WFP

World Food Programme

HOUSEHOLD FOOD ECONOMY ASSESSMENT OF THE RURAL POPULATION IN GEORGIA (PRE-HARVEST SURVEY)

Final Report

Vulnerability Analysis and Mapping (VAM) Unit
WFP, Georgia

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ANNEXES

ACRONYMS AND ABBREVIATIONS

DES	Daily Energy Supply
FAO	Food and Agriculture Organisation
FEZ	Food Economy Zones
FNS	Food and Nutrition Security
GEL	Georgian Lari
HFEA	Household Food Economy Approach
VAM	Vulnerability Analysis and Mapping
WFP	World Food Programme

Executive Summary

This assessment was undertaken by WFP in rural areas of Georgia in September-October 2004 with the recall period from January-June of this year. The aim of the survey was to assess the food security situation of rural households during the 'lean season". The latter refers to the period between harvests when communities have generally depleted their food stocks and experience food shortages. This period coincides in time with planting season, which incurs increase of non-food expenditures among rural households, further diminishing their ability to meet necessary calorie requirement. This study represents a follow-up survey to one conducted earlier this year where the recall period was the year of 2003. About 872 interviews were undertaken in all pre-identified food economy zones of Georgia. Out of three regions (Abkhazia, Ajara, South Ossetia) omitted in the previous survey due to the complicated political situation, only Ajara was included in this round of assessment. Due to the same reasons as before Abkhazia and South Ossetia were, however, again not covered during this survey.

The main findings of the study were as follows:

- Food stocks carried over from the previous year finish within two months in most of the FEZs. In only seven out of total nineteen FEZs do stocks last longer than this and mostly only among the 'middle' wealth households, with one exception from the potato growing area of the southern uplands (zone 12), where 'poor' also have enough stocks to last beyond the month of February. Stocks of the majority of rural households finish by the month of March while the new harvest for principal crops is collected not earlier than July. This suggests that the lean season lasts for four month, including the period from March to June.

- Market purchases of food during the lean season in 2004 were much higher as compared to the annual average for 2003. Overall, rural families purchased around 80% of their total calorie consumption during the 2004 lean season. This is higher than in 2003 when the annual average figure was 62%. This trend can be explained as being due to a reduction in 'own production' by the rural population during the pre-harvest period (March-June 2004).

- The current survey results show shrinkage in the proportion of food expenditures as compared to previous data. In the lean season the share of food expenditure relative to total expenditure amounted to 43% on average vis-à-vis 75% for the annual

average in previous survey. This trend is mostly associated with increased agricultural expenses during the planting season when the survey was undertaken. The share of food expenditure decreased more in the FEZs of East Georgia rather than in West Georgia due to smaller agricultural expenses incurred by the cultivation of smaller plots available to households in this part of Georgia.

- The data collected on diets illustrates a significant reduction in the daily energy supply of households and an imbalance in the diet of all groups in all areas. The DES was above the minimum caloric standards (FAO recommended level of 2,100 kcal pp/pd) and exactly matches the Georgia accepted standard intake (2,300 kcal pp/pd) for the 'middle' wealth group (2,301 kcal). However, the caloric consumption of the 'poor' (1,785kcal) and 'extremely poor' (1,485kcal) groups was much below the minimum requirement. Relative to the 2003 baseline data this represents a 15% reduction by the 'middle' group, 21% by the poor and 22% by the 'extremely poor'.[1] The qualitatively imbalanced diet of the rural population is associated with high carbohydrate consumption (68%). Extremely poor households are also distinguished by low protein intake (9%). Although the 'poor' have an adequate proportion of protein in their diet (11%), the total amount of protein intake is lower than normal as the overall caloric intake has fallen to below the minimum requirement during the lean season.

- Cereals constituted the main dietary component of all wealth-ranked groups, which explains the imbalanced dietary pattern among much of the population characterized by the high level of carbohydrates. Overall the cereal share in the diet amounts to 63% of kilocalorie consumption. The proportion of cereals is higher among the 'extremely poor' (73%) and 'poor' (66%) households as compared to 'middle' (57%) wealth households. The highest share of cereals in total calorie intake was observed in FEZs located in West Georgia.

- Wheat flour represents an important dietary component of all groups of households accounting nearly for half of their total food consumption. This exactly matches the data of the baseline survey. Consumption of this food commodity is higher in East Georgia FEZs, accounting for 53% of the total caloric intake; compared to 44% in

[1] Baseline Household Food Economy Assessment in Georgia (July 2004), WFP Vulnerability analysis and Mapping Unit.

West Georgia FEZs, where consumption is also characterised by a higher caloric consumption of maize flour (16% vis-a- vis 3%).

- FEZs were ranked according to their current food security status as well as their vulnerability to food insecurity using standard FNS indicators available from primary data. The variables used for ranking differed from those used in the baseline data, and a different weighting system was applied to three aspects of food security (availability, access and utilisation) when calculating a corporate score. Seven FEZs out of total of nineteen appeared to be worst-off in terms of current food security as well as levels of vulnerability to food insecurity. These included: 'Uplands with minimal crop production' (zone 18), 'Guria Citrus area' (zone 3), 'Guria maize area' (zone 4) and all tea areas, including 'Guria tea area' (zone 5), 'Samegrelo tea area' (zone 7), 'Imereti tea area' (zone 9) and 'Ajara tea and citrus area' (zone 19). 'Potato&vegetables zone' (zone 11) as well as 'Potato growers in the southern uplands" (zone 12), however, were characterised by low and very low levels of food insecurity and vulnerability to food insecurity as compared to the other FEZs of Georgia.

1) INTRODUCTION

1.1. Overview

This report presents the results of a household food economy analysis (HFEA) of the rural population of Georgia conducted by WFP Georgia in September–October 2004. It follows an identical assessment carried out during January-February 2004. Since the recall period of the previous HFEA was the entire year of 2003 it did not capture the seasonality pattern of food security situation in the rural areas of Georgia. The main purpose of the current survey was to understand this pattern based on the empirical knowledge that rural households do experience food shortages during the lean season.

The agricultural seasonal calendar had initially been intended to be used as the basis for defining the pre- and post-harvest periods in each food economy zone. However, this method was reconsidered and not applied due to the reason that the time interval between pre- and post-harvest periods varied significantly by food economy zones which would have created complications both in data collection as well as the analysis. In such a situation, assuming that most of the main crops are harvested in the second half of the year, it was decided to divide the survey into two rounds as follows: a pre-harvest survey with the recall period from January through end June and a post-harvest survey with the recall period from July to end December. However, after conducting data analysis it was found that households in all FEZs live off the stocks carried over from the previous year until the end of February. Only in seven FEZs do these stocks lasted longer than two months in the current year, primarily for the 'middle' wealth group. As food stocks of the majority of rural population are reduced or completely exhausted by the month of March while harvesting of principal crops does not start earlier than July it was concluded that the lean season continues for four months, covering the period from March to June**.** Therefore, the analyses provided below also pertain to this period.

The fieldwork was conducted by monitoring staff of WFP as well as its Implementing Partners (World Vision, Accion Contra El'Hambre and the local non-governmental organization Abkhazinterconti) during September-October 2004. The same FEZs surveyed in the previous HFEA were included. In addition, Ajara region, which had been omitted in the previous survey due to political instability in the region during that period, was also covered.

1.2. Objectives

The main objectives of the assessment were to:

- Determine the characteristics of food security of the wealth-ranked rural population by means of examining daily calorie consumption, dietary composition and income levels.
- Define the sources of household incomes and patterns of their expenditures during pre-harvest period.
- Update the food security ranking of the Food Economy Zones using a corporate set of food security indicators.

2) METHODOLOGY

2.1 Food Economy Zones

As in the previous survey, the inquiry was focused on food economy zones (FEZ), which were defined on the basis of secondary agricultural statistics provided by the district authorities as well as Soviet agricultural map of Georgia. The country was divided into 19 FEZs based on the predominant type of crop or livestock production undertaken, the climatic conditions and altitude of the area.

The delineation of Georgia into FEZs was first made in 2000 by a WFP consultant during an emergency needs assessment in drought-affected regions. In the previous HFEA (January-February 2004) the FEZ map was updated to include the missing regions of Samegrelo, Guria and Racha. In the current survey, FEZs were delineated in the Ajara region which was omitted from the previous HFEA. The 19th zone, which is located in the coastal area of Ajara, has been named as the 'Ajara tea and citrus zone'. Sixty-five percent of Ajara's population resides in this zone. The rest of the region is amalgamated with other FEZs such as 'uplands with minimal crop production' (zone 18) as well as 'highlands with cereals and livestock' (zone 13).

Map 1 in the annex summarizes the 19 coded FEZs. More detailed description of FEZs is provided in the baseline HFEA report.

2.2 Approach used

The current assessment used the same Household Food Economy Assessment methodology as in the previous survey, which is based upon identifying the various options that people have in order to obtain their food and income as well as their typical expenditure and consumption patterns.

The approach is different from most others because it is not merely based on an assessment of production. Instead it explores, in a systematic way, all the sources of food that people rely on and their relative importance. The method focuses the analysis on groups of households within a delimited geographical area – a food economy zone – where the majority of people has access to food and cash in relatively similar combinations and is at risk to the same external factors.

It should be reiterated that there is no probability sampling procedure applied in this assessment. The study was built on a process of community listing and interviews with households purposively selected from various socio-economic groups preliminarily defined during discussions with key informants. At the first stage, ten percent of communities were randomly selected from each FEZ. At the second stage, households as typical representatives of various wealth groups were selected from each sampled village for interview. Stratification by FEZ as well as socio-economic groups significantly reduced the level of intra-strata variation and allowed the drawing inferences from a small number of interviews. The strata are chosen principally to ensure a "representative picture" of the population with respect to the factors of stratification, and to yield estimates for specific groups, rather than primarily to enhance efficiency of estimation in a statistical sense. The sample size by FEZ is provided in **Table 1** in the annex.

A total of 872 interviews were conducted in this HFEA with randomly selected representatives from three socio- economic groups: *extremely poor,* referring to those who have chronic food security problems; *poor,* referring to those who experience food shortages in the lean seasons even in normal years; and *middle,* referring to those who do not experience food shortage in normal years but still are vulnerable to food insecurity in the events of extreme shocks (harvest failure, conflict, etc.). The well-off group - identified during discussions with key informants as a fourth socio-economic group not experiencing any kind of food security problem - was omitted in this survey. A higher number of interviews were conducted with 'middle' wealth households than with other groups due to greater internal variations existing within this group as was highlighted by the 2003 baseline data. After quality checking about 65 of the interviews conducted in different locations were discarded from the analyses.

3) RESULTS

3.1 Major features of the pre-harvest period

According to FAO "Foodcrops and Shortages" publication (2004) planting of cereals in 2004 exceeded the five year average. Reportedly the heat-wave in March of 2004 followed by sudden frosts severely affected fruit yields in parts of Kvemo Kartli and Kakheti as well as Imereti regions. However, the adverse natural conditions of early spring did not affect the cereal harvest, which usually depends on late spring and early summer precipitation and temperatures.

According to the market price monitoring data regularly collected by WFP in Tbilisi, Kutaisi and Sukhumi since January 2004, an increase in the price of wheat flour, which is the main staple food of Georgian population, was observed in February. However, in the rest of the pre-harvest period the wheat flour price in local currency remained stable. Prices in Kutaisi were slightly lower than in Tbilisi. However, the wheat flour price seems to have fluctuated simultaneously in both Tbilisi and Kutaisi suggesting that the markets were highly correlated.

