



Zimbabwe Baseline Survey

Report of Findings



Prepared by TANGO International, Inc.
In collaboration with the C-SAFE M&E team¹

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¹ For TANGO International: Richard Caldwell. For C-SAFE: Michka Seroussi (South Africa), Clara Hagens (Malawi), Jamo Huddle (Zimbabwe) and Claire Mbizule (Zambia) and Krishnan Uny (Zambia)



World Vision



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Acronyms and Abbreviations

CARE	Cooperative Assistance and Relief Everywhere (NGO)
CSAFE	Consortium for Southern Africa Food Emergency
CSI	Coping Strategies Index
DfID	Department for International Development
FEZ	Food Economy Zone
GFFW	Government Food-for-Work
HH	households
HHH	head of household
MT	metric tons
NGO	Non Governmental Organizations
PPS	Probability Proportional to Size
TA	Traditional Authority
USAID	United States Agency for International Development
VAM	Vulnerability Analysis and Mapping
WFP	(United Nations) World Food Programme

Glossary of Terms

Chronically Ill	Any person who has had persistent and recurring illness during the last three months that has reduced his/her productivity.
Disabled	A person who has a mental and/or physical handicap that prevents him/her from full-productivity.
FEZ	A relatively homogenous geographic area, unique to other zones on the basis of primary subsistence activities, income strategies, cultural practices and hazards, as they affect food security
Head of Household	The primary decision-maker in terms of allocating the natural, human, and financial resources available to the household.
Orphan	A child with one or both parents that have died.

Executive Summary

C-SAFE is a jointly planned and implemented response by World Vision, CARE and CRS to the current food security problems plaguing the three southern Africa countries of Malawi, Zambia and Zimbabwe, with World Vision serving as the lead. The C-SAFE Consortium represents the most significant collaborative initiative to date (both in scale and profile) embarked upon by these three largest American PVOs. The program itself is unique, in that it is neither exclusively emergency nor development oriented. Instead, C-SAFE works along the entire relief to development continuum, addressing the immediate nutritional needs of targeted vulnerable groups; as well as building productive assets and working with communities to increase their resilience to future food security shocks.

The development of the baseline survey began in March 2003. The baseline survey collected data on all outcome indicators listed in the M&E plan, as well as others, anticipating the need to measure the outcomes from future activities planned for Years 2 and 3. The main objectives of the baseline survey were 1) to establish baseline values of logframe indicators against which future measurements of goal-related changes (e.g., practices and/or systemic changes) can be made and 2) to increase understanding of livelihood security factors impacting the lives of rural households. Other secondary objectives were 1) to identify groups and geographic areas where food and livelihood security may be low and 2) to gather and analyze information that will assist project staff in designing or modifying appropriate interventions or generate information for further refining the project logframe.

C-SAFE and the United Nations World Food Programme collaborated on the design and implementation of the survey. This represented an opportunistic time to forge collaborative relationships in M&E with one of C-SAFE's main emergency partners in the region. It also imposed several challenges, including the combining of questionnaires such that both agencies would collect the information essential to their programs

The survey utilized a two-stage random sampling methodology in an effort to provide an unbiased and representative estimation of the information obtained. The sample includes data on a total of 1625 households.

The major findings of the study include:

1. The sample included data on a total of 1625 households, 73.5 percent of which were headed by a male and 26.5 percent by a female. Communal settlements had the highest percentage of female-headed households at 30%.
2. Household sizes are quite large and ranged from 1 to 23 individuals and the average size is 6.7 members. Over 10% of households have 10 or more members. Female-headed households average 6.2 members, significantly smaller than the 6.9 member average of male-headed households.
3. Rural households have low asset value. In this survey, about 80% of households were classified as asset poor or very poor. Households with limited assets are

vulnerable, not only because of their relative poverty, but also because they have few items to divest should they be forced to spend money on food or emergencies.

4. In each district surveyed, the proportion of households that are asset very poor is over 40 %. Chiramunzu has the highest percentage in this category, followed closely by Bullimangwe and Gwanda.

5. Almost half of female headed households were classified as asset very poor, compared to less than a third of male headed households. Of those female-headed households that are asset very poor or asset poor, a significant percentage (20% and 11%, respectively) are divorced or separated. In contrast, no asset intermediate or asset rich female-headed households are divorced or separated.

6. Slightly over 35% of households are hosting on average just over two orphans. Over 90% of orphans are not children of the household where they live. Female-headed households host an average of 2.5 orphans compared to 1.9 hosted by male-headed households.

7. Over 27% of households have at least one chronically ill member. The highest incidence of chronic illness is in old resettled. In natural region 1, one-third of households have at least one chronically ill member, which is significantly higher than all other regions.

8. In C-SAFE operational areas, the percentage of vulnerable households is very high. Just over 60% of households surveyed are in at least one vulnerability category.

9. Out of over 3,000 school-aged children, 81% are currently attending primary school. However, in one-third of households with school-age children, at least one age-eligible child is not attending school. A slightly higher percentage of age-eligible children are attending school in male-headed households as opposed to female-headed households (82% and 78%, respectively). School attendance varies considerably by district with Gutu, Beitbridge and Chiramunzu having the highest enrollment percentages and Kadoma, Gwanda and Chegutu having the lowest

10. Just over 14% of households with age-eligible children report at least one child dropping out within the previous year. School-aged children living in households with chronically ill dropped out at a significantly higher rate than households without chronically ill. When households were asked why age-eligible children had dropped out of school, the majority cited the costs of education.

11. The estimated value of standard assets owned by a household averages 194,000 Zim dollars (approximately US\$139). The value of assets in male-headed households averages 40% higher than female-headed households. Asset values are significantly lower in newly resettled areas as opposed to communal and old resettled areas.

12. The majority of households that were included in the study are engaged in agricultural activities. Only 6% of households did not cultivate crops in the season immediately preceding the survey. Almost 40% of all households cultivated less land than in the previous season. The most common reason for leaving some land fallow

was a response to the drought conditions prevailing in the region. Nearly 3 out of 5 farm households altered their cropping behavior due to the drought.

13. Relatively few households were engaged in selling crops during the current growing season. This is likely due to the low production gained from the crop along with the need to satisfy food requirements. The most commonly sold food crop was sorghum, perhaps partly for beer brewing. Only 12% of all farm households surveyed were engaged in cash crop production, with groundnuts and cotton being the two most prevalent.

14. Just over 18% of households engaged in on-farm labour to access cereals, with an average payment of 80 kilograms. Almost one-quarter of asset very poor households gain cereals by providing on-farm casual labour, significantly more than other asset categories. Off-farm labour was found in only 6% of all households, with about the same average payment as on-farm labour. Gifts or remittances were the most important alternative source of cereals, and were found in almost one-quarter of all households. The average gift or remittance was 83 kilograms.

15. Almost 68% of households surveyed received an average of 173 kgs of general food aid during the last twelve months. Nearly 80% of female-headed households received food aid as opposed to 64% of male-headed households. General food aid was received by nine out of every ten households living in communal areas. In contrast, less than one of every ten households living in newly resettled areas received food aid and only 3 out of every ten living on old resettled lands received general food aid.

16. Over 45% of households gained an average of over 2,600 Zim dollars in income from participation in government food-for-work programs.

17. Male-headed households spend slightly more on food than female-headed households, but less on non-staple foods. They spend slightly more on agricultural inputs and less on household goods. Households with chronically ill members spend significantly more on health care than the general population, but spend slightly less on education, household goods and agricultural inputs. Households hosting orphans spend significantly more on education and less on staple foods and household goods.

18. Agricultural input access varies from district to district. Cereal seed has the largest variance among the nine districts, with over 90% of households in Gutu reporting insufficient access. In Gweru, Kadoma and Bubi over 80% of households report insufficient access. Gwanda had the best access to cereal seed, with one-third of households reporting insufficient access. Access to cereal seed in no way ensures access to cash crop seed. Districts such as Kadoma appear to have poor access to cereal seed but not to cash crop seed.

19. Improved cropping practices included agro-forestry, lime application, drip irrigation, water harvesting, improved food storage, winter plowing, conservation tillage, urea treatment of stover, incorporation of legumes, and fodder production and storage. Less than 25% of those surveyed employed used any one of these techniques during the last growing season. Of those used, conservation tillage and improved food storage were the most common.

20. Over half of households report borrowing food, borrowing money to buy food, or buying food on credit during the last 30 days. Almost two-thirds relied on less preferred food (food other than maize) more than 1-2 times per week. Over three-quarters of households are reducing the number of meals they eat at least once per week, with almost half reducing the number of meals they eat every day. A large percent of households skip entire days of eating at least 1-2 times per week.

21. Households regularly reduce the amount of food for adults so that children can eat normally, but few feed working members in preference to nonworking members. Harvesting and eating all of the available green maize is not strongly practiced and only 10% of households eat green maize one or more times per week.

22. Communal households have the lowest coping strategy index and households on old resettled lands had the highest. The higher the coping strategy index, the more food insecure the household. Households with chronically ill members and households hosting orphans had almost identical indices. Asset very poor households and asset poor households had significantly higher indices than asset intermediate and asset rich households.

23. Over half of all households reported a member sick within the last two weeks. Of those that were ill, formal healthcare was sought in the majority of cases. For those not seeking formal healthcare, the most cited reason was they had no way to pay for treatment.

24. Almost 11% of households had one or more adults die in the last year after being sick for at least three months.

I. Background and Objectives

Although agriculture has been a pillar of the national economy in Zimbabwe, the country has experienced an acute food shortage since early last year, partly due to a severe drought but also due to disruptions in agriculture production resulting from land reforms and economic decline. The most recent Vulnerability Assessment Committee report (May 2003) indicated that at least 388,600 MT must be distributed in the coming year as food aid to 4.4m rural vulnerable people who will not be able to purchase cereals even if it was available. It is estimated that roughly 60% of Zimbabweans live below the poverty level,² and a recent Nutrition Survey conducted by World Vision (1999) in Zimbabwe revealed that one out of four children is chronically malnourished with negative implications for learning ability and future development. As well, one out of every three adults in Zimbabwe is infected with HIV/AIDS³ and over 600,000 children are AIDS orphans.⁴

Zimbabwe's food security prospects most probably will not improve in the near future. Traditionally a regional breadbasket, the political crisis has taken huge tracts of fertile land out of production with significant impacts on supplies as well as motivation for the private sector to invest. The Government of Zimbabwe acquired 11 million hectares (27 million acres) of land from commercial farmers under the government's land reform program. These actions have caused major disruptions in production as well as a reduction in planting by farmers who have resettled those lands. Moreover, the price of maize has risen by 167% since August 2002.⁵ Many households are resorting to coping mechanisms such as gold panning, prostitution, and distress sales of household assets.

An interim USAID report projects a likely "decline" scenario for Zimbabwe that "reflects a continuation of the status quo of gradual deterioration of principal humanitarian, economic, and political indicators, and increasing dependence of large segments of the population on external assistance to survive".⁶ According to the FAO/WFP Crop Assessment (June 2003) national cereal production was higher this year than last, however, the current harvest was still 51% lower than the 2000/1 harvest (which was also a low yield). This year's harvest was low due to erratic rainfall, limited availability of seeds and fertilizer and limited production in newly resettled areas (FAO/WFP).⁷

In order to address short- and near-term issues in food security, C-SAFE is utilizing a relief-development approach. This approach will address short-term food emergency needs in each of its three operational countries, Zimbabwe, Malawi and Zambia. Development activities will also be instituted, and in each country they will address structural weaknesses in household-level behaviors and the systems that support households in achieving their food security needs.

² United States CIA Country Data Files – Zimbabwe, 1999.

³ UNAIDS Report of the Global HIV/AIDS epidemic 2002.

⁴ UNOCHA, Integrated Regional Information Network, 26 March 2003.

⁵ WFP Country Briefs – Zimbabwe, 2002.

⁶ January 31, 2003, "US Agency for International Development Interim Humanitarian Assistance Strategy for Zimbabwe".

⁷ June, 2003, WFP/FAO Crop Assessment for Zimbabwe

The baseline survey analyzed and reported in this document is a significant milestone in establishing monitoring and evaluation systems that will facilitate learning by C-SAFE staff and allow for objective evaluation of the consequences of project activities. It also represents an important effort by C-SAFE to understand more fully the food security status of rural households in Zimbabwe.

The main objectives of the C-SAFE Baseline Survey in Zimbabwe were:

- To establish baseline values of logframe indicators against which future measurements of goal-related changes (e.g., practices and/or systemic changes) can be made.
- To increase understanding of livelihood security factors impacting the lives of rural households.

The secondary objectives of the survey were:

- To identify groups and geographic areas where food and livelihood security may be low.
- To gather and analyze information that will assist project staff in designing or modifying appropriate interventions or generate information for further refining the project logframe.

II. Sampling Methods

Several challenges were faced in designing and implementing the baseline survey in Zimbabwe. Due to the current political and economic situation, it is difficult to plan and implement rural surveys. There was not sufficient time available in the planning process to conduct a stand-alone survey for C-SAFE. Fortunately, WFP was planning a VAC survey about the same time the C-SAFE baseline survey was planned. C-SAFE and WFP, therefore, decided to collaborate. This represented an opportunistic time to forge collaborative relationships in M&E with one of C-SAFE's main emergency partners in the region. It also imposed several challenges, including the combining of questionnaires such that both agencies would collect the information essential to their programs. It also presented challenges in actual survey design, primarily with respect to sample size.

II.A. Sampling Frame and Design

The intent of the survey was to sample rural households within the current and future geographic areas of C-SAFE. Several strata were considered, including districts, type of settlement, and type of household based on livelihood. Since prior information was not available on all strata, the design and sampling frames were based on administrative boundaries. Sampling frames were derived from current household lists. All households residing in rural areas were eligible to be sampled. The survey excluded urban areas since they will not be specifically targeted for future interventions.

II.B. Sample Size

The survey utilized a two-stage random sampling methodology in an effort to provide an unbiased and representative estimation of the information obtained. The first stage was the selection of wards within districts proportional to their population. The second stage was a random selection of households included in the sampling frame.

The sample size was calculated using standard methods based on key dichotomous variables from the household questionnaire. To determine the sample size to be selected, the following formula was used:

$$n = \frac{z^2 pq}{d^2}$$

where: n= sample size
 z= statistical certainty desired
 p= estimated prevalence rate
 q= 1-p (proportion without the attribute of interest)
 d= degree of precision.

The desired precision (d) was set at 8% (0.08) and the statistical certainty at 95% (z = 1.96). Since the general prevalence rate of key variables was not known, the value of p was set at 50% (0.5) in order to maximize the impact of this variable on sample size (thus any error in estimation would be negated). The resulting sample size per district, n, was 180. The resulting sample size was 1620.

III. Survey Findings

III.A. Household Demographics

The sample includes data on a total of 1625 households. A number of control variables will be used throughout this report to disaggregate the data. Table 1 provides sample size for these various strata. All analyses apply appropriate weightings to account for unequal sample sizes among strata.

Overall, 73.5 percent of households are headed by a male member of the family and 26.5 percent are headed by a female member. Communal settlements have the highest percentage of female-headed households (30.1%) while newly resettled and old resettled settlements have significantly lower percentages of female-headed households (16.8 and 18.7%, respectively). All other comparisons of female versus male-headed households yield statistically insignificant differences from the overall population percentages cited above.

Table 1: Sample sizes for selected strata.

Strata/Category	Sub-strata	Sample Size (number of HHs)
Overall Population		1625
Settlement Type	Communal	1171
	Newly Resettled	363
	Old Resettled	91
Gender of HH Head	Male	1195
	Female	430
Farm Type	Livestock	740
	Cropping	349
	Mixed	536
Natural Region	I Adequate Rainfall, Fertile	349
	III Little Rainfall, Less Fertile	320
	IV Inadequate Rainfall, Infertile	544
	V Dry, Infertile	412
District	Beitbridge	181
	Bubi	196
	Bullilimangwe	195
	Chegutu	172
	Chiramunzu	132
	Gwanda	170
	Gweru	187
	Gutu	215
	Kadoma	177

The vast majority of household heads, just over 90%, spend the majority of their time present at home. This percentage reaches 95.6 % for household heads on old resettlement areas.

Figure 1: Age Distribution, Head of Household

The age distribution of household heads is shown in Figure 1. As shown, the majority of household heads are within the 40-59 year old range. In only one case was a household head less than 15 years old. It should also be noted, however, that a large number of households are headed by members greater than 60 years old.

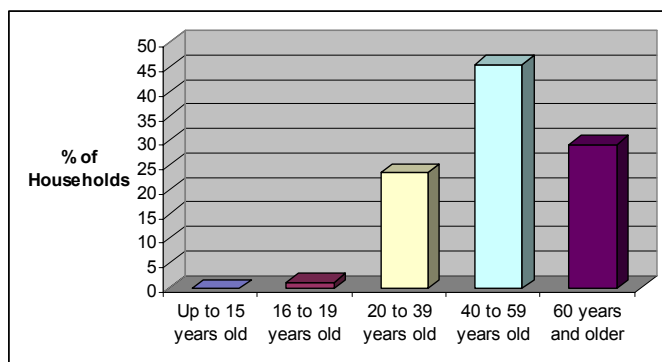


Table 2 summarizes the marital status of the study population. The majority (72.5%) of households are married and 20% are widowed. Only a small fraction of the households are divorced or single.

Table 2: Marital status of the study population.

