. However, the average incomes from informal sector activities have mostly remained constant over the three years.

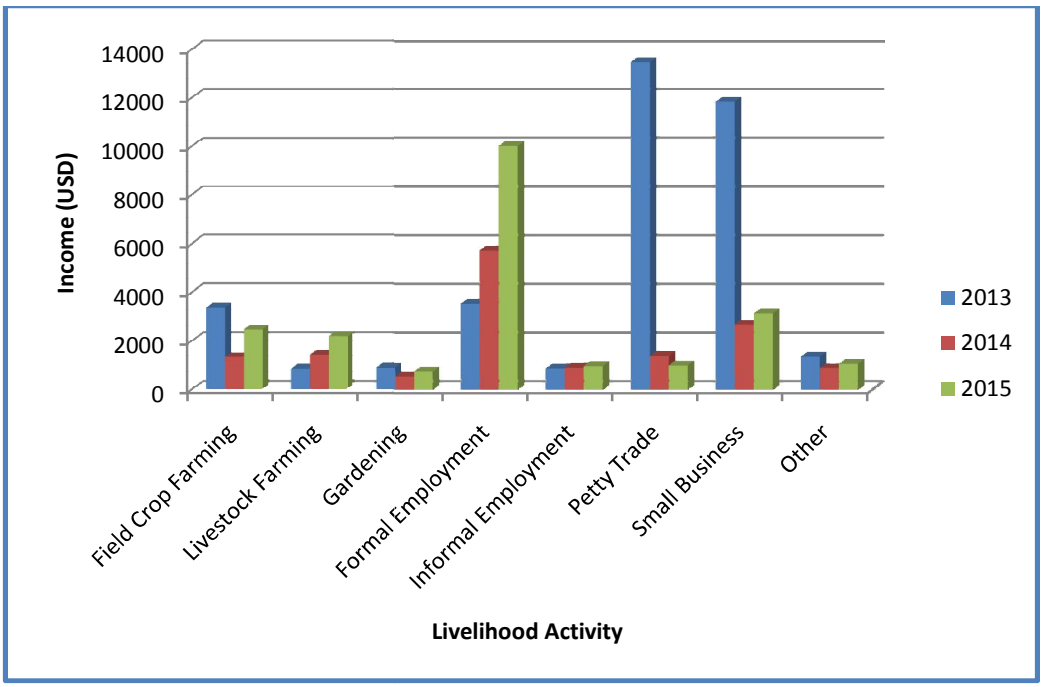


Figure 5: Average Household Income by Livelihood Activity (All Households)

Annual Average Household Income from All Livelihood Activities

The annual average household income is computed focusing on four categories of SHFs interviewed in 2015;

(i) All Households Interviewed
(ii) Households supported in Crop Production (Excluding Livestock Traders and Agro-dealers). For the 2015 household average income, all new households that never participated in previous surveys have been excluded from this category.
(iii) Households supported in livestock trading or agro-dealership (No agro-dealers were interviewed in 2015 but only livestock traders).
(iv) All New Households Interviewed in 2015

Table 6 shows average household incomes for the different respondent categories over the three years of the sentinel surveys. Although the 2015 survey shows a significant increase from the 2014 survey in average household incomes for all respondent categories, the distribution is highly skewed. About 80% of all households interviewed in 2015 have total household incomes below the average of $3,940.83.

Table 6: Average Household Incomes by Category of Farmers

Respondent Category	Period	% of HH involved	Minimum Income (USD)	Maximum income (USD)	Mean Income (USD)	Standard Deviation
All Respondents	2015	97.12	$12	$139,000.00	$3,940.83	10810.96
	2014	96.69	0	$64,680.00	$3,266.98	4866.98
	2013	99.4	$25	$112,506.00	$7,718.00	13288.43
Crop Farmers (*Excluding Agro-dealers & Livestock traders*)	2015	44.00	$12	$100,000.00	$2,254.47	7685.88
	2014	66.0	$50	$24,000.00	$1,887.39	2679.16
	2013	60.7	$25	$45,000.00	$3,411.80	5018.87
For Agro-dealers & Livestock Traders	2015	12.5	$100	$37,500.00	$6,722.00	6406.56
	2014	30.0	$400	$64,680.00	$6,369.68	6831.69
	2013	38.5	$32	$108,000.00	$13,938.01	17024.3
New 2015 Households	2015	40.7	$43	$139,000.00	$4,909.69	14036.91
Final Adjusted Annual Average HH Income for SHFs	2015				**$2,254.47**	
	2014				**$1,887.39**	

The adjusted average income for households that participated in previous surveys (excluding all new households interviewed in 2015) is $3,242.19. The 2014 household average income of $3,266.98 can be regarded as almost equivalent to the 2015 average income for the same households. The new households interviewed in 2015 have an annual average income of $4,909.69.

In 2014 livestock traders and agro-dealers had significantly higher incomes compared to farmers involved in horticulture and field crop production. On average the traders and dealers realised $6,369.68 in income. In 2015, livestock traders have an average income of $6,722.00 which constitutes 5.5% increase from the 2014 average income for the same category of farmers.

When the livestock traders and agro-dealers are excluded from the computation of household income, the final adjusted average income for SHFs was $1,887.39 in 2014. In 2015, no agro-dealers were included in the survey except some livestock traders that had existing linkages with the intermediaries. Thus, when the livestock traders and new households interviewed in

2015 are excluded, the adjusted annual average income for SHFs (involved in crop production) in 2015 is increased by 19.4% from the 2014 average to become$2,254. 47.

Proportion of People living below $2.00 per day

The proportion of households living below $2 per day has been increasing over the three year period. Table 7 shows the proportion of households living below the threshold of $2.00 per day. At baseline 46.1% of households linked to the project were living below an income of $2.00 per household per day. The 2013 Survey had 24.6% whilst the 2014 survey had 30.25% of households living below $2.00 a day. About 42.3% of *all households* interviewed in 2015 were living below $2.00 per person per day. Comparison of households interviewed for the first time in 2015 and those that have been participating since 2014 shows that the later are comparatively better off.

Table 7: Percentage of Households living below $2 per day

Category of Households	Period			
	Baseline	2013	2014	2015
All Households	46.1%	24.6%	30.25%	42.3%
Households interviewed in 2015 that participated in 2014 Survey				39.8%
New Households Interviewed in 2015				45.8%
New Households excluding Sugarcane farmers				54.2%

About 39.8% of households that participated in the 2014 survey had incomes below two dollars per day while 54.2% of new households interviewed in 2015 (excluding sugarcane farmers) had incomes below the threshold. This is a significant difference in the light of crippling economic conditions which indicates that without the programme, households could have been worse off.

Proportion of Households with at least $200 from Agricultural Activities

There has been a notable increase from baseline figures in the proportion of households earning at least $200 from agricultural production. At baseline, about 12.5% of households realised at least $200 from agricultural production. About 75.1% of households interviewed in 2015 (excluding new households participating for the first time in the sentinel survey) realised at least $200 income from agricultural activities.

Average Household Income by Type of Agricultural Activity

Comparison of household incomes for farmers involved in different farming activities shows that some activities with high capital requirements have also comparatively higher incomes. Table 8 shows that sugarcane farmers have the highest average income of $16,877.51. This is more than two times the second ranked activity, livestock trading.