Prices of diesel showed a dramatic increase during the planting season in East Georgia in March-April (by 93%) which was due to an increased demand for fuel for tractors and other agricultural machinery. It was also found that the casual labour wages were higher in Tbilisi in January-April as compared to that in Kutaisi, though they equalised by the end of pre-harvest season (May/June).

The difference in labour wages in these two locations was mirrored by the purchasing power of population. On average, during the recall period in Kutaisi the daily labour wage would purchase about 12kg of wheat flour, while in Tbilisi it would buy up to 15kgs , suggesting that the purchasing power and welfare were better in Tbilisi as compared to Kutaisi. **Figure #1** in the annex demonstrates the fluctuation of purchasing power of the population in these two locations.

3.2 Vulnerability of wealth-ranked rural population groups

3.2.1 The food economy of the rural population

Wealth among the rural population of Georgia is a function of land and livestock holdings, household labour capacity and access to secondary cash opportunities, i.e. diversified income sources.

The better-off households are essentially those with an income in addition to agriculture, usually from private business. Middle wealth households normally have leased land, grow cash crops and may keep several head of cows. They produce more food than they need and can therefore sell some of their crop production. They are also able to improve the quality of their land through chemical fertilisers, and can employ others to work for them. The poorer usually do not lease land (or lease very little), have a few livestock and often undertake wage labour or 'in kind' work on the lands of better-off households. The extremely poor households normally cultivate only kitchen gardens and generally do not own any cattle or other livestock except poultry. They also may engage in wage/in kind employment whenever this is not restricted by the physical inability, as this group mostly comprises of households with inactive members, such as handicapped, elderly people or female-headed households.

3.2.2 Food intake by source

The following analyses describe the average food intake of typical representatives of "extremely poor", "poor" and "middle" households during the lean season. Daily Energy Supply (DES) was used for estimating the calorie intake, which is based on a calculation of the average calorie amount available from one's own production, purchased foods and food gifts or aid, per person per day over the total number of days in March-June 2004. The following analyses do not take into account intra-household food distribution.

The overall diet of the population is quantitatively slightly below FAO's recommended level of 2,100 kcal and much below the accepted calorie intake standard for Georgia of 2,300 kcal pp/pd. The average daily energy supply per person per day for all three groups combined together is 1*,945kcal pp pd.* The analysis of the differences in this indicator by wealth groups illustrates that only the 'middle' group has adequate dietary intake in caloric terms. The consumption of this group is 10% above the minimum food requirement and exactly matches the Georgian standard, equivalent to 2301kcal. However, consumption by the 'poor' group

(1,785 kcal) is only 85% of the minimum calorie need, while for the 'extremely poor' (1,485 kcal) it represents less than three-quarters of the minimum level. Overall DES is below the minimum requirement in all FEZs with the exception of the wine-producing zones of Kakheti (zones 14 and 17, 2,210 kcal and 2,512 kcal respectively) as well as potato growing zone in southern uplands (zone 12- 2,460 kcal), vegetable growing zone (zone 10 – 2,233 kcal) and Shida Kartli fruit belt (zone1 – 2,142kcal). The lowest average DES, equivalent to 1,614 kcal, was observed in the tea zone of Imereti (Zone 9).

The overall diet of the population is qualitatively imbalanced for all groups in all areas. The main feature of diet quality is that these households consume carbohydrates above the required maximum of 60%. This is in line with the observation made during the 2003 baseline survey, where this indicator stood at 64%. In the lean season this was slightly higher, at 68%. Protein intake is normal among the group middle (12%). The group 'poor' also has the protein intake within the recommended range (11% on average vis-a-vis 10-15% recommended). However, as the overall caloric intake of this group is low, this intake of protein represents an energy source and is insufficient to perform its main functions, such as growth, development, repair of muscle tissues, etc. Protein intake was low among the 'extremely poor' households (9%) during the lean season as was the case during 2003 (8%). The higher consumption of protein rich food, which includes livestock, dairy products, beans and fish was observed in pastoral areas (zone 15) and the West Georgia viticulture zone (zone 2), while the lowest was in wheat area (zone 16). (see **Figure #2** in the annex)

Cereals represent the most important dietary component of all wealth groups in all FEZs. This explains the imbalanced dietary pattern among much of the population characterized by the high content of carbohydrates. The overall share of cereal in the diet amounts to 63% of kilocalorie consumption. The highest share of cereals (70%-75%) in total calorie intake is observed in the uplands with minimal crop production (zone 18 - 75%), the Ajara tea and citrus zone (zone 19 - 74%) and the Samegrelo tea area (zone 7 - 71%). The proportion of cereals in the diet was lowest in the two potato growing zones – 47% in 'potato with vegetable' zone (zone 11) and 51% in the potato growing southern uplands (zone 12). To highlight the difference between the wealth groups, cereal consumption among the middle amounted to 57% of the total kilocalorie intake; 66% for the poor and 73% among the extremely poor.

Wheat flour is the most important food commodity among cereals in the diet of all wealth-ranked groups and in all FEZs. Overall wheat flour consumption contributes around 50% of

the total kilocalorie intake. It represents the main staple food in all FEZs of East Georgia and has the largest caloric share in diets (53% on average). The highest share of wheat flour in the total calorie consumption was observed in the wheat area of Kakheti (zone 16 – 61%). Similar to the 2003 baseline data, the lowest share of wheat flour in the diet of rural population of East Georgia was reported in two potato growing zones (zones 11 – 42% and 12 – 44%). In the FEZs of West Georgia the highest share of wheat flour in the diet was observed in the Ajara tea and citrus zone (zone 19 - 57%), while the lowest (39%) was in West Georgia viticulture zone (zone 2) and Imereti tea zone (zone 9). In west Georgia, where maize production is predominant, kilocalorie contribution from maize flour was more significant (16%) than in East Georgia (3%). For the baseline 2003 survey maize, on average, accounted for 20% of the calorie intake of the rural population in west Georgia. Overall, maize flour is a substitute commodity for the 'middle' wealth group with a share of around only 5% in their total calorie intake, though this reaches 9% for the 'poor' and 17% for the 'extremely poor'.

There was a high dependency on markets for food purchases in the recall period. Calories provided by food from households' own production constituted only 16% of the total calorie requirement during the lean season compared to 35% for the 2003 annual average. In average, for all FEZs the extremely poor group produces just 6% of their own calorie consumption, while the poor and middle groups produce 14% and 23% respectively. By FEZ, the highest share of own production in the total calorie intake was observed in potato growing area (zone 12 – 40%). This indicator was the lowest in Samegrelo tea zone (zone 7) as well as the uplands with minimal crop production zone (zone 18), with 10% in each. During the baseline survey the wheat area produced the highest level of its calorie consumption (78%), while the vegetable growing zone produced the least (21%). **Figure #3** in the annex demonstrates the share of kcals from different sources by wealth groups.

A very low amount of kcals was acquired from such food sources as food aid and gifts. This is higher for the group "extremely poor" for which the share of kcals intake obtained from food aid and gifts amounted to 10%. However, this food source was less significant for the 'poor' and 'middle' households, contributing just 2% and 1% to the total kcal consumption respectively.

3.2.3 Income Sources

Table below summarises all income sources of the households from different wealth groups covering the period from March to June.

Sources of households' income by poverty category

Income sources	MIDDLE		POOR		EXTREMELY POOR	
	GEL	% from total	GEL	% from total	GEL	% from total
In-kind income	555	34%	326	38%	74	20%
Other	227	14%	62	7%	36	10%
Salary	172	10%	74	9%	15	4%
Loans	138	8%	100	12%	59	16%
Crop sales	132	8%	40	5%	7	2%
Sale of livestock products	128	8%	58	7%	10	3%
Remittances	114	7%	31	4%	23	6%
Wage/kind employment	110	7%	91	11%	55	15%
Pension/Soc. benefit	69	4%	69	8%	68	19%
Gifts/Aid	6	0.4%	10	1%	19	5%
Total	**1,652**	**100%**	**860**	**100%**	**366**	**100%**

From the data in this table it can be calculated that the household monthly income (cash and non-cash) for the 'middle' group amounted to 413GEL, while for the 'poor' and 'extremely poor' this equalled 215GEL and 92GEL respectively.

In-kind income received in the form of own production, which is converted into monetary value using a producer's unit prices, represents a major source of income for all of the wealth groups. This income refers to the value of own production, which was not sold. By food economy zones, the largest contribution from this source to the total income was observed in the maize and livestock area of Imereti/Samegrelo (zone 8 – 64%) and the lowest was in the wine and orchards area (zone 14 – 10%). However, in monetary terms the in-kind income was highest in pastoral areas (zone 15 – 830GEL), while it was lowest in wheat growing area (zone 16 – 106GEL).

The importance of the remaining sources of income varies by wealth groups. For the 'middle' wealth group the 'other' sources of income have a second highest share in their total income. The latter combines such sources as the sale of households' assets, sale of wild food, handicrafts, sale of firewood, small commercial activities, renting a property, etc. as these, if taken separately, were minimal for all groups. For the 'middle' group, in particular, the other sources mostly comprised the small commercial activities (8%). The remaining 6% was constituted by various sources listed above classified jointly as 'other sources'. The most important income sources for the 'extremely poor' also included pensions/social benefits (19%) and wage/kind employment (15%). For 'poor' households loans had the second largest share in their total income (12%), followed by wage/kind employment (11%).

Cash income sources of the households were combined into three groups: a) sale of own production, b) salary/pension/social benefit and c) 'other' sources constituted by various sources, such as remittances, wage employment, loans, etc. **Figure #4** in the annex highlights the differences in cash income sources between the various wealth groups for the two periods – the lean season and the 2003 annual average.

The figure shows that the sale of households' own production represented only 22% of household cash income during the lean season. This significantly differs from the 2003 annual average when own production was the major cash income source for all wealth groups (52%). The monetary income from own production in the lean season refers mostly to the sale of livestock products, as well as to a small amount of vegetable/fruit production yielded in the last month of the pre-harvest period (i.e. June 2004). This income was slightly higher for the 'middle' group (24% of the total cash income) as compared to the 'poor' (19%) and 'extremely poor' groups (6%).

By food economy zones, the highest household monthly cash income was observed in grapes and orchards (zone 14), amounting to about 374GEL per month, while the lowest was in the Guria citrus area (zone 3) where cash income was 80GEL per month.

3.2.4 Expenditure Patterns

The following section presents the expenditure patterns of the three wealth groups. The estimated food expenditure includes cash expenditure for purchasing food from the market plus a total monetary value of foods from households' own production used for human consumption, which was calculated using the producer's unit prices. In-kind expenditures, such as food bartering as well as the use of own crops as seeds or animal fodder are transferred into monetary terms in order to calculate total household expenditures.

The main difference in expenditure patterns between the lean season and the 2003 annual average is that the share of food expenditures has decreased during the lean season due to increased agricultural expenses associated with planting. If in 2003 the proportion of food expenditures in total expenditures constituted 72%, in the lean season it dropped to 43% due to the increase in agricultural expenses (11% vis-à-vis 27%). However, it should be noted that the share of food expenditures has not decreased in all FEZs equally. In West Georgia, where the land plots available to households are smaller than in East Georgia, the expenses

on agriculture were also lower. Therefore, the proportion of food expenditures in total expenditures was higher in West Georgia (58%) as compared to East Georgia (39%).