	Frequency	Percent
Married	1178	72.5
Widowed	329	20.2
Divorced/Separated	82	5.0
Single	32	2.0
Orphan/Child	2	.1
Other	2	.1
Total	1625	100.0

In Table 3 marital status is shown by settlement type. In communal areas a significantly higher percentage ($p < .001$) of households are widowed when compared to the other settlement types. No significant differences emerge when the data is disaggregated by farm type, nor are there differences when the data is disaggregated by natural region.

Table 3: Marital status of the study population by settlement type

Settlement Type		Frequency	Percent
Communal	Married	815	69.6
	Widowed	272	23.2
	Divorced/Separated	62	5.3
	Single	19	1.6
	Orphan/Child	1	.1
	Other	2	.2
	Total	1171	100.0
Newly Resettled	Married	291	80.2
	Widowed	44	12.1
	Divorced/Separated	17	4.7
	Single	10	2.8
	Orphan/Child	1	.3
	Total	363	100.0
Old Resettled	Married	72	79.1
	Widowed	13	14.3
	Divorced/Separated	3	3.3
	Single	3	3.3
	Total	91	100.0

Household sizes in the study area tend to be quite large and ranges from one to 23 individuals. Over 10% of households have 10 or more members. The average household size is 6.7 individuals, and breaks down as follows:

Children under 5 years old:	1.1
Children 5-14 years old:	2.0
Male youth 15-19 years old:	0.6
Female youth 15-19 years old:	0.5
Adult males 20-59 years old:	0.9
Adult females 20-59 years old:	1.2
Elderly adults over 60 years old:	0.4

The range of household sizes is large, with many households from the sample hosting over 20 individuals.

Female-headed households have, on average, 6.2 members, which is significantly smaller ($p < .001$) than the 6.9 member average of male-headed households.

III.B. CSAFE Vulnerable Groups

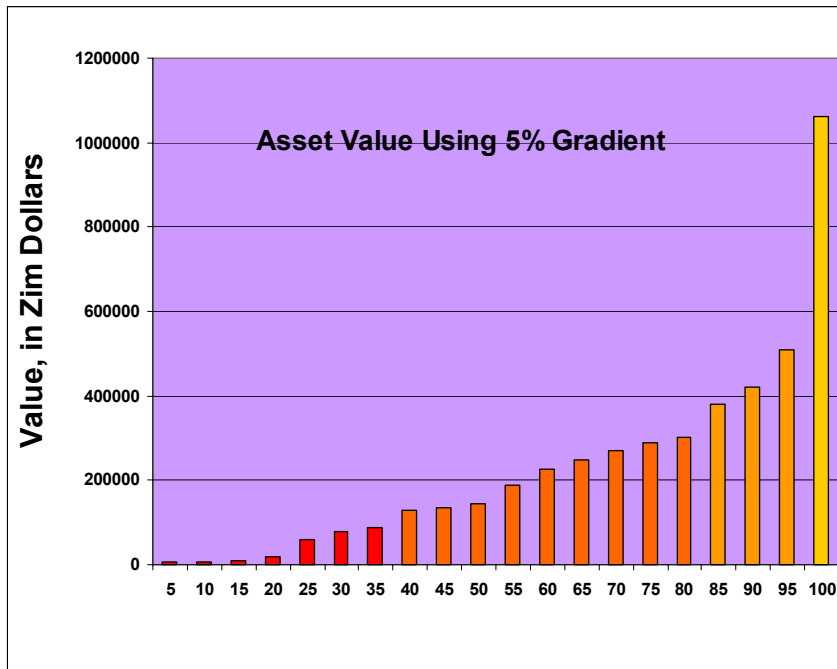
The following section defines various vulnerable groups important to CSAFE and used as variables to disaggregate survey data. These groups include economically disadvantaged households, households hosting orphans, households with chronically ill members, female-headed households, elderly-headed households with no productive-age members, and households headed by youth. CSAFE interventions target these households, so it is important to understand their current status vis-à-vis baseline indicators.

Although youth-headed households are important, they are too rare in the survey population (only 2 households out of 1663) to include as a strata.

Using Assets to Define Poor Households

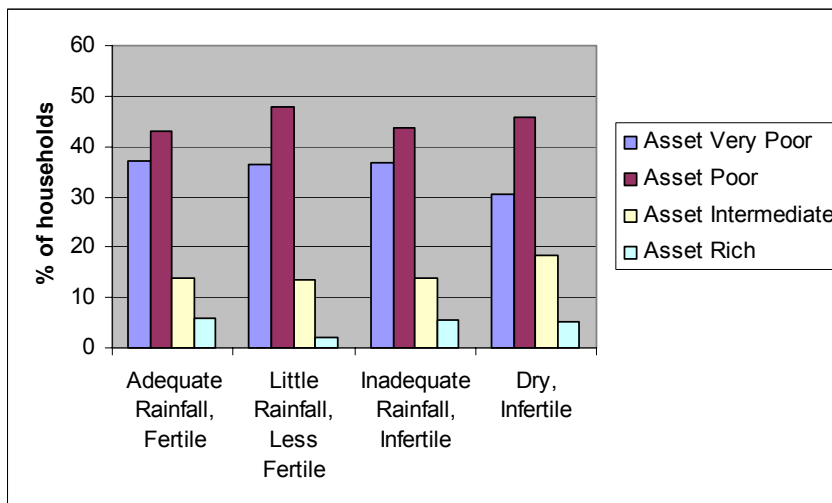
Assets can be used to create wealth groups, which are useful for defining relative levels poverty and for analyzing baseline indicators. The resultant groups can then be monitored over time to track changes in livelihood status of project households. The difficult part of creating wealth groups is to decide what percentage of the population should be placed in each category. Four equal groups, representing 25% of the population each, is not useful in the CSAFE context because, in general, rural households are quite asset-poor. Figure 2 shows the frequency distribution of asset value using 5% gradients. Each bar, thus, represents 5% of the population. The first bar represents the poorest 5% of the sample population and the last bar represents the wealthiest 5%. Note that for the Zimbabwe baseline population there is a distinct change in asset value at the 35% bar. There are other distinct changes at the 85th and 95th percentiles.

Figure 2: Asset Ownership Gradients.



Using the data in Figure 2, four asset categories were created: asset very poor (35% of the sample population); asset poor (45% of the population); Asset Intermediate (15%); and asset rich (5%). These categories are used for selected analyses of the baseline data. Figure 3 shows the distribution of these four categories among the four natural regions.

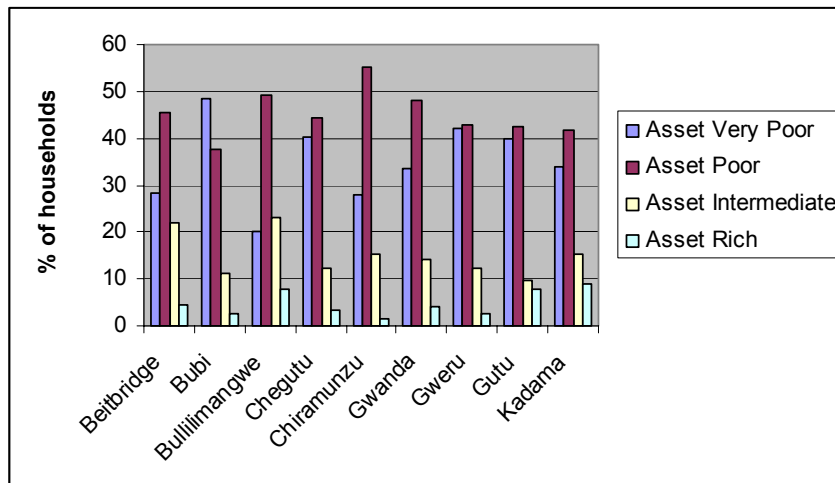
Figure 3: Asset Categories by Natural Region



It shows that there is almost the same distribution of asset categories among the four natural areas. Dry, infertile areas have slightly more households in the asset intermediate and asset rich classes, but the difference is not significant.

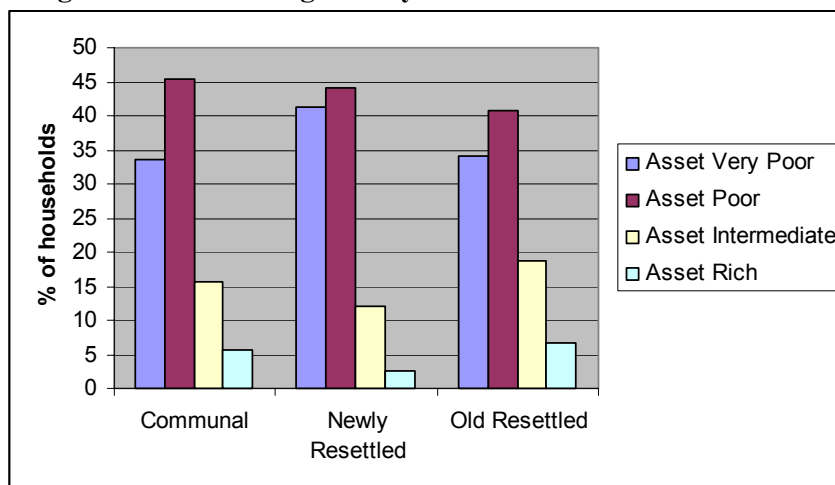
Figure 4 shows asset classification by District and here, some important differences appear. Though in each district, the proportion of asset very poor is over 40 % of the households, Chiramanzu has the highest percentage of households in this category, followed closely by Bullimangwe and Gwanda. Bubi, Chegutu and Gweru, however, all have over 75% of households in the asset very poor and asset poor categories. Based on asset value, the “wealthiest” Districts are Beitbridge, Bullimangwe and Kadama.

Figure 4: Asset Categories by District.



Finally, Figure 5 shows asset value classes by settlement type. Based on this classification, newly settled areas are slightly poorer than communal and old resettled areas, but the differences are small.

Figure 5: Asset Categories by District.



Almost half of female headed households were classified as asset very poor (Table 4), compared to less than a third of male headed households. Similar percentages of male and female headed households were classified as asset poor, but more than twice as many male headed households were asset intermediate.

Of those female-headed households that are asset very poor or asset poor, a significant percentage (20% and 11%, respectively) are divorced or separated. In contrast, no asset intermediate or asset rich female-headed households are divorced or separated.

Table 4: Asset categories by gender.

Sex of Head of HH		Frequency	Percent
Male	Asset Very Poor	377	31.5
	Asset Poor	543	45.4
	Asset Intermediate	210	17.6
	Asset Rich	65	5.4
	Total	1195	100.0
Female	Asset Very Poor	196	45.6
	Asset Poor	185	43.0
	Asset Intermediate	33	7.7
	Asset Rich	16	3.7
	Total	430	100.0

Elders

An average of four percent of households were headed by people over 60 years of age, with no other productive adults living in the house. The percentage of these households was fairly consistent between natural regions 2-4, but there were a higher percentage of elder vulnerable households in natural region 1. Communal settlements had an average of 4.4% of elder vulnerable households, compared to 3% in newly resettled, and 3.3% in old resettled areas.

Orphans

Slightly over 35% of households are hosting one or more orphans, and within these households the average number of orphans being hosted is 2.1. Over 90% of orphans are not children of the household where they live.

As Table 5 shows, of those households hosting orphans, female-headed households host an average of 2.5 orphans compared to 1.9 hosted by male-headed households. The ANOVA table (Table 6) shows this difference to be highly significant.

Table 5: Statistics for female and male-headed households hosting orphans.

Descriptives

Total orphans up to age 15

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Male	342	1.89	1.182	.064	1.77	2.02	1	7
Female	229	2.52	1.705	.113	2.30	2.75	1	11
Total	571	2.15	1.447	.061	2.03	2.27	1	11

The average number of orphan hosted among the nine districts sampled is remarkably similar, with only Gweru and Bubi hosting significantly higher numbers of orphans

than the other districts (2.5 and 2.3, respectively). Importantly, there are no statistically significant differences in the age strata of households hosting orphans. For example, elderly households (age 60+) host orphans at the same rate as younger households.

Chronically ill

Another vulnerable group that C-SAFE addresses is chronically ill persons. Chronically ill individuals, for the purposes of the study, are those who have been ill for three months or longer prior to the study. This would include individuals with HIV/AIDS, and long-term illnesses such as tuberculosis and cancer.

Table 6: Chronically ill members by settlement type.

Category		Frequency	Percent
General Survey Population	Not ill	1185	72.9
	Ill	440	27.1
	Total	1625	100.0
Settlement Type			
Communal	Not ill	856	73.1
	Ill	315	26.9
	Total	1171	100.0
Newly Resettled	Not ill	269	74.1
	Ill	94	25.9
	Total	363	100.0
Old Resettled	Not ill	61	67.0
	Ill	30	33.0
	Total	91	100.0

In the survey it was found that 440 households, or 27.1% of those surveyed, had at least one chronically ill member (Table 6). The highest percentage of households deemed vulnerable due to a chronically ill member was found in the old resettled areas (33.0%), which was significantly higher ($p < .001$) than the 25% found in both communal and newly resettled areas.

Table 7 shows the same data by natural region and by the gender of the head of household. In natural region 1, 32.7% of households have at least one chronically ill member, which is significantly higher than all other regions. Natural region 2 had the next highest percentage at 28.8%, which was significantly higher than regions 3 and 4, both of which had about 25% (Table 7).

Table 7: Chronically ill members by natural region and gender.

		Natural Region				Gender of HHH	
		Plentiful rainfall, fertile	Little rainfall, less fertile	Inadequate rainfall, infertile	Dry, infertile	Male	Female
Frequency	Not ill	235	228	413	309	873	312
	Ill	114	92	131	103	332	118
	Total	349	320	544	412	1205	430
Percent	Not ill	67.3	71.3	75.9	75.0	73.1	72.6
	Ill	32.7	28.8	24.1	25.0	26.9	27.4
	Total	100.0	100.0	100.0	100.0	100.0	100.0

Vulnerable Groups

Households headed by females or elders, and households with a chronically ill member or orphan are considered to be vulnerable. In C-SAFE operational areas, the percentage of vulnerable households is very high. Just over 60% of households surveyed are in at least one vulnerability category. Over one-third of surveyed households are hosting orphans (Table 8), and 27% have at least one chronically ill member.

Table 8: Percent of vulnerable households by category.

	Female HHH	Elderly HHH *	Chronically Ill Member	Hosting Orphans
% of households				
General Population	26.5	4.0	27.1	35.1
Plentiful rainfall, fertile	26.1	5.7	32.7	41.0
Little rainfall, less fertile	31.3	3.4	28.8	37.2
Inadequate rainfall, infertile	21.3	3.3	24.1	30.5
Dry, infertile	29.9	3.9	24.8	34.7

** these vulnerable households have no other adults in the household (ie only elders and children)*

Any particular household can be in from none to all four of the vulnerable household categories above. For example, an elderly female head of household with chronically ill household members and hosting orphans would be in all four categories. Likewise, a 45 year old male-headed household with no orphans or chronically ill members would not appear in any of the vulnerable categories.

Table 9: Number of vulnerability categories.

	Frequency	Percent
Valid 0	627	38.6
1	566	34.8
2	324	19.9
3	99	6.1
4	9	.6
Total	1625	100.0

The following table (Table 9) shows the percentage of households found in no vulnerability category, and the number of households found in 1-4 vulnerability categories. Overall, 60.1% of all households surveyed were found to be in at least one of the four vulnerability categories, and a quarter of households are in at least two vulnerability categories.

This same information is shown by natural region in Table 10 and settlement type in Table 11. Note that natural region 3 and the communal areas have the fewest households in at least one vulnerable category, and natural regions 1 and 2 and the new resettled areas have the most.

Table 10: Number of vulnerability categories by survey zone.

Natural Region		Number of Vulnerability Categories					Total
		0	1	2	3	4	
Adequate Rainfall, Fertile	Frequency	120	121	74	31	3	349
	Percent	34.4	34.7	21.2	8.9	.9	100.0
Little Rainfall, Less Fertile	Frequency	111	107	76	25	1	320
	Percent	34.7	33.4	23.8	7.8	.3	100.0
Inadequate Rainfall, Infertile	Frequency	245	183	90	23	3	544
	Percent	45.0	33.6	16.5	4.2	.6	100.0
Dry, Infertile	Frequency	151	155	84	20	2	412
	Percent	36.7	37.6	20.4	4.9	.5	100.0

Table 11: Number of vulnerability categories by settlement type.

Settlement Type		Total number of vulnerability categories					Total
		0	1	2	3	4	
Communal	Frequency	413	416	249	86	7	1171
	Percent	35.3	35.5	21.3	7.3	.6	100.0
Newly Resettled	Frequency	180	118	55	9	1	363
	Percent	49.6	32.5	15.2	2.5	.3	100.0
Old Resettled	Frequency	34	32	20	4	1	91
	Percent	37.4	35.2	22.0	4.4	1.1	100.0

III.C. Education

Out of 3,194 children aged 5 to 14 years old in the survey, 2,577 or 80.7% are currently attending primary school. In 31% of households with school-age children, at least one age-eligible child is not attending school. A slightly higher percentage of age-eligible children are attending school in male-headed households as opposed to female-headed households (81.6% and 78.2%, respectively). School attendance varies considerably by district with Gutu, Beitbridge and Chiramunzu having the highest enrollment percentages and Kadoma, Gwanda and Chegutu having the lowest (Table 12). No major differences exist among the three settlement types sampled.

Table 12: Percent of children aged 5 to 14 years old currently enrolled in school.

