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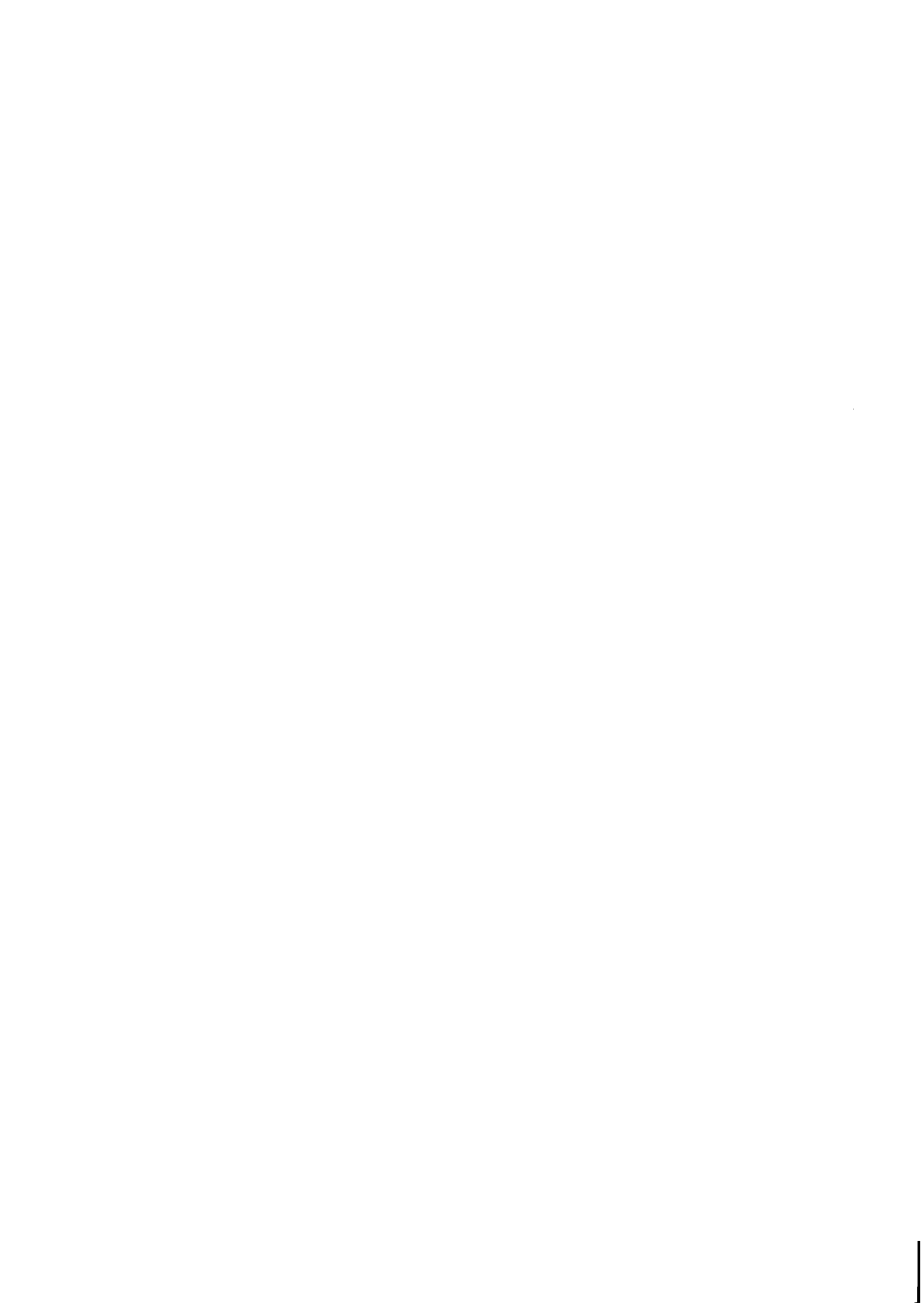
**FOOD CONSUMPTION AND NUTRITION LEVEL  
(KENYA CASE STUDY)**

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**FOOD CONSUMPTION AND NUTRITION LEVEL**  
**(Kenya Case Study)**

G. Fischer and M.M. Shah

A study carried out by the  
International Institute for Applied Systems Analysis  
Laxenburg, Austria

for the

Food and Agriculture Organization of the United Nations  
Rome, Italy



## **FOREWORD**

Understanding the nature and dimension of the food problem and the policies available to alleviate it has been the focal point of the Food and Agriculture Programme (FAP) at the International Institute for Applied Systems Analysis (IIASA) since the program began in 1977.

The major food problem in the world is the inadequate food consumption by many people in the world inspite of adequate food production in the world. Understanding the relationship between income and food consumption patterns is critical in assessing nutritional impacts of alternative policies on the society.

Günter Fischer and Mahendra Shah present here an analysis of Kenyan household consumption survey data to describe the relationship between level of nutrition and various social and economic variables.

We are grateful to the Food and Agriculture Organization of the United Nations for partially supporting this study.

Kirit S. Parikh  
Project Leader  
Food and Agriculture Programme



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## **KENYA CASE STUDY**

### **1. Background**

The Kenya case study presented in this report has been carried out as a contribution to the FAO's Fifth World Food Survey. The main theme of the Fifth World Food Survey is the analysis of undernutrition/malnutrition. Due to the very wide range of factors affecting nutritional status, the phenomena has to be considered within a socio-economic framework rather than a mere comparison of food intake and requirements. Altogether six country case studies (Brazil, Tunisia, Ivory Coast, Philippines, Costa Rica and Kenya) have been carried out as part of the Fifth World Food Survey. The central aim of these case studies is to utilize very detailed and comprehensive country data reflecting the various aspects involved in the analysis of undernutrition / malnutrition. These case studies in a sense are to supplement the Fifth World Food Survey's global assessment of undernutrition / malnutrition.

## **2. Kenya Case Study**

### **2.1. Introduction**

The National Integrated Sample Survey Programme (NISSP) is the main vehicle in Kenya used for collecting socio-economic statistics from both rural and urban areas.

The National Sample is an area sample (rural as well as urban) that was established in 1976. It is a two-stage sample with the primary sampling unit being the "location" and the secondary sampling unit being the household. Most of the surveys within the NISSP use the national sample as their frame.

The Integrated Rural Survey (IRS) forms the backbone of the rural element of NISSP. It is a rural annual household survey and during 1974-78 four surveys (IRS 1 to IRS 4) were carried out. Table 1 shows the availability of rural data pertinent to the present study.

Computerized data for the IRS 2 and IRS 3 were not available at the time of the study. In the first stage analysis was carried out on the computerized household data for IRS 1 and IRS 4. The purchased food consumption data in IRS 4 is very limited and could not be used to estimate the total household food consumption. Additionally, a significant number of household own consumption records were found to have unacceptably large errors and hence the own produced-consumed results of the survey also could not be utilized.

This report presents the data and analysis carried out on the IRS 1 (1974/75) survey. In Section 2.2 the objectives and the approach of the case study are described. In Section 2.3 the IRS 1 survey scope and background are described. Cross tabulation of data for relevant variables is presented in Section 3 and the results of the analysis are presented in Section 4. Finally the conclusions and an assessment of the dimensions of rural undernutrition /

Table 1. Relevant integrated rural survey data, IRS 1-4, Kenya

	Household Income	Population				Consumption		Nutrition Module
		Age	Sex	Employment	Education	Own Consumption (Food)	Purchased (Food)	
IRS 1 1974/75	*	*	*	*	*	Crops: value, quantity and price Livestock: value	Value by food item purchased	n.a.
IRS 2 1975/76	n.a.	*	*	*	*	Crops: residual (kg), used for own consumption Livestock: own consumption (value)	n.a.	*
IRS 3 1976/77	Estimate from value of crop production and livestock sales	*	*	*	Occupation	Crops: Own consumption kg and value Livestock: consumed (value)	Purchased Crops: (kg) and value Livestock: value	n.a.
IRS 4 1977/78	Estimate from value of crop production and livestock sales	*	*	*	Occupation	Crops: Own consumption kg and value Livestock: consumed (value)	Purchased Crops: kg and value Livestock: value and numbers	*

\* Data available in the survey

n.a. Data not collected in the survey

malnutrition in rural Kenya is discussed in Section 5.

## 2.2. Objectives and Approach

The overall objective of the Kenya case study is to utilize the data from food consumption surveys in Kenya to quantify:

- Household and per capita calorie consumption levels ( $c_j$ )

- Household and per capita energy requirement levels ( $E_j$ )
- Using the ratio of household calorie intake to calorie requirement ( $R_j$ ) as a measure of the nutrition level, the survey data is tabulated in terms of:
  - (1) Average energy requirement and food consumption pattern according to nutrition level
  - (2) Economic and social indicators according to level of nutrition
  - (3) Geographic distribution of households according to level of nutrition

On the basis of the quantified data, multiple regression analysis is carried out to identify the relationship between level of nutrition ( $R$ ) and various economic, social and geographic variables as follows:

Consider the model

$$R = f(x_1, x_2, \dots, x_p) + e$$

where  $R$  is the ratio of household calorie intake to calorie requirement as defined above

$x_1 \dots x_p$  are explanatory variables

$e$  is the error term.

Examples of possible explanatory variables are:

- (i) Income
- (ii) Size of holding
- (iii) Household size
- (iv) Value of household assets
- (v) Employment status
- (vi) Education level
- (vii) Location of household

etc.

Note that the choice of the possible explanatory variables will very much depend on the availability of empirical survey data.

### **2.3. Integrated Rural Survey**

#### **2.3.1. Background**

The objectives of the Integrated Rural Survey, initially constituted during the first quarter of 1974, was not only to provide essential statistics on rural areas, but also to be a vehicle to establish a sound infrastructural framework within which statistical enquiries could be mounted in response to current data needs in Kenya.

The specific data content of the IRS 1 survey (1974-5) was wide in subject matter as the aim was to provide a broad baseline description of the socio-economic factors dominating the small-scale agricultural households in Kenya.

The respondents for the first round of IRS 1 were selected on the basis of a two-stage stratified sample. The primary sampling unit (PSU) was the sub-location i.e, the basic administrative unit is the country. Twenty-three PSUs were selected in each province except in Eastern province which had 24 PSUs as a result of a readjustment of sub-location boundaries after the 1969 population census. The sub-locations were also classified into agro-ecological zones on the basis of land use (either actual or potential). Table 2 shows the IRS 1 coverage of the provinces, districts and agro-ecological zones in Kenya.

It should be noted that the traditional pastoral areas, urban areas and all the former "scheduled" areas (except those which had by then been sub-divided into settlement schemes) were excluded from the sample. Table 3 shows the distribution of Kenya's 1975 population. Note that small holder population covered in the IRS 1 survey accounted for about 78% of Kenya's population.

Table 2. IRS 1 coverage of districts and agro-ecological zones in Kenya

<b>Districts</b>	
Central Province:	Kiambu, Kirinyaga, Muranga, Nyandarua, Nyeri
Coast Province:	Kilifi, Kwale, Taita, Taveta
Eastern Province:	Embu, Kitui, Machakos, Meru
Nyanza Province:	Kisii Kisumu, Siaya, South Nyanza
Rift Valley Province:	Kericho, Baringo, Elgeyo Marakwat, Nandi
Western Province:	Bungoma, Busia, Kakamega
<b>Agro-ecological zones</b>	
West of Rift Valley:	Tea Zone, Coffee Zone, Upper Cotton Zone, Lower Cotton Zone
East of Rift Valley:	Tea Zone, Coffee Zone, Upper Cotton Zone, Lower Cotton Zone
Special Zones:	High Altitude Grasslands Zone, Irrigation zone Sugarcane Zone, Ranching Zone
Coast Zones:	Taita Hills Zone, Rain less than 40" Zone Rain over 40" Zone

Table 3. Population distribution in Kenya, 1975

	Population ('000)
Rural	11818
Small Farms	10341
Large Farms	922
Rural Non-agr.	555
Urban	1389
Total Kenya	13207

Within each PSU twelve smallholder households were selected as respondents in the IRS 1 sample, adding up to a total sample size of 1668 households. Out of these only 18 had to be discarded as non-respondents during the entire course of the survey.

The survey year was divided into 13 four-week cycles:



- (i) Each cycle was exactly the same length
- (ii) Each cycle always started on exactly the same day of the week
- (iii) Each household was visited on specified week-days.
- (iv) Possible biases that might be introduced by an enumerator always visiting a household at the beginning or end of a month were automatically removed by the fact that cycles were evenly spread across all the months in the course of one year.

Each household was visited in a particular week during each four-week cycle. The investigator was required to visit the respondent twice during this week, with a maximum gap of four days between visits. This schedule was particularly important in that it ensured that the maximum recall period was no more than four days.

The survey data from IRS 1 is available in a computerized form at the Central Bureau of Statistics in Nairobi. The data and analysis presented in this report is based on the original\* IRS 1 data.

### **2.3.2. IRS 1 Survey Data**

In this section we describe the data from IRS 1 that is relevant for the present study.

#### **2.3.2.1. Household Data**

A household is defined as a person or group of persons living together and sharing a community of life by their dependence on a common holding as a source of income and food.

The relevant data on the household (from the IRS 1 Survey Form 1) is as follows:

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\*SPSS file.

- Household members by age, sex, education and job. The education data is in terms of six classes ranging from a primary education of up to 4 years (class 1) to a University Degree (class 6). The job data is in terms of the type of job, namely farm labour, rural-nonagriculture, teaching or other government job and urban employment. Household members attending school/college are identified separately.

#### **2.3.2.2. Holding Size**

A holding is defined as the land associated with a household being used wholly or partially for agricultural purposes and being managed as a single economic unit under the overall control and direction of the holder. Information on the farm size is available from Form 2 of the IRS 1 Survey.

#### **2.3.2.3. Household Assets**

Form 3 of the IRS 1 Survey provides information on the following:

*Household Goods* (number of radios, chairs, stoves, etc.)