Due to increased agricultural expenses during planting season, which coincided in time with the recall period, the proportion of food expenditures for all groups was a bit lower as compared to the baseline 2003 data. Similarly to the baseline data, during lean season the poorer groups again had higher spending on food (57% for the 'extremely poor' and 50% for 'poor') as compared to 'middle' households (40%). For 2003 annual average these indicators were 79% for 'extremely poor', 75% for 'poor' and 69% for 'middle'. **Figure #5** summarises the analysis described above showing that as wealth increases the proportion of income spent on food decreases.

The largest proportion of expenditures on food was seen in the Guria tea area (zone 5 – 63%) and the uplands with minimal crop production (zone 18 – 61%), while the lowest was observed in the wheat growing zone of Kakheti (zone 16 - 25%) and the Shida Kartli fruit belt (zone 1 – 28%).

The highest level of expenses on agricultural activities was reported in the Shida Kartli fruit belt (zone 1 -42%) while the lowest was in the Ajara tea and citrus zone (zone 19 – 13%). Overall, expenses on land were higher for all wealth-ranked groups (69%) than on livestock (25%).

Other non-food expenditures, which include expenses on firewood, gas, electricity, health, education, etc. are higher than agricultural expenses for all wealth-ranked groups. This is especially relevant for the 'extremely poor' households which spent very little on agricultural activities (10% vis-a-vis 27%). More than half of their non-food expenses are associated with health care (55%). This is followed by expenses on heating and cooking, such as firewood, electricity, gas and kerosene, which make up 47% of their total non-food expenditures. The latter represents the major non-food expenses for the 'poor' (21%) while for the 'middle' this is the third largest category of expense (13%) among the other major non-food expenses such as health care (18%) and clothing (14%).

Middle group households spent more on gifts and contributions (11%) to neighbours/relatives as compared to the two other wealth groups for whom these expenditures were minimal (7% and 3% respectively).

3.2.5 Dependency on loans

The survey results showed that dependency on loans is very common during the lean season as was also the case during the 2003 baseline survey. During the latter, loans represented 20% of the total cash income of 'extremely poor' households and they amounted to 25% for the 'poor'. In the lean season, the share of loans in the total cash income of the two wealth-ranked groups was about 22% and 19% respectively. Loans represented around 13% of the total cash income of the 'middle' during the lean season. Dependency on loans in the current survey is mostly associated with food expenditures for the 'poor' and 'extremely poor' and agricultural activities for the 'middle' group. **Figure #6** in the annex demonstrates the differences in the pattern of loan spending for various wealth groups.

Purchasing food with credit is very common for the poorer households. Food purchases, mostly associated with wheat flour purchases, represent 45% of the total loan spending by 'extremely poor' households and 35% by the 'poor'. Reliance on loans for food purchases is less significant (9%) for the 'middle'. For the latter money borrowing for undertaking agricultural activities (50%) was more common during the planting season.

3.3 The geographic distribution of food insecurity and vulnerability

The food insecurity ranking of FEZs has been obtained by constructing a composite score using several relevant indicators directly related to such aspects of food security as availability, access and utilisation. The composite index was constructed using data pertaining to Georgia's 'poor' and 'extremely poor' wealth groups. A separate FEZ ranking was done for the 'middle' group described by key informants as a group vulnerable to food insecurity. The middle group was used to represent those households that are most "vulnerable" to becoming food insecure. Such households had expenditure and consumption levels that were just above minimum needs. Future negative changes, shocks or circumstances could easily compromise their very fragile food security status.

The indicators for measuring all three aspects of food security in this survey were selected based on the set of standard FNS indicators.

The following main indicators were used to derive a final composite score of food insecurity:

- Food availability:

PRDES – amount of kilocalorie per person per day provided by own production and stocks only (purchased food and other food sources are not included)

- Food accessibility:

  FEXIN - an arithmetic mean of two standardised variables: a) FEXP - share of food expenditures in total expenditures of a household (%); b) INC - sum of net income from own production plus off- farm income during the recall period (GEL)

- Food utilization indicators:

  CER - proportion of DES provided by cereals (%)

The variables measuring food security indicators were standardized in order to make the values of these indicators comparable. Each indicator was reviewed, for the purpose of determining it's "direction". Direction refers to the issue of whether high data values indicate a favorable condition or an unfavorable condition. For example, high values for daily energy supply (kcal/per capita/day) (PRDES) as well as income (INC) represent a favorable food security condition, whereas high values for the indicators representing food expenditures as a percentage of total expenditures (FEXP) and proportion of DES provided by cereals (CER) represent an unfavorable condition. Before integrating the data into a composite food insecurity index, all indicators were arranged using a consistent "direction"[2].

Correlation matrix of three variables (FEXIN, CER and PRDES) measuring three aspects of food security was examined to see the degree of association among the latter. The results for the group 'middle' revealed that all three aspects of food security have high degree of inter-correlations. The variable measuring food availability (PRDES) is negatively correlated with the variables measuring food access (FEXIN) and food utilisation (CER). This implies that accessing food is more difficult for the households with low production rather than for those with higher production. Food utilisation problem, i.e. high share of cereals in their diet, is also more relevant for the former. In its turn, the food utilisation problem for this group is also highly associated with their ability to access food. Thus all three aspects of food insecurity are closely interconnected for the 'middle' wealth households, i.e. difficulties in one of the aspects involve difficulties in the other two. In regard to the food insecure groups of the population ('poor' and 'extremely poor'), a moderate degree of negative inter-correlations was found between two pairs of food security components – availability-utilisation and availability-access. Food utilisation and food access, however, had a low

[2] For those indicators which needed to have their directions changed or "flipped"; their z score values were multiplied by a -1.0, in effect changing their direction to be consistent with the directions of other variables.

degree of association with one another. The correlation matrix of the food security indicators is provided in Table #2 in the Annex.

To derive a final composite score the PRDES, FEXIN and CER variables were assigned weights according to the following scheme: the food availability aspect was given a weighting of 20% in the calculations of a composite score for ranking, while accessibility and utilization aspects were given 40% each. This differs from the technique used in the earlier published baseline survey, where all variables were given the same weight. A decision was taken during the fourth quarter of 2004 to review the results of the baseline analysis and to consider alternative approaches and techniques that could lead to improvements regarding the analysis and findings; particularly with regards to geographic targeting. The main differences between the composite index and results contained herein as opposed to the results generated in the earlier (July 2004) baseline, are as follows:

1) the number of input variables/indicators has been reduced, in an attempt to more directly represent or "capture" relative food insecurity conditions across FEZs, and
2) a "weighting" approach has been applied, whereas in the previous analysis no weights or an "equal weighting" approach was used.

Weights were applied to reflect the general consensus that food insecurity within Georgia is primarily a result of food access and food utilization constraints, as opposed to food availability constraints[3].

The calculation used to create the composite food insecurity index score for the Food Economy Zones (FEZ) is described below:

CORPORATE SCORE FOR FEZ RANKING =
FEXIN*0.4 + CER*0.4 – PRDES*0.2

[3] Accordingly, the access and utilization components were each given a weight of 0.4, whereas the availability component was assigned a lighter weight of 0.2. The sum of the three component weights used to calculate the food insecurity composite index was thus 1.0 (0.4+0.4+0.2).

Food Insecurity Component	***Abbreviation***	***Input Indicators***	***Weight***
Food Access	FEXIN	Food expenditure as % total expenditure plus income (net income from own production + off-farm income)	40%
Food Utilization	CER	Calories in the diet from cereals as a % of total	40%
Food Availability	PRDES	Daily Energy Supply from own production and stocks	20%

As a result, a higher value of a final score indicates higher food insecurity. The final scores were ranked in 5 categories (very high, high, moderate, low and very low). The resulting five food insecurity classes were obtained using SPSS hierarchical clustering algorithms.

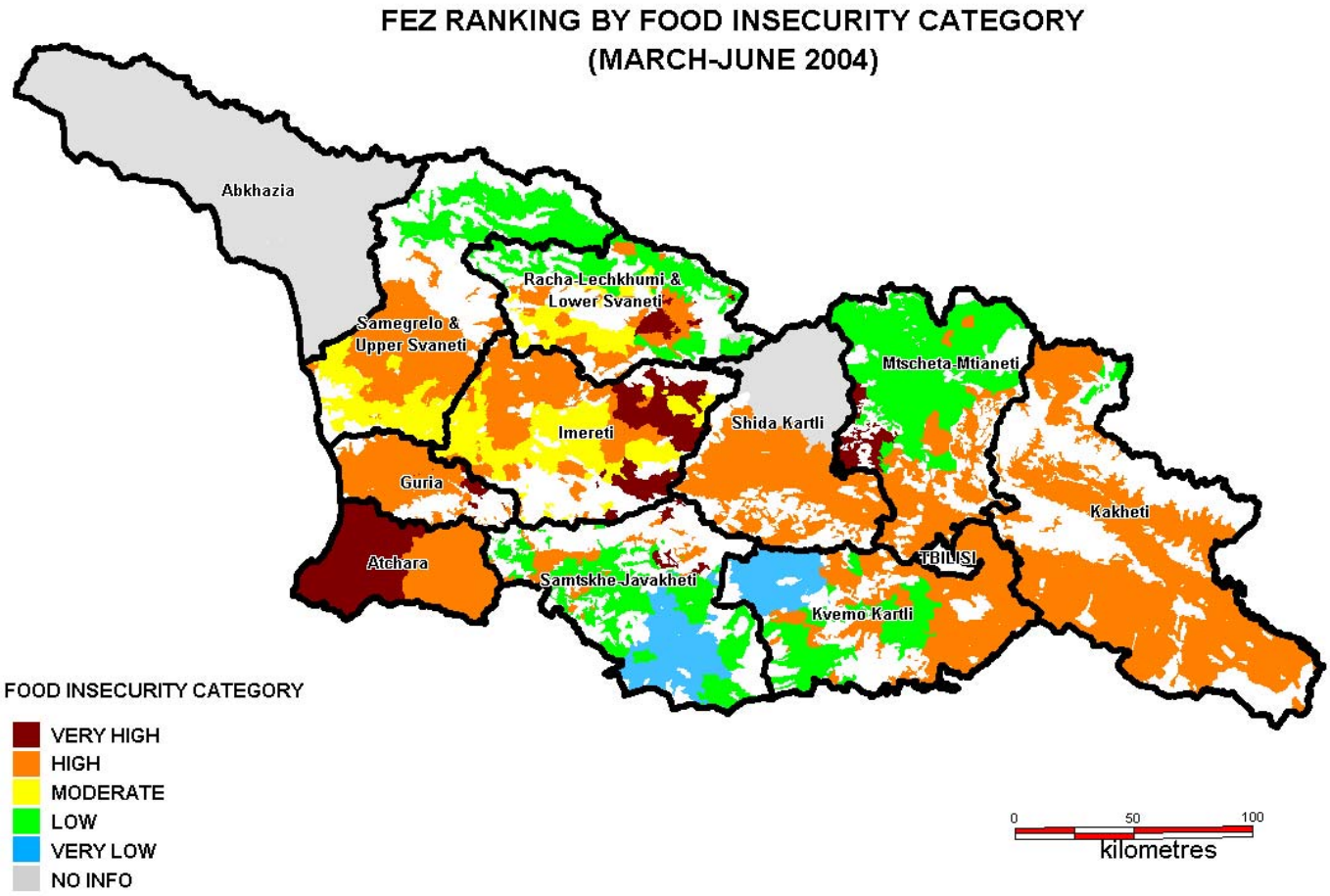
The grouping of FEZs according to their food insecurity composite index scores should be useful for C.O. management and programme staff as a "prioritisation tool"; i.e. for targeting, for resource allocation of food aid distributions, or for prioritising areas for M&E activities or FSM (Food Security Monitoring) activities. Similarly, when faced with resourcing or food aid pipeline insufficiencies/challenges, decisions could be taken to prioritise distributions either "first" or only to priority areas according to their food insecurity status. For example, those FEZs falling into the "worst off" or "second worst-off" categories might be natural choices during a prioritisation process.