District		Children under 5 to 14 years old	Number of children 5-14 years old attending primary school	% of age-eligible school children attending school
Beitbridge	N	181	176	
	Sum	331	291	87.9
Bubi	N	196	194	
	Sum	404	315	78.0
Bullilimangwe	N	195	194	
	Sum	460	359	78.0
Chegutu	N	172	172	
	Sum	314	243	77.4
Chiramunzu	N	132	132	
	Sum	237	206	86.9
Gwanda	N	170	168	
	Sum	390	298	76.4
Gweru	N	187	187	
	Sum	350	279	79.7
Gutu	N	215	215	
	Sum	377	336	89.1
Kadoma	N	177	176	
	Sum	331	250	75.5

The survey revealed that just over 14% of households with age-eligible children report at least one child dropping out within the previous 12 months. Almost 14% of male-headed households reported a drop out while almost 16% of female-headed households report a dropout. As shown in Table 6, the dropout rate was significantly higher ($p < .001$) in the adequate rainfall, fertile zone (18.9%) compared to the other three zones. The dropout rate was the lowest in the dry, infertile zone (10.9%). Almost 20% of households in old resettled areas had dropouts compared with 14% in the other two settlement types.

HH with at least one chronically ill		Frequency	Percent
HHs without chronically ill	No	1041	87.8
	Yes	144	12.2
	Total	1185	100.0
HHs with chronically ill	No	350	79.5
	Yes	90	20.5
	Total	440	100.0

Table 13: Percent 5-14 year old drop outs in HHs with chronically ill.

School-aged children living in households with chronically ill dropped out at a significantly higher rate (21%, $p < .001$) than

households without chronically ill. The major reasons given by respondents of this group were economic.

Table 14 shows dropout rates by region. Dropout rates are higher for households with chronically ill in each of the four regions, but are highest in the adequate rainfall and little rainfall areas where they average almost 24%.

Table 14: Dropout rates for households with chronically ill members, by natural region.

Natural Region	HH with at least one chronically ill		Frequency	Percent
Adequate Rainfall, Fertile	No chronically ill	No	197	83.8
		Yes	38	16.2
	Chronically Ill	No	86	75.4
		Yes	28	24.6
Little Rainfall, Less Fertile	No chronically ill	No	206	90.4
		Yes	22	9.6
	Chronically Ill	No	70	76.1
		Yes	22	23.9
Inadequate Rainfall, Infertile	No chronically ill	No	358	86.7
		Yes	55	13.3
	Chronically Ill	No	107	81.7
		Yes	24	18.3
Dry, Infertile	No chronically ill	No	280	90.6
		Yes	29	9.4
	Chronically Ill	No	87	84.5
		Yes	16	15.5

Dropout rates for all households also vary by region, as shown in Table 15. Adequate rainfall areas have the highest dropout rates at 18.9%, followed by inadequate and little rainfall areas at about 14%, and by the dry, infertile areas at 11%.

Table 15: Dropout rates for households by natural region.

Natural Region		Frequency	Percent
Adequate Rainfall, Fertile	No	283	81.1
	Yes	66	18.9
	Total	349	100.0
Little Rainfall, Less Fertile	No	276	86.3
	Yes	44	13.8
	Total	320	100.0
Inadequate Rainfall, Infertile	No	465	85.5
	Yes	79	14.5
	Total	544	100.0
Dry, Infertile	No	367	89.1
	Yes	45	10.9
	Total	412	100.0

When households were asked why age-eligible children had dropped out of school, 71% cited the costs of education as the primary reason. This was the same for boys and for girls (Table 16). Another often-cited reason was hunger. Few girls are dropping out for early marriage and pregnancy. A total of 2.8% of female children younger than 15 years old were married within the last 12 months.

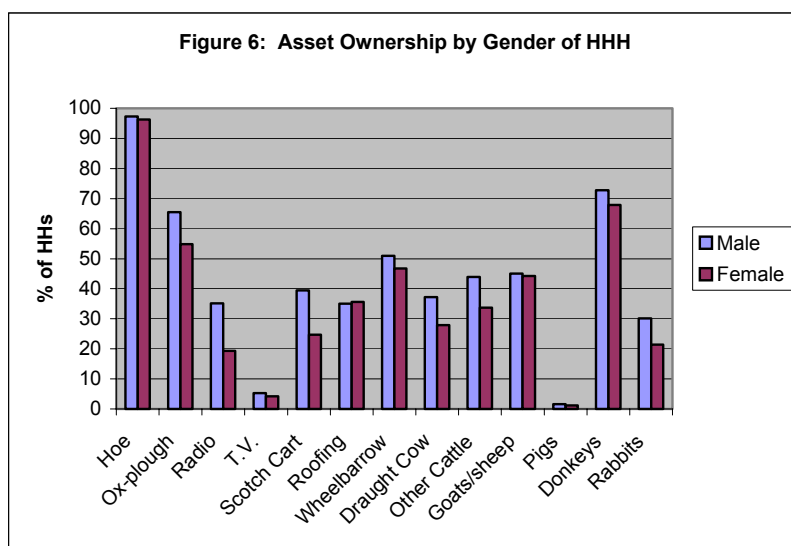
These same reasons prevailed for children who dropped out of school in households with chronically ill members.

Table 16: Reasons cited for children dropping out of school.

	Males		Females	
	Frequency	Percent	Frequency	Percent
Can't afford costs	120	71.0	71	71.0
Work outside home	2	1.2	4	4.0
Help with HH activities	1	.6	3	3.0
Hunger	17	10.1	11	11.0
Not interested	11	6.5	2	2.0
Early marriage or pregnancy			2	2.0
Too far	3	1.8	5	5.0
Other	15	8.9	2	2.0
Total	169	100.0	100	100.0

III.D. Assets

Figure 6 shows asset ownership by gender of the head of household. Overall there is fairly equal ownership of assets between male and female-headed households. As can be seen from the graph, however, a higher percentage of male-headed households own assets in every category.



The value of the above assets owned by a household averages 194,000 Zim dollars (about 139 USD at the time of the survey), but ranges from 0 to 1,062,500 (760 USD). Male headed households on average owned assets totaling 209,343 Zim dollars, and female headed households owned an average of 151,662 Zim dollars in assets.

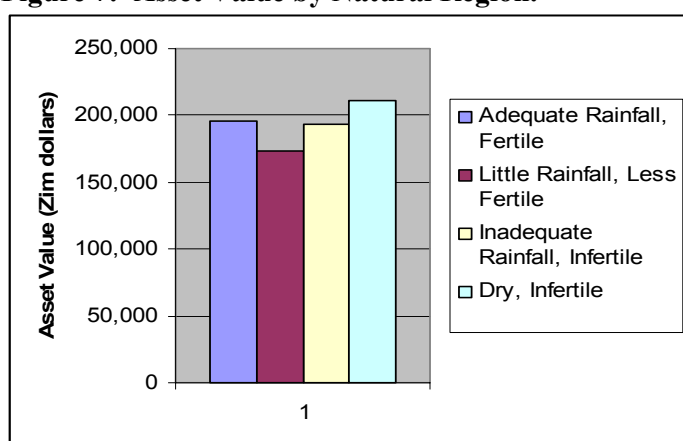
Asset values are significantly lower ($p < .001$) in newly resettled areas as opposed to communal and old resettled areas (Table 17). There is no statistical difference in asset value between communal and old resettled areas.

Table 17: Value of assets by settlement type.

Settlement Type		N	Mean
Communal	Value of assets owned (Zim \$)	1171	201,391
Newly Resettled	Value of assets owned (Zim \$)	363	164,214
Old Resettled	Value of assets owned (Zim \$)	91	219,120

Figure shows asset value by natural region. There is no statistical difference in asset value among the four regions, despite dry, infertile areas having the largest average value of 211,000 Zim dollars.

Figure 7: Asset Value by Natural Region.



Asset ownership is related to a household's ability to recover from shock, as assets can be used as security or collateral when a household needs income. Also, if poor asset households are forced to sell their productive assets, as is common in prolonged crises or when a household experiences multiple shocks (e.g. – deaths of household members during a drought period), they have a difficult time fully recovering, and their food and livelihood security can spiral downward.

Livestock

Table 18 shows livestock ownership by settlement type and for the general study population. Draught cows are owned by 35% of all households, but are most common on old resettled lands where more than 50% of households own and average of 3.2 cows. The number owned is consistent across all settlement types. Females ownership is highest on communal lands and lowest on old resettled lands. Less than 10% of cows are sold, but between 15% and 20% died in the previous year.

Other cattle are owned by over 40% of households, with ownership fairly even among the three settlement types. Less than 13% of other cattle are solely owned by women, and deaths of other cattle were especially high on communal lands.

Table 18: Livestock ownership by settlement type.

Livestock Type	General Population	Communal Lands	Newly Resettled	Old Resettled
Draught Cows (% owning)	34.8	37.3	22.0	52.7
Number owned	3.1	3.1	3.1	3.2
Percent Owned by Women	18.4%	21.0%	11.3%	9.1%
Number Sold	0.24	0.22	0.30	0.33
Number Died	0.59	0.57	0.84	0.35
Number Lost	0.18	0.20	0.06	0.19
Other Cattle (% owning)	41.2	42.4	37.7	39.6
Number owned	4.4	4.1	5.7	4.0
Percent Owned by Women	12.8%	15.3%	7.0%	11.1%
Number Sold	0.26	0.24	0.28	0.36
Number Died	1.59	1.97	0.74	0.08
Number Lost	0.14	0.16	0.06	0.06
Goats (% owning)	44.8	50.4	31.7	25.3
Number owned	5.8	6.0	5.7	3.0
Percent Owned by Women	20.1%	24.0%	12.0%	20.1
Number Sold	0.	0.44	0.69	0.17
Number Died	1.96	1.92	2.55	0.13
Number Lost	0.41	0.47	0.19	0.01
Pigs (% owning)	1.5	2.0	0.0	1.1
Number owned	1.9	1.9		1.0
Percent Owned by Women	44.1%	45.5%		0.0%
Number Sold	0.42	0.43		0.00
Number Died	0.17	0.17		0.00
Number Lost	0.00	0.00		0.00
Donkeys/Horses (% owning)	4.7	5.6	3.3	0.2
Number owned	3.5	3.6	3.3	2.5
Percent Owned by Women	15.4%	16.7%	11.8%	0.0%
Number Sold	0.05	0.06	0.03	0.00
Number Died	0.70	0.79	0.42	0.17
Number Lost	0.27	0.31	0.16	0.00
Poultry (% owning)	71.5	73.5	66.1	67.0
Number owned	6.4	6.2	7.2	6.7
Percent Owned by Women	50.9%	52.4%	52.3%	25.6%
Number Sold	0.54	0.46	0.75	0.79
Number Died	1.57	1.54	1.50	2.31
Number Lost	0.72	0.62	1.24	0.13
Rabbits (% owning)	2.8	3.5	0.0	4.4
Number owned	3.2	3.3		2.7
Percent Owned by Women	13.7%	13.5%		18.2%
Number Sold	0.11	0.12		0.00
Number Died	1.98	2.17		0.00
Number Lost	1.33	1.46		0.00

Goats are owned by almost half of all households, with ownership again being highest on communal lands and lowest on old resettled lands. Women own almost one-quarter of all goats on communal lands. Goat mortality has been high, especially on old resettled lands.

Poultry are owned by over 70% of all households, with an average of just over six birds per household. Ownership is high communal lands and old resettled lands, but only half of the average on newly resettled lands. Women own over half of all chickens on communal lands and old resettled lands, but only one-quarter on newly resettled lands

Pig, donkey and rabbit ownership is very low, with less than 5% of all households owning these animals. Almost half of all pigs are owned by women.

III.E. Land Use and Production

The majority of households that were included in the study are engaged in agricultural activities. Only 108 households, or 6.6% of the sample, did not cultivate crops in the season immediately preceding the survey. Each household was asked if they cultivated more, less, or the same amount of area in the last cropping season. Table 19 provides the results for the general survey population. Just over 25% of households cultivated more and about 30% cultivated the same amount. Almost 40% of all households cultivated less. The remaining households, 6.6%, responded that the question was not applicable to them. These households may be landless but in any case were not engaged in cropping in the current season. These patterns are nearly identical for male and female-headed households.

The study was conducted in four natural regions. These regions are defined by rainfall, and thus reflect some aspects of production potential. Table 20 shows cropping trends in the last growing season for each region. A majority of households (38.4%) in adequate rainfall and fertile areas cultivated more land this season than in the previous season. About one-third of households cultivated the same amount as before. In lesser rainfall areas, the majority of households cultivated the same amount or less land than before. This was particularly true for inadequate rainfall and dry areas. The differences in cultivation trends among the four natural regions were significant (Table 21).

Table 19: Cultivation trends for the current cropping season.

	Frequency	Percent
Cultivated more land this season	419	25.8
Cultivated the same amount of land	475	29.2
Cultivated less land this season	623	38.3
N/A	108	6.6
Total	1625	100.0

Table 20: Cultivation during the last cropping season by natural region.

Natural Region		Frequency	%
Adequate Rainfall, Fertile	Cultivated more land this season	134	38.4
	Cultivated the same amount of land	109	31.2
	Cultivated less land this season	97	27.8
	N/A	9	2.6
	Total	349	100.0
Little Rainfall, Less Fertile	Cultivated more land this season	56	17.5
	Cultivated the same amount of land	118	36.9
	Cultivated less land this season	118	36.9
	N/A	28	8.8
	Total	320	100.0
Inadequate Rainfall, Infertile	Cultivated more land this season	158	29.0
	Cultivated the same amount of land	135	24.8
	Cultivated less land this season	223	41.0
	N/A	28	5.1
	Total	544	100.0
Dry, Infertile	Cultivated more land this season	71	17.2
	Cultivated the same amount of land	113	27.4
	Cultivated less land this season	185	44.9
	N/A	43	10.4
	Total	412	100.0

Table 21: Analysis of variance for cultivation trends among the four natural regions surveyed.

ANOVA

TOTLCULT

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	59.994	3	19.998	24.832	.000
Within Groups	1305.452	1621	.805		
Total	1365.446	1624			

Table 22 shows land use by various strata. Male and female-headed households had similar cultivation trends, with about 38% of households cultivating less land, as well as Chronically ill households. Households with orphans left slightly more land uncultivated.

Communal settlements left significantly more land out of production than the other two settlement types, and a higher percentage of households on newly resettled land cultivated more land.

Table 22: Cultivation trends by various strata.

Category	N	Cultivated More Land	Cultivated Same Amount of Land	Cultivated Less Land
General Population	1615	25.8	29.2	38.3
Male-headed Households	1195	26.0	29.3	38.6
Female-headed Households	430	25.1	29.1	37.7
Chronically Ill HHs	440	26.4	28.4	38.6
Households with Orphans	571	25.2	27.7	42.0
Communal Settlements	1171	20.0	31.3	43.4
Newly resettled	363	41.9	22.9	24.2
Old Resettled	91	36.3	28.6	29.1

Leaving some land fallow is a common practice throughout Zimbabwe. Slightly over 82% of households engaged in agricultural activities left at least some land fallow. When asked how much land was left uncultivated, the responses from male and female-headed households were similar (Table 23), although a higher percentage of female-headed households left less land uncultivated than normal.

Table 23: Relative amount of land left uncultivated by household gender.

Sex of Head of HH		Frequency	Percent
Male	Left more land	511	55.5
	Left the same amount of land	139	15.1
	Left less land	263	28.6
	N/A	7	.8
	Total	920	100.0
Female	Left more land	184	55.1
	Left the same amount of land	35	10.5
	Left less land	114	34.1
	N/A	1	.3
	Total	334	100.0

When households were asked to provide reasons for leaving land uncultivated, the following frequencies resulted:

Lack of Labor	11.4%	Lack of Rainfall	64.1%
Lack of Seed	56.2%	Left Land as Fallow	1.6%
Lack of Draught Power	46.7%	Other	4.4%
Lack of Fertilizer	19.9%		

As noted, the most common reason for leaving some land fallow was a response to the drought conditions prevailing in the region. Nearly 3 out of 5 farm households altered their cropping behavior due to the drought. Over half of the households reported

insufficient seed as a reason and almost half cited a lack of sufficient draught power. Seventeen percent of female-headed households cited lack of labour as a reason as opposed to 9% of male-headed households. Respondents citing a lack of seed were significantly more common on communal and newly resettled lands.

The major crops grown during the current season were, as expected, maize and summer maize. Sixty-four percent of all households reported growing summer maize and 46% grew winter maize. The average production of summer maize was 313 kilograms and the average production of winter maize was a mere 170.7 kilograms (Table 24). The second most commonly grown crop was sweet potato, followed by summer sorghum. Production averages are all low, however the survey does not afford the benefit of comparing production figures with area.

As Table 24 shows, relatively few households were engaged in selling crops during the current growing season. This is likely due to the low production gained from the crop along with satisfying the food needs of the household. The most commonly sold food crop was sorghum, with just over 11% of households growing sorghum engaged in sales. Maize sales accounted for the highest volume, however, with 40 households (under 6% of those growing maize) selling and average of 227.6 kilograms. This is higher than the average production because those households that sell maize also produce more than the average household.

Table 24: Production trends among major crops.

Crop	HHs Growing (%)	Average Production (kgs)	HHs Selling (%)	Average Amount Sold (kgs)
Maize	45.5 (691)	170.7	5.8 (40)	227.6
Sorghum	2.7 (41)	62.7	11.1 (5)	80.0
Millet	4.3 (66)	56.5	4.2 (3)	117.5
Sweet Potato	13.5 (205)	47.6		
Winter Maize	3.1 (51)	130.3		
Wheat	1.4 (22)	67.6		
Summer Maize	64.0 (985)	313.0		
Summer Sorghum	10.8 (163)	72.6		
Summer Millet	7.9 (120)	56.0		

Only 12% of all farm households surveyed were engaged in cash crop production during the current growing season. Groundnuts and cotton were the two most prevalent crops grown, but both are found on less than 5% of households. All other cash crops, including tobacco, maize, wheat, sunflower and soybean were grown by less than 2% of households. Mean cotton production was 335 kilograms, but the range was from 0 to 1,500 kilograms, reflecting a broad range of growing conditions and outcomes for farmers.