*Farm Equipment and Transport* (ploughs, harrows, pumps, grinders, lorries, etc.; year of purchase, value when new, and value at present)

*Permanent Improvements* (buildings, fences, etc.; year of purchase, value when new and value at present)

*Non-capital Farm Inputs in Store* (fertilizers, feed etc.; quantity, unit cost, total value).

Only the household assets in value terms have been used as a variable in the present study.

#### **2.3.2.4. Household Expenditure (Food)**

Form 7 of the IRS 1 Survey provides data on the purchase (value in terms of cash and credit) by item of the following:

- Food and Drinks
- Other Household Purchases
- Farm Purchases and Expenses
- Other Expenditures

Value of household food purchases is available for eight broad commodity groups, namely grains, flours and root crops, dairy products and eggs, meat and fish, fats and oils, sugar and sweets, fruits and vegetables, drinks and beverages, and salt and other flavourings. These broad food commodities had to be further disaggregated to quantify the nutritional intake from purchased food. Table 4 shows data on the distribution of household expenditure for each commodity group into expenditure for individual food items. The assumptions on the distribution share of each commodity group into individual food commodities are on the basis of information from past detailed rural and urban food consumption surveys in Kenya, namely:

- Rural Household Survey - Nyanza Province 1970/71
- Economic Survey of Central Province 1963-64
- Income, Expenditure and Consumption - African Middle Income Workers in Nairobi, 1963
- Urban Food Purchasing Survey 1977

It should be noted, Table 4, that the distribution shares differ according to the three per capita incomes. This differentiation in distribution according to income classes was adopted on the basis of information from the abovementioned surveys. As consumption patterns vary somewhat among provinces in Kenya, we have also taken account of this variation in the distribution of purchased food expenditure, Table 5.

Table 4. Allocation of household expenditure on purchased food to specific food commodities, IRS Rural Survey 1974/75

	Rural Average	Low Income Households with per capita income 0-499shs/year	Medium Income Households with per capita income 500-999shs/year	High Income Households with per capita income 1500-1999shs/year
<b>Grains, Flour, Roots</b>	498	435	539	514
<b>Cereals</b>				
Wheat bread	119	40	136	275
Wheat flour	45	10	52	133
Rice	22	2	22	77
Other Cereals*	211	281	209	
Other roots	101	102	120	29
<b>Dairy Products and Eggs</b>	46	38	48	57
Eggs	21	17	22	28
Processed milk	25	21	26	29
<b>Meat and Fish</b>	236	204	239	317
Beef	171	148	173	229
Other Meat	38	33	39	52
Fish	27	23	27	36
<b>Fats and Oils</b>	83	51	92	136
Butter	6	2	6	16
Vegetable oils	67	41	74	110
Animal fats	10	8	12	10
<b>Sugar and Sweets</b>	172	132	181	248
Sugar	161	116	171	245
Sugarcane	11	16	10	3
<b>Fruit and Vegetables</b>	88	75	98	85
Fruit	44	36	49	42
Vegetables	44	39	49	43
<b>Drinks and Beverages</b>	140	116	134	228
Stimulants	18	15	17	30
Alcoholic Bec.	122	101	117	198
<b>Salt and Flavourings (Spices)</b>	35	32	37	36

\*Other cereals: millet, sorghum and maize flour.

Table 5. Allocation of value of certain purchased foods to specific food commodities: IRS 1974/75: rural and by province

	Total Value Shs	Fruits Shs	Vegetables Shs	Cereals Shs	Roots Shs	Beef Shs	Fish Shs	Other Meat Shs
<b>Rural</b>								
Fruit and vegetables	88	44	44					
Grains, flours, roots	498			397	101			
Meat and fish	236					171	27	38
<b>Central</b>								
Fruit and Vegetables	126	63	63					
Grains, flours, roots	610			510	100			
Meat and fish	147					135		12
<b>Coast</b>								
Fruit and Vegetables	79	39	40					
Grains, flours, roots	1164			883	281			
Meat and fish	238					144	75	19
<b>Eastern</b>								
Fruit and vegetables	109	54	55					
Grains, flours, roots	726			583	153			
Meat and fish	115					100	15	
<b>Nyanza</b>								
Fruit and vegetables	67	33	34					
Grains, flours, roots	229			154	75			
Meat and fish	393					261	50	82
<b>Rift Valley</b>								
Fruit and vegetables	32	16	16					
Grains, flours, roots	240			97	143			
Meat and fish	169					104	20	45
<b>Western</b>								
Fruit and vegetables	66	33	33					
Grains, flours, roots	355			285	70			
Meat and fish	306					210	20	76

Having obtained the value of purchased individual food commodity, the next step was to translate this into quantity of food. The IRS 1 Survey does not provide information on prices of purchased food.

Table 6 summarizes the price estimates for food commodities as used in this study. For the purchased food commodities, estimates from 1974 and 1975 retail prices have been applied. Full details of these price estimates are given below.

### **Cereals**

- a) *Wheat, bread and flour.* The consumer price is regulated and has been obtained from the Kenya Statistical Abstract 1976.
- b) *Rice.* The consumer price is regulated and has been obtained from the Kenya Gazette, August 1974 and February 1975.
- c) *Other cereal flour.* This consists mainly of sorghum, millet and purchased maize flour. The percentage share of each of these three cereals in the "Other Cereal Flour" is given in Table 7. An aggregate price estimate for "Other Cereal Flower" has been derived as a weighted average using the prices of sorghum and millet (calculated from IRS 1974/75 data) and the 1974/75 retail price for maize grain, Kenya Statistical Abstract 1976.

### **Starchy Roots**

This commodity group consists mainly of sweet potatoes, cassava, yams and purchased potatoes. A province-specific weighted price on the basis of individual root production in each province was derived for starchy roots. For the rural average the price estimate was 0.63 shs/kg.

Table 6. Prices of purchased and home-produced/consumed food commodities

		Rural	Central	Coast	Eastern	Nyanza	Rift	Western
<b>Cereals</b>								
Wheat bread	P	2.60						
Wheat flour	P	2.15						
Rice	P	2.30						
Maize flour	H	0.66	0.79	0.81	0.73	0.67	0.62	0.64
Other cereal flour	H,P	0.80	0.80	0.80	0.82	0.74	1.38	0.84
Sorghum	H	0.70			0.68	0.71		0.68
Millet	H	1.00			1.73	0.94	1.38	1.16
Purchased maize flour	P	0.80	0.80	0.80	0.80	0.80	0.80	0.80
<b>Starchy Roots</b>								
English potatoes	H	0.80	0.84	1.00	0.57	1.00	0.84	1.00
Other roots	H,P	0.40						
<b>Sugar</b>								
Sugar raw-centre	P	2.75						
Sugarcane	H,P	0.05						
<b>Beans</b>								
	H	2.09	2.36	3.37	2.16	1.31	1.23	1.83
<b>Vegetables</b>								
Tomatoes	H,P	0.85		0.75		0.75		
Other vegetables	H,P	0.65		0.55		0.55		
<b>Fruits</b>								
Bananas	H,P	0.45		0.35		0.35		
Other fruits	H,P	0.35		0.25		0.25		
<b>Meat</b>								
Beef	H,P	4.15	4.20	4.00	4.10	4.20	3.90	4.15
Other meat	H,P	3.25	3.00	3.10	3.00	3.35	3.25	3.30
<b>Eggs</b>								
	P	4.00						
<b>Fish</b>								
	P	2.25	2.50	2.00	2.50	2.00	2.50	2.50
<b>Milk</b>								
Milk, fresh	H	0.93	0.86	0.78	1.01	1.10	0.78	1.07
Milk, processed	P	1.50						
<b>Fats and Oils</b>								
Butter	P	6.60						
Vegetable oils	P	11.50						
Animal oils & fats	P	10.30						
<b>Spices</b>								
	P	10.00						
<b>Stimulants</b>								
	P	7.05						
<b>Alcoholic Beverages</b>								
	P	5.60						

H: Home produced/consumed

P: Purchased

**Note:** Where prices are not shown, rural average price is used. All prices in Kenya shillings/kg except for milk (shillings/litre) and alcoholic beverages (mainly beer price per bottle).

Table 7. Percentage share of "other cereal flour" allocated to individual cereal commodities and aggregate price estimate

	Rural	Central	Coast	Eastern	Nyanza	Rift Valley	Western
Sorghum	28.6%	-	-	16.0%	81.3%	-	24.5%
Millet	11.4%	-	-	24.0%	11.4%	100%	15.5%
Maize	60.0%	100%	100%	60.0%	7.3%	-	60.0%
Price Estimate: "Other Cereal Flour" shs/kg	0.80	0.80	0.80	0.82	0.74	1.38	0.84

### Sugar

- a) The price estimate for sugar raw-centrifugal has been derived as an average of the 1974 and 1975 consumer price (uniform throughout the country) as given in the Kenya Statistical Abstract, 1976.
- b) The price estimate for sugar cane is based on the Kenya Gazette, February 1974 and January 1975.

### Vegetables and Fruits

Rural retail prices for fruits and vegetables are not available and for the present analysis the prices have been derived from the following considerations.

The 1975 retail price (Nairobi) of fruits and vegetables is shown in Table 8.

Taking into account the transportation costs and retail profit margin (information from the Food and Marketing Project, Ministry of Agriculture), the rural prices for fruits and vegetables are estimated to be approximately half the urban retail price. The price estimates used are shown in Table 9.

Note that lower prices have been applied for the Nyanza and Coast provinces since the high production of certain fruits and vegetables (mangoes, paw paws, bananas, green vegetables, etc.) in these provinces affects the local



Table 8. Retail fruit and vegetable prices in Nairobi, 1975

Tomatoes	2.00 shs/kg
Peas	0.75 shs/kg
Carrots	0.90 shs/kg
Cabbages	1.00 shs/kg
Cooking Bananas	1.20 shs/kg
Ripe Bananas	2.00 shsh/kg
Pineapples	1.60 shs/kg
Oranges	2.20 shs/kg

Table 9. Estimates of rural prices for fruits and vegetables

	Rural and All Provinces except →	Nyanza	Coast
Tomatoes (shs/kg)	0.85	0.75	0.75
Other vegetables (shs/kg)	0.65	0.55	0.55
Bananas (shs/kg)	0.45	0.35	0.35
Other fruit (shs/kg)	0.35	0.25	0.25

price levels.

### Meat

The producer price of various meats (Kenya Statistical Abstract, 1976) is shown in Table 10.

This producer price information together with the information on trade margins (Food and Marketing Project, Ministry of Agriculture) was used to estimate prices of beef and other meat. Note that the reported consumer prices (Kenya Statistical Abstract, 1976) have *not* been directly used in the derivation of the price estimate since a large proportion of the meat in rural areas reaches the consumers via traditional markets.

Table 10. Meat producer prices, 1974 and 1975

	1974	1975
Beef (shs/kg)		
3rd grade	4.13	4.74
4th grade	3.64	4.12
Mutton (shs/kg)		
CA and CB	4.87	4.92
Pig Meat (shs/kg)	5.67	6.36

### **Fish**

The price estimate for fish is approximate. The main consumption of fish is in the Nyanza and Coast provinces. In Nyanza there is a high consumption of tilapia, priced at about 1.20 shs per fish (approximately 0.5 kg). For the Coast Province a much wider variety of fish is available.

### **Eggs**

The price estimate of 4.00 shs/kg is derived from a dozen eggs at 2.70 shs in the rural areas and is applied uniformly for all provinces (one dozen eggs = 680 gms).

### **Milk**

The purchased dairy products have been allocated equally\* to eggs and processed milk. The price of purchased milk in the rural areas has been estimated to be 1.50 shs per litre (excluding transport costs).

### **Fats and Oils, Spices, Stimulants and Alcoholic Beverages**

The price estimates are uniform throughout the country and have been obtained from the Kenya Statistical Abstract 1976.

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\*The assumption was made due to the relatively high consumption of own produced-consumed milk in all provinces except for Western Province.

Given the above price estimates and purchased value of each food commodity, the quantity of each food item consumed by individual households was estimated. The purchased food together with the own produced/consumed food provides the basis for estimating the nutrient (calorie, protein, etc.) intake per household and on a per capita basis. We now describe the IRS 1 data base for the own produced/consumed food items.

### 2.3.2.5. Household Own Produced/Consumed Food

Form 9 of the IRS 1 Survey was used to collect information on the on-farm consumption by crop at the household level. This information consisted of price of crop and value of crop consumption; from this the quantity of crop consumption at the household level was calculated. The main food items reported by the survey were maize, finger millet, sorghum, beans, English potatoes and other crops. The last aggregated food commodity had to be distributed among individual food commodities, namely fruits, vegetables, roots, sugarcane, at the province level as shown in Table 11.

Table 11. Allocation of "other crops" to individual food commodities home produced/consumed

	Other Crops Value Shs	Percent Allocation			
		Fruits %	Vegetables %	Roots %	Sugarcane %
Rural	152	21.1	24.3	54.6	
Central	186	21.9	25.3	53.8	
Coast	85	21.2	24.7	54.1	
Eastern	250	20.8	25.2	54.0	
Nyanza	103	18.4	20.4	54.4	6.8
Rift Valley	13	23.1	23.1	53.8	
Western	111	20.7	25.2	54.1	

Among the own produced/consumed livestock commodities, the IRS 1 collected data (Form 10) on beef, other meat/poultry and milk. For beef and other meat/poultry only the value of own farm consumption was collected. This was translated into quantities on the basis of price estimates shown in Table 7.

#### **2.3.2.6. Household Food Consumption and Nutrient Intake**

Given the quantity of purchased food consumed and the own produced/consumed food, nutritional conversion factors for Kenya, Table 12, were applied to quantify the nutrient intake for each household in the survey.

Energy Requirement (E) for each household was calculated as the sum of individual energy requirement of persons belonging to the household. The FAO/WHO age- and sex-specific energy requirements, Table 13, were applied to estimate the energy requirement for each household.