The map #1 below shows the food insecurity levels among poor and extremely poor population groups by Food Economy Zones (FEZ). Two of the 19 FEZs have "very high" food insecurity levels; these are:

- The "uplands areas" of with minimal crop production located mostly within Imereti region (eastern side). This food economy zone is primarily dependant on maize and livestock production. The area appears in the map below and is shaded with dark red.
- The "tea and citrus areas" of Atchara region; located in the Southwest of the country. This area is also visible on the map below with dark red shading.

A total of eleven FEZs had “high” food insecurity levels; these are listed in the table #3 of the annex and also appear on the map below (areas shaded orange/dark red).

MAP 1.

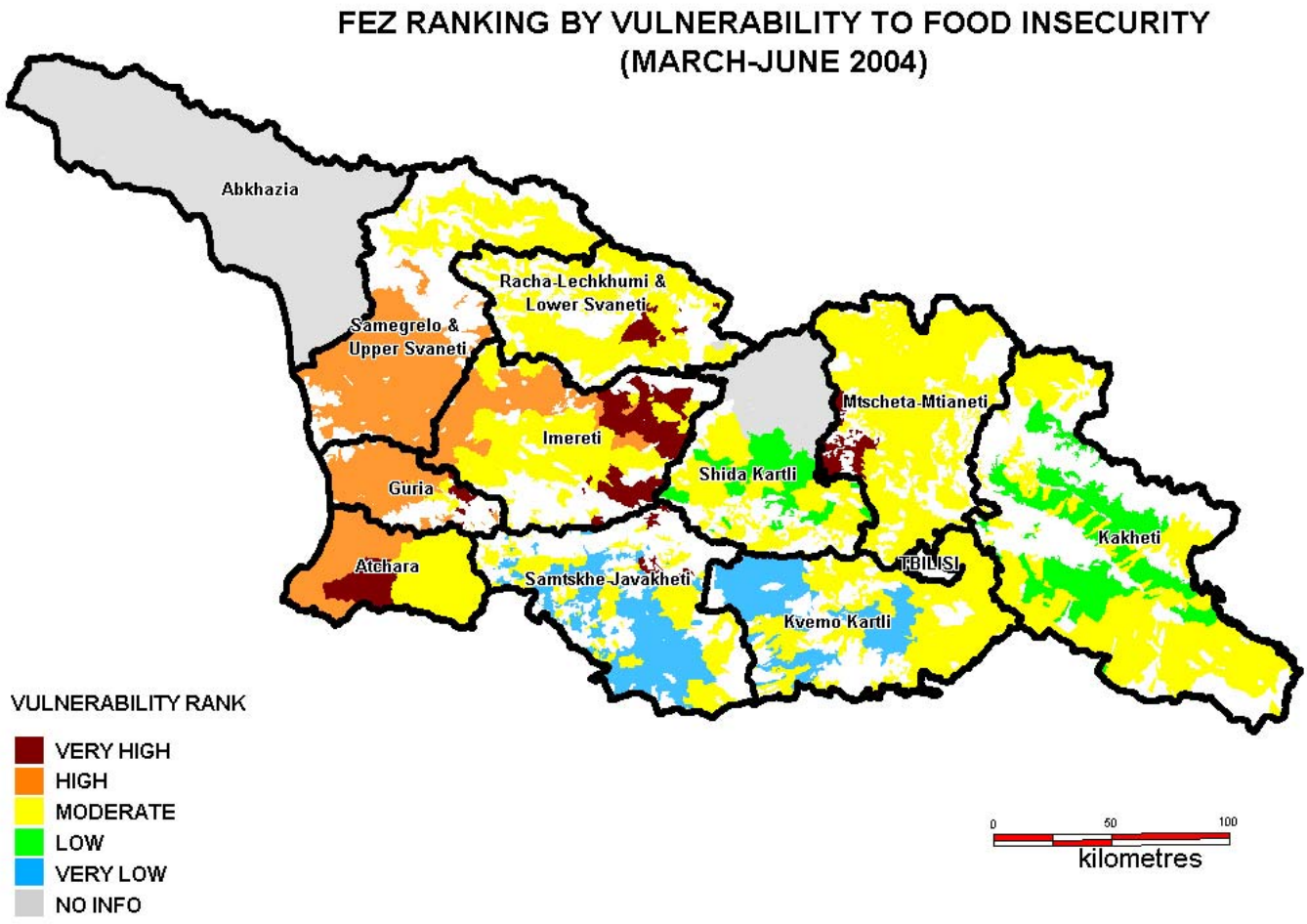


The map #2 below highlights levels of vulnerability to food insecurity among the middle wealth households according to Food Economy Zone (FEZ). The vulnerability levels were created using the same input variables, weights, and composite index score approach described above; but with the important distinction that only the data for “middle” wealth group households was considered.

One of the 19 FEZs, ‘Uplands with Minimal Crop Production (zone 18) has “very high” vulnerability levels; this appears in the map below with “dark red” shading.

An additional eight FEZs in West Georgia have high vulnerability levels and these appear in the map below with orange/dark-red shading (see vulnerability ranking table #4 in the annex).

MAP 2.



Practically, both the tabular and mapped data above should prove useful to management and programme staff as a means for prioritising food security monitoring (FSM) activities. More attention and relatively more intensive monitoring activities should be justified for priority areas and populations, with the logic that “in the event of a shock or downturn in the local economy” these FEZs are or would become more vulnerable to food insecurity.

Both food insecurity and vulnerability levels for FEZs should also be considered together; to shed light on questions such as:

"Which areas or FEZs within Georgia have both relatively high food insecurity levels for poor and extremely poor households and have relatively high vulnerability levels for "middle wealth households" at greater risk of becoming food insecure?

The table below highlights FEZs meeting both conditions:

FEZ-Description (Livelihood/Production Dependency)	Food Insecurity Level (for "Poor" and "Extremely Poor" households)	Vulnerability to Food Insecurity (for "middle" households)
Uplands with minimal crop production (maize & livestock)	**Very High**	**Very High**
Atchara Tea and Citrus	**Very High**	**High**
Samegrelo tea area (with maize and fruit)	**High**	**High**
Imereti tea area	**High**	**High**
Guria citrus area	**High**	**High**
Guria tea area	**High**	**High**
Guria maize area (with tea&orchards)	**High**	**High**

Alternatively, a converse question could be asked for the purpose of identifying areas/populations, which should require less intensive monitoring:

"Which areas or FEZs within Georgia are characterized by relatively low/better food insecurity levels and have relatively low vulnerability to food insecurity for "middle" wealth households?

The table below highlights FEZs meeting both conditions:

FEZ-Description (Livelihood/Production Dependency)	Food Insecurity Level (for "Poor" and "Extremely Poor" households)	Vulnerability to Food Insecurity (for "middle" households)
Potato growers is southern uplands	**Very Low**	**Very Low**
Potato and vegetable zone	**Low**	**Very Low**

The population distribution and estimated proportions of three wealth groups (as defined by informants) in priority Food Economy Zones characterised by relatively high food insecurity or vulnerability is given in table below:

Food Economy Zone	Population	Middle (%)	Poor (%)	Extremely Poor (%)
Samegrelo tea area (with maize and fruit)	54,359	27	42	11
Uplands with minimal crop production	45,702	18	60	20
Atchara Tea and Citrus	35,797	20	60	10
Guria tea area	21,742	8	50	25
Imereti tea area	18,866	10	48	18
Guria maize area (with tea&orchards)	9,534	15	60	12
Guria citrus area	9,458	20	50	15

Wealth among the rural population in these areas is determined by various indicators, including land size, number of livestock, type of crop grown, number of able-bodied members in the households as well as secondary income sources. Essentially, characteristics of extremely poor households are almost identical in all Food Economy Zones. (see description above). The qualitative description of poor and middle-wealth households is shown in **table # 5** of the annex.

4. CONCLUSION

The following conclusions have been withdrawn from this baseline HFEA:

1. Stocks carried over from the previous year are finished in a maximum of two months in most of the FEZ, which confirms the assumption that the lean season in Georgia starts from the month of March. Stocks last longer in FEZ "Potato Growers" (zone 12 – 5 months) as compared to the other zones.

2. The average calorie consumption per person per day (1,945 kcal) found in the survey is below FAO's recommended minimum level of 2,100 kcal as well as the accepted calorie intake standard for Georgia of 2,300 kcal pp/pd. This result differs from the baseline data where this indicator was 2,384kcal which is above both of the thresholds. Only the 'middle' wealth category of households have a DES above the norm, while it is much below the minimum requirement for the 'poor' (1,785kcal) and 'extremely poor' (1,485kcal) segments of the population. The lowest average DES equivalent to 1,614 kcal was observed in the tea zone of Imereti (Zone 9), while the highest was in the wine and cereals zone of Kakheti region (zone 17 – 2,512kcal).

3. The diet is qualitatively imbalanced. All wealth groups are characterised by high consumption of carbohydrates. The 'extremely poor' households additionally are distinguished by low protein intake. The imbalance of the diet is mostly associated with a high share of cereals (63%) in the diet of the population. Overall consumption of protein rich food is quite low among all the wealth-ranked groups, amounting to 21% of caloric intake by the middle group, 15% by the poor and 9% by the extremely poor.

4. Market purchases of food (in terms of kcals) were much higher during the lean season as compared to the annual average for 2003 (80% vis-a-vis 65%). Own production met only 17% of their caloric intake during the recall period. Wheat flour was the major commodity purchased by the rural households, representing 42% of their total food expenditures.

5. Households have increased agricultural expenses during lean season due to planting activities. The share of food expenditures is lower in the FEZs of East

Georgia as compared to those in West Georgia. This is mostly associated with larger plots and, subsequently, larger agricultural expenses in the former area, which has caused the shrinking of the proportion of food expenditures in the total expenditures. However, the same trend was observed in the annual 2003 baseline data.

6. Households are highly dependant on loans. Borrowing among the “middle’ wealth group took place mostly for undertaking agricultural activities; while “poor” and “extremely poor” mostly borrowed for food purchases.

7. The FEZs have been ranked based on a composite score constructed by using several relevant indicators measuring three aspects of food security - availability, access and utilisation. The variables used for ranking differ from those used in the baseline data. Also, a different weighting system was used in the current survey. FEZs were ranked by current food security status as well as by the vulnerability to food insecurity. ‘Uplands with minimal crop production’ (zone 18), ‘Guria Citrus area’ (zone 3), ‘Guria maize area’ (zone 4) and all tea areas, including ‘Guria tea area’ (zone 5), ‘Samegrelo tea area’ (zone 7), ‘Imereti tea area’ (zone 9) and ‘Ajara tea and citrus’ zone (zone 19) are characterised by high or very high levels of food insecurity as well as vulnerability. Conversely, ‘Potato growers in southern uplands’ zone (zone 12) as well as “Potato & vegetables zone” (zone 11) were categorised as having low to very low levels of food insecurity as well as vulnerability.