Table 25 shows the percent of households growing the three most common food crops – maize, summer maize and sweet potatoes. Male and female-headed households grow these three crops at about the same rate, with only slightly more male-headed households growing maize. A significantly higher percentage of households with chronically ill members and households hosting orphans grow maize, but the same

percentage statistically grow summer maize and sweet potatoes. Table 26 shows the number of crops grown each year by vulnerability categories. Households that are in more vulnerability categories (i.e., more like to have chronically ill and host orphans and be headed by a female) are more likely to cultivate maize two or three times per year.

Table 25: Percent of households growing major crops by selected categories.

Category	N	Maize	Summer Maize	Sweet Potato
	% of households cultivating			
General Population	1615	45.5	64.0	13.5
Male-headed Households	1195	46.2	64.0	13.9
Female-headed Households	430	43.7	64.1	12.4
Chronically Ill HHs	440	47.2	65.0	18.5
Households with Orphans	571	50.4	65.7	16.4
Communal Settlements	1171	49.1	64.2	15.3
Newly resettled	363	23.8	59.6	4.0
Old Resettled	91	81.4	94.2	26.7
Asset Very Poor	573	40.6	64.7	11.6
Asset Poor	782	46.3	64.0	13.6
Asset Intermediate	243	52.8	64.2	15.3
Asset Rich	81	50.0	77.0	20.3

There are large and significant differences according to settlement type (Table 24). About one-half of households on communal settlements grew maize but only about half of this percentage on newly resettled lands grew maize. In contrast, over 80% of households on old resettled lands grew maize. Summer maize was also grown by more than nine out of ten households on old resettled lands, while the percentages for newly resettled and communal lands averaged about 60%. Sweet potato was rare on newly resettled land, grown by only 4% of households. With respect to asset category, asset rich households grew each of the three crops at a higher percentage than the other asset categories. Asset poor households had about the same percentages as the general population.

Table 26: Number of maize crops per year by vulnerable category.

Vulnerability Category	Maize crops/yr	Frequency	Percent
0	No maize	213	34.0
	One crop only	195	31.1
	Two maize crops	204	32.5
	Three maize crops	15	2.4
1	No maize	190	33.6
	One crop only	167	29.5
	Two maize crops	194	34.3
	Three maize crops	15	2.7
2	No maize	102	31.5
	One crop only	97	29.9
	Two maize crops	114	35.2
	Three maize crops	11	3.4
3 or more	No maize	31	28.7
	One crop only	31	28.7
	Two maize crops	44	40.7
	Three maize crops	2	1.9

III.F. Other Direct Sources of Cereals

In addition to growing cereal crops such as maize and sorghum, households engage in other activities in order to gain access to food staples. Options include on and off-farm labor, receipt of gifts and remittances from relatives and other sources, and other options such as using savings to purchase food.

Table 26 provides summary data for other direct sources of cereals available to households. Just over 18% of households engaged in on-farm labour to access cereals and the average payment was about 80 kilograms. Off-farm labour was found in only 6.3% of all households, with about the same average payment as on-farm labour (79 kilograms per household). Gifts or remittances were the most important alternative source of cereals, and were found in almost one-quarter of all households. The average gift or remittance was 83 kilograms.

Male and female-headed households engaged in on-farm labour at nearly the same rate, but the average payoff for male-headed households was nearly 10 kilograms higher (Table 27). A higher percentage of female-headed households, however, received gifts or remittances and the average cereal receipt was nearly 10 kilograms higher than for male-headed households. On-farm labour was found in significantly more old resettled households (24.2%) and the amount of cereal received was also significantly higher than for communal and newly resettled households.

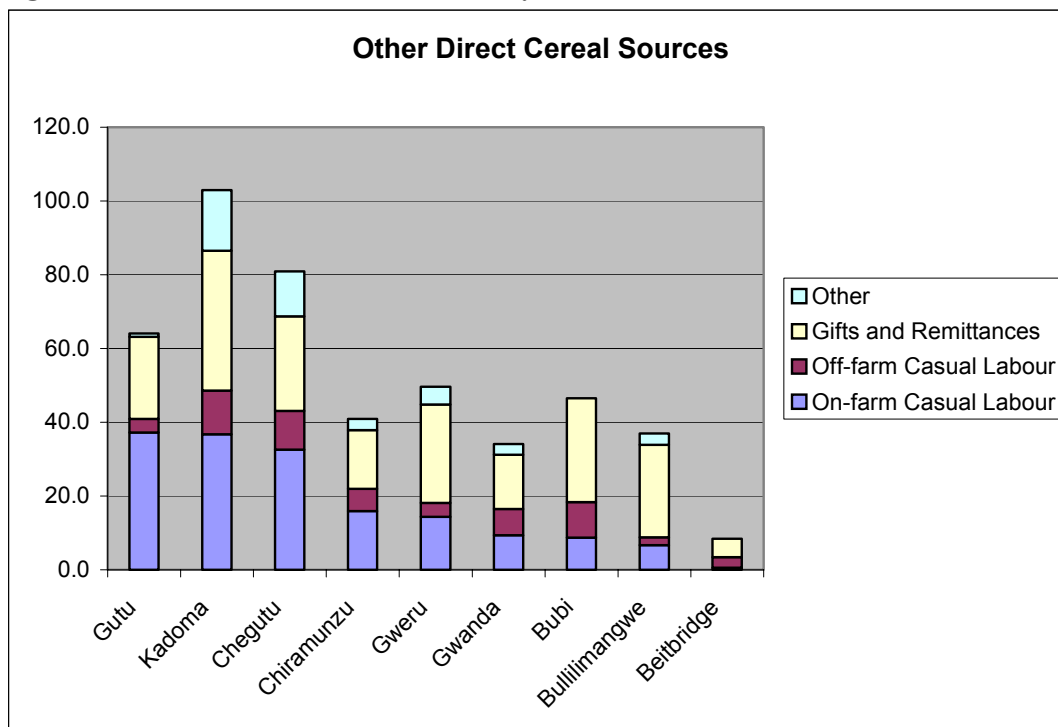
Table 27: Direct cereal sources by selected strata.

		On-farm Casual Labour	Off-farm Casual Labour	Gifts or Remittances	Other Sources
General Survey Population	%	18.2	6.3	22.6	4.7
	kgs	79.5	78.9	83.1	77.0
Male-headed Households	%	18.3	6.5	21.0	3.8
	kgs	82.0	82.5	80.0	79.9
Female-headed Households	%	17.9	5.6	27.2	7.0
	kgs	72.2	67.1	89.7	72.4
Communal Lands	%	18.8	6.4	23.7	4.8
	kgs	76.2	68.5	76.3	65.1
Newly Resettled	%	14.9	5.5	18.5	2.2
	kgs	87.0	68.7	103.9	34.4
Old Resettled	%	24.2	7.7	25.3	13.2
	kgs	93.8	219.2	105.7	160.8
Asset Very Poor	%	24.4	7.5	23.6	4.4
	kgs	76.9	99.2	75.9	47.0
Asset Poor	%	17.0	5.6	20.9	5.4
	kgs	70.8	65.8	74.3	76.0
Asset Intermediate	%	10.3	5.0	24.7	4.3
	kgs	137.2	57.6	102.1	149.4
Asset Rich	%	8.6	1.2	25.9	4.9
	kgs	77.1	40.0	139.8	128.5

Table 27 shows direct cereal sources by asset category. Almost one-quarter of asset very poor households gain cereals by providing on-farm casual labour, compared to 17% for asset poor, 10% for asset intermediate and 9% for asset rich. They gain on average 77 kgs of cereal by providing labor. A slightly higher percentage of asset very poor households also gain cereals from off-farm labour opportunities, although as a cereal source it is far less important than on-farm labour. Gifts are received by about one-quarter of all asset categories, but the amount received is significantly higher in the wealthier asset categories. Probably in this category we have the village head and other important people of the communities.

Other direct cereal sources differed considerably among the nine districts sampled. Figure 9 shows the contribution of each of the four other cereal sources for each district. Off-farm labour as a cereal source was most common in Gutu, and was practiced by nearly 40% of households surveyed with an average gain of 80 kilograms of cereals. It was also common in Kadoma and Chegutu where it was practiced by 37% and 32% of households, respectively. It was least prevalent in Beitbridge where it was found in only one household. Off-farm casual labour was most commonly found in Bubi, Kadoma and Chegutu, but in all districts averaged less than 12%.

Figure 9: Other Direct Cereal Sources by District



Gifts and remittances were most prevalent in Kadoma, Chegutu, Gweru and Bubi and least prevalent in Beitbridge. Other sources were most prevalent in Kadoma and Chegutu. As Figure 9 reveals, other direct sources of cereal overall were most important in Kadoma and Chegutu.

III.G. Cereals from Food Aid

In the general survey population, 67.9% of all households received general food aid during the last twelve months (Table 28). The average amount of general food aid received during these twelve months was 173 kgs. Nearly 80% of female-headed households received general food aid as opposed to 64% of male-headed households. General food aid was received by nine out of every ten households living in communal areas. In contrast, less than one of every ten households living in newly resettled areas received food aid and only 3 out of every ten living on old resettled lands received general food aid. Average amounts received were also greatest in communal areas where the averaged 178 kilograms per household.

Table 28: Cereal from food aid by selected strata.

		Food Aid	Chronically Ill	Supplementary Feeding	School Porridge
General Survey Population	%	67.9	8.6	34.4	49.2
	Kgs	173.2	90.1		
Male-headed Households	%	64.0	7.7	35.7	47.9
	Kgs	170.3	81.4		
Female-headed Households	%	78.8	10.9	30.7	53.0
	kgs	179.7	107.2		
Communal Lands	%	89.1	11.7	41.7	55.8
	kgs	177.9	91.0		
Newly Resettled	%	9.1	0.3	14.9	33.3
	kgs	85.5	40.0*		
Old Resettled	%	30.8	1.1	18.7	27.5
	kgs	101.2	15.0*		
Chronically Ill Households	%	67.0	8.2	34.3	49.1
	kgs	180.7	40.9		
Households Hosting Orphans	%	75.7	8.8	37.7	56.9
	kgs	179.6	90.4		

* n=1

Less than 10% of households reported receiving cereals specifically for chronically ill individuals, orphans or pregnant/lactating mothers. Female-headed households were more common recipients of such food aid than were male-headed households (Table 28) and they also received about 30% more in payments. As was the case for general food aid, households living in communal lands were the most common recipient.

Supplemental feeding as a source for cereals was found in slightly more than one-third of all households. Slightly higher percentages of male-headed households received supplementary feeding compared to female-headed households and these programs were most common in communal areas. Nearly half of all households had children receiving porridge at school and, again, this program was more prevalent in communal areas.

A higher percentage of asset intermediate and asset rich households (71.6%) received food aid than did asset very poor and asset poor households (65% and 69%, respectively). There could be several reasons for this. Vulnerable households could be underreporting due to fears that food aid will stop if it is found out how much food aid they receive, or there could be some problems with targeting. The same percentage of households with chronically ill members received food aid as the general population (Table 28) and they received about the same number of kgs. However, only 8.2% of households with chronically ill members received food aid specifically for chronically ill individuals, and the amounts received were significantly less. A higher percentage of households with orphans received food aid and school porridge than the general population.

Table 29 shows the percent of households participating in various numbers of food aid programs. About 20% of households surveyed do not participate in any of the four food aid programs targeted by the survey. Slightly less than 30% of households participate in one or two programs and about 20% participate in three programs. Only 47 households, or 3% of the sample, participate in all four food aid programs.

Table 29: Percent of HHs participating in various numbers of food aid programs.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	313	19.3	19.3	19.3
1	467	28.7	28.7	48.0
2	447	27.5	27.5	75.5
3	351	21.6	21.6	97.1
4	47	2.9	2.9	100.0
Total	1625	100.0	100.0	

III.H. Cereal Purchases

Cereal purchases from government outlets and local markets are an important component to meeting household food needs throughout Zimbabwe. Out of 1,625 households, 1,433 or 88% made purchases averaging 254 kilograms during the previous 12 months from the GMB or at controlled prices. Just over 60% of households purchased an average of 175 kilograms of cereals at uncontrolled prices. A total of 53% of all households made purchases at both controlled and uncontrolled prices.

Figure 10: Cereal Purchases at controlled and uncontrolled prices

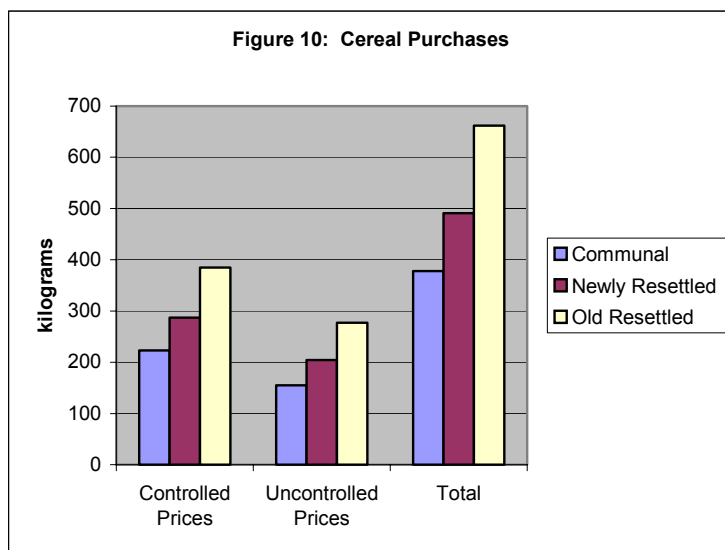
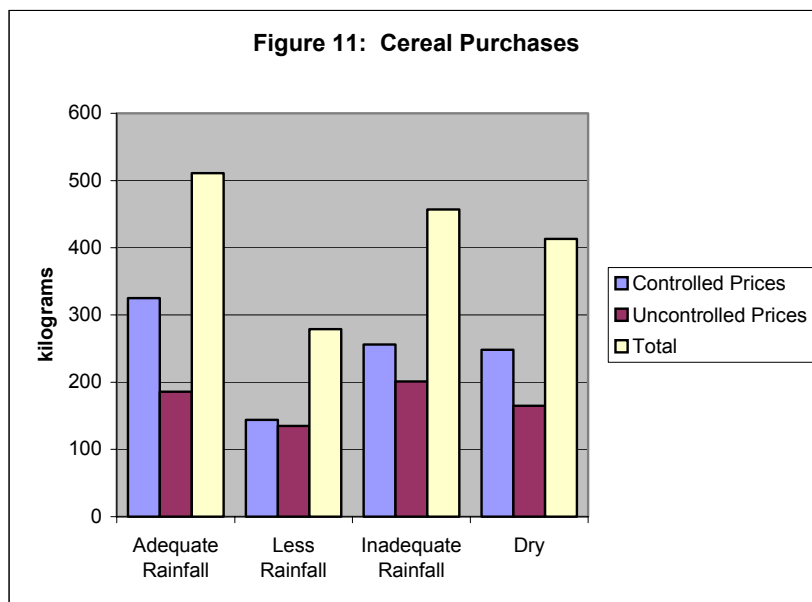


Figure 10 provides a comparison of the average cereal purchases by settlement type. Households living in old, resettled areas had the highest amount of cereal purchases, both at controlled and uncontrolled prices. Their total cereal purchases were almost 300 kilograms more compared to communal areas.

Cereal purchases also varied by natural region (Figure 11). Households living in areas with adequate rainfall and fertile soils also had the highest average purchases at controlled prices as well as the highest overall purchases. Purchases at uncontrolled prices were similar among the four areas. Total purchases during the previous 12 months were lowest for those households living in less rainfall, fertile areas.



Households were also asked about specific food purchases during the four months previous to the survey. Slightly more than one in four households purchased on average 12 kilograms of rice during this time period (Table 30). Fewer than 10% of households

reported purchasing about 25 kilograms of potatoes or sweet potatoes. Flour was purchased at a rate and quantity similar to rice, and bread purchases were made by 29% of households. Male-headed households made purchases at a higher frequency than female-headed households and, with the exception of bread, at significantly larger quantities.

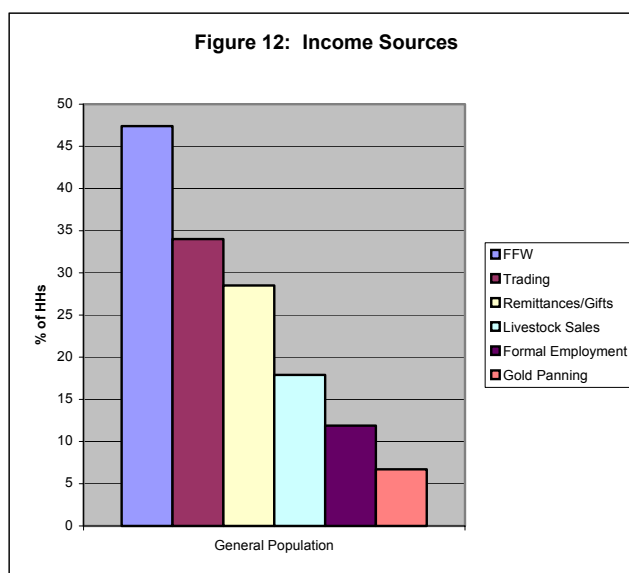
Table 30: Specific food purchases during the previous 4 months.