The calorie intake per household ( $C_i$ ) as well as on a per capita basis together with calorie requirement ( $E_i$ ) was used to form the ratio of calorie consumption over energy requirement for each household:

$$R_i = \frac{C_i}{E_i}, \quad i=1,2,\dots,n \text{ households}$$

It should be noted that the calorie requirement ( $E_i$ ) is estimated on the basis of age, sex and activity level of each member of a particular household. In the first stage of the analysis the basic data is classified and tabulated in terms of 10 classes providing a fairly normal frequency distribution. These results are described in the next section.

Table 12. Nutritional conversion factor for Kenya

	Per 100 Grams		
	Calories	Proteins	Fats
<b>Cereals:</b>			
Wheat bread	261	7.7	2.0
Wheat flour	364	11.0	1.3
Rice	363	7.0	0.5
Maize flour	353	9.3	3.8
Other cereals flour	342	9.3	3.0
<b>Starchy Roots:</b>			
English potatoes	71	1.5	0.1
Other roots	110	0.9	0.1
<b>Sugar:</b>			
Sugar raw-centre	344	0	0
Sugar cane	28	0.3	0.1
<b>Beans:</b>	341	22.1	1.7
<b>Vegetables:</b>			
Tomatoes	20	1.0	0.2
Other vegetables	22	1.4	0.2
<b>Fruits:</b>			
Bananas	60	1.0	0.1
Other fruits	89	0.8	0.2
<b>Meat:</b>			
Beef	190	14.6	14.2
Other meat	178	13.1	13.5
<b>Eggs:</b>	123	10.4	8.4
<b>Fish:</b>	72	11.2	2.7
<b>Milk:</b>			
Milk, fresh	63	3.1	3.5
Milk, other	62	3.8	2.9
<b>Fats &amp; Oils:</b>			
Butter	716	0.6	81.0
Vegetable oils	884	0	100.0
Animal oils & fats	884	0	100.0
<b>Spices:</b>	337	11.3	15.5
<b>Stimulants:</b>	48	9.0	0
<b>Alcoholic Beverages:</b>	41	0	0

Table 13. Effect of body size, age and sex on estimation of per caput energy requirements in a moderately active\* population

Age group (years)	Adult males 53kg Adult females 46kg
	Individual requirements (kcal)
<b>Children:</b> both sexes, <1 year, including allowance for pregnancy and lactation	1090
1-3	1360
4-6	1830
7-9	2190
<b>Male:</b> adolescent, adult	
10-12	2600
13-15	2370
16-19	2490
20-39	2440
40-49	2318
50-59	2196
60-69	1952
70 and over	1708
<b>Female:</b> adolescent, adult	
10-12	2350
13-15	2080
16-19	1932
20-39	1840
40-49	1748
50-59	1656
60-69	1472
70 and over	1288

**Source:** FAO/WHO, Energy and Protein Requirements, Rome, 1973.

\* Activity correction factors (% of moderate activity):  
moderately active (100%)  
light activity (90%)  
very active (117%)

† The IRS 1 population data was in terms of the following age groups for male and female separately:  
Below 5, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59 and above 59 years.

### **3. Data Tabulation**

Tabulated results (Annex 1) for the rural average and each of six provinces, namely Central, Coast, Eastern, Nyanza, Rift Valley and Western, include the following data:

#### **A. According to 10 classes of nutrition level (R is the ratio of consumption over requirement)**

1. Energy requirement and consumption pattern
  - Number of households
  - Average household size
  - Average calorie requirement per caput
  - Average calorie, protein and fat consumption per caput
2. Economic and social indicators
  - Average size of holding
  - Average income per caput
  - Average expenditure per caput
  - Mean value of assets per holding
  - Percentage distribution of head of households according to four levels of education
3. Geographic (by province) distribution
4. to 6. Source (by food group, i.e. grains, roots, meat and eggs, etc.) of calorie, protein and fat intake
7. Share of food expenditure by food group

**B. According to 5 classes of per capita household expenditure**

1 to 7 as above

**C. According to 7 classes of household size**

1 to 7 as above.

In addition to the above data, cross-tabulations of rural averages for selected variables are given in Annex 2. These include the following:

- Nutrition level (R)
  - vs average expenditure per caput (Table A2.1)
  - vs average household size (Table A2.2)
  - vs average farm size (Table A2.3)
  - vs average share of own consumption in total consumption (Table A2.4)
  - vs sex of head of household (Table A2.5)
  - vs province (Table A2.6)
- Expenditure per caput
  - vs average household size (Table A2.7)
  - vs average farm size (Table A2.8)
  - vs average share of own consumption in total consumption (Table A2.9)
  - vs sex of head of household (Table A2.10)
  - vs province (Table A2.11)
- Average household size vs province (Table A2.12)
- Average farm size vs province (Table A2.13)
- Average share of own consumption in total consumption vs province (Table A2.14)
- Sex of head of household vs province (Table A2.15)

In these cross-tables, the results after "row normalization" as well as "column normalization" are also presented. Note that in Tables A2.1 to A2.15,



in the case of "row normalization" row percentages add up to 100% and similarly for columns in the case of "column normalization".

A detailed description of the abovementioned tabulated data (Annex 1 and Annex 2) is not included here since the tables are selfexplanatory.

#### 4. Data Analysis

As mentioned in Section 2.2, the aim of the data analysis is to identify the relationship between nutrition level (R, i.e. the ratio of calorie consumption over calorie requirement) and various economic and social variables.

##### 4.1. Correlation Analysis

Table 4.1. shows the correlation matrix of the relevant variables for rural Kenya and the six provinces as calculated from IRS 1 data (1974/75). These results show:

- Nutrition level (R) is strongly and positively correlated with household expenditure per caput. For the rural Kenya, the coefficient of correlation has a value of 0.72; Western Province shows the lowest value of 0.66 and Eastern Province the highest value of 0.80.
- Nutrition level (R) is positively correlated with the household assets per caput. For rural Kenya, the coefficient of correlation has a value of 0.25 and at the province level, the correlation varies from 0.17 for Coast Province to 0.47 for Central Province.
- Nutrition level (R) is negatively correlated with the household size; for rural Kenya the coefficient of correlation being -0.29 and ranging from -0.19 for Coast Province to -0.44 for Central Province.
- Nutrition level (R) is positively correlated with the farm size. Here the coefficient of correlation comes to 0.29 for rural Kenya varying between 0.42 for Central Province and 0.19 for the Coast Province.
- Nutrition level (R) is positively correlated with the share of own consumption in total consumption. In all cases this correlation was small -- for rural Kenya the value was 0.16, Coast Province had the lowest value of 0.05 and Rift Valley the highest value of 0.29.

Table 4.1. Correlation of matrix of nutrition level (R), calorie consumption per caput and explanatory variables, Kenya Integrated Rural Survey, 1974/75

Correlation Matrix of Variables in RURAL KENYA :

VARIABLE	EXP/HHS	ASS/HHS	HHS	FSZ/HHS	SHOWNC	CAL/HHS	CONS/REQ
EXP/HHS	1.00						
ASSETS/HHS	0.46	1.00					
HHSIZE	-0.29	-0.18	1.00				
FSZ/HHS	0.29	0.47	-0.26	1.00			
SHOWNC	0.05	0.11	-0.04	0.09	1.00		
CAL/HHS	0.72	0.36	-0.30	0.33	0.16	1.00	
CONS/REQ	0.72	0.35	-0.29	0.29	0.16	0.98	1.00

Correlation Matrix of Variables in CENTRAL Province :

VARIABLE	EXP/HHS	ASS/HHS	HHS	FSZ/HHS	SHOWNC	CAL/HHS	CONS/REQ
EXP/HHS	1.00						
ASSETS/HHS	0.47	1.00					
HHSIZE	-0.33	-0.34	1.00				
FSZ/HHS	0.28	0.59	-0.38	1.00			
SHOWNC	0.06	0.16	-0.03	0.27	1.00		
CAL/HHS	0.81	0.51	-0.46	0.44	0.15	1.00	
CONS/REQ	0.78	0.47	-0.44	0.42	0.15	0.98	1.00

Correlation Matrix of Variables in COAST Province :

VARIABLE	EXP/HHS	ASS/HHS	HHS	FSZ/HHS	SHOWNC	CAL/HHS	CONS/REQ
EXP/HHS	1.00						
ASSETS/HHS	0.25	1.00					
HHSIZE	-0.31	-0.11	1.00				
FSZ/HHS	0.26	0.44	-0.18	1.00			
SHOWNC	0.01	0.13	-0.03	0.03	1.00		
CAL/HHS	0.80	0.18	-0.21	0.17	0.05	1.00	
CONS/REQ	0.77	0.17	-0.19	0.19	0.05	0.99	1.00

Correlation Matrix of Variables in EASTERN Province :

VARIABLE	EXP/HHS	ASS/HHS	HHS	FSZ/HHS	SHOWNC	CAL/HHS	CONS/REQ
EXP/HHS	1.00						
ASSETS/HHS	0.41	1.00					
HHSIZE	-0.28	-0.18	1.00				
FSZ/HHS	0.34	0.54	-0.32	1.00			
SHOWNC	0.09	0.03	-0.06	0.05	1.00		
CAL/HHS	0.82	0.32	-0.33	0.30	0.11	1.00	
CONS/REQ	0.80	0.31	-0.32	0.32	0.10	0.98	1.00

Correlation Matrix of Variables in NYANZA Province :

VARIABLE	EXP/HHS	ASS/HHS	HHS	FSZ/HHS	SHOWNC	CAL/HHS	CONS/REQ
EXP/HHS	1.00						
ASSETS/HHS	0.33	1.00					
HHSIZE	-0.26	0.	1.00				
FSZ/HHS	0.24	0.27	-0.25	1.00			
SHOWNC	-0.10	0.11	-0.05	-0.10	1.00		
CAL/HHS	0.69	0.29	-0.33	0.30	0.16	1.00	
CONS/REQ	0.70	0.26	-0.32	0.24	0.16	0.98	1.00

Correlation Matrix of Variables in RIFT VALLEY Province :

VARIABLE	EXP/HHS	ASS/HHS	HHS	FSZ/HHS	SHOWNC	CAL/HHS	CONS/REQ
EXP/HHS	1.00						
ASSETS/HHS	0.51	1.00					
HHSIZE	-0.38	-0.20	1.00				
FSZ/HHS	0.47	0.49	-0.26	1.00			
SHOWNC	0.11	0.18	0.11	0.07	1.00		
CAL/HHS	0.79	0.36	-0.30	0.40	0.26	1.00	
CONS/REQ	0.78	0.37	-0.30	0.34	0.29	0.99	1.00

Correlation Matrix of Variables in WESTERN Province :

VARIABLE	EXP/HHS	ASS/HHS	HHS	FSZ/HHS	SHOWNC	CAL/HHS	CONS/REQ
EXP/HHS	1.00						
ASSETS/HHS	0.39	1.00					
HHSIZE	-0.27	-0.16	1.00				
FSZ/HHS	0.28	0.64	-0.33	1.00			
SHOWNC	0.01	0.01	0.11	0.10	1.00		
CAL/HHS	0.69	0.28	-0.32	0.26	0.24	1.00	
CONS/REQ	0.66	0.23	-0.28	0.20	0.27	0.98	1.00

It is also interesting to note the following relationships from Table 4.1:

- Assets per caput are negatively correlated with household size (except Nyanza Province where the correlation is zero) and positively correlated with expenditure per caput, farm size per caput and share of own consumption in total consumption.
- Household size is negatively correlated with farm size per caput in all cases. There was little correlation (negative) between household size and share of own consumption in total consumption; note that for Rift Valley and Western Province there was a positive correlation (0.11) between household size and share of own consumption in total consumption.
- Farm size per caput is positively correlated with expenditure per caput in all cases.

The correlation matrix in Table 4.1 also shows the level of correlation of calorie consumption per caput. These results, as expected, are similar to the results for Nutrition level (R) as described above.

#### 4.2. Regression Analysis

In the specification of the functional form  $f$  in

$$R = f(x_1, x_2, \dots, x_p) + e$$

where  $R$  is nutrition level

$x_1, \dots, x_p$  are explanatory variables

and  $e$  is the error term,

five alternative functions were specified as shown in Table 4.2. Here only the expenditure per caput has been included as an explanatory variable since it showed by far the highest correlations. The double-log form provided the best statistical fit (for rural Kenya as well as for individual provinces) and this specification was chosen for multiple regression analysis. Note that in Table

Table 4.2. Estimation of nutrition level (R) and calorie consumption per caput as a function of average household expenditure per caput: Alternative function specifications.

Calorie Intake over Calorie Requirements in RURAL KENYA					
EQN	R-SQ	DF	B	A	FUNCTION SPECIFICATION
1	0.52	1632	0.11543e-02 (41.7)	0.39278	CONS/REQ = A + B • EXP/HHS
2	0.45	1632	0.74702e-03 (36.3)	-0.58384	LN(CONS/REQ) = A + B • EXP/HHS
3	0.65	1632	0.70746 (54.8)	-4.4614	LN(CONS/REQ) = A + B • LN(EXP/HHS)
4	0.46	1632	0.85403 (37.0)	-4.1433	CONS/REQ = A + B • LN(EXP/HHS)
5	0.42	1632	-161.30 (-34.7)	0.31162	LN(CONS/REQ) = A + B / (EXP/HHS)

Calorie Intake per Household Member in RURAL KENYA					
EQN	R-SQ	DF	B	A	FUNCTION SPECIFICATION
1	0.52	1632	2.7357 (42.3)	829.01	CAL/HHS = A + B • EXP/HHS
2	0.46	1632	0.76483e-03 (37.6)	7.1317	LN(CAL/HHS) = A + B • EXP/HHS
3	0.67	1632	0.72163 (57.3)	3.1780	LN(CAL/HHS) = A + B • LN(EXP/HHS)
4	0.45	1632	1994.2 (36.5)	-9740.1	CAL/HHS = A + B • LN(EXP/HHS)
5	0.43	1632	-163.36 (-35.1)	8.0433	LN(CAL/HHS) = A + B / (EXP/HHS)
6	0.58	1632	0.12517 (47.4)	0.25652e-03	1/(CAL/HHS) = A + B / (EXP/HHS)

4.2, the results for rural Kenya only have been presented.