TABLES

TABLE #1. Sample size by FEZ and wealth-ranked groups

FEZ #	FEZ NAME	total number of interviews	o/w middle	o/w poor	o/w extremely poor
1	Shida Kartli fruit belt	33	17	11	5
2	West Georgia viticulture	74	37	26	11
3	Guria citrus zone	30	15	10	5
4	Guria maize zone	30	15	10	5
5	Guria tea zone	30	15	10	5
6	Samegrelo nut area	30	15	10	5
7	Samegrelo tea zone	54	27	19	8
8	Maize&livestock zone of Imereti/Samegrelo	38	19	13	6
9	Imereti tea zone	30	15	10	5
10	Vegetable growers	150	75	52	23
11	Potato&vegetables zone	30	15	10	5
12	Potato growers in southern uplands	30	15	10	5
13	Highlands with cereals/potato & livestock	68	34	24	10
14	Grapes&orchards	30	15	10	5
15	Pastoral areas	47	24	16	7
16	Wheat area (with sunflower)	30	15	10	5
17	Grapes&cereals	70	35	24	11
18	Uplands with minimal crop production	32	17	10	5
19	Atchara tea&citrus zone	36	18	13	5
	TOTAL	**872**	**438**	**298**	**136**

TABLES

TABLE #2. Correlation matrices of food security indicators

A) Poor and Extremely Poor Categories

	PRDES	FEXIN	CER
PRDES	1.00	-0.47	-0.50
FEXIN	-0.47	1.00	0.27
CER	-0.50	0.27	1.00

B) 'Middle' Wealth Category

	PRDES	FEXIN	CER
PRDES	1.00	-0.67	-0.83
FEXIN	-0.67	1.00	0.63
CER	-0.83	0.63	1.00

TABLES

TABLE #3. Ranking by current food security situation ('poor' and 'extremely poor')

FEZ #	FEZ	Composite score	FEZ rank	Food Insecurity Category
18	Uplands with minimal crop production	1.07	1	VERY HIGH
19	Atchara tea&citrus zone	0.96	2	VERY HIGH
17	Wine area (grapes&cereals)	0.45	3	HIGH
3	Citrus area (Guria)	0.44	4	HIGH
10	Vegetable growers (with cereals & fruit/grapes)	0.41	5	HIGH
7	Samegrelo tea area (with maize&fruit)	0.33	6	HIGH
14	Wine area (grapes&orchards)	0.23	7	HIGH
4	Guria maize area (with tea&orchards)	0.18	8	HIGH
5	Guria tea area	0.18	9	HIGH
9	Imereti tea area	0.12	10	HIGH
13	Highlands (livestock with cereals/orchards)	0.08	11	HIGH
1	Shida Kartli fruit belt	0.06	12	HIGH
16	Wheat area (with sunflower)	0.05	13	HIGH
8	Maize&livestock (Imereti/Samegrelo)	-0.21	14	MODERATE
6	Samegrelo nut area (with maize&livestock)	-0.4	15	MODERATE
2	West Georgia Viticulture	-0.46	16	MODERATE
11	Potato&vegetable zone	-0.77	17	LOW
15	Pastoral areas (livestock with minimal crop production)	-1.05	18	LOW
12	Potato growers in southern uplands	-1.81	19	VERY LOW

TABLES

TABLE #4. Ranking by vulnerability to food insecurity ('middle' wealth group)

FEZ #	FEZ	Composite score	FEZ rank	Vulnerability to Food Insecurity
18	Uplands with minimal crop production	1.33	1	VERY HIGH
7	Samegrelo tea area (with maize&fruit)	1.05	2	HIGH
19	Atchara tea&citrus zone	0.88	3	HIGH
9	Imereti tea area	0.75	4	HIGH
4	Guria maize area (with tea&orchards)	0.69	5	HIGH
3	Citrus area (Guria)	0.67	6	HIGH
5	Guria tea area	0.56	7	HIGH
6	Samegrelo nut area (with maize&livestock)	0.41	8	HIGH
8	Maize&livestock (Imereti/Samegrelo)	0.21	9	HIGH
2	West Georgia Viticulture	-0.02	10	MODERATE
13	Highlands (livestock with cereals/orchards)	-0.06	11	MODERATE
14	Wine area (grapes&orchards)	-0.27	12	MODERATE
10	Vegetable growers (with cereals & fruit/grapes)	-0.28	13	MODERATE
15	Pastoral areas (livestock with minimal crop production)	-0.49	14	MODERATE
16	Wheat area (with sunflower)	-0.50	15	MODERATE
1	Shida Kartli fruit belt	-0.90	16	LOW
17	Wine area (grapes&cereals)	-0.97	17	LOW
11	Potato&vegetable zone	-1.46	18	VERY LOW
12	Potato growers in southern uplands	-1.77	19	VERY LOW

TABLES

TABLE #5: Description of rural households in most vulnerable and most food insecure zones

FEZ #	FEZ	POOR	AVERAGE
3	Guria Citrus Area	Have small plots 0.4-0.5ha, o/w 0.1 is occupied by tea plantations and 0.1 by citrus. They grow some potatoes and own 0-2 cows; can have a family member involved in seasonal work within the community; or may be getting small in-country remittances; might be selling wild fruit and collecting firewood for selling.	Owns citrus more than 0.3 ha, or nuts more than 0.3 ha; in addition grows maize on a leased land (about 1ha); has 1-2 cows; May have salaried jobs (teacher, police, etc; tea factory); alternatively, may have bee-hives – 10-15 families.
4	Guria Maize Area	Has land about 0.75ha, o/w 0.2ha is occupied by fruit. Grows maize on his private land, doesn't lease the land; has 1-2 cow; may have salaried job or involved in wage/in-kind employment	Have 1-2 cows and 1-2 pigs. May grow nuts (0.1ha). Live close to the road or a resort zone (gives the possibility to sell some fruits and dairy products); small traders; green-house owners; have salary (working in the railway or other budget organizations).
5	Guria Tea Area	Tea collectors (with private tea plots); has 1-2 cows; 0-1 pig; has low productive land or sometimes plot is located far away from the house; often can't cultivate their land fully.	May own about 5-10 cows; grows kiwi on more than 0.05 ha; owners of bee-hives (above 10-15 bee families). Sometimes may be involved in temporary wage employment or have a salaried job.
7	Samegrelo Tea Area	Have 1-2 able-bodied household members. Own about 0.7ha of land; grow maize, fruit, citrus, grapes. Have 1-2cows and 1pig.Income outside agriculture includes pension, seasonal works (potatoes in Marneuli; apples in Shida Kartli; citrus in Guria); wood-cutting (1-2 cars a year - 450lari p/y).	Have 0-7ha of private land, o/w 0.4ha is arable where they grow maize. Perennials used for selling include nuts, some grapes, or citrus/tea. Might be leasing 1ha of tea (in Senaki district) or 0.5ha of nuts (in Tsalenjikha & Chkhorotsku districts). Have 2-3 cows with additional source of income; otherwise 4-5cows. Additional sources of income include: kiosks/mill owners; tractor/bus/truck drivers; state salaries or workers of tea factories; cheese trading; honey makers (30-40 bee-hives); small workshop owners (wooden floor makers, etc.).
9	Imereti Tea Area	Have 0.7ha of land, o/w 0.1ha is occupied by tea. Own 1 cow and1 pig with a few chicken.Income outside agriculture includes pension, pension; seasonal works (potatoes in Marneuli; apples in Shida Kartli; citrus in Guria); tea collection for tea factories in the area.	Have 0.7ha of private land, but might be leasing about 1ha of arable land. 3-4 cows and 1-2 pigs with additional source of income; otherwise 5 or more cows. Additional sources of income include: kiosks owners; mill owners; tractor owners; state salaries or other wage employees; traders with cheese/milk; remittances $100-200 per month).

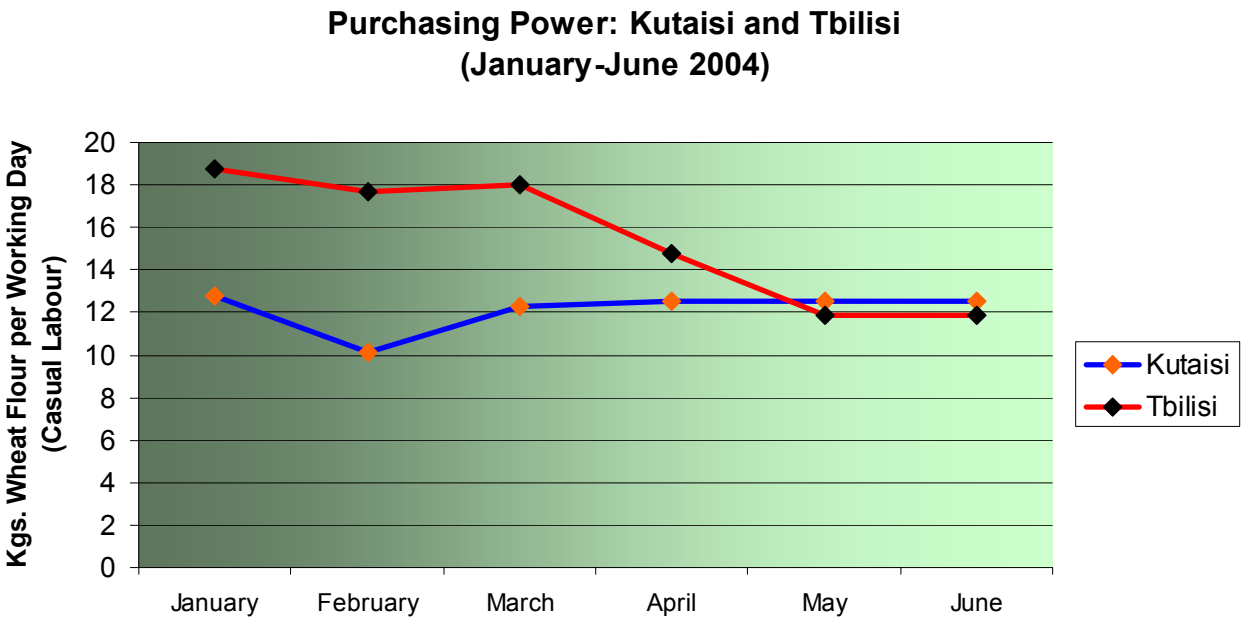
Continued on the following page

TABLES

FEZ #	FEZ	POOR	AVERAGE
18	Uplands with minimal crop production	Farmers who own 2-3 cows, 1ha of plot size, mainly pasture. They sell cheese. Some of them have 10-20 bee-hives, collect wild fruit (mushroom, berries, etc.). One family member may be engaged in hired job within the region or working in Tbilisi as a skilled worker.	Farmers who own 5-7 cows, have about 50-100 bee-hives. One family member works in a private sector or went abroad for work.
19	Atchara tea&citrus zone	Depend solely on agriculture, may have 1 cow; grow 2 tons of citrus; have land plot about 0.15-0.2ha. Occasionally are involved in wage/in-kind employment within or outside the community.	Households with external income sources (outside agriculture). Usually generate additional income from petty trading, working as a van driver, salaried jobs. May be occupied in cafes or renting houses to tourists in summer.