Table 8: Average Household Income by Agricultural Activity

Type of Farming	N	Minimum Income	Maximum Income	Mean Income (USD)
Sugarcane	35	350	58,000	16,877.51
Livestock Trading	65	100	37,500	6,722.00
Bananas	37	0	22,291	2,125.22
Other Field Crops(cowpeas, potatoes, etc)	67	0	16,650	982.48
Horticulture	132	0	20,000	629.59
Paprika Contract Farming	30	0	3,450	532.73
Sesame	15	0	1,755	457.00
Maize Contract Farming	31	0	1,600	376.26
Tea	69	0	1,950	222.75
Sugar Beans	12	120	400	144.83
Maize	163	0	5,000	120.13
Sorghum Contract Farming	36	0	1,000	88.06
Groundnuts	27	0	150	40.07

Banana farmers are ranked third in terms of average income. Farmers growing other field crops such as cowpeas, potatoes and other cash crops such as cotton and tobacco(crops not supported by CREATE Fund), have accessed tillage services from intermediaries that accessed the Fund. There is a correlation between the level of capital injection and the income to be realized. However, this is an area that may require further research or analysis to establish the return on capital investment for various agricultural value chains. This will be useful in establishing the minimum amount to be injected into smallholder farming activities in order for significant livelihood impacts to be realized.

Despite erratic rainfall patterns experienced during the 2014/15 season, farmers growing maize under contract arrangements realize more than double average incomes when compared to farmers growing the crop without contract. This is largely due to increased access to inputs that boost production for contracted farmers.

3.2.4 Household Assets

The survey measured changes in household assets that include livestock, productive and non productive assets. Accumulation or disposal of these assets reflects changes in household livelihood conditions or wellbeing.

Livestock

Main livestock types kept by households are cattle, goats, sheep and poultry. Table 9 shows the proportion of households owning particular livestock types and average numbers of livestock purchased or sold. Without considering new households interviewed in 2015, the proportion of households owning cattle and goats increased from the 2014 level. The average number owned has also been on the increase. For cattle owners, besides natural increase, this can also be attributed to more purchases that exceeded the average number of beasts sold.

Although the proportion of households owning sheep or poultry has been on a downward trend since 2013, the average number of sheep or poultry owned has been increasing. This shows that households with interest in the aforementioned livestock types are continuing to build their stocks.

Table 9: Livestock Ownership, Purchase and Disposal

Livestock Assets		2015		2014	2013
		ALLHH	2014 HH	ALL HH	ALL HH
Cattle	% HH owning cattle	67.4%	65.7%	61%	66%
	Average Number Owned	10.6	13.1	6.7	6.4
	Average Purchased	2.6	4.8	2.2	1.4
	Average Sold	2.1	3.3	0.5	1.2
Goats	% HH owning goats	66.4%	64.7%	62%	61%
	Average Owned	8.0	9.1	6.4	5.6
	Average Purchased	1.1	2.7	2.9	1.6
	Average Sold	1.1	3.3	0.2	1.8
Sheep	% HH owning sheep	13.6%	8.4%	10%	17%
	Average Owned	4.4	7.5	4.3	3
	Average Purchased	0.6	4.7	4.5	3
	Average Number Sold	0.1	0	0.3	0
Poultry	% HH owning poultry	84.3%	86.1%	89%	89%
	Average Owned	20.3	22.2	16	21.3
	Average Purchased	6.3	25.1	52.3	47
	Average Number Sold	7.8	20.1	1.6	30

Purchase and Disposal of Assets

The proportion of households purchasing productive or non productive assets has been declining since 2013. An exception is in 2015 when the proportion of households purchasing productive assets rose from 19.1% in 2014 to 21% in 2015.

The average value of productive assets purchased has been increasing since 2013 whilst the value of non productive assets purchased has been decreasing. Table 10 shows that the average value of assets purchased in 2015 by households that also participated in the 2014 survey rose 6.3% to $959.88 from $902.68 recorded in 2014.The average value of non-productive assets

purchased by the same households declined by 39% to $211.40 in 2015. This trend demonstrates the investment behaviour of farmers that seek to strengthen their productive capacity.

Table 10: Average Value of Productive and Non-Productive Assets Purchased

Variable	Productive Assets				Non-productive Assets			
	2015		2014	2013	2015		2014	2013
	ALL HH	2014 HH	ALL HH	ALL HH	ALL HH	2014 HH	ALL HH	ALL HH
N	130	65	89	157	73	45	111	155
Mean (USD)	$1,908.47	$959.88	$902.68	$763.6	$302.7	$211.4	$346.39	$495.46

Only 3.2% of households that participated in 2014 survey sold productive assets in the 2015 survey at an average value of $402.80. The main reasons given for the disposal of assets include supporting agricultural production, payment of school fees, food purchases and replacement of old equipment.

3.2.5 Agricultural Production

With increased access to finance for agricultural value chain actors, some expected outcomes include an increase in the area under crop production and productivity per hectare.

Area under Crop Production

Besides availability of farming land, the area under smallholder crop production is often determined by availability of inputs and market systems. Critical inputs include affordable seeds, fertilisers, chemicals, labour and tillage facilities. Market determinants include accessibility to the market as well as prevailing market prices.

Annex 5 shows that the area under crop production has been declining over the years for most of the crops (contracted and non contracted crops). The only crops in 2015 with marginal increase in area under production are beans and garlic. Area under groundnuts that was on the increase in the last survey is also on a downward trend. The average area under crop production for most of the crops supported is below three (3) hectares. The only exception is sugarcane with an average area under production being 14 hectares.

Crop Productivity

A number of factors determine crop productivity per hectare. One key factor being addressed by the ZADT programme is enhancing SHF access to affordable inputs. Table 11 shows productivity levels (yield per hectare) of selected crops grown by SHFs over the three year period.

Table 11: Crop Productivity by Period

Crop	Productivity by Period (kg/ha)			
	Baseline	2013	2014	2015
Maize	247.2	2963.1	2114.88	2295.86
Sugar Beans	628.8	1616.9	5422	1338.37
Sesame	657.3	-	414	634.42
Groundnuts	1448.5	1250	1700.9	1354.84
Tomatoes	25843.2	9861.1	6450	4956.96
Banana	37923.6	14977.2	7807.7	11407.12

Crop productivity per hectare is variable for most of the crops but often below 2014 or 2013 levels. While there has been an improvement of maize and banana productivity per hectare from 2014 to 2015, the rates are still below the 2013 levels. Productivity of beans per hectare was very low compared to results recorded in the 2014 survey. The productivity of groundnuts and tomatoes is also going down compared to baseline and levels reached last year.

Cattle Trading

The average numbers of cattle sold by traders over the years have been on a decreasing trend. Table 12 shows that the average number of cattle sold in 2015 was less than half the average number sold in 2013. This can be attributed to changing cattle marketing conditions regulating cattle trading through Rural District Council facilities. On the other hand, the average income realised was also on a declining trend. According to the cattle traders interviewed the market price of cattle has been constant or going down since 2013. For instance, Marcedale has managed to maintain a constant price for beef since 2013 whilst Daeco has reduced the buying price from $1.90/kg in 2013 to $1.50/kg in 2015.