### **4.3. Multiple Regression Analysis**

This analysis identifies the relationship between the level of nutrition (R) as well as calorie consumption per caput and the following economic, social and geographic variables:

- Expenditure per caput
- Household assets per caput
- Household size
- Farm size per caput
- Share of own consumption in total consumption
- Sex of head of household (dummy variable)
- Province (dummy variable used in the case of rural Kenya results).

Multiple regressions using various combinations of the above variables were carried out and the detailed results for rural Kenya and each of the six provinces are given in Annex 3 (Tables A3.1 to A3.14). Tables 4.3 and 4.4 show the set of equations finally selected for the level of nutrition (R) and the calorie consumption per caput respectively. This choice was made on the basis of best statistical fit as well as significance and "correct" sign of the estimated coefficients. These results are summarized below.

#### **4.3.1. Nutrition Level (R)**

The results, Table 4.3, for Rural Kenya, Central Province, Coast Province, Eastern Province, Nyanza Province, Rift Valley Province and Western Province show that:

Table 4.3 : Multiple Regression Analysis : Calorie Intake over Calorie Requirements - KENYA

EQN	R-SQU	DF	EXP/HHS	HHS	FRMSZ/HHS	OWNC/TOTC	DMV-SEX	DM-COAST	DM-EASTN	DM-NYANZA	DM-WESTN	CONSTANT
RURAL KENYA	19	0.70	1625	0.66727 ( 49.1)	-0.10219 ( -6.8)	0.44167 ( 12.3)	0.08275 ( 3.9)	0.30683 ( 10.3)	0.14312 ( 5.6)	0.04838 ( 1.9)	0.05953 ( 2.3)	-4.37970
CENTRAL	17	0.73	278	0.53565 ( 18.3)	-0.18402 ( -5.6)	0.10160 ( 1.6)	0.29988 ( 3.9)	0.11040 ( 2.8)				-3.35200
COAST	10	0.69	262	0.72271 ( 24.1)		0.18038 ( 1.9)						-4.53180
EASTERN	6	0.73	271	0.70928 ( 24.4)	-0.06703 ( -2.0)							-4.29350
NYANZA	11	0.66	264	0.62457 ( 18.5)	-0.16473 ( -5.0)	0.68050 ( 7.3)						-4.10600
RIFT VALLEY	11	0.76	268	0.66569 ( 18.6)	-0.19170 ( -4.7)	1.09960 ( 11.0)						-4.67350
WESTERN	13	0.70	266	0.69429 ( 20.5)	-0.13514 ( -3.6)	0.60995 ( 6.6)	0.17453 ( 2.9)					-4.53190

Table 4.4 : Multiple Regression Analysis : Calorie Intake per Household Member - KENYA

EQN	R-SQU	DF	EXP/HHS	HHS	FRMSZ/HHS	OWNC/TOTC	DMV-SEX	DM-COAST	DM-EASTN	DM-NYANZA	DM-WESTN	CONSTANT
RURAL KENYA	18	0.71	1626	0.67416 ( 51.0)	-0.13834 ( -9.7)	0.41477 ( 11.9)		0.29281 ( 10.1)	0.13285 ( 5.4)	0.05507 ( 2.2)	0.05581 ( 2.2)	3.40770
CENTRAL	9	0.75	279	0.55511 ( 19.8)	-0.21616 ( -7.1)	0.10382 ( 1.7)	0.26290 ( 3.5)					4.35150
COAST	10	0.72	262	0.73293 ( 25.5)		0.13244 ( 1.5)						3.14000
EASTERN	6	0.74	271	0.70994 ( 25.0)	-0.08285 ( -2.5)							3.44880
NYANZA	11	0.68	264	0.63644 ( 19.5)	-0.17206 ( -5.4)	0.66869 ( 7.5)						3.57920
RIFT VALLEY	11	0.76	268	0.67260 ( 18.8)	-0.23483 ( -5.7)	1.03440 ( 10.4)						3.14680
WESTERN	13	0.72	266	0.70229 ( 21.6)	-0.18889 ( -5.2)	0.56584 ( 6.4)	0.10851 ( 1.9)					3.28570

- Expenditure per caput is a highly significant and the most important explanatory variable for the level of nutrition (R). The value of the response coefficient is 0.67 for rural Kenya. At the province level it varies from 0.54 for Central Province to 0.72 for Coast Province.
- Also household size is a significant explanatory variable for all areas except for Coast Province where the coefficient of this variable was found to have the "wrong sign" (i.e. positive), see Table A3.3 in Annex 3.
- The farm size per caput generally turned out to have the wrong sign (i.e. negative) in all cases except Coast and Central Province. For Coast Province the estimated coefficient was found to be insignificant (t-statistic less than 1.0) and hence the variable was dropped from the selected equation.
- The share of own consumption in total consumption was found to be a significant explanatory variable in all cases except for Eastern Province where this variable had the "wrong sign" (i.e. negative).
- The sex of head of household (dummy variable) is a significant explanatory variable for Rural Kenya, Central and Western Provinces. For the other provinces, this variable was not relevant (t-statistic generally less than 1.0).
- The province (dummy variable for Coast, Eastern, Nyanza and Western Provinces) variable used as an explanatory variable in the case of Rural Kenya was significant for all four provinces.
- Household assets, being highly correlated to expenditure, resulted in collinearity and hence insignificant estimates for household assets.

Table 4.3. shows that the statistical fit was good in all cases -- R-square values being higher than 0.66 in Rural Kenya and all six provinces.



#### **4.3.2. Calorie Consumption per Caput**

The results obtained for calorie consumption per caput, Table 4.4, are similar to the above results for the nutrition level (R) except that the coefficient for the variable sex (dummy variable) of the head of household turned out to be insignificant (less than 20% significance level ) for Rural Kenya and Central Province.

## 5. Concluding Remarks

The nutrition level (i.e. ratio of calorie consumption to energy requirement) of the rural small holder population in Kenya has been analyzed at the province level on the basis of the 1974/75 Integrated Rural Survey in Kenya. The small holder population in Kenya accounted for 87.5% and 78.3% of Kenya's rural and total population respectively in 1975.

Expenditure per caput, household size, farm size per caput, share of own consumption (i.e. own produced and consumed food) in total consumption as well as sex of the head of household were found to be the most important variables available from the survey in explaining the level of nutrition.

An assessment of the 1975 small holder population by level of nutrition is given in Table 14. These results show that about 32% of the small holder population in Kenya had a calorie intake below 0.6 of the recommended energy requirement. On the average, Central and Eastern Provinces were better off than the other four provinces in terms of the share of people consuming less than 0.6 of recommended energy requirement.

It may be noted from Table 14. that the average household size for the population below a nutrition level of 0.6 tended to be large. These results need to be interpreted in the context of the following survey limitations as well as the assumptions made in the study in estimating levels of household food intake:

- Household size:
  - Many such households may in fact be polygamous households where each wife together with her children constitute a semi-autonomous unit within the household usually eating and sleeping separately but still dependent on the holding as a source of income and food. This aspect may have led to an underestimation of the food consumption levels of such households.

Table 14. Small holder population and level of nutrition: Rural Kenya, Central, Coast, Eastern, Nyanza, Rift Valley and Western Provinces -- Year 1975

Ratio of Calorie Intake to Requirement	Average Household Size	Percent of Household %	Percent of Population %	1975 Population '000
<b>Rural Kenya</b>				
Above 1.4	5.25	18.73	12.78	1321
0.8 to 1.4	7.15	33.96	31.56	3264
0.6 to 0.8	8.74	20.75	23.57	2438
Below 0.6	9.29	26.56	32.09	3318
Total	7.69	100.00	100.00	10341
<b>Central Province</b>				
Above 1.4	4.14	20.07	11.55	264
0.8 to 1.4	7.27	48.94	49.46	1133
0.6 to 0.8	9.11	16.90	21.38	490
Below 0.6	9.00	14.09	17.61	403
Total	7.20	100.00	100.00	2290
<b>Coast Province</b>				
Above 1.4	6.58	15.09	11.25	63
0.8 to 1.4	7.32	33.58	27.88	157
0.6 to 0.8	10.74	24.91	30.33	170
Below 0.6	10.20	26.42	30.54	172
Total	8.82	100.00	100.00	562
<b>Eastern Province</b>				
Above 1.4	5.11	28.47	20.57	489
0.8 to 1.4	7.36	34.67	36.08	859
0.6 to 0.8	7.73	18.61	20.34	484
Below 0.6	8.92	18.25	23.01	548
Total	7.07	100.00	100.00	2380
<b>Nyanza Province</b>				
Above 1.4	5.13	14.55	9.92	252
0.8 to 1.4	6.66	28.74	25.46	647
0.6 to 0.8	8.25	24.25	26.61	676
Below 0.6	8.80	32.46	38.01	966
Total	7.52	100.00	100.00	2541
<b>Rift Valley</b>				
Above 1.4	5.86	18.75	13.93	94
0.8 to 1.4	6.78	28.31	24.33	164
0.6 to 0.8	8.09	20.22	20.74	140
Below 0.6	9.89	32.72	41.00	276
Total	7.89	100.00	100.00	674
<b>Western Province</b>				
Above 1.4	5.10	15.13	10.01	189
0.8 to 1.4	7.32	28.78	27.34	518
0.6 to 0.8	8.17	19.93	21.13	400
Below 0.6	8.85	36.16	41.52	786
Total	7.70	100.00	100.00	1893

- Recording of food consumption data in survey:
  - In IRS 1 data was collected once every four weeks and then ratioed up to yield an annual estimate. The recall period was 4 days. Experience from food consumption surveys in other countries suggests that the recall period should be no more than 24 hours.
- Consumption of own produced food:
  - Due to practical difficulties in recording the consumption of own produce, it is likely that this was under-estimated. It should also be noted that own produced items were valued at local market prices.
- Study assumptions on the allocation of expenditure on certain food aggregate groups to individual commodities and price estimates of purchased food:
  - In the absence of survey data by individual food commodity, it was necessary to make these assumptions in deriving levels of household food consumption. It is likely that the allocation procedure as well as some of the price estimates used for purchased food led to an under-estimate of food consumption for some households.

The study had to be limited to the analysis of only the 1974/75 Integrated Rural Survey which focussed on the small holder population. More recently data from 1983 Rural and Urban Household Consumption Surveys have become available. This data base should provide the basis for a national assessment and analysis of the nutritional level in Kenya.

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## **ANNEX 1**

### **Data Tabulation**

**According to Nutrition Level**

**According to Per Capita Household Expenditure**

**According to Household Size**





**Rural Kenya**

1. Average Energy Requirement and Food Consumption Pattern according to Nutrition Level

Food Consumption over Requirement	No. of Households	Average			
		Household Size	Requirement calories/cap/day	Consumption grams/cap/day	Fats grams/cap/day
> 2.0	136	4.52	2227.5	6854.2	183.2
1.4-2.0	170	5.83	2262.9	3691.0	101.9
1.1-1.4	204	6.58	2239.3	2780.7	75.9
0.9-1.1	211	7.19	2237.5	2223.3	60.4
0.8-0.9	140	7.91	2227.7	1885.8	51.0
0.7-0.8	166	8.81	2258.5	1687.6	45.9
0.6-0.7	173	8.67	2255.9	1463.1	39.5
0.5-0.6	132	8.86	2276.4	1245.6	33.5
0.4-0.5	150	8.68	2290.1	1024.1	27.7
< 0.4	152	10.27	2269.0	714.6	18.9
Total	1634				
Average	163	7.69	2256.0	2039.8	55.3
					27.6

2. Economic and Social Indicators according to Level of Nutrition

Food Consumption over Requirement	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					STANDARD 4 and below	STANDARD 7-8	FORM 11 and over
> 2.0	3.4	1236.7	1402.0	10650.3	12.5	11.8	3.7
1.4-2.0	2.8	861.0	849.2	8968.2	10.0	12.4	4.7
1.1-1.4	3.0	633.3	633.4	8702.9	18.1	9.3	3.4
0.9-1.1	3.3	576.5	556.9	8621.2	15.2	9.5	1.4
0.8-0.9	3.0	478.6	448.7	8030.1	18.6	4.3	2.9
0.7-0.8	3.3	412.5	403.4	8151.2	16.3	9.0	3.6
0.6-0.7	2.4	402.6	354.4	7221.1	18.5	8.1	2.3
0.5-0.6	2.5	426.1	297.9	6459.3	15.9	8.3	1.5
0.4-0.5	2.6	330.7	278.8	6371.9	15.3	4.7	2.7
< 0.4	2.3	334.2	199.1	5729.4	14.5	9.2	2.6
							72.1
							72.4
							69.1
							73.9
							73.6
							71.1
							71.1
							74.2
							77.3
							73.7
							0.6
							0.0
							0.7
							0.0
							0.0
							0.0
							0.0

3. Geographic Distribution of Households according to Level of Nutrition

Food Consumption over Requirement	Total Rural	Percentage Distribution of Households			
		Central	Coast	Eastern	Nyanza Rift Valley
> 2.0	8.3	10.2	5.3	12.0	4.9
1.4-2.0	10.4	9.9	9.8	15.4	9.7
1.1-1.4	12.5	19.7	10.6	15.0	7.8
0.9-1.1	12.9	19.7	12.5	10.2	10.8
0.8-0.9	8.6	9.5	10.6	9.5	10.1
0.7-0.8	10.2	7.7	13.6	9.9	13.1
0.6-0.7	10.6	9.2	11.3	8.8	11.2
0.5-0.6	8.1	5.6	9.4	4.4	11.9
0.4-0.5	9.2	4.2	7.9	6.2	9.3
< 0.4	9.3	4.2	9.1	7.7	11.2
					15.8
					11.8
					14.0
					6.3
					8.9
					10.3
					12.2
					6.3
					8.9
					11.1
					10.3
					11.8
					14.0