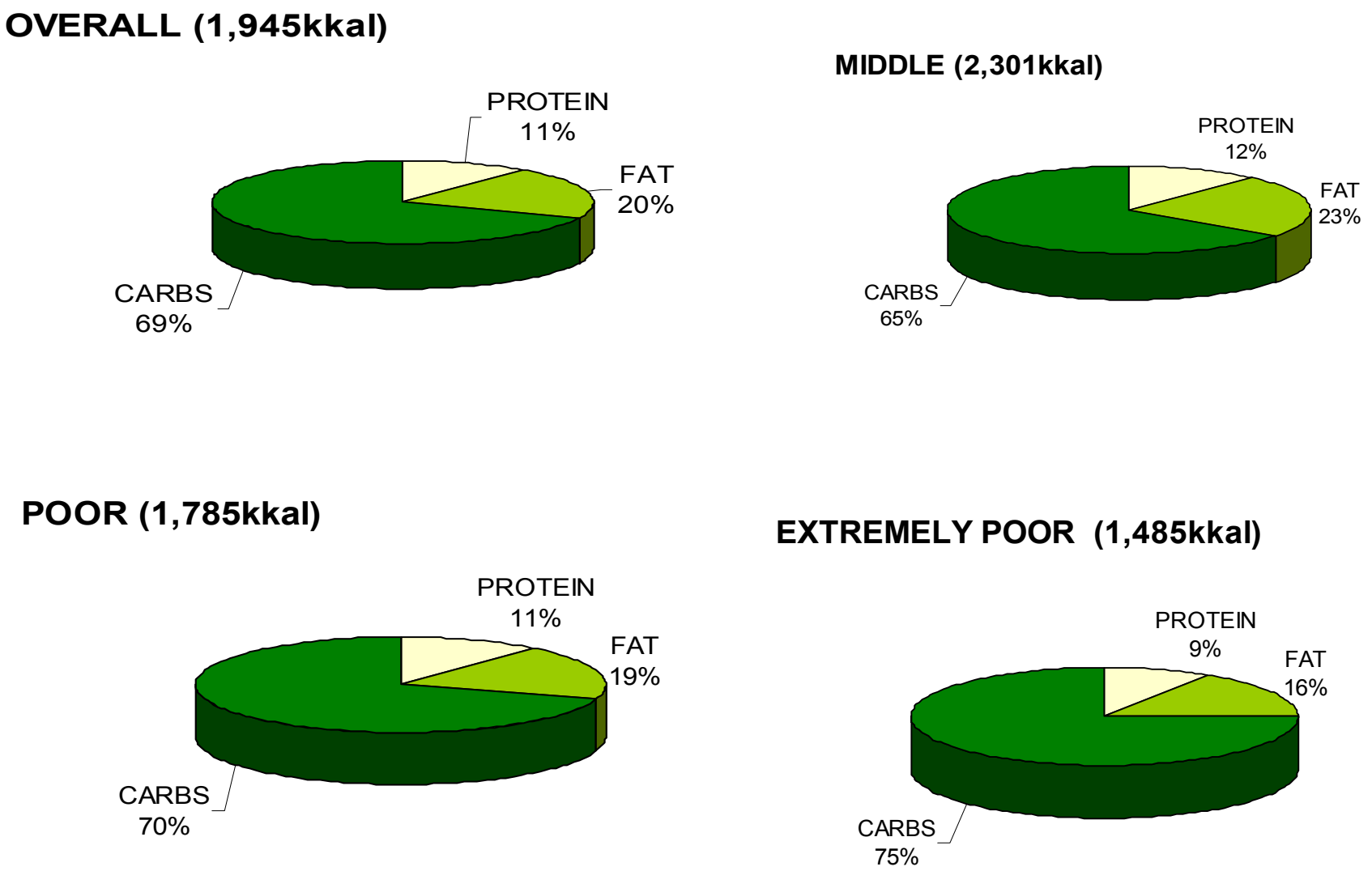
FIGURES

FIGURE #1. Fluctuation of the purchasing power



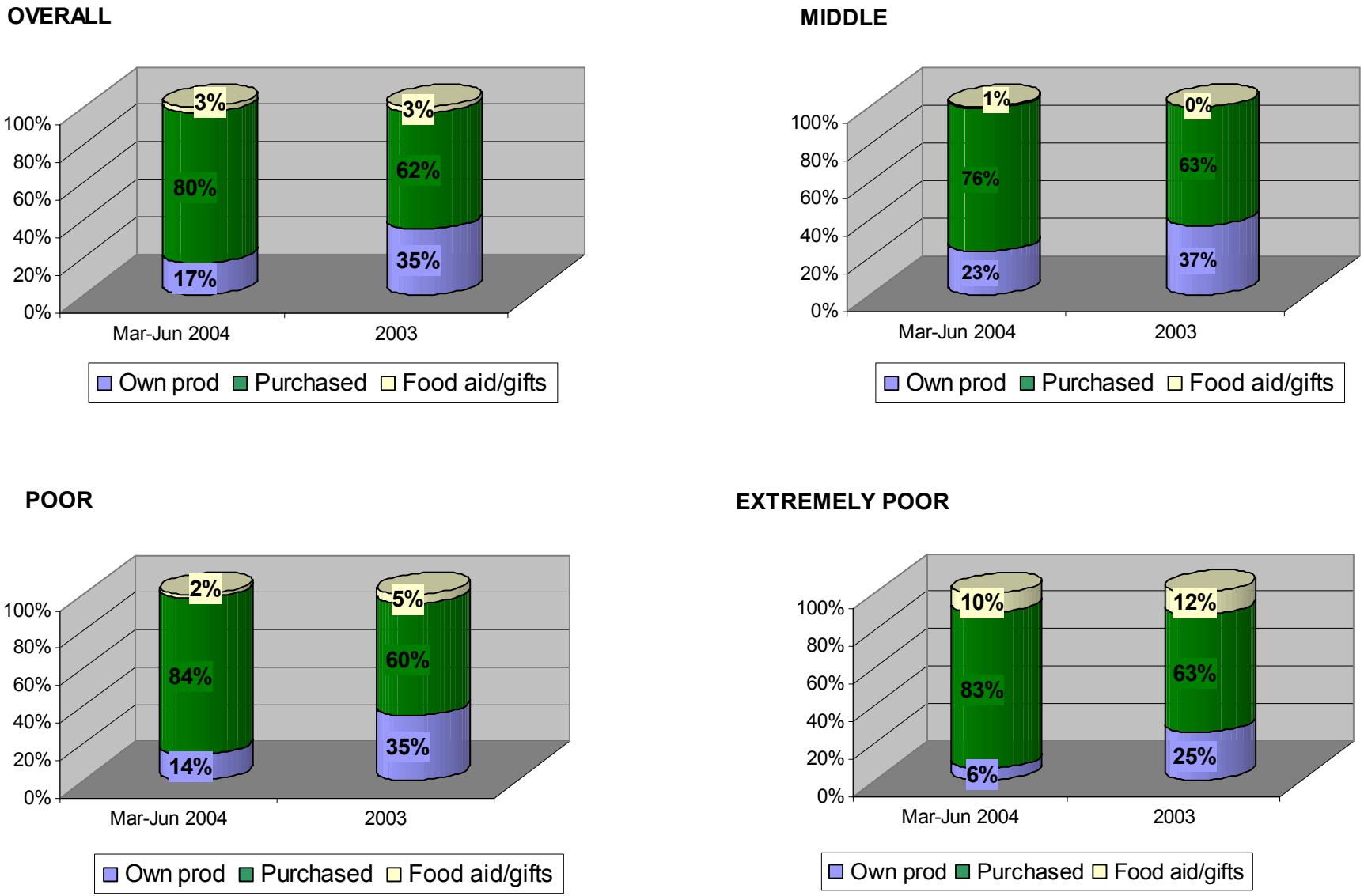
FIGURES

FIGURE #2. Diet composition of the wealth ranked groups



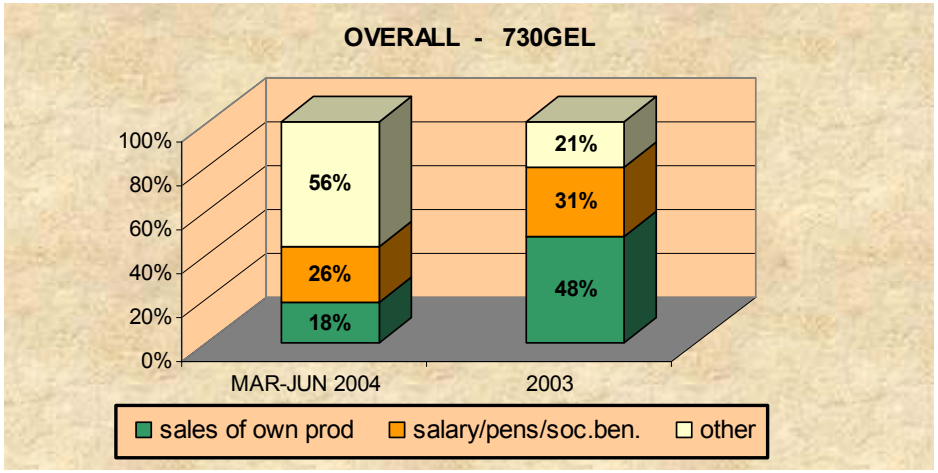
FIGURES

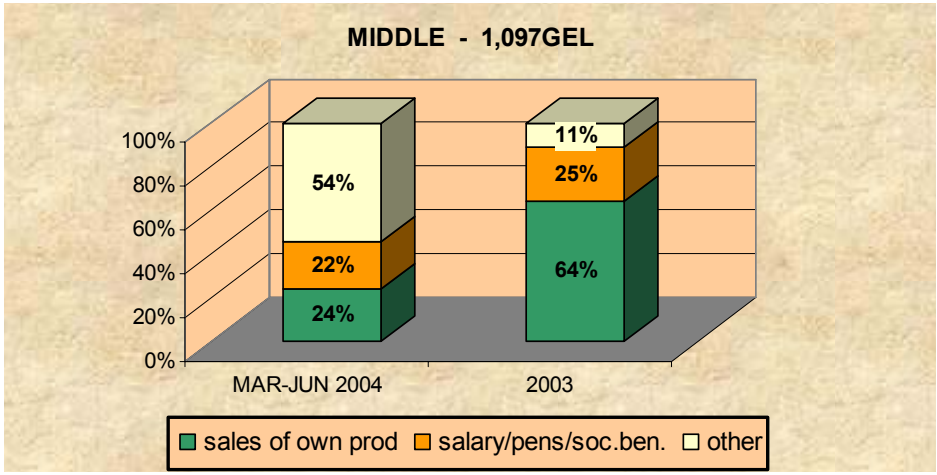
FIGURE #3. Food sources of the wealth ranked groups (in kcal)