Table 12: Average Number of Cattle Sold and Average Income Realised

Statistic	Cattle Sold				Income from Sales			
	Baseline	2013	2014	2015	Baseline	2013	2014	2015
N	-	-	51	60	-	-	51	60
Mean	-	98	53	48.1	$5,500.00	$11,266.3	$3,557.69	$2,941.00
Minimum	-	1	6	1	-	-	$420.00	$500.00
Maximum	-	480	168	720	-	-	$11,760.00	$31,000.00

3.2.6 Farmer Relations with Intermediaries

Most of the SHFs interviewed had been linked with the intermediaries that accessed CREATE Fund Loan for at least three years. Figure 6 shows that 76% of the households have been working with the companies for periods stretching from 3 years to over 25 years. The new households interviewed in 2015 constitute about 89% of the respondents with less than 3 years' linkage to intermediaries.

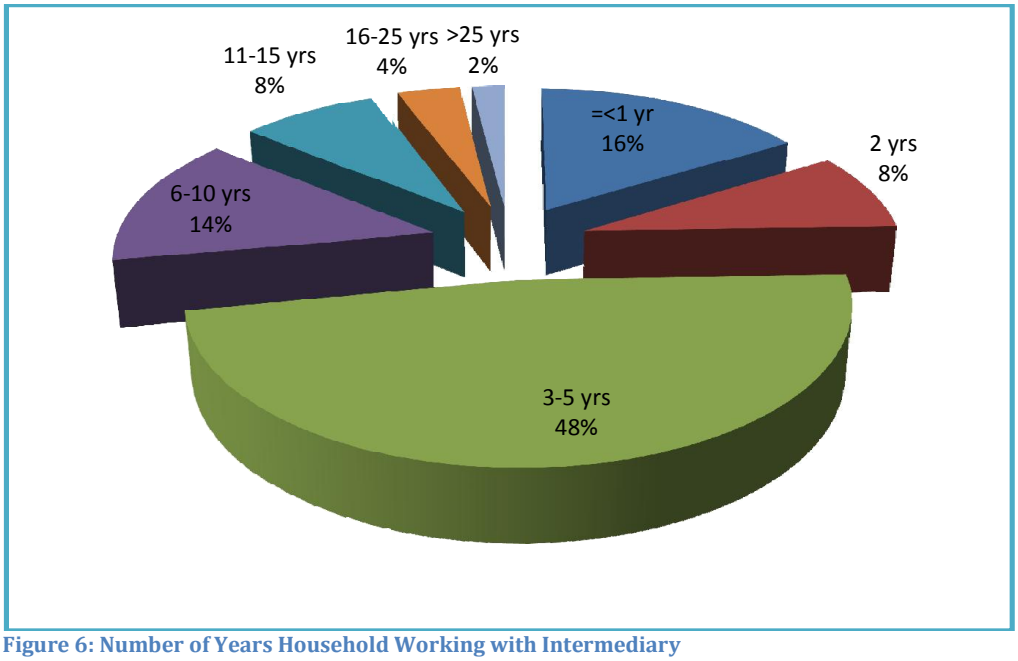


Figure 6: Number of Years Household Working with Intermediary

Figure 7 shows an increase in the proportion of respondents happy with intermediary linkages from 62% in 2014 to 76% in 2015[5]. Although there is a notable increase over the last two years, the proportion of satisfied households is still far below that of 2013 where 89% of the respondents were happy with the intermediary linkages.

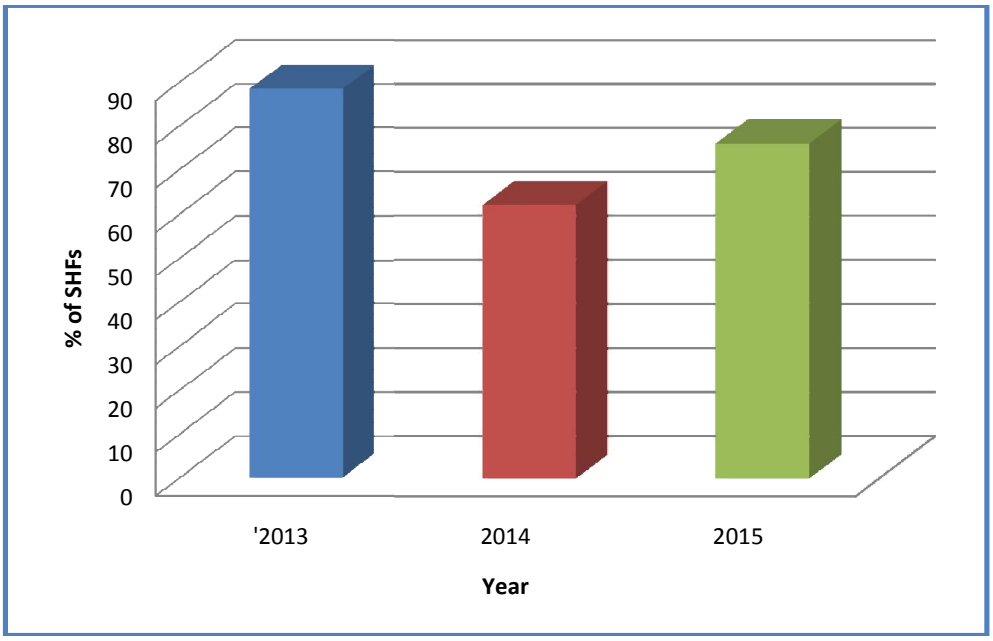
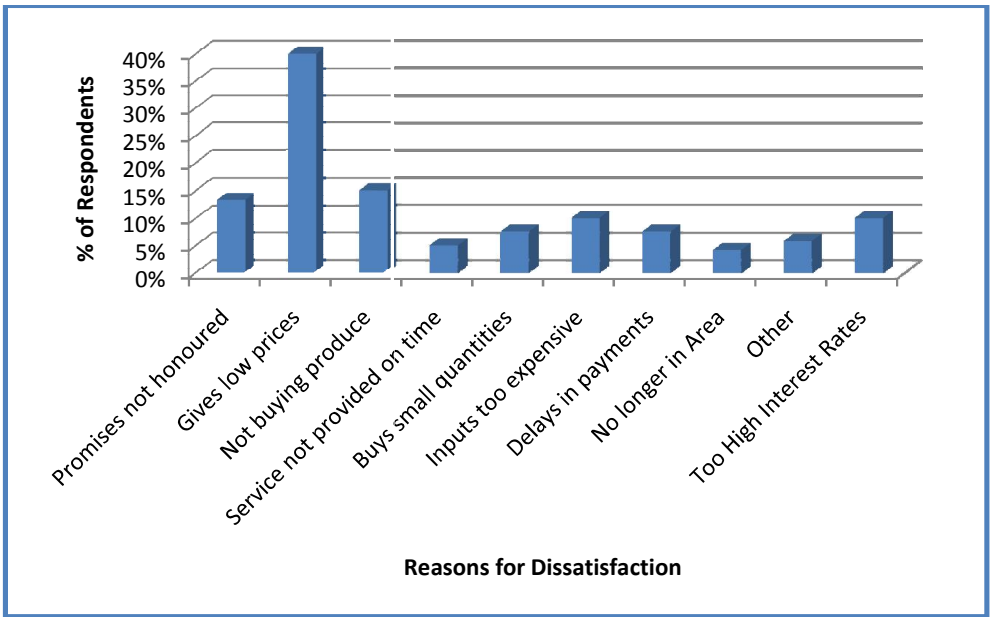


Figure 7: Proportion of SHFs Satisfied with Intermediary

Nevertheless, the 24% of respondents not satisfied with the linkages is significant and should be taken into consideration. Figure 8 shows the main reasons cited by respondents leading to dissatisfaction with intermediary services.