4. Source of Calorie Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.721	73.9	3.1	10.1	2.2	3.9	1.9	0.1	3.6	0.9	0.3
1.4-2.0	0.743	67.4	5.1	11.5	2.9	4.5	2.7	0.2	4.3	1.1	0.4
1.1-1.4	0.746	67.6	4.8	11.4	3.1	4.7	2.6	0.1	4.2	1.0	0.4
0.9-1.1	0.710	66.7	3.6	12.2	2.6	4.9	3.1	0.2	5.2	1.1	0.4
0.8-0.9	0.722	64.9	4.5	13.5	3.0	5.2	3.1	0.2	4.3	0.9	0.4
0.7-0.8	0.736	66.6	3.5	12.0	2.5	5.5	3.6	0.3	4.6	1.0	0.4
0.6-0.7	0.735	65.3	3.2	13.4	2.3	5.6	3.6	0.2	5.1	1.0	0.4
0.5-0.6	0.737	65.8	2.5	12.3	2.7	6.1	3.7	0.3	5.2	0.9	0.5
0.4-0.5	0.702	61.5	3.1	12.9	2.3	7.6	4.0	0.2	6.8	1.0	0.6
< 0.4	0.706	60.3	1.5	15.8	3.1	6.9	5.2	0.3	5.3	1.0	0.6

5. Source of Protein Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.721	73.4	7.6	4.2	1.6	0.3	5.4	0.5	6.7	0.0	0.3
1.4-2.0	0.743	64.9	11.9	4.2	1.9	0.4	7.3	1.2	7.7	0.0	0.4
1.1-1.4	0.746	65.8	11.4	4.1	2.2	0.5	7.2	0.8	7.7	0.0	0.4
0.9-1.1	0.710	65.2	8.6	4.2	1.9	0.6	8.6	1.1	9.6	0.0	0.4
0.8-0.9	0.722	64.0	10.8	4.5	2.1	0.6	8.6	1.1	7.8	0.0	0.4
0.7-0.8	0.736	65.1	8.4	4.0	1.8	0.7	9.9	1.5	8.4	0.0	0.4
0.6-0.7	0.735	64.5	7.6	4.4	1.6	0.7	10.2	1.3	9.4	0.0	0.4
0.5-0.6	0.737	65.2	6.0	4.1	1.9	0.8	10.5	1.5	9.5	0.0	0.5
0.4-0.5	0.702	60.1	7.5	4.2	1.6	1.0	11.1	1.4	12.4	0.0	0.6
< 0.4	0.706	60.9	3.6	5.1	2.3	0.9	14.8	1.8	10.0	0.0	0.6

6. Source of Fat Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.721	61.0	1.2	0.8	0.5	0.2	11.3	0.3	15.7	8.4	0.5
1.4-2.0	0.743	52.7	1.9	0.9	0.7	0.3	15.0	0.6	17.9	9.2	0.8
1.1-1.4	0.746	53.6	1.8	0.8	0.7	0.3	14.9	0.4	17.8	9.0	0.6
0.9-1.1	0.710	49.5	1.3	0.8	0.6	0.4	16.5	0.5	20.7	9.2	0.6
0.8-0.9	0.722	51.5	1.7	1.0	0.7	0.4	17.6	0.5	17.9	7.8	0.8
0.7-0.8	0.736	49.9	1.3	0.8	0.6	0.4	19.4	0.7	18.2	8.3	0.6
0.6-0.7	0.735	48.3	1.1	0.9	0.5	0.4	19.4	0.6	20.1	8.0	0.6
0.5-0.6	0.737	48.3	0.9	0.8	0.6	0.5	19.9	0.7	20.2	7.3	0.8
0.4-0.5	0.702	42.8	1.0	0.8	0.5	0.6	20.1	0.6	25.1	7.6	0.9
< 0.4	0.706	42.0	0.5	1.0	0.7	0.5	26.3	0.8	19.8	7.5	0.9

7. Share of Food Expenditure according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.721	41.5	4.9	10.8	4.5	6.4	9.7	0.7	12.8	2.9	5.8
1.4-2.0	0.743	35.2	6.7	10.7	4.9	6.2	11.5	1.3	13.3	2.9	7.3
1.1-1.4	0.746	35.1	6.7	11.3	5.5	6.4	11.4	1.0	13.0	2.8	6.8
0.9-1.1	0.710	34.7	4.9	11.0	4.5	6.1	12.9	1.1	15.0	2.9	6.9
0.8-0.9	0.722	33.5	6.7	11.8	4.9	6.9	13.3	1.2	12.6	2.4	6.8
0.7-0.8	0.736	34.4	4.6	10.2	4.1	7.0	14.9	1.5	12.9	2.6	7.6
0.6-0.7	0.735	33.2	4.3	10.9	3.7	6.9	15.2	1.3	15.1	2.5	6.7
0.5-0.6	0.737	33.3	3.3	10.3	4.5	7.5	15.8	1.5	14.0	2.4	7.5
0.4-0.5	0.702	28.5	3.3	10.2	3.5	8.7	15.5	1.4	17.2	2.4	9.3
< 0.4	0.706	29.2	1.5	11.1	4.8	7.8	19.7	1.7	13.3	2.3	8.7

1. Average Energy Requirement and Food Consumption Pattern according to Level of Expenditure

Household Expend. per Caput	No. of Households	Average			
		Household Size	Requirement calories/cap/day	Consumption grams/caput/day	Fats grams/caput/day
- 250	318	9.50	2236.8	1055.4	27.1
- 500	641	8.45	2256.8	1709.3	45.9
- 1000	486	6.67	2260.9	2742.6	76.4
- 1500	114	5.41	2293.4	3984.2	108.6
> 1500	75	3.65	2308.6	6738.5	183.0
Total	1634				
Average	272	7.69	2256.0	2039.8	55.3
					27.6

2. Economic and Social Indicators according to Level of Expenditure

Household Expend. per Caput	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households			
					STANDARD 4 and below	STANDARD 7-8	FORM 11 and over	never attended school
- 250	2.3	250.0	180.0	4984.6	10.7	5.3	1.9	82.1
- 500	2.8	430.7	356.5	7206.2	16.1	7.8	2.3	73.8
- 1000	3.1	719.3	675.7	8675.5	17.9	9.3	3.5	68.9
- 1500	3.6	986.6	1212.8	13652.9	16.7	17.5	5.3	60.5
> 1500	3.7	1822.1	2290.1	13284.6	14.7	14.7	4.0	66.7

3. Geographic Distribution of Households according to Level of Expenditure

Household Expend. per Caput	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
- 250	19.5	4.6	28.3	19.9
- 500	39.2	32.0	40.4	42.3
- 1000	29.7	40.5	36.1	24.0
- 1500	7.0	12.7	8.4	7.0
> 1500	4.6	10.2	1.9	5.9
			6.2	6.3
			0.7	2.2
			0.7	2.2

4. Source of Calorie Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.840	72.0	1.7	13.5	1.9	4.6	2.5	0.2	3.0	0.4	0.3
- 500	0.781	68.6	3.1	12.1	2.3	5.2	3.2	0.2	4.1	0.8	0.4
- 1000	0.717	66.6	4.9	10.8	3.0	4.9	3.0	0.2	5.1	1.1	0.4
- 1500	0.639	63.9	4.0	12.6	3.6	5.3	3.2	0.2	5.4	1.4	0.4
> 1500	0.610	59.9	4.6	14.5	3.3	5.7	3.2	0.1	6.2	2.1	0.5

5. Source of Protein Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.840	74.6	4.2	4.4	1.4	0.7	7.3	1.2	5.8	0.0	0.4
- 500	0.781	67.9	7.5	4.0	1.6	0.7	9.0	1.2	7.7	0.0	0.4
- 1000	0.717	63.6	11.5	3.8	2.0	0.5	8.0	1.0	9.1	0.0	0.4
- 1500	0.639	62.2	9.5	5.2	2.5	0.4	9.0	1.0	9.9	0.0	0.4
> 1500	0.610	58.6	10.9	6.4	2.3	0.3	8.8	0.8	11.3	0.0	0.5

6. Source of Fat Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.840	62.5	0.7	1.0	0.5	0.5	15.6	0.6	13.7	4.2	0.7
- 500	0.781	53.9	1.2	0.8	0.5	0.5	18.0	0.6	17.1	6.7	0.7
- 1000	0.717	49.7	1.8	0.8	0.7	0.3	16.0	0.5	20.5	9.2	0.7
- 1500	0.639	46.5	1.4	0.9	0.8	0.3	17.0	0.5	21.1	11.0	0.5
> 1500	0.610	40.8	1.6	1.0	0.7	0.2	16.0	0.4	23.0	15.7	0.6

7. Source of Food Expenditure according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.840	42.5	2.3	12.8	3.7	6.8	12.9	1.4	9.7	1.4	6.6
- 500	0.781	36.1	4.2	10.8	4.0	7.0	14.6	1.4	12.7	2.2	7.1
- 1000	0.717	33.6	6.8	10.0	5.0	6.4	12.4	1.1	14.9	2.9	6.9
- 1500	0.639	31.7	4.6	11.6	5.6	6.7	12.4	1.1	15.4	3.2	7.6
> 1500	0.610	29.5	5.5	12.0	5.1	7.1	11.4	0.8	15.9	4.5	8.1

**1. Average Energy Requirement and Food Consumption Pattern according to Size of Household**

Household Size	No. of Households	Average			
		Household Size	Requirement calories/cap/day	Consumption grams/cap/day	Fats grams/cap/day
1 M	54	1.00	2415.7	6574.9	177.0
2 - 3	174	2.49	2371.5	3479.8	94.3
4 - 5	302	4.62	2275.0	2483.9	68.4
6 - 7	377	6.47	2269.7	2221.6	60.3
8 - 10	402	8.88	2254.1	1913.9	52.0
11 - 15	242	12.46	2239.6	1860.9	50.2
16+ M	83	20.01	2218.1	1472.4	39.1
Total	1634				
Average	233	7.69	2256.0	2039.8	55.3
					27.6

**2. Economic and Social Indicators according to Size of Household**

Household Size	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					STANDARD 4	STANDARD 7-8	FORM 11 and over
1 M	2.4	1728.7	1645.5	2987.2	11.1	7.4	1.9
2 - 3	2.3	1115.6	870.7	4773.2	6.3	6.9	0.
4 - 5	2.2	630.1	584.8	5540.7	12.6	8.3	2.6
6 - 7	2.6	611.5	515.1	6917.5	14.3	7.2	4.2
8 - 10	3.1	453.0	463.7	8843.8	19.7	10.2	3.5
11 - 15	3.8	439.1	434.4	11685.7	22.7	10.7	3.3
16+ M	4.4	384.2	322.8	15869.5	13.3	9.6	0.
							77.1
							63.2
							66.4
							74.3
							76.2
							86.8
							79.6
							0.
							0.3
							0.2
							0.
							0.

**3. Geographic Distribution of Households according to Size of Household**

Household Size	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
1 M	3.3	6.0	1.5	2.9
2 - 3	10.6	10.2	8.7	7.7
4 - 5	18.5	19.0	17.0	13.4
6 - 7	23.1	21.1	23.0	20.1
8 - 10	24.6	27.5	24.9	21.6
11 - 15	14.8	13.4	15.1	14.2
16+ M	5.1	2.8	9.8	16.5
				5.1
				4.4
				17.0
				25.5
				24.6
				21.8
				17.3
				12.2
				2.2

4. Source of Calorie Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.732	66.5	5.2	10.5	3.8	6.3	2.5	0.2	3.0	1.4	0.6
2 - 3	0.773	63.1	3.9	13.3	3.8	5.7	3.8	0.2	4.2	1.4	0.5
4 - 5	0.749	66.2	4.7	11.3	3.2	5.3	3.2	0.2	4.2	1.2	0.4
6 - 7	0.748	65.9	4.1	12.8	2.9	5.1	2.9	0.2	4.6	1.0	0.4
8 - 10	0.710	67.4	3.7	11.4	2.8	5.3	3.1	0.2	4.8	1.0	0.4
11 - 15	0.703	68.7	3.5	11.8	2.0	4.8	2.7	0.2	5.0	1.0	0.4
16+ M	0.732	70.7	2.1	13.2	1.5	4.0	3.2	0.2	4.3	0.5	0.3

5. Source of Protein Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.732	66.2	12.6	3.7	2.7	0.4	7.2	1.0	5.7	0.0	0.6
2 - 3	0.773	62.4	9.3	4.9	2.7	0.4	10.6	1.4	7.7	0.0	0.6
4 - 5	0.749	64.2	11.0	3.8	2.2	0.5	8.9	1.4	7.6	0.0	0.4
6 - 7	0.748	64.7	9.9	4.7	2.0	0.5	8.1	1.1	8.5	0.0	0.4
8 - 10	0.710	65.8	8.9	4.1	2.0	0.6	8.5	1.0	8.7	0.0	0.4
11 - 15	0.703	67.5	8.3	4.1	1.4	0.6	7.7	0.9	9.1	0.0	0.4
16+ M	0.732	70.6	5.1	4.3	1.1	0.6	9.0	1.0	8.1	0.0	0.4

6. Source of Fat Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.732	53.3	2.1	0.8	0.9	0.3	14.9	0.5	13.2	12.9	1.2
2 - 3	0.773	46.3	1.4	0.9	0.9	0.3	20.6	0.6	16.6	11.4	0.9
4 - 5	0.749	50.3	1.7	0.8	0.7	0.3	17.8	0.7	17.1	9.6	0.7
6 - 7	0.748	51.0	1.5	0.9	0.7	0.4	16.4	0.6	19.2	8.7	0.7
8 - 10	0.710	51.4	1.4	0.8	0.6	0.4	16.7	0.5	19.1	8.4	0.6
11 - 15	0.703	52.7	1.3	0.8	0.5	0.4	15.1	0.4	20.2	8.1	0.5
16+ M	0.732	55.7	0.8	0.9	0.3	0.4	18.0	0.5	18.1	4.6	0.6