	Rice		Potatoes		Flour		Bread	
	%	kgs	%	kgs	%	kgs	%	kgs
General Population	26.2	11.9	8.9	24.4	23.0	10.6	28.9	26.5
Male-headed HHs	27.8	13.0	9.5	27.5	24.2	11.8	31.0	22.3
Female-headed HHs	21.9	7.9	7.0	13.0	19.8	6.5	23.3	42.1

Finally, households reported that if cereals were readily available, and they were receiving no food aid, they would have purchased on average 113 kilograms and 49 kilograms of cereals at controlled and uncontrolled prices, respectively.

III.I. Income Sources

Households derive income from a number of different sources. Figure 12 shows the percent of households in the survey that gained income over the last four months from six different sources. As shown, over 45% of households gained income from participation in government food-for-work (GFFW) programs. The average earning from GFFW activities during the previous four months was 2,684 Zim Dollars.



Income sources vary somewhat by strata (Table 31). Male and female-headed households vary most in the percentage that receive remittances, with more female-headed households having this as an income source than male-headed households. Male-headed households have slight but insignificant advantages in trading, livestock sales and gold panning. Households with chronically ill members mimic closely the general population, while households hosting orphans rely less on formal employment, slightly more on livestock sales, and slightly more on GFFW.

Asset very poor households rely on trade slightly more than other asset categories, but rely less on formal employment and livestock sales.

Table 31: Income sources by selected categories.

Category	GFFW	Trading	Remits/Gifts	Livestock sales	Formal Employ	Gold Panning
General Population	47.4	34.0	28.5	17.9	11.9	6.7
Male-headed Households	46.2	34.4	26.6	18.8	12.9	7.4
Female-headed Households	50.9	32.8	33.7	15.3	9.3	4.7
Chronically Ill HHs	45.7	35.2	31.1	17.5	13.9	7.5
Households with Orphans	48.5	31.9	30.8	21.7	8.9	6.0
Asset Very Poor	45.2	36.3	28.4	9.2	9.1	6.8
Asset Poor	49.2	32.4	28.4	19.6	12.5	5.9
Asset Intermediate	47.7	32.9	27.6	28.8	13.2	9.1
Asset Rich	46.9	34.6	32.1	30.9	23.5	6.2

Income sources differ slightly by settlement type. Figure 13 compares the sources among communal settlements, newly resettled areas, and old resettled areas. GFFW activities are the most common income-earning opportunity across all three sites, but they are most important in old resettled areas. These same areas are also where most gold panning activities take place. In contrast, there are few formal employment opportunities in these areas. On communal lands, in addition to GFFW, trading and

remittances/gifts are also important, followed by livestock sales and formal employment. Newly resettled areas have the highest percentage of households engaged in trade and moderate percentages involved in livestock sales and formal employment.

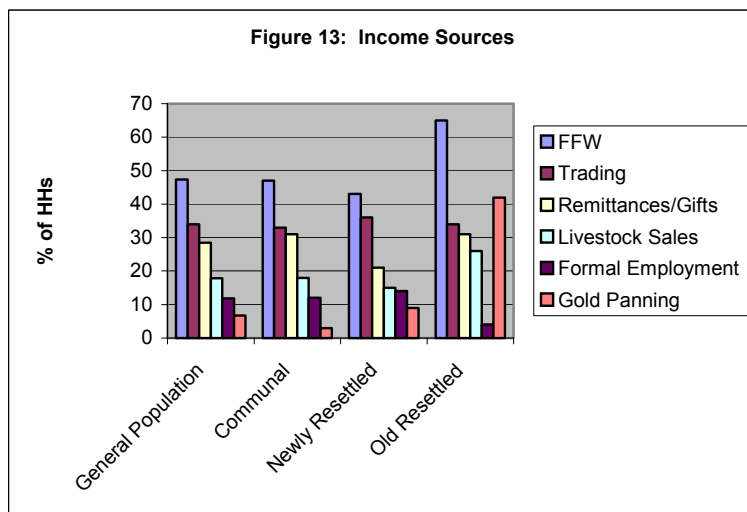


Table 32 reveals important differences in earnings among income-earning sources and disaggregated variables. The most striking differences are average earning differences between male and female-headed households. In some cases, female-headed households average about half the earnings as male-headed households. In the case of livestock sales, it may be that female-headed households are engaged in the sale of smaller livestock and poultry, thus the vast earnings gap may be a function of the type of livestock sold. In any case, the gap in income earnings has a severe and negative impact on the food security of female-headed households.

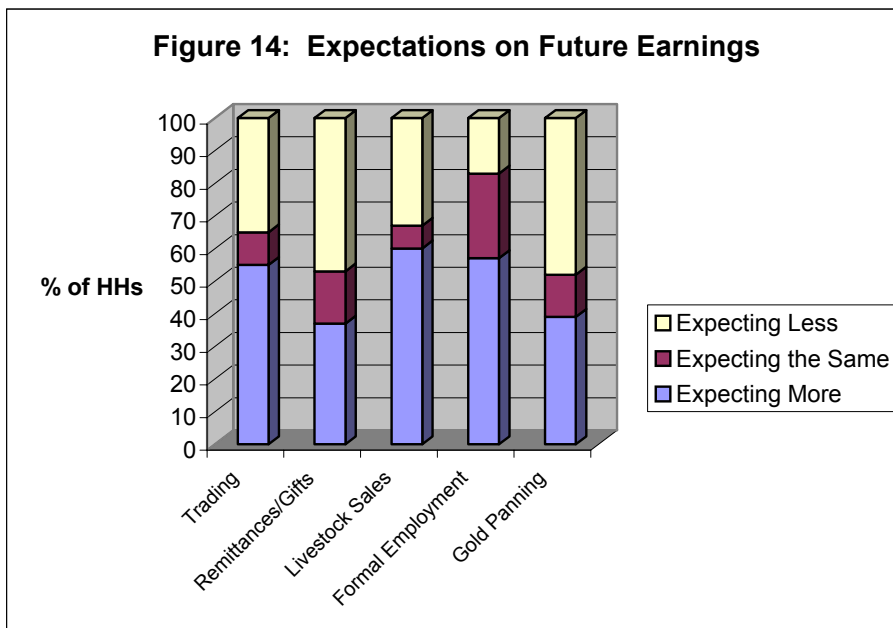
Table 32: Average earnings, in Zimbabwe dollars, during the previous four months from selected income sources.

	Formal Employ.	Livestock Sales	Trading	Remittances /Gifts	Gold Panning	GFFW
General Population	44,989	38,910	13,863	11,598	29,808	2,684
Male-headed HHs	47,606	44,567	14,518	13,585	32,910	2,746
Female-headed HHs	34,915	19,627	11,955	7,242	16,000	2,528
Communal	42,719	32,652	10,739	9,179	18,046	2,484
Newly Resettled	47,745	57,863	18,915	20,768	33,167	2,743
Old Resettled	87,500*	50,750	32,060	16,900	38,652	4,402

* Fewer than 10 cases.

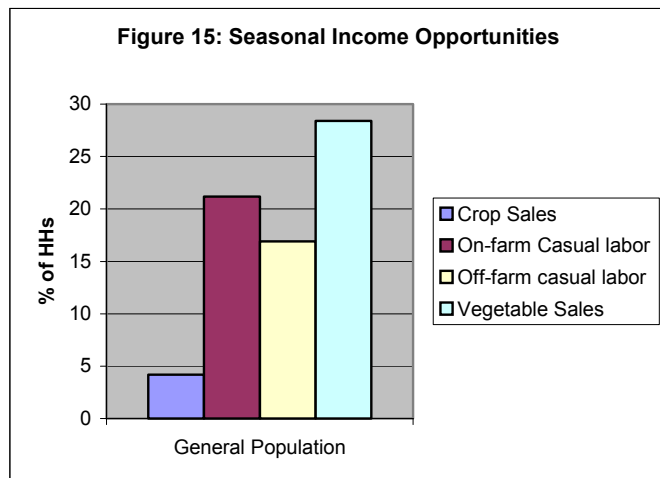
There are also differences in income earnings among the three settlement types. Earnings are significantly lower on communal lands, and in some instances are half of those found on old and newly resettled lands. The smallest discrepancy in average earnings is in GFFW activities. This is important given that GFFW activities are the most common income-earning activity on all 3 settlement types.

Figure 14 provides results of household expectations on future income earnings from selected sources. The majority of households are optimistic that earnings will improve for formal employment, trade and livestock sales. They are less optimistic that remittances will improve or gold panning opportunities. Female-headed households are very optimistic about formal employment and trade opportunities, more so than male-headed households. They share pessimism with male-headed households, however, about remittances and gifts, perhaps because they want to return to some sense of normalcy and not have to depend on remittances, or because they feel those who have historically supplied remittances are less able to do so because of their economic situation.



Seasonal Income Sources

Households were asked about seasonal income-earning activities for the 12 months preceding the survey. Seasonal income-earning opportunities include cereal and cash crop sales, on- and off-farm casual labor, and vegetable sales. As Figure 15 shows, less than 5% of all households are engaged in cereal or cash crop sales. Slightly more than 20% earn seasonal income from on-

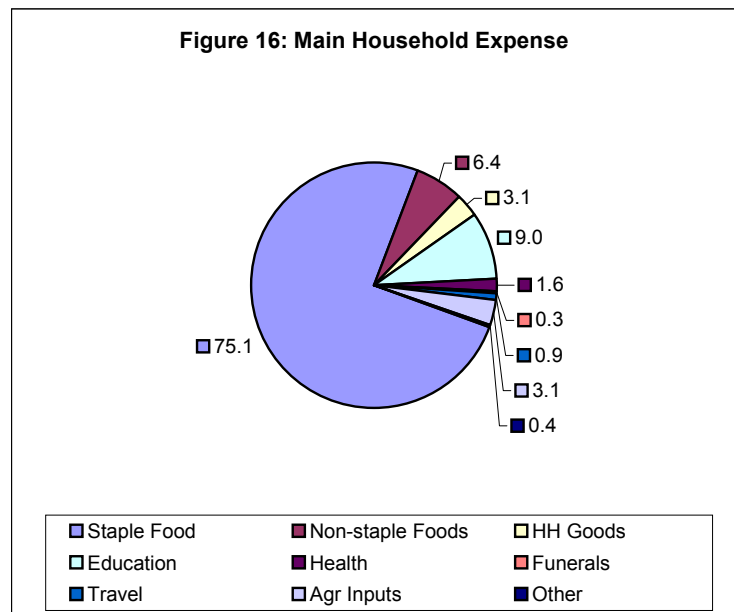


farm casual labor, and fewer, about 17%, earn income from off-farm casual labor. The most common seasonal income-earning activity was vegetable sales. This was practiced by 28% of all households. For those few households that sold cereals and cash crops the average earning were 26,600 Zim dollars. On-farm casual labor only averaged about 8,900 Zim dollars, slightly less than the 9,700 earned through the sale of vegetables. Off-farm casual labor contributed, on average, 16,500 Zim dollars to a household during the previous 12 months.

A large majority (77.8%) of households currently engaged in cereal and cash crop sales expect to earn more in the future from such sales. About half of households earning income last year from on-farm and off-farm casual labor expect more in the future. The same is true for vegetable sales, with about half of the relevant households expecting to earn more in the future.

Household Expenditures

Households were asked to report their largest three expenditures, in order, during the last 12 months. As Figure 16 shows, a large majority of households cite the purchase of staple foods as their largest expenditure. Education was cited by 9% of households as the largest single expense while the purchase of non-staple foods was cited by 6.4%. All other expense categories were cited by 3% or less of all households.



Figures 17 and 18 provides graphic results of household responses for the second and third highest expenditures during the previous 12 months. Non-staple foods and household goods were cited by slightly more than 15% of households, and staple foods by another 13.3%. The most often cited third largest expenditure was household goods, followed by education, non-staple foods and agricultural inputs.

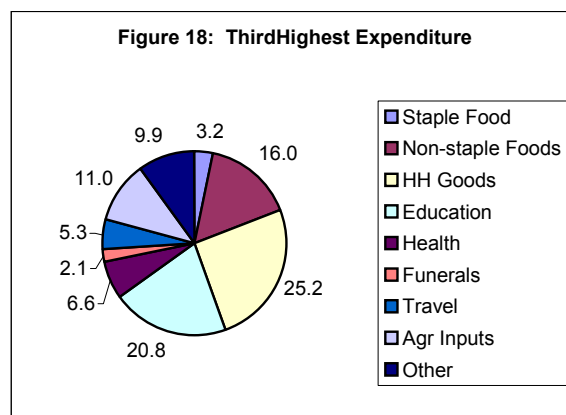
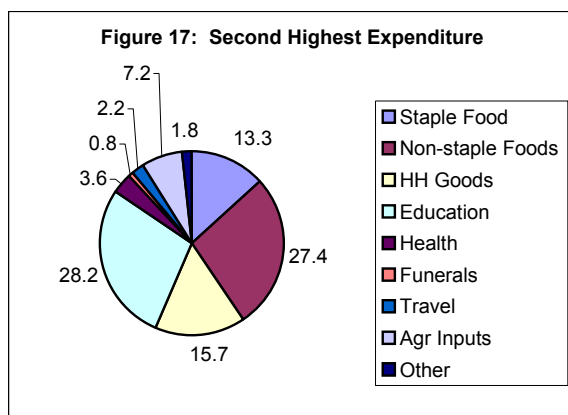


Table 33 shows selected household expenditures by vulnerability category. Male-headed households spend slightly more on food than female-headed households, but less on non-staple foods. They spend slightly more on agricultural inputs and less on household goods. Households with chronically ill members spend significantly more on health care than the general population, but spend slightly less on education, household goods and agricultural inputs. Households hosting orphans spend significantly more on education and less on staple foods and household goods.

Households living on communal settlements spend significantly less on food than those on other settlement types and more on non-staple foods and education. Those on newly resettled lands appear to spend less on health and education, more on food and agricultural inputs. Households on old resettled land report almost no health expenditures.

Asset category has a large influence on expenditure patterns (Table 33). The lower asset categories spend a significantly larger percent of their budget on food, with less for education, health, agricultural inputs and non-staple foods. They spend a slightly higher percentage, however, on household goods.

Table 33: Selected household expenses by vulnerability category.

Category	N	Food	Non-staple Food	Education	Health	Agr. Inpts	HH Goods
General Population	1615	75.1	6.4	9.0	1.6	3.1	3.1
Male-headed Households	1195	75.9	5.9	9.1	1.8	3.3	2.7
Female-headed HHs	430	73.0	7.7	8.8	1.2	2.6	4.4
Chronically Ill HHs	440	76.4	5.2	8.6	2.7	2.7	2.1
Households with Orphans	571	73.6	5.1	11.4	1.9	3.5	2.7
Communal Settlements	1171	72.6	7.9	9.6	2.0	3.1	3.2
Newly resettled	363	81.8	2.2	7.4	0.6	2.8	3.3
Old Resettled	91	81.3	3.3	8.8	0.1	4.4	1.1
Asset Very Poor	573	81.0	3.7	7.5	0.9	1.7	4.2
Asset Poor	782	74.5	6.9	9.6	2.1	3.2	2.2
Asset Intermediate	243	69.1	7.8	10.3	2.1	4.9	3.3
Asset Rich	81	58.0	17.3	11.1	1.2	6.2	3.7

I.J. Agricultural Inputs

A sufficient and accessible supply of agricultural inputs is essential for securing rural livelihoods. Farm households were asked if they had access to sufficient key agricultural inputs – seeds and fertilizer – during the previous year. The disaggregated results are provided in Table 34. A large majority of households (71%) felt they did not have access to sufficient seed during the previous year. This response was nearly identical for male and female-headed households. Households with chronically ill members and households with orphans have rates that do not vary significantly from the general population. Those living on communal lands appear to have had the least access to cereal seed while those living on resettled land fared somewhat better but still had poor access. Access to cash crop seed was better, however few households were engaged in cash crop production. The difficulty in accessing seed may be one barrier to cash crop production, especially on communal and newly resettled land. Fertilizer is not accessible for 9 out of 10 households (Table 34), and gender or household location have little if any impact.

There is no difference in the percentage of households with difficulty obtaining adequate cereal seed by asset category. Slightly higher percentages of asset very poor households report difficulty in obtaining cash crop seeds, and higher percentages of asset very poor and asset poor households have insufficient fertilizer.

Table 34: Percent of sampled households with insufficient agricultural inputs.