[5] The 2015 increase can also be attributed to the fact that farmers working with five intermediaries in 2014 that had no functional linkages were dropped from participating in the 2015 survey. The majority of these farmers were dissatisfied with the relations. Six new sites (with 212 SHFs) were added in the 2015 survey.



(N=120)

Figure 8: Main Reasons for Dissatisfaction with Intermediary Services

The main reasons for dissatisfaction include low product buying prices provided by the intermediaries, non-fulfilment of promises, not buying farmer produce and high interest rates charged on borrowing farmers. These reasons are almost similar to the ones highlighted in the 2014 survey. This shows limited efforts have been made to improve relations between farmers and intermediaries at least over the last two years.

About 12% of respondents indicated they will no longer be continuing with the relationship with intermediaries largely due to the aforementioned reasons. The proportion of farmers not continuing with the relationship in 2015 is however less than last year's 28% but equal to 2013 percentage of non-interested farmers.

Table 13 shows the proportion of respondents satisfied and willing to continue with the established intermediary relations. At the time of the survey 6 companies had significant numbers of SHFs not actively working with the companies. This could be largely due to the fact that these intermediaries had not been reaching the farmers with their services/ products, rather than farmers not being happy with the company services.

Intermediaries with more than 50% of SHFs not happy with company operations or services/ products are as follows;

- Amani Obrie
- Global Import
- Mupangwa
- Sidella Trading
- Inclusive Financial Services

Table 13: Proportion of Respondents Satisfied and Willing to Continue with Linkages

Company Name	Still Working with Company	Happy With Business Relationship	Continuing with Relationship
AmaniObrie	88.9%	38.9%	41.7%
Carswell	56.3%	88.9%	70.8%
Forster	100%	100%	100%
Global Import	84.4%	23.1%	92%
Hippo Crene	100%	89.2%	97.2%
Hippo Valley	100%	94.3%	100%
JothamChidavaenzi	87.9%	87.9%	87.5%
Marcedale	97.0%	100%	100%
Montcase	3.1%	100%	100%
Mupangwa	23.8%	14.3%	81%
Nico Orgo	100%	100%	100%
Northern Farming	61.3%	100%	93.5%
Tanganda	96.9%	96.9%	100%
Sidella	3.7%	3.7%	100%
Zero One Africa	96.7%	100%	100%
Inclusive Financial Services	63.6%	33.3%	37.5%

Out of the five companies mentioned above, most SHFs are unlikely to continue linkages with Amani Obrie and Inclusive Financial Services. This could be due to availability of a viable competitor or service provider with products or services that are less costly to the farmer (as in the case of Amani) or unfavourable/ inappropriate linkage terms for the SHF (as in the case of IFS).

For the other three companies (Global Import, Sidella Trading and Montcase) farmers, who have had experience working with these companies, are still cognisant of the benefits that accrue from the linkages and hence would still want to resuscitate the relationship. These companies have not actively provided their services to the SHFs over the last year due to various reasons.

3.2.7 Key Changes in Smallholder Farmer Livelihoods

The ZADT programme is expected to contribute to improved livelihoods for the targeted smallholder farmers. These can be measured in terms of improvement in human capital (health and education), physical capital, financial capital, social capital and natural capital. Programme attention has been largely on three livelihood capitals; human, financial and physical.

Figure 9 shows a comparison of key livelihood changes for the periods 2014 and 2015 for linked farmers that participated in both surveys.

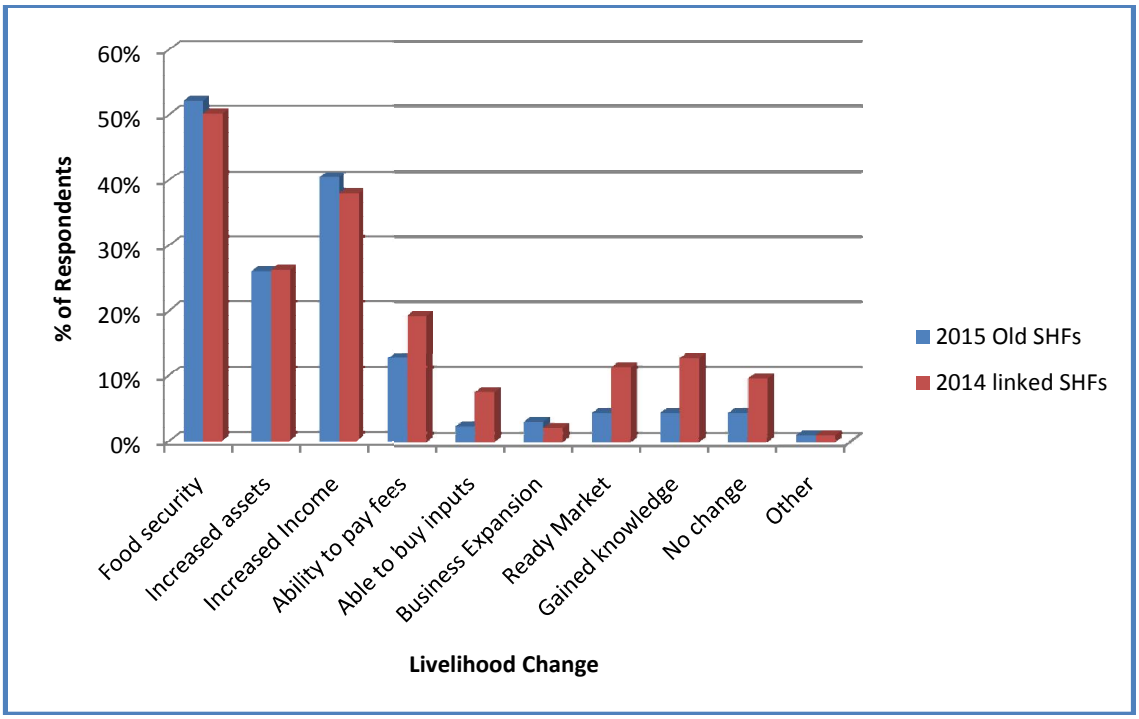


Figure 9: Comparison of Livelihood Changes between 2014 and 2015 SHFs

The proportion of farmers indicating improved food security increased from 50% in 2014 to 52% in 2015.

Farmers have also alluded to increased income and assets as a result of the linkages. Whilst increase in income is confirmed through household income data collected, the same cannot be said about assets. The absence of baseline data and indicators intended to track changes in household assets results in the assessment being entirely dependent on the farmer's perception.

The ability to pay school fees for children is also a notable contribution to SHF livelihoods. The other changes attributed to the programme, although by relatively fewer farmers, include the ability to procure agricultural inputs, enhanced access to product markets as well as accumulation of knowledge. As indicated in the 2014 Sentinel report these are also important considerations (or lower level indicators) that contribute to the realisation of higher level outcomes.