7. Share of Food Expenditure according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.732	35.0	7.2	9.3	6.4	8.9	10.8	1.0	8.7	3.5	9.3
2 - 3	0.773	31.9	4.6	10.6	6.0	7.3	14.8	1.3	11.9	3.3	8.2
4 - 5	0.749	33.5	5.8	10.0	5.4	7.1	13.7	1.5	12.4	3.0	7.5
6 - 7	0.748	33.7	5.6	11.9	4.9	6.8	12.5	1.2	14.2	2.7	6.4
8 - 10	0.710	33.7	5.2	10.6	4.8	6.9	13.2	1.1	14.5	2.7	7.3
11 - 15	0.703	36.1	4.8	10.8	3.6	6.4	12.4	1.1	14.8	2.7	7.2
16+ M	0.732	42.2	3.2	11.5	2.6	5.4	14.2	1.2	12.2	1.5	6.1





## Central Province

1. Average Energy Requirement and Food Consumption Pattern according to Size of Household

Household Size	No. of Households	A v e r a g e			
		Household Size	Requirement calories/cap/day	Consumption grams/caput/day	Fats grams/caput/day
1 M	17	1.00	2322.4	6380.8	173.3
2 - 3	29	2.41	2361.6	4423.0	116.3
4 - 5	54	4.67	2296.4	2691.1	71.8
6 - 7	60	6.57	2266.1	2331.3	64.7
8 - 10	78	8.78	2233.0	1949.0	53.6
11 - 15	38	12.45	2225.0	2005.9	52.6
16+ M	8	19.13	2183.5	1715.4	44.6
Total	284				
Average	41	7.20	2246.8	2231.5	60.2
					32.0

2. Economic and Social Indicators according to Size of Household

Household Size	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					STANDARD 4	FORM 11	never attended school
1 M	1.9	1544.6	2154.5	4003.9	11.8	0.	88.2
2 - 3	2.5	1661.2	1330.8	10050.3	17.2	3.4	79.3
4 - 5	2.4	761.7	722.8	8538.3	18.5	7.4	70.4
6 - 7	3.1	944.8	719.5	10698.8	25.0	8.3	58.3
8 - 10	3.6	502.7	653.7	13637.1	33.3	15.4	48.7
11 - 15	3.5	475.5	554.1	14820.8	28.9	10.5	57.9
16+ M	5.9	394.1	524.6	17531.9	37.5	0.	62.5

3. Geographic Distribution of Households according to Size of Household

Household Size	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
1 M	6.0	6.0	0.	0.
2 - 3	10.2	10.2	0.	0.
4 - 5	19.0	19.0	0.	0.
6 - 7	21.1	21.1	0.	0.
8 - 10	27.5	27.5	0.	0.
11 - 15	13.4	13.4	0.	0.
16+ M	2.8	2.8	0.	0.

4. Source of Calorie Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.683	52.7	10.8	13.5	5.9	8.4	1.4	0.0	4.1	2.6	0.6
2 - 3	0.753	56.5	4.3	14.4	5.2	7.1	3.1	0.1	6.4	2.5	0.5
4 - 5	0.750	58.2	6.8	14.0	4.4	7.0	2.0	0.1	4.9	2.2	0.4
6 - 7	0.726	55.7	7.2	13.1	4.8	6.8	2.6	0.1	6.9	2.4	0.4
8 - 10	0.628	59.4	6.2	13.0	3.9	6.0	2.6	0.1	6.1	2.2	0.5
11 - 15	0.700	60.2	5.1	14.9	2.2	7.0	2.3	0.1	5.2	2.5	0.4
16+ M	0.551	65.7	4.7	15.9	1.4	5.0	1.9	0.0	4.1	1.0	0.3

5. Source of Protein Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.683	51.7	25.8	5.4	4.1	0.4	4.1	0.2	7.6	0.0	0.6
2 - 3	0.753	57.1	10.6	6.2	3.8	0.5	8.9	0.3	12.0	0.0	0.5
4 - 5	0.750	57.7	16.5	6.3	3.2	0.7	5.7	0.3	9.1	0.0	0.4
6 - 7	0.726	53.3	16.8	5.9	3.3	0.5	7.0	0.4	12.3	0.0	0.4
8 - 10	0.628	57.1	14.7	5.8	2.8	0.6	7.2	0.4	11.0	0.0	0.5
11 - 15	0.700	60.9	12.6	6.6	1.6	0.9	6.6	0.4	9.9	0.0	0.5
16+ M	0.551	67.0	11.7	5.7	1.0	0.7	5.4	0.2	7.9	0.0	0.3

6. Source of Fat Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.683	41.5	4.4	1.1	1.5	0.3	8.5	0.1	17.8	23.8	1.0
2 - 3	0.753	37.4	1.4	1.0	1.1	0.3	15.5	0.1	23.4	19.1	0.7
4 - 5	0.750	44.7	2.5	1.1	1.0	0.4	11.1	0.2	19.9	18.6	0.5
6 - 7	0.726	37.7	2.4	0.9	1.0	0.3	12.9	0.2	25.7	18.3	0.6
8 - 10	0.628	41.9	2.1	0.9	0.8	0.4	13.2	0.2	22.9	17.0	0.5
11 - 15	0.700	43.7	1.8	1.1	0.5	0.5	11.9	0.2	20.1	19.8	0.6
16+ M	0.551	56.4	1.9	1.2	0.4	0.5	11.5	0.1	18.5	9.1	0.4

7. Share of Food Expenditure according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.683	28.4	13.6	11.7	8.2	9.6	5.3	0.2	9.0	5.1	8.9
2 - 3	0.753	28.6	5.3	13.2	7.3	7.8	9.9	0.3	14.9	5.1	7.5
4 - 5	0.750	28.1	8.8	15.3	7.1	8.2	7.4	0.3	12.8	5.0	6.8
6 - 7	0.726	26.8	8.6	14.0	6.9	7.5	8.3	0.4	16.6	4.9	6.0
8 - 10	0.628	27.6	7.8	13.6	6.1	6.8	9.2	0.5	15.1	4.8	8.7
11 - 15	0.700	29.6	5.9	15.6	3.7	8.1	9.0	0.4	13.9	5.9	7.9
16+ M	0.551	37.2	7.6	15.6	2.7	6.3	8.0	0.2	13.2	2.7	6.5

1. Average Energy Requirement and Food Consumption Pattern according to Level of Expenditure

Household Expend. per Caput	No. of Households	Average			
		Household Size	Requirement calories/cap/day	Consumption Protein grams/caput/day	Fats grams/caput/day
- 250	13	8.15	2302.3	1062.4	26.6
- 500	91	9.00	2206.8	1601.0	42.6
- 1000	115	6.94	2260.9	2359.0	65.3
- 1500	36	6.00	2269.8	3060.4	81.7
> 1500	29	3.62	2347.6	5655.0	149.0
Total	284				
Average	47	7.20	2246.8	2231.5	60.2
					32.0

2. Economic and Social Indicators according to Level of Expenditure

Household Expend. per Caput	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households			
					STANDARD 4	STANDARD 7-8	FORM 11 and over school	never attended else
- 250	2.3	220.1	199.3	4904.3	30.8	0.	0.	69.2
- 500	3.2	408.3	372.7	9934.1	31.9	4.4	3.3	60.4
- 1000	3.0	762.3	689.7	11470.1	24.3	9.6	4.3	61.7
- 1500	3.6	1006.7	1216.1	12821.4	19.4	16.7	2.8	61.1
> 1500	3.0	1455.3	2343.8	16595.8	13.8	17.2	3.4	65.5

3. Geographic Distribution of Households according to Level of Expenditure

Household Expend. per Caput	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza Valley	Rift Western
- 250	4.6	4.6	0.	0.
- 500	32.0	32.0	0.	0.
- 1000	40.5	40.5	0.	0.
- 1500	12.7	12.7	0.	0.
> 1500	10.2	10.2	0.	0.

4. Source of Calorie Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.865	71.4	3.5	12.8	1.4	5.8	1.2	0.0	1.4	1.8	0.6
- 500	0.767	63.1	6.4	13.9	2.4	6.1	1.8	0.0	4.1	1.7	0.4
- 1000	0.717	57.9	7.1	12.6	4.4	6.4	2.4	0.1	6.4	2.3	0.4
- 1500	0.601	51.4	5.8	18.3	5.5	6.7	3.0	0.1	6.4	2.3	0.5
> 1500	0.575	56.7	3.6	12.7	3.6	8.2	3.4	0.1	7.5	3.5	0.6

5. Source of Protein Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.865	75.4	9.1	5.8	1.1	0.9	3.8	0.3	2.8	0.0	0.6
- 500	0.767	62.8	15.6	5.7	1.8	0.8	5.1	0.2	7.7	0.0	0.4
- 1000	0.717	55.4	16.6	5.6	3.1	0.6	6.5	0.4	11.4	0.0	0.4
- 1500	0.601	51.2	14.1	8.8	3.9	0.5	8.5	0.6	11.9	0.0	0.5
> 1500	0.575	57.4	9.0	5.5	2.6	0.6	9.8	0.5	14.1	0.0	0.6

6. Source of Fat Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.865	64.2	1.5	1.1	0.4	0.7	7.8	0.1	6.3	17.0	0.9
- 500	0.767	51.7	2.5	1.1	0.6	0.5	10.3	0.1	17.6	15.0	0.5
- 1000	0.717	41.0	2.4	0.9	0.9	0.4	12.1	0.2	24.0	17.6	0.5
- 1500	0.601	35.5	2.0	1.4	1.2	0.3	15.7	0.3	24.6	18.5	0.5
> 1500	0.575	32.8	1.1	0.8	0.7	0.3	15.2	0.2	24.7	23.7	0.6

7. Share of Food Expenditure according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.865	38.7	4.9	16.0	3.0	7.3	6.1	0.3	5.4	5.0	13.2
- 500	0.767	33.0	8.8	14.8	4.5	7.6	7.4	0.3	11.8	4.4	7.4
- 1000	0.717	26.9	9.1	13.8	6.8	7.3	8.4	0.4	15.4	5.0	7.0
- 1500	0.601	24.6	6.0	17.6	7.3	7.0	9.4	0.5	16.2	4.4	6.9
> 1500	0.575	28.3	4.4	10.9	4.8	8.8	10.3	0.4	16.2	6.7	9.1

1. Average Energy Requirement and Food Consumption Pattern according to Nutrition Level

Food Consumption over Requirement	No. of Households	Average			Protein grams/caput/day	Fats grams/caput/day
		Household Size	Requirement calories/cap/day	Consumption		
> 2.0	29	2.90	2273.8	7311.2	192.0	105.5
1.4-2.0	28	5.43	2247.8	3641.8	98.2	55.8
1.1-1.4	56	5.98	2251.0	2761.4	76.5	37.5
0.9-1.1	56	8.04	2229.2	2200.5	59.8	31.8
0.8-0.9	27	8.37	2209.9	1886.5	50.5	25.2
0.7-0.8	22	8.64	2287.2	1717.0	48.1	27.1
0.6-0.7	26	9.50	2234.3	1450.9	37.9	21.9
0.5-0.6	16	7.31	2232.8	1226.3	34.0	16.5
0.4-0.5	12	9.50	2339.7	1048.3	28.1	13.7
< 0.4	12	10.75	2238.1	807.9	19.0	10.7
Total	284					
Average	28	7.20	2246.8	2231.5	60.2	32.0

2. Economic and Social Indicators according to Level of Nutrition

Food Consumption over Requirement	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					STANDARD 7-8	FORM 11 and over	never attended school else
> 2.0	3.1	1162.8	2157.9	12342.0	6.9	13.8	79.3
1.4-2.0	3.6	1064.3	1162.3	13784.6	14.3	17.9	60.7
1.1-1.4	3.0	925.6	770.4	11283.9	21.4	7.1	64.3
0.9-1.1	3.3	671.5	693.7	11735.7	23.2	8.9	66.1
0.8-0.9	3.6	465.5	501.3	14238.0	40.7	0.	55.6
0.7-0.8	3.8	499.1	593.2	11578.4	31.8	9.1	54.5
0.6-0.7	2.9	501.4	433.8	10540.4	38.5	7.7	50.0
0.5-0.6	1.7	462.8	419.9	6961.1	37.5	18.8	43.8
0.4-0.5	2.6	353.6	323.3	8920.6	41.7	0.	58.3
< 0.4	1.9	358.2	296.3	5420.8	16.7	8.3	75.0

3. Geographic Distribution of Households according to Level of Nutrition

Food Consumption over Requirement	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Western Valley
> 2.0	10.2	10.2	0.	0.
1.4-2.0	9.9	9.9	0.	0.
1.1-1.4	19.7	19.7	0.	0.
0.9-1.1	19.7	19.7	0.	0.
0.8-0.9	9.5	9.5	0.	0.
0.7-0.8	7.7	7.7	0.	0.
0.6-0.7	9.2	9.2	0.	0.
0.5-0.6	5.6	5.6	0.	0.
0.4-0.5	4.2	4.2	0.	0.
< 0.4	4.2	4.2	0.	0.