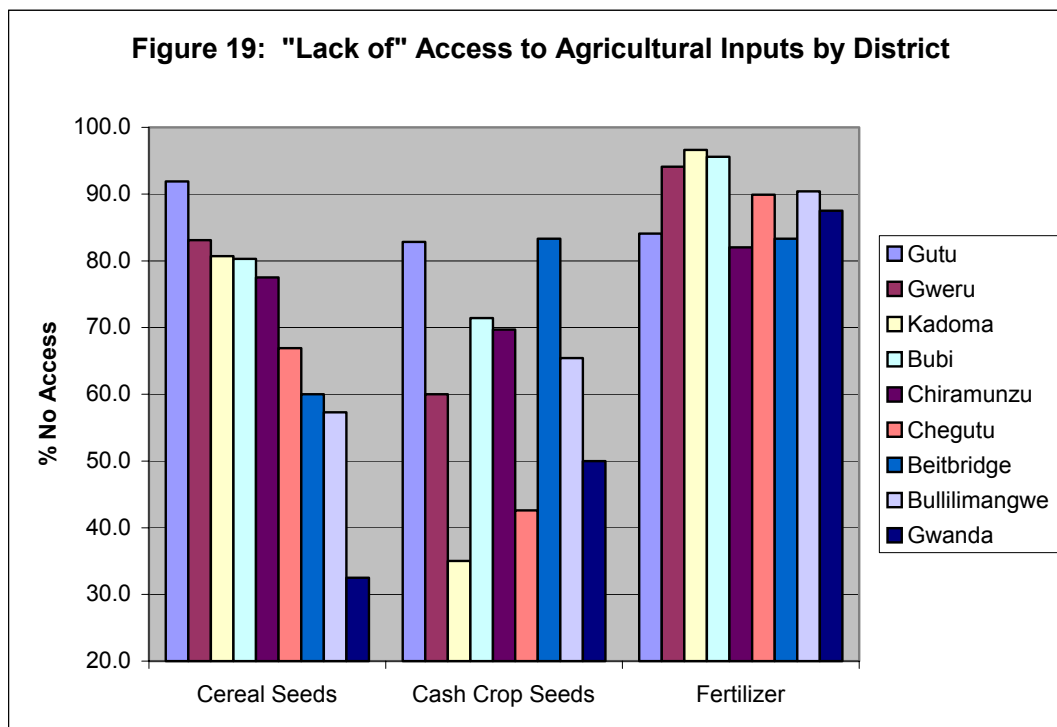
Category	N	Seeds - Cereals	Seeds – Cash Crops	Fertilizer
	% of households			
General Population	1615	70.8	60.1	89.2
Male-headed Households	1195	70.7	57.9	89.6
Female-headed Households	430	71.1	66.7	88.3
Chronically Ill HHs	440	72.5	56.7	91.6
Households with Orphans	571	73.5	58.4	90.2
Communal Settlements	1171	73.4	64.8	88.7
Newly resettled	363	65.2	79.1	90.8
Old Resettled	91	60.2	23.6	89.8
Asset Very Poor	573	72.6	64.4	91.5
Asset Poor	782	69.6	59.4	89.9
Asset Intermediate	243	71.0	60.9	84.1
Asset Rich	81	68.4	52.5	81.8

Agricultural input access varies from district to district, as Figure 19 highlights. For cereal seed has the largest variance among the nine districts, with over 90% of households in Gutu reporting insufficient access. In Gweru, Kadoma and Bubi over 80% of households report insufficient access. Gwanda had the best access to cereal seed, with only 32% of households reporting insufficient access.

Access to cereal seed in no way ensures access to cash crop seed. Districts such as Kadoma appear to have poor access to cereal seed but not to cash crop seed. Access to cash crop seed is poorest in Gutu and Beitbridge with over 80% of households

reporting that it is insufficient. It appears most favorable in Kadoma, Chegutu and Gwanda.

Districts have no significant impact on access to fertilizer. In all districts the percentage of households reporting insufficient access is over 80% (Figure 19).



Those households with insufficient access to agricultural inputs were then asked what they felt the main reasons were for this lack of access. Table 35 gives the results for 'Cereal and cash crop seeds. The majority of households state that they cannot afford to purchase seed, even if it is available in local markets or through other supply means. The price of cash crop seed appears to inhibit many households from engaging in production. The supply of seeds for both cereals and cash crops appears to be a problem, as about 12% of households respond directly that seed is not available, and another 24% and 12% for cereal seed and cash crop seed, respectively, state that both price and availability are a problem.

Table 35: Reasons of insufficient access to agricultural inputs.

	Seeds - Cereals	Seeds – Cash Crops
Could not afford to purchase	58.4	69.9
Seed not available	15.2	12.3
Both of the above	23.7	12.3
Other	2.7	5.5

The main reasons cited by households for their difficulties in accessing fertilizer, in order of importance, are as follows:

<i>Could not afford to purchase:</i>	54.8
<i>Neither available nor affordable:</i>	16.5
<i>Did not want to use:</i>	11.1
<i>Not available in the market:</i>	7.7
<i>Preferred organic fertilizer (manure):</i>	3.7
<i>Other:</i>	6.2

Again the majority of households' access to fertilizer is restricted by price. The availability of fertilizer may also be inhibiting based on the 16.5% of households that say it is neither available nor affordable, plus the 7.7% who say it is not available. Just over 10% of households indicate their preference not to use fertilizer.

Over half of all households surveyed (56%) report that they do not have sufficient water for gardening. Districts with the highest percentage of households reporting insufficient water include Bubi (81%), Gwanda (79%), Beitbridge (77%), Bullilimangwe (77%), and Gweru (69%). Those Districts where households enjoy the best access to water for gardening include Gutu, Chiramunzu, Chegutu and Kadoma.

Households were asked which techniques they participated in during the last growing season (Table 36). These practices included agro-forestry, lime application, drip irrigation, water harvesting, improved food storage, winter plowing, conservation tillage (potholing, tied ridges, contour ridging), urea treatment of stover, incorporation of legumes, and fodder production and storage. Less than 25% of those surveyed employed used any one of these techniques during the last growing season. Of those used, conservation tillage (23.1%) and improved food storage (22.8%) were the most common. Winter plowing (16.9%) and incorporation of legumes and storage (15.6%) were also used, with most other practices only being used by 10% or less of the households surveyed.

Table 36: Techniques used during the last planting season.

Technique	Percent	Technique	Percent
Agro-forestry	10.6	Lime application	3.4
Drip Irrigation	1.5	Water harvesting	9.8
Improved food storage (cribs, grainaries)	22.8	Winter plowing	16.9
Conservation Tillage (potholing, tied ridges, ridges)	23.1	Urea treatment of stover	6.2
Incorporation of legumes and storage	15.6	Fodder production	1.8

Households were asked what labor saving crops they had planted and what drought tolerant plants they had planted during the last six months (Table 37). By far the largest percentage of households grew short season maize (65.4%) as a labor saving crop, but over 30% of the households also grew groundnuts, cowpeas and sweat

potatoes. Melons were the most grown draught tolerant crop, with 45.8% of the households growing them. Growing sorghum (25.5%) and groundnuts (27.8%) were also important drought tolerant activities. All other labor saving crops and drought tolerant crops were grown by less than 10% of the households.

Table 37: Percent of crops used in the last planting season

<u>Labor Saving</u>	<u>Percent</u>	<u>Drought Tolerant</u>	<u>Percent</u>
Short season maize	65.4	Sorghum	25.5
Groundnuts	31.2	Pearl millet	14.2
Cow peas	32.2	Finger millet	8.7
Sweet potato	32.2	Groundnuts	27.8
Sunflower	3.6	Bambara nuts	9.1
		Melons	45.8
		Sesame	1.0
		Cotton	5.9
		Castor	.3

Table 38: Agricultural techniques and crops used last season, by natural region.

	Natural Region				
	Item	Plentiful rainfall, fertile	Little rainfall, less fertile	Inadequate rainfall, infertile	Dry, infertile
Techniques	Agroforestry	14.3	8.2	6.5	15.1
	Drip irrigation	0.3	2.5	2.1	1.2
	Improved food storage	32.1	24.1	20.6	17.3
	Conservation tillage	35.9	30.3	13.8	19.3
	Incorporating legumes	7.2	13.4	20.0	19.1
	Lime application	0.6	4.4	4.9	3.4
	Water harvesting	2.6	9.1	9.9	16.6
	Winter plowing	46.8	18.1	7.1	3.7
	Urea treatment	8.6	4.1	4.1	8.8
Fodder production	0.6	3.1	2.3	1.5	
Crops	Short season maize	70.2	60.3	76.1	52.0
	Groundnuts	38.7	25.0	31.8	29.3
	Cowpeas	52.4	3.1	42.2	24.9
	Sweet potatoe	67.2	17.5	26.9	21.7
	Sunflower	4.9	2.2	3.5	3.7
	Sorghum	10.6	8.4	37.7	34.4
	Pearl millet	0.3	2.8	24.6	21.5
	Finger millet	4.6	5.3	9.3	13.9
	Groundnuts	35.6	20.6	29.1	25.4
	Bambara nuts	14.9	4.1	9.0	8.5
	Melons	49.0	17.2	62.5	44.4
	Sesame	0.9	0.3	2.1	0.2
	Cotton	26.4	0.0	0.8	0.0
Castor	0.3	0.0	0.8	0.0	

Table 38 provides reference data for Agricultural techniques and crops used last season, by natural region.

III.K. Consumption and Food Frequency

Survey participants were asked which food types were consumed in their households the day before the survey. Maize was the most significant food type with 91.7% of households eating maize, or maize meal, the previous day. Over 60% of households also consumed cooking oil or other fats, and vegetables. Sugar or sugar products were used in just under half the households. Other foods were less used, with nuts and pulses (groundnuts, beans, etc.), milk, wild food (leaves, roots, tubers, fruits, insects, etc.), and fruit (not wild fruit) being used in 22-36% of the households. Other foods were little used with meat (chicken, beef, wild meat), other cereals (sorghum, millet, rice, etc.), bread and flour, fish (fresh and dried), eggs, and cassava/potatoes being consumed in less than 15% of the households .

The following table (Table 39) shows the percent of households eating these different types of food.

Table 39: Percent of households consuming food yesterday.

Food Item	Percent	Food Item	Percent
Maize	91.7	Fruit	22.9
Cooking Oil	68.9	Meat	14.7
Vegetables	64.8	Other Cereals	13.8
Sugar	45.5	Bread	6.0
Nuts and Pulses	36.0	Fish	5.4
Milk	34.8	Eggs	4.1
Wild Fruit	27.1	Cassava/potatoes	2.1

The number of meals eaten in the household yesterday was asked for adults and children. About 50% of the time, both adults and children ate two meals per day, the day before the survey (Tables 40 and 41). Approximately 28% of adults and 20% of children ate less than two meals per day, with 1% of adults and 2.8% of children not eating at all. Approximately 15% of adults and 27% of children ate three meals per day, with less than .8% of each group eating four meals per day.

Table 40: Number of meals eaten by adults the day prior to the survey.

	Frequency	Percent
0	17	1.0
1	450	27.8
2	901	55.6
3	251	15.5
4	2	.1
Total	1621	100.0

Table 41: Number of meals eaten by children the day prior to the survey.

	Frequency	Percent
0	45	2.8
1	268	16.8
2	825	51.9
3	440	27.7
4	13	.8
Total	1591	100.0

The number of items in the diet is an important measure of food security. The average number of items in the diet was 4.4 for the survey population as a whole, with a median value of 4.0 (50% of households ate more than 4 items and 50% ate less) and a range of one to thirteen items.

Table 42: Number of items in the diet by strata.

Category	N	Number of Items in the Diet
General Population	1618	4.37
Male-headed Households	1192	4.33
Female-headed Households	426	4.47
Chronically Ill HHs	437	4.39
Households with Orphans	567	4.39
Asset Very Poor	571	3.98
Asset Poor	725	4.37
Asset Intermediate	242	4.81
Asset Rich	80	5.83
Communal Settlements	1124	4.69
Newly resettled	351	3.29
Old Resettled	89	4.71

Table 42 shows the mean number of items in the diet for vulnerable groups. There is overall no significant difference in the number of items in the diet between the general population and female-headed households, households with chronically ill members, or households hosting orphans. There is, however, a significant trend ($p < .001$) based on asset wealth. Asset very poor household consumed an average of four items

compared to almost six items for the wealthiest asset group. Also, households on newly resettled lands consumed significantly fewer items (3.3) compared to both communal and old resettled households (4.7).

III.L. Coping Strategies

The Coping Strategies Index (CSI) is a relatively simple and efficient indicator of household food security that corresponds well with other more complex measures of food insecurity. Developed by CARE, and field tested by WFP and CARE, the CSI has been used for early warning and food security assessments in eight African countries. The CSI gives a quantitative score for each household that is a cumulative measure of the level of coping - and therefore the measure of food insecurity. In similar studies in 6 countries in the Greater Horn of Africa region, this has been found

to be a robust indicator of household food security, and one which is straight forward to measure and analyze, and can be used to track both household food security in emergencies, and the impact of interventions such as food aid.

The CSI measures the *frequency* and *severity* of a household's coping strategies for dealing with shortfalls in food supply. Information on the frequency and severity is combined into a single CSI score. Comparing scores and averages gives a good comparison of overall household food security and establishes the baseline for monitoring drought trends and the impact of interventions. The measure includes only short-term consumption strategies that are most important in a particular context.

CSAFE recognizes the CSI as a useful monitoring tool to measure changes in household food security status and provide program managers with timely information. To be effective, the CSI must be adapted to the local context and developed as part of a more time and resource intensive assessment. Developing the index requires background knowledge of the indicator, or several days of training.

III.L.1. Consumption Strategies

The household survey asked households which coping strategies were used during the last 30 days. The coping strategies were subset into consumption strategies (Table 43), expenditure strategies, income strategies, and migration strategies. Consumption strategies included borrowing food, borrowing money to buy food, buying food on credit, relying on less preferred foods as substitutes for maize, regularly reducing the number of meals eaten per day, regularly skipping entire days without eating due to lack of money or food, regularly eating meals of vegetables only, eating unusual types of wild food that are not normally eaten, restricting consumption of adults so children can eat normally, feeding working members at the expense of nonworking members, eating all green maize fresh from the field, and slaughtering more animals than normal for food. Over the last 30 days, the respondents were asked if they participated in these coping strategies every day, 3-6 times per week, 1-2 times per week, less than one day per week, or never.

Over half the households (54%) responded that they borrowed food, borrowed money to buy food, or bought food on credit during the last 30 days. Almost all of those who used borrowing or credit, 46% of total households, participated in this activity 1-2 times per week. Almost two-thirds relied on less preferred food (food other than maize), but only 28.7% of households eat less preferred food more than 1-2 times per week. More importantly, 76.5% of households reduce the number of meals they eat at least once per week, with 45% of the households reducing the number of meals they eat every day. A large percent of households, almost 40%, skipped entire days of eating at least 1-2 times per week.

Table 43: Consumption strategies.

Consumption Strategies (% of 1625 households)	Severity	Every Day	3-6 Times per Week	1-2 Times per Week	<1 Time per Week	Never
Borrowing food or money to buy food, or buying food on credit.	2.3	1.0	6.4	23.7	22.9	46.0
Relying on less preferred foods as substitutes for maize.	3.0	7.9	20.8	25.4	16.7	29.2
Regularly reducing the number of meals per day.	2.9	45.0	15.1	16.4	6.4	17.1
Regularly skipping entire days without eating due to lack of money or food.	3.7	.9	15.4	23.7	17.0	43.1
Regularly eating less preferred food as a substitute for maize.	3.5	7.3	19.7	26.7	16.9	29.4
Regularly eating meals of vegetables only.	3.1	2.5	18.7	21.3	14.0	43.3
Eating unusual types of wild food that are not normally eaten.	3.1	3.3	7.6	10.5	12.7	66.0
Restricting consumption of adults so that children can eat normally.	3.0	17.8	15.5	17.5	7.8	41.4
Feeding working members at the expense of nonworking members.	3.1	.6	.5	2.6	2.5	93.8
Eating all green maize fresh from the field (i.e. nothing left to harvest).	2.9	4.4	2.2	4.5	2.5	86.3
Slaughtering more animals than normal for food.	2.3	.6	.7	2.1	4.4	92.2

Forty-two percent of households regularly eat meals of “vegetables only” one or more times per week. Wild foods are also used, but only 21.4% of the households use wild foods one or more times per week. Fourteen percent of the households use wild foods more than three times per week, and 3.3% of the households eat wild food every day.

Households regularly reduce the amount of food for adults so that children can eat normally (58.6% of households), but only 6.2% of households feed working members in preference to nonworking members. Harvesting and eating all of the available green maize is not strongly practiced and only 11.1% of household eat green maize one or more times per week. Slaughtering more animals than normal is minimally practiced with 3.4% of households killing additional livestock one or more times per week.

Coping Strategy Index

Coping strategy index scores (CSI) for each settlement type are shown in Table 44. Communal households have the lowest CSI, averaging 61.2. This increases to 64.5 on newly resettled lands and 72.8 on old resettled lands. Each of these means is significantly different at $p < .001$.

Table 44: CSI by settlement type.

Descriptive Statistics						
Settlement Type		N	Minimum	Maximum	Mean	Std. Deviation
Communal	CSISUM	1159	30.600	123.800	61.32062	20.53080
	Valid N (listwise)	1159				
Newly Resettled	CSISUM	363	30.600	119.100	64.49118	18.81149
	Valid N (listwise)	363				
Old Resettled	CSISUM	91	30.600	107.400	72.81648	16.20771
	Valid N (listwise)	91				

Looking at the CSI by natural region (Table 45) shows that those households in Little Rainfall, Less Fertile areas had highest index. Recall that it also had the highest percentage of “asset very poor” households, and indeed there is a negative and significant correlation between asset ownership and coping strategy index (Table 46). In other words, the less assets a household has, the more likely they are to have a higher coping strategy index.

Table 45: CSI by natural region.

Descriptive Statistics						
Natural Region		N	Minimum	Maximum	Mean	Std. Deviation
Adequate Rainfall, Fertile	CSISUM	345	30.600	123.800	75.25884	17.08338
	Valid N (listwise)	345				
Little Rainfall, Less Fertile	CSISUM	318	30.600	119.100	50.86824	18.92137
	Valid N (listwise)	318				
Inadequate Rainfall, Infertile	CSISUM	539	30.600	110.600	64.56716	18.08695
	Valid N (listwise)	539				
Dry, Infertile	CSISUM	411	30.600	108.700	58.79586	19.47973
	Valid N (listwise)	411				

Table 46: Correlation between CSI and asset category.