About 4% of SHFs interviewed in 2015 indicated having no livelihood changes that can be attributed to the programme. This constitutes a notable decrease from the 10% recorded last year. However, for the new households interviewed in 2015, about 25% indicated having no livelihood changes that can be attributed to the linkage. This is justified especially when considering that agricultural linkage outcomes are not immediate but require some time to be realised. Some immediate results of linkages include access to inputs. About 33% of the new households interviewed indicated improved access to inputs as a notable change.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

Zimbabwe's economic challenges have continued to intensify thereby affecting the viability of agri-business in Zimbabwe. The situation has been exacerbated by a poor agricultural season following erratic rainfall distribution. Given the prevailing socio-economic challenges, the consistency in the provision of quality services to SHFs by intermediaries has been varied and dependent upon value chain. The ensuing intermediary, SHF relationship ultimately determines the scale of livelihood improvement at the SHF level. Where relations have been strong, livelihood outcomes, such as increased household income have been considerably significant. Below, are specific conclusions that can be drawn from the 2015 Sentinel Survey:

1. Despite challenges encountered by both intermediaries and SHFs in 2015, the survey notes that the ZADT programme still plays a critical role in addressing the gap in financing for agricultural value chain actors that promote timely provision of affordable inputs and product markets for the SHF. Over the three years, the surveys have confirmed that with functional linkages, there is high potential for SHFs to increase productivity and income generation leading to improved livelihoods. However, threats to the commercialisation of smallholder farming often arose when intermediaries faced challenges affecting the continuous provision of required services or products to SHFs during or after the CREATE fund lending period. These included the general macro-economic challenges affecting liquidity, especially after the active lending period, poor loan servicing by agents and farmers and the erratic rainfall patterns.

2. The uneven distribution of household incomes among SHFs participating in the 2015 survey demonstrates that the target group is a heterogeneous group with farmers at the different levels and scale in the commercialisation of their farming activities. The SHFs accessing the services/products of intermediaries can be differentiated by size of land holdings and value chain. The survey has shown that various agricultural undertakings have different capital requirements as well as returns on investment. Some with high capital investments (such as sugar cane production) have high returns and also high risk of default, especially for farmers with limited or no training in financial planning and management. This means that farmers in different value chains have unique needs that may require special attention in programming or the nature of support to be rendered.

3. Whilst the programme seeks to commercialise smallholder agriculture and increase household incomes, there is a significant proportion of targeted farmers that are still struggling to produce enough to meet household basic needs such as food. Thus, besides some marketing challenges encountered, serious commercial production is still very low amongst the target group. This is also reflected in the recorded meagre incomes realised from agricultural sales as well as the significant proportion of households living below the $2.00 per household per day (i.e. 39.8%).

4. The CREATE fund is primarily designed to be administered by financial institutions using laid down bank lending procedures and systems with minimal or no consideration to unique agricultural requirements such as crop farming seasons that should determine loan tenure and repayment schedules. Consequently, some intermediaries and farmers have struggled to repay the loans within the specified time frames.

5. Most of the farmers that accessed small loans from a financial institution were largely not satisfied with lending conditions and services by the intermediary. The loan tenure, interest and upfront payments have been regarded as unwieldy for SHF development.

6. The non-adherence to contractual provisions (written or verbal) by SHFs and intermediaries has continued to affect relations between the two parties. This often results in losses (crop or revenue) by either party contributing to defaults in loan repayments.

7. Whilst some intermediaries have been providing extension support services to SHFs, this has not been extended to improve farmer organisation, planning and sustainable link to markets. Consequently, some intermediary farmer relations have broken down upon the expiry of the CREATE Loan support to the intermediary.

   Some farmers, particularly those in horticulture, have not been able to self-organise and produce products in accordance with market requirements. Some intermediaries have relied on external activities by NGOs that supported farmer organisation and market oriented production. At the end of such NGO programmes farmers have not been able to sustain established processes and linkages. The intermediaries, on the other hand, being largely profit oriented, have not been able to cover the critical gaps at the farmer level.

4.2 Recommendations

1. Given the prevailing socio-economic conditions in the country, the ZADT programme remains very relevant and vital for the revitalisation and development of smallholder farming in Zimbabwe. It is therefore recommended that the programme be supported and strengthened to reach more farmers countrywide, with a basket of customised products and services meeting the diverse needs of smallholder farmers. To ensure sustainability of established linkages continued capacity building, targeting both intermediaries and farmers, remains critical.

2. The ZADT programme has reached out to a wide range of intermediaries and SHFs in numerous agricultural value chains. It is important to further categorise the participating SHFs to enhance programmatic targeting, assessment of programme performance as well as guide the design of appropriate financial products for the intermediaries working in different value chains. Survey results over the three years show that the programme has great potential or positively contributed to improved productivity and household income for farmers involved in the following value chains and especially under contract farming arrangements; Livestock trading, Banana, Horticulture, Paprika and Maize farming. It is therefore recommended that ZADT continues to support these value chains. In addition, the programme should also support the development of other new or promising value chains such as sesame that have potential to improve household income or as demanded by the market.

   However, there is also need to draw a line (in terms of scale of production/ acreage) upon which the level of programme support will be determined. For instance, some households supported by the programme are still at the subsistence farming level (particularly farmers without contractual relations with markets) whereas others (such as sugarcane farmers) are already operating at a commercial scale (with cropping area well above 10 hectares).Thus, the programme may require a three pronged approach in which the farmers served by the intermediaries are categorised in three groups based on their level of commercialisation (i.e. those at the lower tier, middle upper end of commercialisation).

3. Besides provision of funds to financial institutions and monitoring results at the SHF level, there has been an increasing call from intermediaries and farmers that ZADT plays a more active role that ensures the diverse agricultural concerns of intermediaries and farmers are taken into consideration in the design of appropriate lending products by banks. This may include setting aside an innovative fund to identify and pilot test farmer or intermediary initiatives in some new value chains which may be considered too risky by financial institutions.

4. Direct financing of smallholder farming by micro-finance institutions is an area that still requires further examination and support. Key areas that need to be examined include favourable interest rates that ensure a win-win situation for the intermediary and the farmer. Consideration should also be given to the period of loan repayment as well as the nature of farming activities that can be supported by micro-finance institutions. It is recommended that farmers insure their agricultural activities to cushion against adverse climatic conditions that lead to default in loan repayments.

5. There is need for development partners such as SNV to continue assisting with SHF training in the establishment of viable farmer intermediary contracts. This should also entail strengthening farmer contract negotiation and management skills. To promote sustainable linkages between SHFs and Intermediaries more programmatic attention should be given towards improvement of SHF coordination, organisational development and market oriented production.

ANNEXES

Annex 1: Intermediary Key Informant Interview Guide

ZADT 2015 SENTINEL SURVEY: INTERMEDIARY QUESTIONNAIRE	
Province	
District	
Intermediary/ Company Name	
Respondent Name	
Respondent Position in Company	

A. BUSINESS PROFILE

(i) Value Chain Category(tick) Agro-dealer ☐ Wholesaler ☐ Processor ☐

Contract Farming ☐ Trader ☐ Manufacturer ☐

(ii) Briefly describe your line of business

B. LOAN UTILISATION

(i) Briefly explain how the CREATE Fund loan has been utilized in the business

ii) Have you faced any challenges on CREATE Fund Loan repayments to the bank? 1= Yes; 2= No ☐

iii) If yes, please state the main challenges faced.