4. Source of Calorie Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.646	64.6	4.8	10.6	2.8	7.3	2.3	0.1	4.5	2.7	0.4
1.4-2.0	0.711	54.5	5.6	15.7	5.0	6.1	2.6	0.1	7.1	2.8	0.5
1.1-1.4	0.738	58.1	7.8	13.7	4.5	6.0	2.3	0.1	5.2	1.9	0.4
0.9-1.1	0.648	59.5	5.9	13.4	3.7	6.2	2.4	0.1	6.2	2.1	0.4
0.8-0.9	0.771	56.1	7.5	15.3	3.2	7.9	1.9	0.0	5.7	1.9	0.4
0.7-0.8	0.637	58.4	5.7	12.6	3.9	5.8	2.9	0.1	7.7	2.3	0.5
0.6-0.7	0.692	59.8	4.1	14.6	2.5	7.0	2.7	0.1	6.3	2.5	0.5
0.5-0.6	0.637	52.1	9.9	16.4	4.7	7.0	2.4	0.1	4.7	2.4	0.5
0.4-0.5	0.673	59.6	6.2	15.6	3.3	6.5	2.3	0.1	4.1	1.8	0.6
< 0.4	0.568	57.2	3.1	17.8	4.1	9.0	2.3	0.1	4.1	3.2	0.8

5. Source of Protein Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.646	65.4	11.7	4.3	2.0	0.6	6.8	0.4	8.5	0.0	0.4
1.4-2.0	0.711	53.6	13.5	7.9	3.6	0.5	7.1	0.4	13.0	0.0	0.5
1.1-1.4	0.738	55.6	18.3	6.2	3.2	0.5	6.2	0.3	9.3	0.0	0.4
0.9-1.1	0.648	58.1	14.1	5.6	2.7	0.7	6.8	0.4	11.3	0.0	0.4
0.8-0.9	0.771	55.5	18.2	6.4	2.3	0.9	5.5	0.2	10.6	0.0	0.4
0.7-0.8	0.637	55.3	13.2	5.7	2.7	0.5	7.9	0.5	13.6	0.0	0.5
0.6-0.7	0.692	60.8	10.1	5.7	1.9	0.8	7.8	0.4	12.1	0.0	0.5
0.5-0.6	0.637	49.7	23.2	7.2	3.3	0.8	6.5	0.4	8.4	0.0	0.5
0.4-0.5	0.673	58.8	15.0	7.8	2.4	0.9	6.6	0.3	7.7	0.0	0.6
< 0.4	0.568	64.5	8.6	7.7	3.5	1.4	7.5	0.5	5.5	0.0	0.8

6. Source of Fat Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.646	45.3	1.6	0.7	0.6	0.3	12.2	0.2	17.1	21.4	0.6
1.4-2.0	0.711	36.3	1.8	1.1	1.0	0.3	12.5	0.2	25.6	20.6	0.6
1.1-1.4	0.738	44.3	2.9	1.1	1.0	0.3	12.6	0.2	21.2	15.9	0.5
0.9-1.1	0.648	42.5	2.0	1.0	0.8	0.4	12.5	0.2	23.7	16.3	0.5
0.8-0.9	0.771	43.7	2.8	1.2	0.8	0.6	10.9	0.1	23.5	15.8	0.7
0.7-0.8	0.637	38.2	1.8	0.9	0.8	0.3	13.9	0.2	27.1	16.4	0.5
0.6-0.7	0.692	40.9	1.3	1.0	0.5	0.5	13.2	0.1	23.1	18.8	0.5
0.5-0.6	0.637	40.6	3.7	1.3	1.1	0.6	13.1	0.2	19.0	19.9	0.6
0.4-0.5	0.673	47.9	2.4	1.3	1.0	0.6	13.4	0.2	17.0	15.9	0.7
< 0.4	0.568	44.7	1.2	1.3	1.0	0.8	12.7	0.2	10.1	27.0	0.9

7. Share of Food Expenditure according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.646	35.2	6.2	10.0	4.6	9.5	9.3	0.4	12.5	6.5	5.7
1.4-2.0	0.711	25.0	6.4	16.2	7.2	6.7	8.0	0.3	15.8	5.6	8.7
1.1-1.4	0.738	27.7	10.3	16.1	7.1	7.1	8.1	0.4	12.6	4.2	6.5
0.9-1.1	0.648	29.4	7.3	13.7	5.9	7.1	8.8	0.4	15.8	4.7	7.0
0.8-0.9	0.771	27.3	10.4	14.6	5.1	8.8	7.2	0.2	15.8	4.1	6.4
0.7-0.8	0.637	26.9	6.6	13.0	5.7	6.3	9.0	0.5	16.8	4.7	9.4
0.6-0.7	0.692	29.2	5.1	12.9	3.9	7.6	9.6	0.4	17.8	5.5	8.0
0.5-0.6	0.637	23.2	11.1	16.2	6.9	7.2	8.2	0.4	12.7	4.9	9.1
0.4-0.5	0.673	25.9	6.4	20.6	5.2	6.9	8.6	0.3	10.9	4.0	11.1
< 0.4	0.568	27.1	4.3	14.7	6.5	9.3	8.9	0.5	8.4	7.0	13.3





**Coast Province**

1. Average Energy Requirement and Food Consumption Pattern according to Nutrition Level

Food Consumption over Requirement	No. of Households	Average				
		Household Size	Requirement calories/cap/day	Consumption Protein grams/caput/day	Fats grams/caput/day	
> 2.0	14	7.29	2125.4	6353.0	155.6	67.8
1.4-2.0	26	6.19	2257.4	3567.2	90.2	39.6
1.1-1.4	28	7.14	2249.2	2774.2	65.8	28.4
0.9-1.1	33	6.79	2291.2	2267.6	56.6	26.4
0.8-0.9	28	8.14	2224.6	1850.2	41.3	17.4
0.7-0.8	36	10.92	2235.4	1658.3	42.4	21.0
0.6-0.7	30	10.53	2228.8	1436.1	34.4	16.0
0.5-0.6	25	9.40	2236.2	1206.2	29.3	13.5
0.4-0.5	21	8.57	2328.2	1037.8	24.9	12.1
< 0.4	24	12.46	2293.4	730.7	17.6	8.2
<b>Total</b>	<b>265</b>					

2. Economic and Social Indicators according to Level of Nutrition

Food Consumption over Requirement	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					STANDARD 4 and below	STANDARD 7-8 and over	FORM II never attended school else
> 2.0	5.1	75.0	969.7	16149.7	0.	0.	100.0
1.4-2.0	2.8	877.1	748.7	7491.3	3.8	3.8	80.8
1.1-1.4	3.2	628.5	559.6	6532.8	21.4	7.1	71.9
0.9-1.1	1.9	497.7	457.8	6195.9	6.1	3.0	84.8
0.8-0.9	2.2	346.8	366.3	4790.5	10.7	0.	78.6
0.7-0.8	2.6	392.4	340.7	7362.0	5.6	2.8	91.7
0.6-0.7	1.9	356.8	292.0	5868.5	6.7	3.3	83.3
0.5-0.6	2.6	656.7	254.0	6649.3	12.0	4.0	84.0
0.4-0.5	1.7	205.6	225.4	6589.4	4.8	0.	85.7
< 0.4	1.6	229.9	149.0	7106.4	4.2	4.2	87.5

3. Geographic Distribution of Households according to Level of Nutrition

Food Consumption over Requirement	Percentage Distribution of Households				
	Total Rural	Central	Coast	Eastern Nyanza Valley	Rift Western
> 2.0	5.3	0.	5.3	0.	0.
1.4-2.0	9.8	0.	9.8	0.	0.
1.1-1.4	10.6	0.	10.6	0.	0.
0.9-1.1	12.5	0.	12.5	0.	0.
0.8-0.9	10.6	0.	10.6	0.	0.
0.7-0.8	13.6	0.	13.6	0.	0.
0.6-0.7	11.3	0.	11.3	0.	0.
0.5-0.6	9.4	0.	9.4	0.	0.
0.4-0.5	7.9	0.	7.9	0.	0.
< 0.4	9.1	0.	9.1	0.	0.

4. Source of Calorie Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.892	78.5	0.9	14.6	1.4	2.0	1.7	0.1	1.3	0.3	0.1
1.4-2.0	0.812	69.9	0.8	17.6	2.6	3.2	3.0	0.7	1.1	0.6	0.4
1.1-1.4	0.817	67.4	0.8	19.1	4.1	4.1	2.2	0.4	0.9	0.8	0.3
0.9-1.1	0.766	73.2	0.1	14.9	3.0	3.3	2.7	0.5	1.2	0.7	0.4
0.8-0.9	0.765	61.6	0.5	24.4	5.4	4.3	2.0	0.4	0.4	0.4	0.4
0.7-0.8	0.820	68.3	0.4	16.5	3.3	3.8	4.5	0.6	1.5	0.7	0.4
0.6-0.7	0.777	64.8	1.1	21.4	2.4	4.5	3.1	0.4	1.1	0.8	0.3
0.5-0.6	0.789	67.8	0.8	16.9	3.3	5.5	2.7	0.5	1.1	0.9	0.5
0.4-0.5	0.785	64.2	0.6	16.8	4.2	7.8	3.3	0.7	0.6	1.2	0.5
< 0.4	0.783	67.3	0.2	18.7	3.2	4.6	2.6	0.5	1.7	0.7	0.4

5. Source of Protein Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.892	85.0	0.7	4.9	1.1	0.2	5.1	0.8	2.8	0.0	0.1
1.4-2.0	0.812	73.7	2.3	5.7	1.9	0.3	9.1	4.4	2.2	0.0	0.4
1.1-1.4	0.817	75.7	2.1	6.6	3.1	0.5	7.1	2.7	1.9	0.0	0.3
0.9-1.1	0.766	77.8	0.2	4.9	2.3	0.7	8.2	3.3	2.5	0.0	0.4
0.8-0.9	0.765	73.2	1.6	8.9	4.5	0.5	6.9	2.7	1.0	0.0	0.5
0.7-0.8	0.820	70.8	1.1	5.3	2.4	0.5	13.1	3.4	3.0	0.0	0.4
0.6-0.7	0.777	71.8	3.1	7.3	1.9	0.7	9.7	2.7	2.5	0.0	0.3
0.5-0.6	0.789	74.1	2.1	5.7	2.5	0.8	8.5	3.4	2.4	0.0	0.6
0.4-0.5	0.785	70.8	1.7	5.7	3.3	1.3	10.4	4.5	1.6	0.0	0.6
< 0.4	0.783	74.1	0.6	6.4	2.5	0.7	8.3	3.4	3.5	0.0	0.5

6. Source of Fat Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.892	75.8	0.4	1.2	0.4	0.2	11.7	0.5	6.8	3.2	0.2
1.4-2.0	0.812	62.5	0.4	1.4	0.7	0.2	20.3	2.4	5.1	6.3	0.7
1.1-1.4	0.817	64.9	0.4	1.7	1.2	0.4	16.2	1.5	4.5	8.8	0.5
0.9-1.1	0.766	65.0	0.0	1.2	0.8	0.3	17.3	1.7	5.6	7.3	0.8
0.8-0.9	0.765	68.4	0.3	2.4	1.7	0.5	16.4	1.6	2.5	5.4	0.9
0.7-0.8	0.820	56.5	0.2	1.2	0.8	0.4	26.4	1.7	6.5	6.0	0.5
0.6-0.7	0.777	60.5	0.5	1.7	0.7	0.5	20.7	1.4	5.4	8.1	0.6
0.5-0.6	0.789	61.6	0.3	1.4	0.9	0.6	18.1	1.8	5.1	8.9	1.4
0.4-0.5	0.785	57.8	0.3	1.3	1.1	0.9	20.9	2.2	2.6	11.5	1.2
< 0.4	0.783	61.9	0.1	1.5	0.9	0.5	17.4	1.8	8.2	6.7	1.1

7. Share of Food Expenditure according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.892	61.3	0.7	14.2	2.5	3.3	8.9	1.0	4.4	1.0	3.3
1.4-2.0	0.812	47.0	0.7	13.7	3.7	4.4	13.3	4.3	3.6	1.6	7.7
1.1-1.4	0.817	47.8	1.7	15.4	6.0	5.9	10.0	2.5	3.1	2.2	5.5
0.9-1.1	0.766	48.1	0.1	12.8	4.8	4.6	13.0	3.4	3.6	2.2	7.3
0.8-0.9	0.765	39.7	1.3	21.4	8.8	6.2	9.8	2.6	1.7	1.3	7.2
0.7-0.8	0.820	40.0	0.7	13.0	4.8	4.8	18.7	3.4	4.3	1.8	8.4
0.6-0.7	0.777	41.1	2.8	18.0	3.8	6.2	14.2	2.7	3.9	2.3	5.1
0.5-0.6	0.789	44.1	1.7	13.5	4.9	7.3	12.3	3.2	4.3	2.4	6.2
0.4-0.5	0.785	37.1	1.3	13.1	6.2	9.5	14.6	4.1	3.2	3.2	7.6
< 0.4	0.783	44.2	0.5	15.6	4.9	6.3	12.4	3.4	4.5	1.9	6.4

1. Average Energy Requirement and Food Consumption Pattern according to Level of Expenditure

Household Expend. per Caput	No. of Households	Average				
		Household Size	Requirement calories/cap/day	Consumption Protein grams/caput/day	Fats grams/caput/day	
- 250	75	11.40	2233.5	1152.2	27.8	12.0
- 500	107	9.10	2258.9	1786.6	43.5	20.5
- 1000	68	6.44	2279.4	3226.5	79.4	35.4
- 1500	10	5.40	2227.3	4198.2	106.1	53.2
> 1500	5	3.40	2068.7	8001.3	189.2	78.1
Total	265					
Average	44	8.82	2251.4	1925.2	47.0	21.4

2. Economic and Social Indicators according to Level of Expenditure

Household Expend. per Caput	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households			
					4 and below	7-8	11 and over	never attended school
- 250	2.2	259.7	184.2	5650.4	4.0	5.3	2.7	88.0
- 500	2.3	458.0	351.3	6851.0	8.4	4.7	0.0	86.9
- 1000	2.3	700.4	671.8	7696.5	13.2	7.4	4.4	73.5
- 1500	3.8	-256.5	1149.8	15949.7	0.0	0.0	20.0	80.0
> 1500	7.3	1829.8	1908.9	3786.6	0.0	0.0	0.0	100.0

3. Geographic Distribution of Households according to Level of Expenditure

Household Expend. per Caput	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
- 250	28.3	0.0	28.3	0.0
- 500	40.4	0.0	40.4	0.0
- 1000	25.7	0.0	25.7	0.0
- 1500	3.8	0.0	3.8	0.0
> 1500	1.9	0.0	1.9	0.0

4. Source of Calorie Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.860	72.7	0.6	17.5	2.0	3.5	1.9	0.3	0.9	0.3	0.3
- 500	0.803	67.4	0.4	18.8	3.5	4.0	3.3	0.5	1.0	0.7	0.3
- 1000	0.794	70.4	0.8	16.3	3.3	4.0	2.5	0.4	1.2	0.8	0.3
- 1500	0.738	60.7	0.2	20.1	5.4	4.0	4.2	0.8	3.1	1.0	0.5
> 1500	0.790	67.5	0.	22.2	2.2	3.3	2.5	0.6	0.6	0.8	0.4