Correlations			
		CSISUM	ASSETCAT
CSISUM	Pearson Correlation	1	-.135**
	Sig. (2-tailed)	.	.000
	N	1613	1613
ASSETCAT	Pearson Correlation	-.135**	1
	Sig. (2-tailed)	.000	.
	N	1613	1625

** . Correlation is significant at the 0.01 level (2-tailed).

Other household types show a relationship between level of vulnerability and the coping strategies index. Households with chronically ill members had an average index of 64.6. Households hosting orphans had an almost identical average index of 64.2. Female-headed households averaged only 60.7 while elder-headed households averaged 62.4. For asset categories, asset very poor households and asset poor households averaged 64.7 and 63.4, respectively. Asset intermediate and asset rich households averaged significantly less, at 59.1 and 52.7, respectively.

The CSI can be used to monitor household status in the future and evaluate trends over time.

Expenditure Strategies

Households participate in various expenditure strategies in order to buy food. This usually means giving up important activities such as healthcare and education. Approximately half of all households surveyed reduced spending on healthcare (46.3%) and education (49.9%) in order to buy food (Table 47). Additionally, 58% of

households reduced expenditures on agricultural and livestock inputs to insure enough food was available for consumption.

Table 47: Expenditure strategies.

Expenditure Strategies (percent of 1625 households surveyed).	Yes	No	N/A
Avoided spending on healthcare because you had to buy food.	46.4	49.0	4.6
Reduced expenditure on education to buy food.	49.9	41.1	8.9
Reduced expenditure on agricultural and livestock inputs	58.6	37.4	3.9

Income Strategies

In conjunction with reducing expenditures, households also sold more assets, including livestock, breeding cattle, and draft cattle to get food. These income strategies were not practiced at the same level as expenditure strategies, with less than 20% of households finding it necessary to sell assets (Table 48). Competition for resources is high however, as indicated by 20.4% of households reporting theft of crops or livestock in the 30 days prior to the survey.

Table 48: Income strategies.

Income Strategies (percent of 1625 households surveyed).	Yes	No	N/A
Sold more than the usual number of cattle to buy food.	18.4	57.2	24.4
Sold breeding and draft cattle to buy food.	10.2	61.1	28.7
Sold other household assets to buy food.	17.5	79.2	3.3
Household had crops or livestock stolen.	20.4	74.2	5.4

A significantly higher percentage of households ($p < 0.45$) with chronically ill (21%) versus households without chronically ill (16%) have recently sold assets to purchase food. The more vulnerability categories a household is in, the more likely it will have sold assets recently to purchase food. Households hosting orphans do not vary significantly from those not hosting orphans in this regard, nor do male versus female-headed households.

Migration Strategies

Households use migration as a strategy when there is a food shortage. About 21% of households send children to friends or relatives in time of need, but temporary and permanent migration to find food or work was also undertaken by 17 % of those surveyed (Table 49).

Table 49: Migration strategies.

Migration Strategies (% 1625 households)	Yes	No	N/A
Sent children away to friends or relatives.	20.9	76.7	2.4
Been forced to temporarily or permanently migrate to find food or work.	16.9	82.3	.8

III.M. Health

The health section of the survey gathered data about sickness in adults, heads of households, and children. Two time periods were addressed, the last two weeks, and the last year. If a household had someone who was ill during the last two weeks, they were asked where they went for healthcare services. The responses included: a pharmacy or dispensary (without doctor consultation), a clinic, hospital, or village health care worker (formal health care), a traditional or faith healer, no health care sought outside the home, and other. Further, those that did not receive formal health care were asked why they did not seek formal health care. The reasons included: no money to pay for treatment (fees and drugs), no transport or too expensive/far to get there, poor quality of service (no drugs or staff leading to lack of confidence), preferring not to go due to religious or cultural reasons, illness was minor, and other.

Fifty-seven percent of households reported a member sick within the last two weeks. Of those that were ill, formal healthcare was sought in the majority (62.6%) of the cases (Table 50). Of the remaining, a relatively large percentage did not seek health care outside the home (26.8%). The main reason households did not seek formal healthcare was that they had no way to pay for treatment. This response was used in 48.7% of the cases. The second reason for not acquiring formal healthcare was that the illness was minor (18%). The rest of the reasons were spread among other factors including no transport (9%), preferring not to go (8.7%), and poor quality of service (3.7%).

Table 50: Where households seek treatment.

	Frequency	Percent
Did not seek healthcare outside household	250	26.8
Pharmacy/dispensary (without doctor consultation)	29	3.1
Clinic/hospital/village health worker (formal health care)	583	62.6
Traditional healer/faith	43	4.6
Other	27	2.9
Total	932	100.0

One question was asked concerning community healthcare and asked if the community had programs to help those that were chronically ill. Survey participants were also asked how many times a community health worker visited their home. Of those surveyed 58% stated their communities had programs to help those that were chronically ill.

Almost 38% of the respondents stated that they have never had a healthcare worker visit their home (Table 51). Of the remainder the responses were fairly even distributed between the other categories. Fifteen percent had a health care worker visit their home within the last week, 16.2% had a healthcare worker visit within the

last month, 17.4% had a health care worker visit within the last year, and 12.7% had a health care worker visit more than one year ago.

Table 51: Last time a health care worker visited your home.

		Frequency	Percent
Valid	Within the last week	259	15.9
	Within the last month	263	16.2
	Within the last year	283	17.4
	More than one year ago	206	12.7
	Never	614	37.8
	Total	1625	100.0

Twenty-four percent of the households had one or more adults, ages 15-60, that were sick for more than three months, within the last 12 month period (chronically sick). The majority of households (22.1%) only had one adult in the house that fit the criteria (Table 52). In 11% of the total households the head of household was chronically sick. Fewer households (5.5%) had small children, under age five, that were sick more than three months of the last 12 months. In the majority of these households (5%) only one child was chronically sick.

Table 52: Percent of chronic illness in adults and young children.

	Only One	Two	Three or more
Adults	22.1	1.7	.6
Children	5.0	.4	.1

It was also asked how many adults and young children died within the last year after being sick for more than three months. Almost 11% of the households had one or more adults, ages 15-60, that died in the last year after being sick for more than three months in that time period (chronically sick). The majority of houses (9.5%) only had one adult in the house that fit the criteria. In 2.2% of the total households the head of household died. Fewer households (2.6%) had small children, under age five, who died. that were sick more than three of the last 12 months. In the majority of these households (2.3%) only one child was chronically sick.

Summary

1. The sample included data on a total of 1625 households, 73.5 percent of which were headed by a male and 26.5 percent by a female. Communal settlements had the highest percentage of female-headed households at 30%.
2. Household sizes are quite large and ranged from 1 to 23 individuals and the average size is 6.7 members. Over 10% of households have 10 or more members. Female-headed households average 6.2 members, significantly smaller than the 6.9 member average of male-headed households.
3. Rural households have low asset value. In this survey, about 80% of households were classified as asset poor or very poor. Households with limited assets are vulnerable, not only because of their relative poverty, but also because they have few items to divest should they be forced to spend money on food or emergencies.
4. In each district surveyed, the proportion of households that are asset very poor is over 40 %. Chiramanzu has the highest percentage in this category, followed closely by Bullimangwe and Gwanda.
5. Almost half of female headed households were classified as asset very poor, compared to less than a third of male headed households. Of those female-headed households that are asset very poor or asset poor, a significant percentage (20% and 11%, respectively) are divorced or separated. In contrast, no asset intermediate or asset rich female-headed households are divorced or separated.
6. Slightly over 35% of households are hosting on average just over two orphans. Over 90% of orphans are not children of the household where they live. Female-headed households host an average of 2.5 orphans compared to 1.9 hosted by male-headed households.
7. Over 27% of households have at least one chronically ill member. The highest incidence of chronic illness is in old resettled. In natural region 1, one-third of households have at least one chronically ill member, which is significantly higher than all other regions.
8. In C-SAFE operational areas, the percentage of vulnerable households is very high. Just over 60% of households surveyed are in at least one vulnerability category.
9. Out of over 3,000 school-aged children, 81% are currently attending primary school. However, in one-third of households with school-age children, at least one age-eligible child is not attending school. A slightly higher percentage of age-eligible children are attending school in male-headed households as opposed to female-headed households (82% and 78%, respectively). School attendance varies considerably by district with Gutu, Beitbridge and Chiramanzu having the highest enrollment percentages and Kadoma, Gwanda and Chegutu having the lowest
10. Just over 14% of households with age-eligible children report at least one child dropping out within the previous year. School-aged children living in households with chronically ill dropped out at a significantly higher rate than households without

chronically ill. When households were asked why age-eligible children had dropped out of school, the majority cited the costs of education.

11. The estimated value of standard assets owned by a household averages 194,000 Zim dollars (approximately US\$139). The value of assets in male-headed households averages 40% higher than female-headed households. Asset values are significantly lower in newly resettled areas as opposed to communal and old resettled areas.

12. The majority of households that were included in the study are engaged in agricultural activities. Only 6% of households did not cultivate crops in the season immediately preceding the survey. Almost 40% of all households cultivated less land than in the previous season. The most common reason for leaving some land fallow was a response to the drought conditions prevailing in the region. Nearly 3 out of 5 farm households altered their cropping behavior due to the drought.

13. Relatively few households were engaged in selling crops during the current growing season. This is likely due to the low production gained from the crop along with the need to satisfy food requirements. The most commonly sold food crop was sorghum, perhaps partly for beer brewing. Only 12% of all farm households surveyed were engaged in cash crop production, with groundnuts and cotton being the two most prevalent.

14. Just over 18% of households engaged in on-farm labour to access cereals, with an average payment of 80 kilograms. Almost one-quarter of asset very poor households gain cereals by providing on-farm casual labour, significantly more than other asset categories. Off-farm labour was found in only 6% of all households, with about the same average payment as on-farm labour. Gifts or remittances were the most important alternative source of cereals, and were found in almost one-quarter of all households. The average gift or remittance was 83 kilograms.

15. Almost 68% of households surveyed received an average of 173 kgs of general food aid during the last twelve months. Nearly 80% of female-headed households received food aid as opposed to 64% of male-headed households. General food aid was received by nine out of every ten households living in communal areas. In contrast, less than one of every ten households living in newly resettled areas received food aid and only 3 out of every ten living on old resettled lands received general food aid.

16. Over 45% of households gained an average of over 2,600 Zim dollars in income from participation in government food-for-work programs.

17. Male-headed households spend slightly more on food than female-headed households, but less on non-staple foods. They spend slightly more on agricultural inputs and less on household goods. Households with chronically ill members spend significantly more on health care than the general population, but spend slightly less on education, household goods and agricultural inputs. Households hosting orphans spend significantly more on education and less on staple foods and household goods.

18. Agricultural input access varies from district to district. Cereal seed has the largest variance among the nine districts, with over 90% of households in Gutu

reporting insufficient access. In Gweru, Kadoma and Bubi over 80% of households report insufficient access. Gwanda had the best access to cereal seed, with one-third of households reporting insufficient access. Access to cereal seed in no way ensures access to cash crop seed. Districts such as Kadoma appear to have poor access to cereal seed but not to cash crop seed.

19. Improved cropping practices included agro-forestry, lime application, drip irrigation, water harvesting, improved food storage, winter plowing, conservation tillage, urea treatment of stover, incorporation of legumes, and fodder production and storage. Less than 25% of those surveyed employed used any one of these techniques during the last growing season. Of those used, conservation tillage and improved food storage were the most common.

20. Over half of households report borrowing food, borrowing money to buy food, or buying food on credit during the last 30 days. Almost two-thirds relied on less preferred food (food other than maize) more than 1-2 times per week. Over three-quarters of households are reducing the number of meals they eat at least once per week, with almost half reducing the number of meals they eat every day. A large percent of households skip entire days of eating at least 1-2 times per week.

21. Households regularly reduce the amount of food for adults so that children can eat normally, but few feed working members in preference to nonworking members. Harvesting and eating all of the available green maize is not strongly practiced and only 10% of households eat green maize one or more times per week.

22. Communal households have the lowest coping strategy index and households on old resettled lands had the highest. The higher the coping strategy index, the more food insecure the household. Households with chronically ill members and households hosting orphans had almost identical indices. Asset very poor households and asset poor households had significantly higher indices than asset intermediate and asset rich households.

23. Over half of all households reported a member sick within the last two weeks. Of those that were ill, formal healthcare was sought in the majority of cases. For those not seeking formal healthcare, the most cited reason was they had no way to pay for treatment.

24. Almost 11% of households had one or more adults die in the last year after being sick for at least three months.

Annex A : Household questionnaire

Zimbabwe Vulnerability Assessment Committee			
April 2003 Assessment - Household Interview			
1. Enumerator Number _____	2. District Name _____	3. District Code _____	
_ _ _			
4. Ward Name _____	5. Ward Code _ _ _		
6. Village Name _____	7. Village Surveyed _ _	8. FEZ (ID) _____	
_ _			

A. Household Demographics			
9.	Sex of household head (<i>circle one</i>)	Male	Female
10.	Does the head of household stay most of the time in this homestead?	No	Yes
11.	How old is the household head in years (<i>circle one</i>)-(approx)?	Up to 15years 40 to 59 years	16 to 19 years 60 years or older
12.	What is the Marital Status of the household head?	1 = married 4 = single	2 = widowed 5 = orphan/child
13.	Household Size – How many people CURRENTLY eat and sleep in the household (<i>exclude temporary visitors (for <1 month), and include the respondent</i>)	_ _ Members	
14.	How many children under 5 years live permanently in the household? (< 5)	_ _ Children from 0 to 4 years	
	How many children 5-14 years live permanently in the household? (5 to 14)	_ _ Children from 5 to 14 years	
	How many youths 15-19 years live permanently in the household? (15 to 19)	_ _ Males 15-19	_ _ Females 15-19
	How many adults 20-59 years live permanently in the household? (20 to 59)	_ _ Males 20-59	_ _ Females 20-59
	How many elderly older than 60 years live permanently in the household? (60 or older)	_ _ Elderly older than 60	
	From the total number of children aged up to 15 years old, how many are orphaned children ? (Defined as "one or both parents lost, and less than 15 years")	_ _ Orphans (if none, skip to Q15)	
	From the total orphans described above, how many have come from other households ?	_ _ Orphans	
15.	Has any female child under 15 years got married in the last 12 months? (<i>circle one</i>)	No	Yes
			Not Applicable
16.	Has your family lived in this community for more than one year?	No	Yes

B. EDUCATION			
17.	From the total number of children aged between 5 to 14 years old, how many are currently attending primary school ?	_ _ children	
18.	Did any child aged between 5 to 14 years old drop out of primary school for more than one month in the last 12 months? (circle one)	No – skip to question 22 Yes Not applicable	19. If yes, how many? _ _
20.	If any boys dropped out of primary school, what was the main reason ? (choose only one option)	1=Family cant afford costs (books, uniform, fees etc.) 2= Work outside home for food or cash 3= Help with household activities 4= Care for sick family member 5= Hunger	6= Not interested/ not good student 7 = Too far 8= Other 99= N/A (no children dropped out)
21.	If any girls dropped out of primary school, what was the main reason ? (choose only one option)	1= Family cant afford costs (books, uniform, fees etc.) 2= Work outside home for food or cash 3= Help with household activities 4= Care for sick family member 5= Hunger	6= Not interested/ not good student 7= Early marriage or pregnancy 8 = Too far 9= Other 99= N/A (no children dropped out)

C. ASSETS and Livestock Ownership							
22.	Does your household own any of the following items :		Hoe _	Scotch Cart _			
	Record how many of each items is owned by the household		Ox-Plough _	Iron/ Asbestos Roofing			
			Radio _	Sheet (<i>not scrap metal</i>) _			
			Television _	Wheelbarrow _			
24 Type of Livestock	13a. How many are owned by:			13b. How many were sold in the last 6 months?	13c. Main reason for sale?	13d. How many livestock died during the previous 6 months?	13e. How many were lost due to theft or any other reason?
	Men	Women	Both		1.needed money for food 2.needed money for other items/services 3. lack of grazing 4. other		
Draught Cows				_ _		_ _	_ _
Other cattle				_ _		_ _	_ _
Goat/sheep				_ _		_ _	_ _
Pigs				_ _		_ _	_ _
Poultry				_ _		_ _	_ _
Donkeys/Horses				_ _		_ _	_ _
Rabbits							

D. Land Use and Production			
D.1 AREA CULTIVATED			
25.	Compared to last year's summer growing season (i.e. planted Nov/Dec01-harvested Apr02), did you cultivate more, less or the same amount of land during this current cropping season (Nov/02-Apr/03)? (circle one)	Cultivated more land this season Cultivated same amount of land Cultivated less land this season N/A (HH doesn't cultivate) – if N/A, skip to section E	
26.	During this current summer growing season (planted Nov/Dec02 – harvesting Apr/03), did you leave any land uncultivated that would normally be cultivated? (circle one)	No (if no skip to Q29) Yes N/A (HH doesn't cultivate)	
27.	Was the area left uncultivated during this current summer season (i.e. harvesting Apr/03) bigger, smaller or the same as the area left uncultivated during the last year summer season (i.e. harvested Apr/02)? (circle one)	Left more land uncultivated this season Left the same amount of land uncultivated Left less land uncultivated this season N/A (HH doesn't cultivate)	
28.	If any land was left uncultivated during this current summer season (Dec/02-Apr/03), what were the reasons: (tick all relevant boxes)	lack of labour (<i>incl. illness</i>) <input type="checkbox"/> lack of seed <input type="checkbox"/> lack of draught power <input type="checkbox"/> lack of fertilizer <input type="checkbox"/>	lack of rainfall <input type="checkbox"/> To leave as fallow <input type="checkbox"/> Other <input type="checkbox"/>