C. BUSINESS LINK WITH SMALLHOLDER FARMERS

(i) How many SHFs have you been working with over the last three years?

Year	# of Smallholder Farmers	Province (s) of Operation	Districts
2015 (Current)			
2014			
2013			

(ii) What strategies do you use to reach out to SHFs with your products/ services?

(iii) Do you keep records of the SHFs that you deal with? 1=Yes; 2=No ☐

If No, please skip to Q8

(iv) If Yes, How do you keep the records?

v) What type of information do you capture on SHF records?

vi) Do you share farmer records with your partners (e.g. financial institutions)? 1=Yes; 2=No vii) If no, state the reason why you do not share the records?
(viii)If you don't keep records, please explain why:
D. CAPACITY BUILDING
(i) Are you effectively reaching out to SHFs? 1= Yes; 2=No; 3=Other (ii) Can you please explain your answer above.
(iii) If No to Q1, what do you think should be done to effectively reach out to SHFs?
iv) Is there any support that you give to SHFs so that they meet your specific requirements :1=Yes; 2=No v) If Yes, Please specify the support you give to SHFs
vi) Is there any other support that you think should be given to SHFs? 1=Yes; 2=No vii) If, Yes Please Specify.
E. ACHIEVEMENTS/ BUSINESS PERFORMANCE (i) What proportion of your annual revenue comes from SHF?
(ii) How many times have you accessed CREATE Fund Loans?
(iii) What changes have happened to your company after accessing CREATE Fund loan(s) (a) Capacity Utilisation
(b) Annual Turnover Growth
(c) Other
F. PRODUCT/ SERVICE COST to the Smallholder Farmer/ BUSINESS BUYING PRICE (i) Indicate your product/ service cost/buying price to the smallholder farmer

Product/ Service	Unit	Average Annual Price per Unit (USD)		
		2015	2014 2013	2013

(ii) Do you have written contracts/ agreements with the SHFs? 1=Yes; 2=No

(iii) If Yes, Indicate any challenges encountered in adhering to the contract?

(iv)If no contracts, give reasons why you do not have contracts with smallholder farmers

G. POSSIBLE IMPACTS at Small Holder Farmer Level

(i) In which areas/ districts do you think your products/ services have had great impact at the smallholder farmer level?

(ii) What do you think are the main reasons for the great impact?

(iii)In which areas/ districts do you think your products/ services have had the least impact at the smallholder farmer level?

(iv) What do you think are the main reasons for the least impact?

H. CHALLENGES

(i) What are the main challenges that you faced as a business?

(a) Over the last 12 months:

(b) Over the last 3 years:
I. RECOMMENDATIONS (i)What are your key recommendations for improved business operations and impact at the smallholder farmer level?
J. LESSONS LEARNT (i) What would you say are the key lessons learnt based on your experience doing business with smallholder farmers?
GENERAL COMMENTS BY INTERVIEWER

:**of Interviewer Name**	**Date:**

Annex 2: Household Questionnaire

ZADT Sentinel Site Questionnaire 2015									
HH Code (Eight digit code: Province, District, Ward and Household number This number will be used for this HH throughout the project.									

Section A: Site and Location(*write the response in the space provided*)

A0. Company Name:			
A1. Enumerator's name:		**A2** Date of interview: dd/mm//yy	
A3. Province	**A4.** District	**A5.** Ward Number	**A6.** Village

Province Codes:1=Manicaland; 2=Mash Central; 3= Mash East; 4=Mash West; 5=Masvingo; 6=Mat North; 7=Mat South; 8=Midlands

District Codes: 1=Beitbridge; 2=Binga; 3=Bulilima; 4=Chipinge; 5=Chiredzi; 6=Chivhu; 7=Chivi; 8=Chiweshe; 9=Goromonzi; 10=Gwanda; 11=Hurungwe 12=Insiza; 13=Marondera; 14=Masvingo; 15=Mberengwa; 16=Murewa; 17=Mutasa; 18=Muzarabani; 19=Mwenezi; 20=Mzingwane; 21=Nyanga; 22=Seke; 23=Zvishavane

Section B: Demographics of the Contract Holder/ SHF

B0. Category of Respondent: 1=Farmer; 2=Livestock Trader; 3=Agro-dealer; 4=Other (Specify)					
B1.Name:		**B2.**Sex :1=Male; 2= Female			
B3. Year of Birth (e.g. 1980)					
B4. Number of people in the Household at time of survey.	**Total**	***Adults***: Male		Female	
		Children(below 18yrs)Male		Female	
B5. How many household members are involved in agricultural activities?:		Male		Female	
B6How many people outside your household did you employ during the season		***Permanent:*** Male		Female	
		Temporal: Male		Female	
B7. Were there any other household member(s) involved in paid agricultural work during the season (e.g. middleman, piece work)		1=Yes; 2=No		**B8**. If Yes, indicate number:	

Section C: Assets (How many of each of the following assets does the household own or keep?)

C1. Livestock

Asset	Total	How many did you buy in the past 12 months	How many did you sell in the past 12 months
1=Cattle			
2=Goats			
3=Sheep			
4=Poultry			
5=Pigs			

C2. Household Assets

1. Did you buy any productive assets in the last 12 months e.g. hoes, carts, wheelbarrows, vehicles	1=Yes 2=No		**1b.**Value of asset/s bought :	US$
2. Did you buy any non-productive assets in the last 12 months e.g. radio, cell phones, sofas etc.	1=Yes 2=No		**2b.**Value of asset/s bought :	US$
3. Did you sell any productive assets in the last 12 months?	1=Yes 2=No		**3b.** Value of asset/s sold:	US$
4. If yes to Q3, specify the reason for selling productive assets	*1=Purchase food; 2=IGA; 3=School fees; 4= Financial problems; 5=Support Agric Production; 99=N/A; 6=Other (Specify)*			
5. Did you sell any non-productive assets in the last 12 months?	1=Yes 2=No		**5b.**Value of asset/s sold	US$
6. If yes to Q5, specify the reason for sellingnon-productive assets	*1=Purchase food; 2=IGA; 3=School fees; 4= Financial problems; 5=Support Agric Production; 99=N/A; 6=Other (Specify)*			

Section D: Household Income

(Indicate the collective income for the household from the various activities for the last 12 months)

Livelihood Activity	Annual Income	Livelihood Activity	Annual Income	Livelihood Activity	Annual Income
1 = Field Crop Production		**5** = Informal employment		**9** = Petty Trade	
2=Livestock		**6** = Remittances		**10** =Agri business	
3 = Gardening		**7** = Formal Mining		**11** = Other (Specify)	
4 = Formal employment		**8** = Informal mining			
Total Annual Income (US$)					

Section E: Production and Marketing

E1. Crop Production and Marketing

a) Which crops did you grow this season (Use codes below)	b) Was crop grown on contract or not 1=Yes 2=No	c) Area Planted (ha)	d) Total Harvest (kg)	e) Quantities delivered for the contract in the past 12 months (kg)	f) Income from sales (US$)	g) Quantities for household consumption (kg)	h) Surplus Quantities for sale to other buyers	i) Surplus Income (US$)