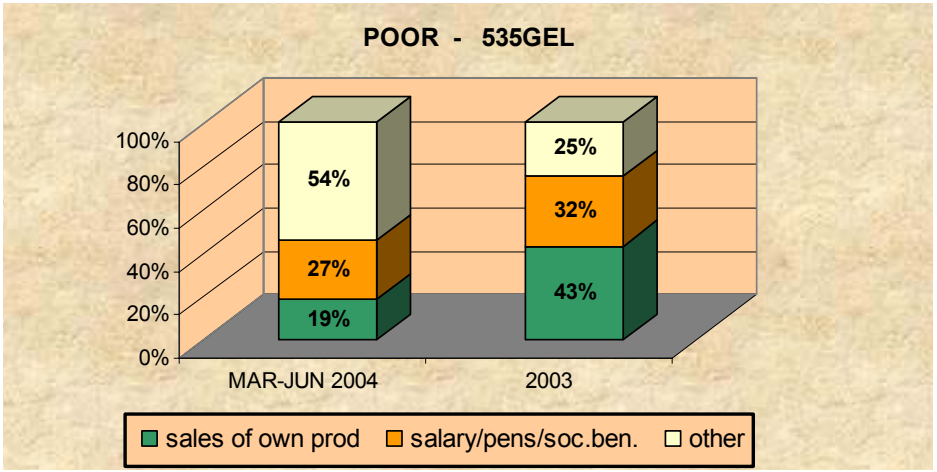


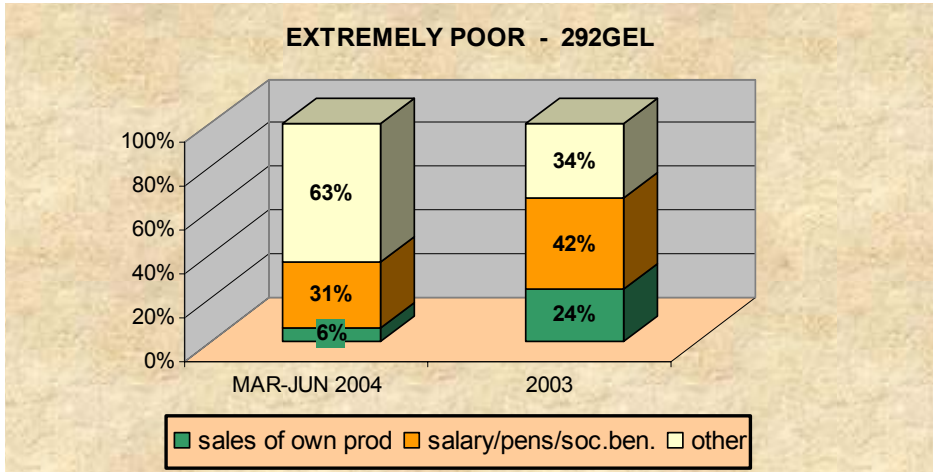
FIGURES

FIGURE #4. Cash income sources of the wealth-ranked groups in March-June 2004



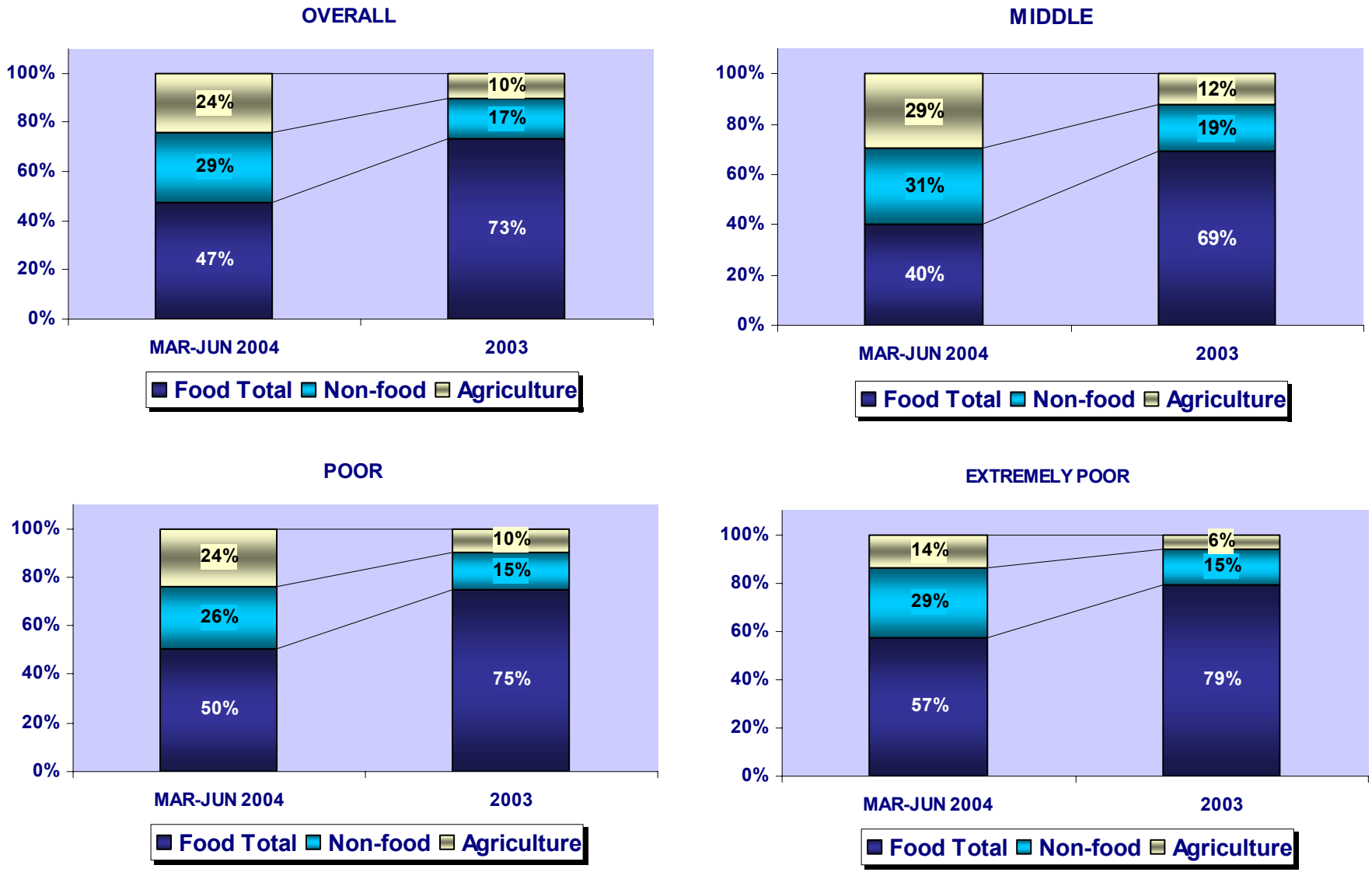






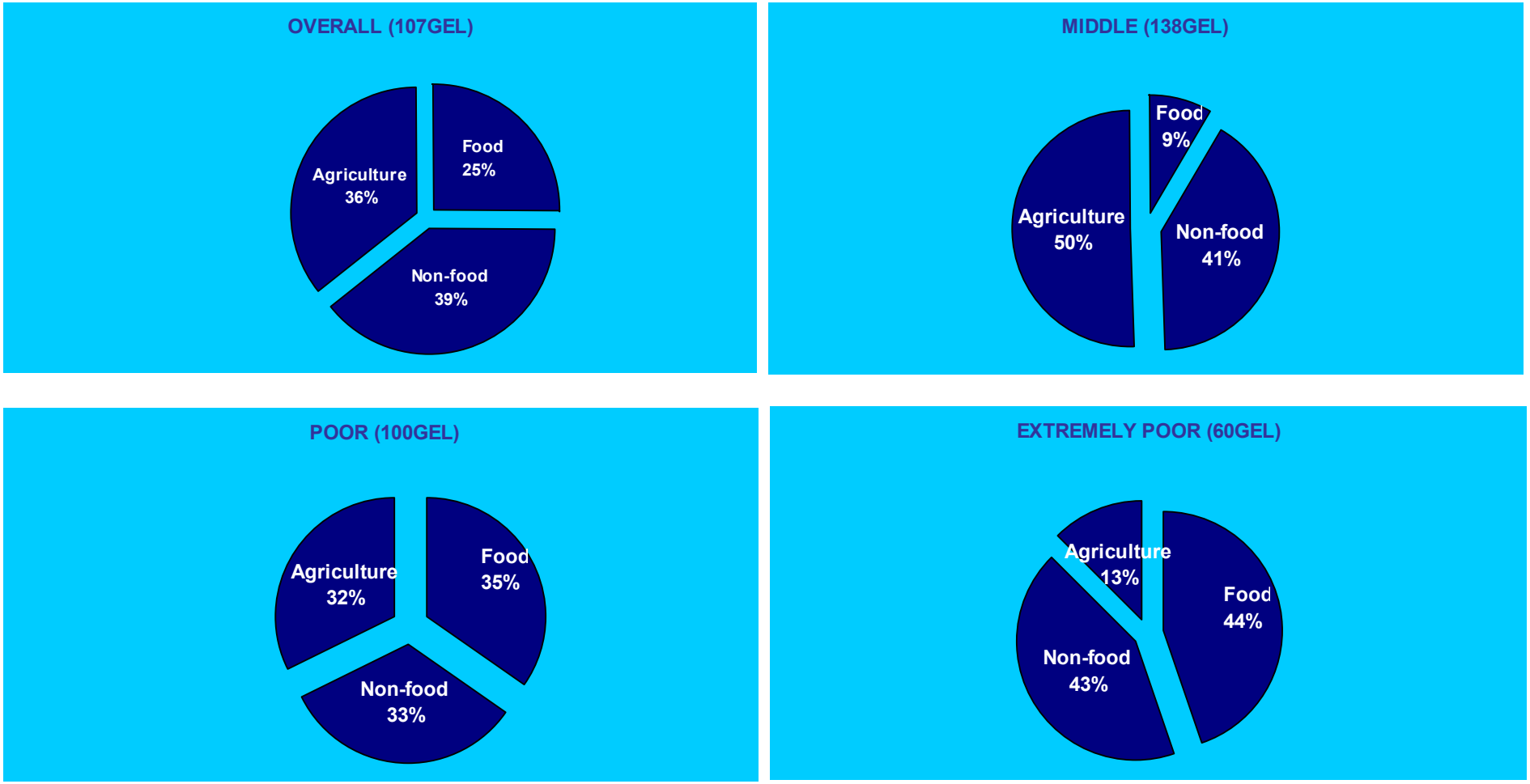
FIGURES

FIGURE #5. Expenditure patterns of the wealth ranked groups



FIGURES

FIGURE #6. Dependency on loans by wealth groups (loans not repaid by the end of the recall period)



FOOD ECONOMY ZONES OF GEORGIA

- no data
- FEZ 1 - Shida Kartli fruit belt
- FEZ 2 - West Georgia Viticulture
- FEZ 3 - Guria citrus area
- FEZ 4 - Guria maize area
- FEZ 5 - Guria tea area
- FEZ 6 - Nut area
- FEZ 7 - Samegrelo tea area
- FEZ 8 - Imereti/Samegrelo maize and livestock area
- FEZ 9 - Imereti tea area
- FEZ 10 - Vegetable growers (with cereals & fruit/grapes)
- FEZ 11 - Potato&vegetable growers
- FEZ 12 - Potato growers in southern uplands
- FEZ 13 - Highlands (livestock with cereals/orchards)
- FEZ 14 - Wine producers (grapes & orchards)
- FEZ 15 - Pastoral areas (livestock with minimal crop production)
- FEZ 16 - Wheat area (with sunflower)
- FEZ 17 - Wine producers (grapes with cereals)
- FEZ 18 - Uplands with minimal crop production
- FEZ 19 - Atchara tea & citrus zone

0 50 100
kilometres

Source: District Administration Agricultural Units

QUESTIONNAIRE

WFP Georgia Household Food Economy Assessment (January-June 004)

Wealth group according to key informant

Wealth group according to interviewer

Region

District

Food Economy Zone

Sacrebulo

Household name, surname

Form 1- Household demographic profile

1	2	3	4	5	6	7	8	9
Person number	**Name**	**Relation to the household head**	**Sex**	**Age in years**	**Education in years**	**Ethnic group**	**Particular social status of (name)**	**Current employment status**
01								
02								
03								
04								
05								
06								
07								
08								
09								
10								

Column 3

Relation code

1. HEAD
2. SPOUSE
3. SON/DAUGHTER
4. BROTHER/SISTER
5. FATHER/MOTHER
6. SON/DAUGHTER IN LAW
7. GRAND CHILDREN
8. OTHER RELATIVES