D.2 Production – Last Year's Harvest (Harvested during 2002)			
D.2a Cereal and Sweet Potatoes <u>SUMMER</u> Harvest Season 2002 (Mar-Jun/02)			
29.	Did you harvest MAIZE during last year's summer harvest (Mar-Jun/02)?	No = 0 if no skip to Q33 Yes = 1	
30.	If yes, what was your TOTAL harvest of MAIZE for 2002? (in kgs)	_ _ _ _ _ kgs	
31.	Did you give away, sell or exchange any MAIZE from that harvest?	1= Yes 0= No – if no skip to Q. 33	
32.	If yes, how many kgs of MAIZE did you sell, exchange or give away? (in kgs)	_ _ _ _ _ kgs	
33.	Did you harvest SORGHUM during last year's summer harvest (Mar-Jun/02)?	No = 0 if no skip to Q37 Yes = 1	
34.	If yes, what was your TOTAL harvest of SORGHUM during 2002? (in kgs)	_ _ _ _ _ kgs	
35.	Did you give away, sell or exchange any SORGHUM from that harvest?	1= Yes 0= No – go to question 37	
36.	If yes, how many kgs of SORGHUM did you sell, exchange or give away? (in kgs)	_ _ _ _ _ kgs	
37.	Did you harvest MILLET (rapoko and/ or mhunga) during last year's summer harvest (Mar-Jun/02)?	No = 0 if no skip to Q41 Yes = 1	
38.	If yes, how many kgs of MILLET did you harvest during 2002?	_ _ _ _ _ kgs	
39.	Did you give away, sell or exchange any MILLET from that harvest?	No = 0 if no skip to Q41 Yes = 1	
40.	If yes, how many kgs of MILLET did you sell or give away?	_ _ _ _ _ kgs	
41.	Did you harvest sweet potatoes during last year's summer harvest (Mar-Jun/02)?	1= Yes 0= No – go to question 43	
42.	If yes, how many kgs of sweet potatoes did you harvest?	_ _ _ _ _ kgs	
D.2b Production – Winter (Dry Season) Harvest 2002			
43.	Did you harvest any winter (dry season) MAIZE crop during 2002?	1= Yes 0= No – go to question 45	
44.	If yes, what was your TOTAL MAIZE harvest during last year's dry season?	_ _ _ _ _ kgs	
45.	Did you harvest any winter (dry season) WHEAT crop during 2002?	1= Yes 0= No – go to question 45	

82. Did any of the children of primary school age receive porridge at the school ?	No – if no skip to 85 Not applicable (no children in HH)	Yes
83. If yes, how many children received porridge at primary schools during the last 12 months? (not including school feeding)	_ _ CHILDREN	
84. If yes, for how many months ?	_ _ MONTHS	

G. Cereal Purchases		
During the last 12 months (April 2002 to now)...		
85.	How much cereal (including mealie meal) did your household purchase <u>during the last 12 months</u> from GMB or at controlled prices? (kgs)	_ _ _ _ kgs
86.	Taking into account the months that GMB was not available or sufficient, how much cereal (including mealie meal) did your household purchase at uncontrolled prices or from local markets (or the black market) during the last 12 months? (kgs)	_ _ _ _ kgs
During the last 4 months (December 2002 to now)...		
87.	How much rice did your household purchase during the last 4 months? (kgs)	_ _ _ _ kgs
88.	How much potatoes/ sweet potatoes did your household purchase during the last 4 months?	_ _ _ _ kgs
89.	How much flour did your household purchase during the last 4 months?	_ _ _ _ kgs
90.	How much bread did your household purchase during the last 4 months? (N.b. 1 loaf = roughly 400g)	_ _ _ _ kgs
Imagine that during the last 12 months (April 2002 to now)...		
91.	If cereals had been readily available at GMB/ controlled prices and no food aid was delivered, how much cereal would you have been able to buy from GMB per month (on average) with the income you were earning?	_ _ _ _ kgs
92.	If cereals had been readily available at uncontrolled prices/black market and no food aid and GMB was delivered, how much cereal would you have been able to buy from shops with uncontrolled prices per month (on average) with the income you were earning?	_ _ _ _ kgs

H. Income Sources

H.1 Non-Seasonal Income Sources – Last 4 months

93. Did anyone in your household earn income from Formal Employment during the last 4 months (December to March)?	No – if no, skip to Q96 Yes
94. If yes, how much did you earn from formal employment during the last 4 months?	Z\$ _____
95. For these coming 12 months, are you expecting to earn more, less or the same than last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
96. Did anyone in your household earn income from sales of livestock during the last 4 months?	No – if no skip to Q99 Yes
97. If yes, how much did you earn from sales of livestock during the last 4 months?	Z\$ _____
98. For these coming 12 months, are you expecting to earn more, less or the same than last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
99. Did anyone in your household earn income from trading and self-employment during the last 4 months?	No – if no, skip to Q102 Yes
100. If yes, how much did you earn from trading and self-employment during the last 4 months? (n.b. profits only – do not include input costs)	Z\$ _____
101. For these coming 12 months, are you expecting to earn more, less or the same than last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
102. Did anyone in your household earn income from gold panning during the last 4 months?	No – if no, skip to Q105 Yes
103. If yes, how much did you earn from gold panning during the last 4 months?	Z\$ _____
104. For these coming 12 months, are you expecting to earn more, less or the same than last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
105. Did anyone in your household earn income from remittances and gifts during the last 4 months?	No – if no, skip to Q108 Yes
106. If yes, how much did you earn from remittances and gifts during the last 4 months?	Z\$ _____
107. For these coming 12 months, are you expecting to earn more, less or the same than last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
108. Did anyone in your household earn income from Government Public Works (“Food for Work”) during the last 4 months?	No – if no, skip to Q110 Yes
109. If yes, how much did you earn from “food for work” during the last 4 months?	Z\$ _____

H.2 Seasonal Income Sources – Last 12 Months

110. Did anyone in your household earn income from Cereal and Cash Crop Sales during the last 12 months?	No – if no, skip to Q113 Yes
111. If yes, how much did you earn from sales of cereal and cash crops during the last 12 months?	Z\$ _____
112. For these coming 12 months, are you expecting to earn more, less or the same than the last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
113. Did anyone in your household earn income from On-farm Casual Labor during the last 12 months?	No – if no, skip to Q116 Yes
114. If yes, how much did you earn from on-farm casual labor during the last 12 months?	Z\$ _____
115. For these coming 12 months, are you expecting to earn more, less or the same than the last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
116. Did anyone in your household earn income from Off-farm Casual Labor during the last 12 months?	No – if no, skip to Q119 Yes
117. If yes, how much did you earn from off-farm casual labor during the last 12 months?	Z\$ _____
118. For these coming 12 months, are you expecting to earn more, less or the same than the last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
119. Did anyone in your household earn income from Vegetable sales/gardening during the last 12 months?	No – if no, skip to Q122 Yes
120. If yes, how much did you earn from Vegetable sales/gardening during the last 12 months?	Z\$ _____
121. For these coming 12 months, are you expecting to earn more, less or the same than last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable

I. Expenditure Patterns

122. What is the main/ biggest expense your household has had over the last 12 months? (1= staple foods, 2= non-staple foods, 3=household goods, 4= education, 5=health, 6= funerals, 7= travel, 8= agricultural inputs, 9= other)	□
123. What is the second main/ biggest expense your household has had over the last 12 months? (1= staple foods, 2= non-staple foods, 3=household goods, 4= education, 5=health, 6= funerals, 7= travel, 8= agricultural inputs, 9= other)	□
124. What is the third main/ biggest expense your household has had over the last 12 months? (1= staple foods, 2= non-staple foods, 3=household goods, 4= education, 5=health, 6= funerals, 7= travel, 8= agricultural inputs, 9= other)	□

J. Agricultural Inputs	
125. Did you have enough seeds for your main cereal crops last 12 months?	No Yes – <i>if yes skip to Q127</i> NA / did not cultivate cereals – <i>if NA skip to Q128</i>
126. If not, what was the reason ?	1= Could not afford to purchase 2= Was not available in the market 3= Both of the above 4= Other
127. What was the main source for the seed that you used? (one answer only)	1=from last harvest/ retained seed/carry over 2=purchased 3=provided by NGO 4=provided by government 5= gifts/remittances 6=other
128. Did you have enough seeds for your main cash crop?	No Yes – <i>if yes, skip to Q130</i> NA / did not cultivate cash crops - <i>if NA, skip to q130</i>
129. If not, what was the reason ?	1= Could not afford to purchase 2= Was not available in the market 3= Both of the above 4= Other
130. Did you have sufficient chemical fertilizer for your main cereal crop?	No Yes – <i>if yes, skip to Q132</i> NA / did not cultivate cereals – <i>if NA, skip to Q132</i>
131. If not, what was the reason ?	1= Did NOT want to use fertilizer 2= Preferred to use organic fertilizer (manure) 3= Could not afford to purchase 4= It was not available in the market 5= Both 3 and 4 of the above 6= Other
132. Has the household got access to enough water for gardening?	No Yes N/A (no crops)

K. Consumption and food frequency

YESTERDAY, DID ANYONE IN YOUR HOUSEHOLD CONSUME ANY OF THE FOLLOWING FOOD TYPES...:

Food item	Yes/ No		Food item	Number of days eaten (0 to 7 days)	
133. Maize/ Maize Meal	Yes	No	Fruits (not wild fruits)	Yes	No
Other Cereals (sorghum, millet, rice, etc.)	Yes	No	Wild foods (leaves, roots, tubers, fruits, insects...)	Yes	No
Bread/ flour	Yes	No	Meat (chicken, beef, wild...)	Yes	No
Cassava, potatoes	Yes	No	Eggs	Yes	No
Sugar or sugar products	Yes	No	Fish (fresh or dried)	Yes	No
Nuts & Pulses (groundnuts, beans etc.)	Yes	No	Cooking oil, fats	Yes	No
Vegetables	Yes	No	Milk	Yes	No

L. COPING STRATEGIES

Which of the following Coping Strategies did the household utilise in the last 30 days

Consumption Strategies

	Every Day	3-6 times per week	1-2 times per week	<1 time per week	Never
Has the household borrowed food or money to buy food, or bought food on credit?					
Has the household relied on less preferred foods as substitutes for maize?					
Have the household members regularly reduced the number of meals eaten per day?					
Have HH members regularly skipped entire days without eating due to lack of money or food?					
Have HH members regularly eaten less preferred food as substitute for maize?					
Have HH members regularly eaten meals of vegetables only?					
Eaten unusual types of wild food that are not normally eaten?					
135. Has the HH restricted consumption of adults so that children can eat normally?					
Has the HH fed working members at the expense of non-working members					
136. Eaten all maize green/ fresh from the field? (i.e. nothing left to harvest)					
137. Slaughtered more animals than normal for food?					

Expenditure Strategies		
138. Have you avoided spending on healthcare because you had to buy food?	No N/A	Yes
139. Has the HH reduced expenditure on education to buy food?	No N/A	Yes
140. Has the HH reduced expenditure on agricultural and livestock inputs?	No N/A	Yes
Income Strategies		
141. Has the HH sold more than the usual number of livestock to get food?	No N/A	Yes
142. Has the HH sold breeding and draft cattle to get food?	No N/A	Yes
143. Has the HH sold other HH assets to get food?	No N/A	Yes
144. Has the household had crops or livestock stolen?	No N/A	Yes
Migration Strategies		
145. Send children away to friends or relatives?	No N/A	Yes
146. Been forced to temporarily or permanently migrate to find food or work?	No	Yes

M. HEALTH		
147	Did anyone in the household get sick over the last two weeks?	Yes No – if no, skip to Q150
148	If "yes", where did you go for health care? (Multiple answer allowed)	1. Did not seek health care outside household 2. Pharmacy/dispensary (without doctor consultation) 3. Clinic/hospital/village health worker (formal health care) 4. Traditional Healer/Faith 5. Other 99. No one was sick – not applicable
149	If someone was sick and did NOT seek FORMAL health care, what was the MAIN reason?	1. No money to pay for treatment (fees and drugs) 2. No transport, too far, or too expensive to get there 3. Poor quality of service (no drugs/ staff)/lack of confidence 4. Prefer not to go – religious or cultural reasons 5. Illness was minor 6. Other reasons 99. Sought formal health care – Not applicable
150	How many adults (15-60 years) in the household have been ill for more than 3 months during the last 12 months? (Please refer to members that keep getting sick over and over, i.e. chronically ill)	1. Only One 2. Two 3. Three or more 4. None were chronically ill – skip to question Q152
151	Is the head of household among those who have been ill for more than 3 months last 12 months?	Yes No
152	How many children under 5 years old in the household have been ill for more than 3 months during the last 12 months? (Please refer to members that keep getting sick over and over, i.e. chronic illness)	1. Only One 2. Two 3. Three or more 4. None are chronically ill
153	How many adults (15-60 years) died in the last 12 months after being ill for more than 3 months?	1. Only One 2. Two 3. Three or more 4. None died – skip to question Q155
154	Was the head of household one of the people that died?	Yes No
155	How many children under 5 years old died in the last 12 months after being ill for more than 3 months?	1. Only One 2. Two 3. Three or more 4. No children died
	How many meals (not snacks) did the adults in this household eat yesterday?	(record number of times) <input type="text"/>
	How many meals (not snacks) did the children in this household eat yesterday?	(record number of times) <input type="text"/>

64. During the last planting season (the last 6 months), have you used one of the following techniques for any of your crops?		Who introduced this technique to you
Agroforestry	Yes No	
Lime application	Yes No	
Drip irrigation	Yes No	
Water harvesting	Yes No	
Improved food storage (cribs, granaries)	Yes No	
Winter plowing	Yes No	
conservation tillage (potholing, tied ridges, contour ridging.)	Yes No	
Urea treatment of stover	Yes No	
Incorporation of legumes	Yes No	
Fodder production and storage	Yes No	

In the last planting season did you

Plant any labour saving crops		Plant any drought tolerant crops	
Short season maize	Yes No	Sorghum	Yes No
Groundnuts	Yes No	Pearl millet	Yes No
Cowpeas	Yes No	Finger millet	Yes No
Sweet potato	Yes No	Groundnuts	Yes No
Sunflower	Yes No	Bambara nuts	Yes No
cowpeas	Yes No	Melons	Yes No
		Sesame	
		Cotton	
		Castor	

Annex 2
C- SAFE Assessment Team Members

Team 1 Mat South

Shadreck Matarira – WV (Team Leader)

Ndabezinhle Nyoni – WV

Thulani Dube – WV

Edwin Kwangwa – CARE

Grace Njombolo - CRS

Team 3 Masvingo

Ronica Mutema – CARE (Team Leader)

Edmore Masawu – CARE

Tendekai Chituwu – CRS

Edgar Dzomba – WV

Otillia Munayiwa - CARE

Team 4 Midlands

Wellington Muririsiwa/Constella Dobbie – CARE (Team Leader)

Tinashe Nyahwedegwe – CARE

Constella Dobbie – CARE

Gloria Mukwirimba – CARE

Thulani Mandiriza – WV

Team 5 Mash West

Monica – CRS

Lynette Hutire – CARE

Debra Maleni – CARE

Jackson G Mongoni – CRS

Blessing Matsika – CRS

Appendix C. Procedures for Constructing Coping Strategies Index (CSI)

The coping strategies index is calculated using measures of the frequency and severity of coping strategies that households adopt. The frequency measure was collected from individual households in the quantitative survey. The severity weights for all the possible coping strategies were obtained through focus group interviews, in which the groups were asked to give their own perceptions of the severity of each of the coping strategies, and rank them on a scale of 1 to 4.

During the survey design phase, possible coping strategies were identified and incorporated into the household survey instrument and the topical outlines for the focus groups. The strategies identified were:

1. Rely on less preferred and less expensive foods
2. Borrow food or rely on help from friends and relatives
3. Purchase food on credit
4. Gather wild food
5. Consume seed stock held for next season
6. Send household members to live elsewhere
7. Limit portion sizes at mealtimes
8. Restrict consumption of adults so children can eat
9. Reduce number of meals eaten in a day
10. Skip entire days without eating
11. Sell jewelry or household items
12. Sell livestock
13. Sell farm implements

Focus group interviews were conducted in several locations. The information collected from the household surveys and the focus group interviews is combined to calculate the CSI value for each household. Two decisions must be made to arrive at the final definition of the CSI:

- i. Which strategies to include in the index. As described in the Coping Strategies Index Field Methods Manual, one aspect of adopting the CSI to the local context is identifying the appropriate coping strategies that are appropriate within a given study area. Furthermore, the Manual suggests that the appropriate strategies to include in the index are immediate and short term alteration of consumption patterns, but not longer term or less reversible strategies. The survey included several longer term strategies: sell jewelry or household items; sell livestock; and sell farm implements. Another strategy; send household members to live elsewhere could also be considered as a longer term strategy. Three different sets of coping strategies were considered for inclusion in the CSI:
 - a. Include all 13 coping strategies identified in the survey instrument
 - b. Exclude sale of jewelry or household items, sale of livestock and sale of farm implements
 - c. Exclude sale of jewelry or household items, sale of livestock and sale of farm implements and send family members to live elsewhere

- ii. Which severity weights to use in the CSI calculations. Two options are to:
 - a. use separate weights for each survey zone
 - b. use the sample average weights, taking the average across the survey zones.