***Crop Codes**: 1=Maize; 2=Cotton; 3=Tea; 4=Tobacco; 5=Tomatoes; 6=Potatoes; 7=Bananas; 8= soya bean; 9=Beans; 10= Groundnuts; 11= Cowpeas; 12=Sesame; 13=Garlic; 14=Peas; 15=Cucumbers; 16=Carrots; 17=Butternuts; 18=Green pepper; 19=Green beans; 20=Wheat; 21=Chillies; 22= Paprika; 23=Sugarcane; 24=Other (Specify)*

E2. Livestock Production and Marketing(*Fill in if HH is supplying livestock, if not skip to E3*)

Livestock Type*(Use codes below)*	Are animals reared on contract or not 1=Yes 2=No	Number of animals owned	Quantities sold over the last 12 Months	Total Income from sales (US$)

***Livestock Codes:**1=Cattle; 2=Goats; 3=Sheep; 4= Poultry; 5=Pigs; 6= Other (Specify)*

E3. Agricultural Services(*Fill-in if HH is receiving agricultural services*)

Type of Service you are getting from company (*Use codes below*).	Number of times service was given in the past 12 months	Amount paid for the service (US$)	Impact of service to household agricultural production[*Codes: 1=Increased Production; 2=None; 3=Other (Specify)]*

Section F: Contractual Issues

F1. Are you still working or dealing with this Company?	1=Yes;2=No	
F2. How long have you been working with the company (In years)		
F3. Are you happy with the business relationship with company?	1=Yes; 2=No; 99=N/A	
F4. If No why?	*(Multiple Response) 1=Not honouring their promises/contracts; 2=Company buys at low prices; 3= Not buying produce/output; 4= Do not provide services on time; 5=Buy in small quantities; 6=Inputs too expensive; 7=Delays in payments; 8=Company no longer operating in the area; 99=N/A*	

	9=Other (Specify)		
F5. Do you see yourself continuing with the relationship in the next year/season?		1=Yes; 2=No; 99=N/A	
F6. If No why?	*(Multiple Response) 1=Prices too low; 2=Defaulted/ Failed to pay back; 3=Not pleased with service by company; 4=considering other markets; 5=No capital; 6=Company services no longer necessary; 7=Farming activity no longer viable; 99=N/A; 8=Other (Specify)*		
F7. What major changes have happened in your life due to the relationship you have with the company? ***(Multiple Response) Codes:*** *1=Food security; 2=Increased assets; 3= Increased Income; 4=Ability to pay fees; 5=Able to buy inputs; 6=Business Expansion; 7=Ability to pay rent; 8=Ready Market; 9=Gained Knowledge; 10=No Change; 11= Improved access to capital; 12=Improved Health; 13=Other (specify)*			
F8. Enumerator General Comments; including human interest story on programme impact (positive or negative)			

END

Annex 3: Intermediary Operations, Challenges, Lessons Learnt and Recommendations

Value Chain Component/ Farming Activity	Operations	Challenges	Comments, Lessons Learnt &Recommendations
• Tea • Bananas	• Contract Farming Arrangements. SHFs provided inputs and ready produce market • Limited support/ capacity building provided by intermediaries	• Loose contracts and parties not adhering to agreed parameters • Buying prices going down annually while input costs are increasing • Side marketing • Farmers have developed a donor syndrome where they do not want to pay for their own inputs • *Loan Tenure not favourable for banana plantations*	• Transparency is critical for SHF trust & building enduring relations • Availability of ***irrigation water*** and better ***management*** practices are important for improved productivity • Farmer Training on Contract Management is critical for improved adherence to contract provisions. • There is need to monitor inputs given to farmers. These should be given on the basis of production history not land size • Need for the Fund to have more of an agricultural perspective rather than rely solely on bankers' viewpoint.
Sugarcane	Farmers accessing loans directly from banks	High capital investment (initial and working capital)	Training of SHFs on financial management is critical
Maize	SHF provided inputs	Adverse climatic conditions	With crop insurance, climatic impact on SHF is mitigated
Paprika	SHF provided inputs	Poor rains and late delivery of inputs (fertiliser) affects yield & repayment of loans	Farmers generally happy with relationship
Sorghum	SHF provided inputs (seed)	• Poor rainfall patterns results in low yields & failure by farmers to repay loans • Low buying prices & unavailability of binding contract would promote side marketing.	• Advent of NGOs providing free inputs disturb established relations • Farmers need more agronomic training for instance they are using more seed per hectare than recommended.
Sesame	SHF provided inputs (seed)	• Limited monitoring of field personnel by intermediary • Side marketing	Viable market exists and farmers willing to work with intermediary
Farming Inputs & Services • Fertilisers • Tillage & Transportation	• Inputs used to be delivered to agro-dealers on consignment stock basis. • Inputs and	• High defaulting rates by agro-dealers & SHFs. • Low purchasing power results in SHFs applying inputs falling well below	Organisation of SHFs important for pooling own resources and facilitating efficient provision of services by intermediaries

	services now being provided on a cash basis	recommended levels thereby affecting productivity	
HorticultureProduction and Marketing	• Purchase of SHF produce • Loose or unavailability of binding contracts with SHFs	• Intermediaries have not been consistently buying farmer produce • Limited information about market requirements resulting in SHF production not aligned to market fluctuations • Support of NGOs enhanced quality of produce and maintained market linkages	Support from NGOs is critical in establishing viable market linkages.
Livestock (beef)	Working with agents without binding contracts	Limited competition among buyers has resulted in low prices for the farmers	
Direct Financing for SHFs	Provide short term loans to SHFs	Drought conditions affected farmer productivity and consequently loan repayment	

Annex 4A: Household Incomes by Livelihood Activity(All Households)

Livelihood Activity	Period	% of HH involved	Minimum Income (USD)	Maximum income (USD)	Mean Income	Standard Deviation
Field Crop Production	2015	67.6%	$9.00	$58,000.00	$2,475.93	6494.98
	2014	46.4	0	$16 000	$1 316.8	2326.64
	2013	41	0	$45000	$3367.4	4578.98
	Baseline	-	$30.00	$30 000.00	$2138.08	-
Livestock Production	2015	20.3%	$12.00	$31,000.00	$2,209.55	3482.68
	2014	11.2	$50	$7200	$1427.98	1534.58
	2013	8.5	$30	$5200	$859.02	955.24
	Baseline	-	-	-	-	-
Gardening	2015	38.6%	$20.00	$11,400.00	$729.62	1156.14
	2014	29	$20	$6000	$556.68	882.8
	2013	20.3	$20	$20000	$901.00	3277.9
	Baseline	-	$10.00	$30 000.00	$3750.70	-
Formal Employment	2015	7.9%	$150.00	$100,000.00	$10,011.41	22219.41
	2014	9.1	$150	$60 000.00	$5717.05	8668.64
	2013	5.8	$50	$31200	$3529.6	5867.65
	Baseline		$624.00	$10 000.00	$3666.80	
Informal Employment	2015	12.9%	$10.00	$15,000.00	$970.85	2555.02
	2014	7.87	$72	$10 000.00	$899.92	1657.02
	2013	3.3	$60	$4000	$868.8	1187.15
	Baseline		$360.00	$7 200.00	$2160.29	
PettyTrade	2015	30.1%	$10.00	$15,000.00	$995.19	2047.86
	2014	12	$40.00	$10 000.00	$1375.78	2218.51
	2013	16.4	$100	$108 000	$13 446.5	20527.34
	Baseline		$600.00	$3 600.00	$1,733.33	
Small Business	2015	2.7%	$100.00	$18,000.00	$3,131.43	4629.01
	2014	16.15	$250	$11 000.00	$2,671.28	2013.66
	2013	4.3	$20	$107814	$11,826.4	26101.81
	Baseline		$20.00	$160 000.00	$18,575.0	
Other	2015	4.2%	$12.00	$5,520.00	$1,059.18	1512.66
	2014	8.9	$50	$420,000	$888.37	992.79
	2013	3.5	$100	$10000	$1,353.5	2387.779
	Baseline		$350.00	$24 000.00	$6,882.50	