Column 4

Sex code

1. MALE
2 FEMALE

Column 7

Ethnic code

1. Georgian
2. Armenian
3. Azerbaijanian
4. Ossetian
5. Russian
6. Greek
7. Other
8. Abkhaz

Column 8

Particular status code

1. WOMAN-HEADED
2. DISABLED/INVALID
3. IDP
4. SINGLE PENSIONER
5. SINGLE MOTHER
6. ORPHAN (BELOW THE AGE OF 16)
7. OTHER

Column 9

Current employment status code

1. FARMER
2. GOVT WORKER
3. SKILLED WORKERS
4. MILITARY SERVANT/OFFICIAL
5. PRIVATE TRADER
6. SMALL SCALE TRADER
7. PENSIONER
8. STUDENT
9. WAGE OR KIND EMPLOYMENT
10. JOBLESS/HOUSEWIFE
11. OTHER

QUESTIONNAIRE

Form 3 - Agriculture and Livestock

1. Agricultural land

Total plot size (hectares -ha) ☐

Of total: Private land (ha) ☐ Leased land (ha) ☐

Of total: Arable land (ha) ☐ Perennials (ha) ☐

Pasture(ha) ☐ Mow(ha) ☐

2. How much of your plot you usually cultivate (ha) ☐

3. Please name the reason why the rest of the plot is not cultivated ☐

Codes: 1. Long distance (indicate km) 3. No physical resources
2. No financial means 4. Other (specify)

4. Did you grow any crops and/or perennials in the first half of 2004

Yes ☐ **Continue Question 5**
No ☐ **Skip to Question 6**

5. For households who grow any crops or perennials in the first half of 2004

1	2	3	4	5	6	7	8	9	10	11
	Crop	**Cultivated land for 2004 crops (ha)**	**Total production in 2004(Kg)**	**Quantity sold (Kg)**	**Average price per kg**	**Quantity consumed (Kg)**	**Quantity for seeds (Kg)**	**Quantity for animal feeding (Kg)**	**Losses (storage, natural disasters, gifted out hospitality) (kg/lt)**	**Quantity at the stock left in July (kg/lt)**
1	**CEREALS**									
1.1	MAIZE									
1.2	WHEAT									
1.3	BARLEY									
1.4	POTATO									
1.5	OTHER									
2	**VEGETABLES**									
2.1	BEANS									
2.2	CUCUMBER									
2.3	TOMATO									
2.4	CABBAGE									
2.5	GREENS									
2.6	EGGPLANT									
2.7	PUMPKIN									
2.8	ONION									
2.9	OTHER VEGETABLE									
3	**FRUITS**									
3.1	APPLE									
3.2	PEAR									
3.3	PEACH									
3.4	LEMON									
3.5	MANDARIN									
3.6	BERRIES									
3.7	MELON									
3.8	GRAPES									
	Wine									
3.9	**OTHER FRUIT**									
	Vodka									
4	**TEA**									
5	**NUTS**									
6	**SUNFLOWER**									
	Sunflower Oil									
7	**FODDER**									

QUESTIONNAIRE

Form 3 - Agriculture and Livestock

6. Did you raise or purchase any livestock in the first half of 2004? Yes — Continue Question 7; No — Skip to Form 3

7. For households who raised or purchased any livestock in the first half of 2004

1	2	3		4	5	6	7	8		9		10	11
		Cattle (bull, buffalo, oxen)		Milk cows*	Milk buffalo*	Sheep*	Goat*	Poultry (duck,chicken, turkey) *		Pigs		Fish	Bee-hives
		Adult	Offspring					Adult	Offspring	Adult	Offspring		
1	No. at the start of 2004												
2	Purchased												
3	Consumed (kg)												
4	Income form selling (GEL)												
5	Price per kg												
6	Reasons for selling												
7	Number died												
8	Cause of death												
9	Number at the end of 2004												

*** If any Yes answer in columns 4, 5, 6, 7: Continue with Question 7. Otherwise, Skip to Form 3**

Raw 5: Reason for sale codes

1. Annual (routine)
2. Need cash for food
3. Need cash for other needs
4. Reduced or lack of animal fodder
5. Animal unproductivity
6. Animal sickness

Row 7: Cause of death codes

1 Disease
2 Drought/flood/landslides
3 Accident

8. For households who produced diary products (from cow, buffalo, sheep or goat milk) and eggs last year (2003)

1	2	3	4	5	6	7
	Dairy product	Quantity produced	Household consumed	Quantity sold	Total value (GEL)	Reason for sale
1	MILK (Liter)					
2	CHEESE (Kg)					
3	COTTAGE CHEESE (kg)					
4	FAT-FREE CHEESE (kg)					
5	BUTTER (Kg)					
6	YOGHURT (Kg)					
7	SOUR CREAM (Kg)					
8	EGGS (pcs)					

Column 7

Reason for sale codes

1. Annual (routine)
2. Need cash for food
3. Need cash for other needs

QUESTIONNAIRE

Form 4- Average monthly food expenditures during the first half of 2004

1	2	3			
	Food item	Purchased food			
		For HH consumption (kg)	For processing other food(kg)	Total amount actually spent (GEL)	Total amount of loans not repaid before July 2004 (GEL)
1	Wheat flour (kg)				
2	Maize (kg)				
3	Bread (kg)				
4	Other bread products (e.g. pasta, etc.) (kg)				
5	Other cereals (barley, rice, etc.) (kg)				
6	Sugar (kg)				
7	Vegetable oil (lt)				
9	Butter, fats (ghee, margarin) (kg)				
10	Milk (lt)				
11	Cheese (kg)				
12	Cottage cheese (kg)				
13	Fat-free cheese (kg)				
14	Yoghurt (kg)				
15	Sour cream (kg)				
16	Eggs (pcs)				
17	Beef (kg)				
18	Mutton (kg)				
19	Chicken meat (kg)				
20	Turkey/duck (kg)				
21	Fish (kg)				
22	Beans (kg)				
23	Potato (kg)				
24	Vegetables (kg)				
25	Fruits (apple, pear) (kg)				
26	Citrus (lemon, mandarin) (kg)				
27	Other fruit (kg)				
28	Berries (kg)				
29	Beverages (wine, alcohol, beer) (lt)				
30	Coffee, tea (kg)				
31	Prepared dishes				

QUESTIONNAIRE

Form 5 - Non-food expenditure in the first half of 2004

1	2	3	4
	Non-food expenditure	**Total amount actually spent (GEL)**	**Total amount of loans not repaid before July 2004 (GEL)**
1	**AGRICULTURE**		
1.1	Hiring tractor		
1.2	Fuel/oil for tractor		
1.3	Fertilizers		
1.4	Chemicals, insecticides		
1.5	Seeds		
1.6	Irrigation (time or m3)		
1.7	Transportation costs (to the plot)		
1.8	Packaging materials		
1.9	Grazing		
1.10	Buy new animals		
1.11	Animal fodder		
1.12	Hiring manpower		
1.13	Repairs of machine, tools		
1.14	Veterinary check-ups		
1.15	Vaccination		
1.16	Land tax		
1.17	Milling costs		
1.18	Product realisation costs (specify)		
2	**NON-AGRICULTURAL EXPENSES**		
2.1	Housing (rent, repair)		
2.2	Gaz (for heating & cooking)		
2.3	Firewood (for heating & cooking)		
2.4	Electricity (light,heating,cooking)		
2.5	Kerosene/ Candle		
2.6	Education (fee,books,stationery)		
2.7	Health care (medicine, check-up)		
2.8	Telephone, TV cable		
2.9	Transportation		
3	Clothing		
3.1	Household items		
3.2	Profit tax for business		
3.3	Repayment of loans		
3.4	Purchase of property (house, car, tractor, land, motorcycle, etc.)		
3.5	Other (gift, contribution, etc)		

QUESTIONNAIRE

Form 6 - Additional sources of income in the first half of 2004

1	2	3	4
	Additionnal sources of income	**Total value (GEL)**	**Time period (number of times, days, weeks, month)**
1	Sales of firewood		
2	Small commercial activities		
3	Handicraft		
4	Sales of households assets		
5	Sales of agricultural land		
6	Sales of agricultural tools		
7	Sales of wild food (mushroom, edible sprouts/grass, berries, chestnut, etc.)		
8	Salary		
9	Pension		
10	Social benefit		
11	Wage or kind employment within the community		
12	Wage or kind employment outside the community		
13	In-country remittances		
14	Remittances from other countries		
15	Direct grants (**food aid***, subsidized agriculture, NGO projects)		
16	Food gifts from relatives (specify type and the amount in kg/lt)		
16.1.1	*wheat flour*		
16.1.2	*maize*		
16.1.3	*pasta, rice*		
16.1.4	*vegetable oil*		
16.1.5	*sugar*		
16.1.6	*beans*		
16.1.7	*potato*		
16.1.8	*cheese*		
16.1.9	*other dairy products*		
16.2.0	*fruit (specify type)*		
16.2.1	*vegetables (specify type)*		
16.2.2	wine		
17	Other (rent of house, car, tractor, cattle,cart, cash contribution from weddings/funerals, etc) - specify		

*** If receives Food aid in Row 15, continue with Form 9**

- -

Form 9- Food aid received in 2004

1 Is anyone of your household receiving food aid now? **Codes:** 1. Yes 2.No

2 If YES, since when? mm

3 When was the last food receipt? (Show the ration card if available) mm

4 What was the daily food ration you received last time? (by type of food and amount in gram per day)

5 How do you use food aid which you received last time?

Codes
1. Self-consumption only
2. Shared with other household members
3. Sale out for cash
4. Keep as stock for the lean season
5. Give to poorer relatives or neighbors as gift

6 If you could choose, what type of food commodities do you prefer to receive from the food aid?

QUESTIONNAIRE

Form 7 - Household wealth properties

	Item
1	Car
2	Tractor
3	Motorcycle
4	Bicycle
5	Cart
6	Refrigerator
7	Air conditioner
8	Television

	Item	How many do you currently have
9	Radio /CD cassette players	
10	Computer	
11	Mobile phone	
12	Complete set of texbooks	
13	Food/wine cupboard	
14	Farming tools (ax, sickle, yoke beam, etc)	
15	Music instruments (specify)	
16	Other (savings, jellewery, etc)	

Form 8 - Consumption and Coping Mechanisms

		summer	winter/ spring
1	On average, how many meals do you have a day (in-house and outside) ?		

2 How many meals did you have yesterday?

3 What food dishes did you actually eat yesterday?. Please separately indicate dishes eaten by young children (under 5 years old) and the others.

4 In the last 3 months, have there been times when you didn't have enough food or money to buy food?

1. Yes
2. No

How often has your household had to:

1	2	Code
	Coping mechanisms	
1	Rely on less preferred and less expensive foods?	
2	Borrow food, or rely on help from friend or relative?	
3	Purchase food on credit?	
4	Gather wild food, hunt, or harvest premature crops?	
5	Consume seed stock held for next season ?	
6	Send household members to eat elsewhere?	
7	Send household members to obtain cash?	
8	Limit portion size at meal time?	
9	Restrict consumption of adults in order for small	
10	Sell household assets	
11	Sell livestock, cattle	
12	Sell agricultural land	
13	Sell agricultural tools	
14	Borrow money for investing in agriculture	
15	Borrow money for other needs (food, non-food)	
16	Reduce number of meals eaten in a day?	
17	Skip entire days without eating?	
18	Other	

Code:
1. Always
2. Often
3. Rarely
4. Never