Annex 4B:Household Incomes by Livelihood Activity (Participants in 2014 Survey)

Livelihood Activity	Period	% of HH involved	Minimum Income (USD)	Maximum income (USD)	Mean Income	Standard Deviation
Field Crop Production	2015	68.6%	$9.00	$17,555.00	$1,200.90	2200.76
	2014	46.4	0	$16 000	$1 316.8	2326.64
	2013	41	0	$45000	$3367.4	4578.98
	Baseline	-	$30.00	$30 000.00	$2138.08	-
Livestock Production	2015	27.8%	$12.00	$31,000.00	$2,421.83	3737.44
	2014	11.2	$50	$7200	$1427.98	1534.58
	2013	8.5	$30	$5200	$859.02	955.24
	Baseline	-	-	-	-	-
Gardening	2015	43.0%	$20.00	$5,200.00	$513.31	825.51
	2014	29	$20	$6000	$556.68	882.8
	2013	20.3	$20	$20000	$901.00	3277.9
	Baseline	-	$10.00	$30 000.00	$3750.70	-
Formal Employment	2015	8.7%	$10.00	$100,000.00	$7,149.92	963.11
	2014	9.1	$150	$60 000.00	$5717.05	8668.64
	2013	5.8	$50	$31200	$3529.6	5867.65
	Baseline		$624.00	$10 000.00	$3666.80	
Informal Employment	2015	11.7%	$10.00	$4,500.00	$541.11	963.11
	2014	7.87	$72	$10 000.00	$899.92	1657.02
	2013	3.3	$60	$4000	$868.8	1187.15
	Baseline		$360.00	$7 200.00	$2160.29	
PettyTrade	2015	25.2%	$10.00	$15,000.00	$1,456.15	2656.55
	2014	12	$40.00	$10 000.00	$1375.78	2218.51
	2013	16.4	$100	$108 000	$13 446.5	20527.34
	Baseline		$600.00	$3 600.00	$1,733.33	
Small Business	2015	3.2%	$240.00	$18,000.00	$4,194.00	5145.13
	2014	16.15	$250	$11 000.00	$2,671.28	2013.66
	2013	4.3	$20	$107814	$11,826.4	26101.81
	Baseline		$20.00	$160 000.00	$18,575.0	
Other	2015	5.5%	$12.00	$5,520.00	$966.59	1469.01
	2014	8.9	$50	$420000	$888.37	992.79
	2013	3.5	$100	$10000	$1,353.5	2387.779
	Baseline		$350.00	$24 000.00	$6,882.50	

Annex 4C: Household Incomes by Livelihood Activity(New 2015 HHs)

Livelihood Activity	Period	% of HH involved	Minimum Income (USD)	Maximum income (USD)	Mean Income	Standard Deviation
Field Crop Production	2015	66.0%	$23.00	$58,000.00	$4,406.75	9640.4
	2014	46.4	0	$16 000	$1 316.8	2326.64
	2013	41	0	$45000	$3367.4	4578.98
	Baseline	-	$30.00	$30 000.00	$2138.08	-
Livestock Production	2015	9.4%	$20.00	$5,200.00	$1,296.75	1540.43
	2014	11.2	$50	$7200	$1427.98	1534.58
	2013	8.5	$30	$5200	$859.02	955.24
	Baseline	-	-	-	-	-
Gardening	2015	32.1%	$20.00	$11,400.00	$1,152.69	1540.43
	2014	29	$20	$6000	$556.68	882.8
	2013	20.3	$20	$20000	$901.00	3277.9
	Baseline	-	$10.00	$30 000.00	$3750.70	-
Formal Employment	2015	6.6%	$960.00	$96,000.00	$15,530.00	27776.87
	2014	9.1	$150	$60 000.00	$5717.05	8668.64
	2013	5.8	$50	$31200	$3529.6	5867.65
	Baseline		$624.00	$10 000.00	$3666.80	
Informal Employment	2015	14.6%	$40.00	$15,000.00	$1,469.90	3577.81
	2014	7.87	$72	$10 000.00	$899.92	1657.02
	2013	3.3	$60	$4000	$868.8	1187.15
	Baseline		$360.00	$7 200.00	$2160.29	
PettyTrade	2015	37.3%	$20.00	$7,200.00	$540.06	999.2
	2014	12	$40.00	$10 000.00	$1375.78	2218.51
	2013	16.4	$100	$108,000.00	$13 446.5	20527.34
	Baseline		$600.00	$3,600.00	$1,733.33	
Small Business	2015	1.9%	$100.00	$1,200.00	$475.00	513.9
	2014	16.15	$250	$11,000.00	$2,671.28	2013.66
	2013	4.3	$20	$107,814.00	$11,826.4	26101.81
	Baseline		$20.00	$160,000.00	$18,575.0	
Other	2015	2.4%	$150.00	$4,500.00	$1,374.00	1794.54
	2014	8.9	$50	$420,000.00	$888.37	992.79
	2013	3.5	$100	$10,000.00	$1,353.5	2387.779
	Baseline		$350.00	$24 000.00	$6,882.50	

Annex 5: Area under Crop Production

Crop	Period	Minimum (hectares)	Maximum (hectares)	Mean (hectares)
Maize	Baseline	0.2	70	2.8
	2013	0.4	7	2.2↓
	2014	0.03	6	1.3↓
	2015	0.02	5	0.7↓
Beans	Baseline	0.2	5	0.8
	2013	0.02	1	0.4↓
	2014	0.1	1	0.3↓
	2015	0.01	2	0.4↑
Garlic	Baseline	0.01		
	2013	0.001	0.5	0.1↓
	2014	0.01	0.1	0.04↓
	2015	0.02	3	0.3↑
Groundnuts	Baseline	0.2	2	0.6
	2013	0.2	0.4	0.3↓
	2014	0.2	2	0.8↑
	2015	0.02	2	0.5↓
Tomatoes	Baseline	0.08	6	1.2
	2013	0.08	0.4	0.2↓
	2014	0.1	0.2	0.13↓
	2015	0.01	2	0.11↓
Bananas	Baseline	0.25	1.5	0.7
	2013	0.3	2.5	0.9↑
	2014	0.5	2	0.95↑
	2015	0.1	2	0.74↓
Sesame	Baseline	-	-	-
	2013	-	-	-
	2014	0.2	3	1.1
	2015	0.02	2.5	1.0↓
Tea	Baseline	-	-	-
	2013	-	-	-
	2014	0.2	18	1.7
	2015	0.1	6	1.1
Paprika	Baseline	-	-	-
	2015	0.2	2	0.5
Sugarcane	Baseline	-	-	-
	2015	1.5	25	14.3