5. Source of Protein Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.860	79.8	1.6	5.9	1.5	0.6	6.1	2.2	1.9	0.0	0.4
- 500	0.803	73.4	0.9	6.3	2.7	0.6	10.3	3.2	2.1	0.0	0.4
- 1000	0.794	76.1	2.2	5.4	2.4	0.4	7.7	2.8	2.5	0.0	0.4
- 1500	0.738	64.2	0.5	6.5	3.9	0.4	12.7	5.2	6.1	0.0	0.5
> 1500	0.790	76.7	0.	7.7	1.6	0.1	8.1	3.9	1.5	0.0	0.4

6. Source of Fat Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.860	73.3	0.3	1.5	0.6	0.4	14.0	1.2	4.6	3.2	0.8
- 500	0.803	61.0	0.2	1.5	0.9	0.4	21.8	1.6	4.7	7.2	0.7
- 1000	0.794	64.4	0.4	1.4	0.9	0.3	16.9	1.5	5.7	7.9	0.5
- 1500	0.738	47.1	0.1	1.4	1.3	0.3	24.9	2.5	13.2	8.7	0.6
> 1500	0.790	62.9	0.	2.1	0.7	0.1	18.7	2.3	2.8	9.8	0.7

7. Share of Food Expenditure according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.860	50.6	1.4	16.9	3.6	5.3	10.2	2.5	3.1	1.0	5.3
- 500	0.803	42.6	0.8	15.8	5.5	5.3	15.2	3.2	3.3	2.1	6.0
- 1000	0.794	48.3	1.2	13.1	4.8	5.6	11.3	2.7	3.9	2.1	6.9
- 1500	0.738	36.2	0.3	13.2	6.4	4.7	15.2	4.2	6.9	2.2	10.1
> 1500	0.790	51.2	0.	15.6	2.7	4.8	10.6	3.2	2.7	2.0	7.1

1. Average Energy Requirement and Food Consumption Pattern according to Size of Household

Household Size	No. of Households	Average			
		Household Size	Requirement calories/cap/day	Consumption grams/cap/day	Fats grams/cap/day
1 M	4	1.00	2245.0	4410.9	96.2
2 - 3	23	2.57	2363.6	2881.4	73.4
4 - 5	45	4.62	2275.8	2372.3	60.5
6 - 7	61	6.43	2268.8	2254.8	55.0
8 - 10	66	8.95	2266.7	1615.9	38.3
11 - 15	40	12.57	2208.8	2006.7	47.4
16+ M	26	22.35	2240.6	1672.7	42.2
Total	265				
Average	38	8.82	2251.4	1925.2	47.0
					21.4

2. Economic and Social Indicators according to Size of Household

Household Size	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					STANDARD 4 and below	STANDARD 7-8 and over	FORM 11 never attended school else
1 M	2.1	2691.3	1494.5	4592.5	25.0	0.	50.0
2 - 3	2.9	1597.1	712.9	3173.7	0.	0.	100.0
4 - 5	1.7	642.7	586.7	4964.1	13.3	4.4	77.8
6 - 7	2.7	450.9	446.6	6007.1	6.6	3.3	83.6
8 - 10	1.9	328.7	321.4	5039.4	9.1	4.5	81.8
11 - 15	2.8	280.7	367.9	9632.8	7.5	0.	80.0
16+ M	3.5	415.3	289.6	17674.6	3.8	0.	96.2

3. Geographic Distribution of Households according to Size of Household

Household Size	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
1 M	1.5	0.	1.5	0.
2 - 3	8.7	0.	8.7	0.
4 - 5	17.0	0.	17.0	0.
6 - 7	23.0	0.	23.0	0.
8 - 10	24.9	0.	24.9	0.
11 - 15	15.1	0.	15.1	0.
16+ M	9.8	0.	9.8	0.

4. Source of Calorie Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.809	49.3	0.	25.1	2.3	12.5	4.3	1.0	1.1	3.5	0.8
2 - 3	0.765	67.3	0.7	13.8	3.2	6.8	4.3	0.7	1.4	1.5	0.4
4 - 5	0.775	62.9	2.2	16.7	4.3	6.3	3.5	0.9	1.6	1.2	0.4
6 - 7	0.804	69.3	0.5	17.1	3.4	4.5	2.9	0.6	0.5	0.8	0.3
8 - 10	0.787	68.2	0.6	17.8	4.1	4.8	2.3	0.4	0.7	0.8	0.4
11 - 15	0.798	68.9	0.1	20.9	3.1	2.5	2.0	0.4	1.4	0.4	0.3
16+ M	0.867	74.3	0.	16.8	1.4	1.8	3.4	0.3	1.6	0.2	0.2

5. Source of Protein Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.809	61.8	0.	9.4	1.9	0.7	15.3	6.8	3.0	0.0	1.1
2 - 3	0.765	70.3	1.7	4.4	2.3	0.7	12.9	4.4	2.9	0.0	0.5
4 - 5	0.775	65.6	5.7	5.4	3.1	0.7	10.5	5.3	3.3	0.0	0.5
6 - 7	0.804	75.4	1.4	5.8	2.6	0.6	8.9	3.6	1.2	0.0	0.4
8 - 10	0.787	76.4	1.7	6.2	3.2	0.7	7.3	2.6	1.5	0.0	0.5
11 - 15	0.798	77.4	0.3	7.2	2.5	0.4	6.4	2.5	2.9	0.0	0.4
16+ M	0.867	78.1	0.	5.4	1.1	0.3	10.1	1.7	3.1	0.0	0.2

6. Source of Fat Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.809	28.2	0.	1.9	0.6	0.4	26.8	3.0	4.1	33.4	1.6
2 - 3	0.765	51.7	0.3	1.0	0.7	0.5	24.6	2.1	5.5	12.8	0.9
4 - 5	0.775	52.6	0.9	1.3	1.1	0.5	22.0	2.8	6.9	11.1	0.8
6 - 7	0.804	64.2	0.2	1.4	0.9	0.5	19.3	1.9	2.4	8.5	0.7
8 - 10	0.787	66.6	0.3	1.5	1.2	0.6	15.9	1.4	3.3	8.4	0.8
11 - 15	0.798	69.1	0.1	1.8	0.9	0.3	14.4	1.4	7.3	4.0	0.7
16+ M	0.867	65.2	0.	1.3	0.4	0.2	21.9	0.9	7.4	2.4	0.4

7. Share of Food Expenditure according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.809	39.1	0.	12.1	2.1	12.2	12.7	3.5	3.4	5.8	9.1
2 - 3	0.765	41.2	1.1	9.7	4.1	8.5	17.1	3.8	5.0	3.5	5.9
4 - 5	0.775	38.8	2.9	11.6	5.4	7.7	14.1	4.6	5.1	2.8	7.1
6 - 7	0.804	44.4	1.1	14.3	5.3	6.2	13.3	3.6	2.6	2.4	6.8
8 - 10	0.787	44.8	1.4	15.1	6.4	6.6	10.8	2.6	2.8	2.3	7.4
11 - 15	0.798	46.7	0.3	19.0	5.3	3.8	9.9	2.6	3.9	1.1	7.4
16+ M	0.867	53.6	0.	14.8	2.4	2.6	15.8	1.9	4.2	0.8	4.0





## **Eastern Province**

1. Average Energy Requirement and Food Consumption Pattern according to Nutrition Level

Food Consumption over Requirement	No. of Households	A v e r a g e			Protein grams/caput/day	Fats grams/caput/day
		Household Size	Requirement calories/cap/day	Consumption		
> 2.0	33	4.39	2264.2	6735.3	187.1	77.0
1.4-2.0	45	5.64	2257.9	3733.7	109.6	41.2
1.1-1.4	41	7.05	2217.4	2779.3	77.4	30.3
0.9-1.1	28	7.57	2177.1	2200.4	61.0	25.3
0.8-0.9	26	7.62	2236.7	1902.7	56.0	22.3
0.7-0.8	27	7.19	2307.6	1735.0	52.1	20.6
0.6-0.7	24	8.33	2273.0	1474.2	42.2	16.4
0.5-0.6	12	10.83	2286.4	1291.7	33.7	14.7
0.4-0.5	17	7.41	2239.5	1009.9	28.1	10.1
< 0.4	21	9.05	2235.7	684.1	16.3	7.0
Total	274					
Average	27	7.07	2246.4	2388.0	67.6	26.8

2. Economic and Social Indicators according to Level of Nutrition

Food Consumption over Requirement	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					STANDARD 4	STANDARD 7-8	FORM 11 and over
> 2.0	2.8	1228.1	1800.9	9683.4	15.2	9.1	6.1
1.4-2.0	1.8	622.9	777.3	6812.0	13.3	13.3	2.2
1.1-1.4	3.0	468.7	601.2	9200.0	14.6	9.8	0.
0.9-1.1	3.0	495.1	509.2	9177.2	7.1	7.1	0.
0.8-0.9	3.0	449.5	505.0	9252.5	3.8	0.	3.8
0.7-0.8	1.8	513.7	458.9	5628.2	14.8	3.7	3.7
0.6-0.7	2.0	387.2	382.6	7151.5	16.7	12.5	4.2
0.5-0.6	2.8	308.6	293.0	6884.8	16.7	8.3	0.
0.4-0.5	2.2	254.7	240.4	4134.6	29.4	0.	0.
< 0.4	3.6	429.9	163.1	5659.0	14.3	9.5	4.8

3. Geographic Distribution of Households according to Level of Nutrition

Food Consumption over Requirement	Percentage Distribution of Households				
	Total Rural	Central	Coast	Eastern Nyanza Rift Valley Western	
> 2.0	12.0	0.	0.	12.0	0.
1.4-2.0	16.4	0.	0.	16.4	0.
1.1-1.4	15.0	0.	0.	15.0	0.
0.9-1.1	10.2	0.	0.	10.2	0.
0.8-0.9	9.5	0.	0.	9.5	0.
0.7-0.8	9.9	0.	0.	9.9	0.
0.6-0.7	8.8	0.	0.	8.8	0.
0.5-0.6	4.4	0.	0.	4.4	0.
0.4-0.5	6.2	0.	0.	6.2	0.
< 0.4	7.7	0.	0.	7.7	0.

4. Source of Calorie Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.705	57.0	8.9	19.0	4.8	3.6	2.0	0.1	2.5	1.6	0.5
1.4-2.0	0.819	60.0	13.0	14.6	3.3	3.4	1.7	0.0	2.4	0.9	0.6
1.1-1.4	0.751	64.8	9.1	13.9	4.0	3.1	1.7	0.1	2.4	0.6	0.4
0.9-1.1	0.734	62.6	9.5	14.9	3.2	3.9	1.9	0.1	2.3	1.2	0.4
0.8-0.9	0.670	59.8	12.6	13.9	3.0	4.0	2.4	0.1	2.8	1.0	0.5
0.7-0.8	0.686	56.9	15.1	12.9	3.3	5.1	2.1	0.1	2.7	1.5	0.5
0.6-0.7	0.715	57.1	12.7	16.4	2.7	5.1	2.0	0.1	2.1	1.2	0.6
0.5-0.6	0.710	66.2	5.9	16.1	3.1	3.5	2.0	0.0	1.3	1.3	0.6
0.4-0.5	0.730	52.6	13.6	20.0	3.4	5.1	1.5	0.0	1.9	0.8	1.0
< 0.4	0.744	54.5	5.3	25.5	3.9	4.7	1.9	0.0	2.3	1.0	0.8

5. Source of Protein Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.705	55.0	20.7	9.6	3.3	0.2	5.5	0.5	4.6	0.0	0.5
1.4-2.0	0.819	54.2	28.8	5.2	2.2	0.3	4.4	0.3	4.1	0.0	0.6
1.1-1.4	0.751	61.5	21.1	4.6	2.8	0.3	4.6	0.4	4.3	0.0	0.4
0.9-1.1	0.734	59.6	22.3	5.2	2.3	0.5	5.3	0.4	4.1	0.0	0.4
0.8-0.9	0.670	53.9	27.7	4.4	2.0	0.4	6.0	0.3	4.8	0.0	0.6
0.7-0.8	0.686	50.3	32.7	4.0	2.1	0.5	5.2	0.4	4.4	0.0	0.5
0.6-0.7	0.715	53.0	28.8	5.8	1.8	0.6	5.3	0.4	3.6	0.0	0.6
0.5-0.6	0.710	67.5	14.7	5.7	2.3	0.6	5.8	0.3	2.5	0.0	0.7
0.4-0.5	0.730	50.1	31.7	6.4	2.4	0.6	4.1	0.2	3.4	0.0	1.1
< 0.4	0.744	60.7	14.4	9.1	3.1	0.6	5.9	0.3	4.9	0.0	1.0

6. Source of Fat Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.705	50.9	3.9	1.9	1.3	0.2	13.1	0.3	12.0	15.5	0.9
1.4-2.0	0.819	56.5	5.9	1.3	0.9	0.3	11.6	0.2	11.9	9.6	1.8
1.1-1.4	0.751	61.9	4.1	1.2	1.1	0.4	11.6	0.2	12.3	6.2	1.1
0.9-1.1	0.734	57.0	4.1	1.3	0.9	0.4	12.6	0.2	10.8	11.9	0.9
0.8-0.9	0.670	53.0	5.3	1.1	0.8	0.3	15.0	0.2	13.1	9.6	1.4
0.7-0.8	0.686	49.6	6.4	1.0	0.9	0.4	13.1	0.2	12.3	14.7	1.3
0.6-0.7	0.715	53.6	5.7	1.4	0.8	0.5	13.5	0.2	10.1	12.5	1.7
0.5-0.6	0.710	60.8	2.6	1.3	0.8	0.4	13.0	0.2	6.0	13.0	1.9
0.4-0.5	0.730	55.1	6.8	1.9	1.1	0.6	11.2	0.2	10.3	9.1	2.7
< 0.4	0.744	53.5	2.6	2.3	1.2	0.5	13.7	0.2	12.6	11.3	2.3

7. Share of Food Expenditure according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.705	29.2	11.0	17.5	8.2	4.8	8.1	0.6	9.6	3.8	7.2
1.4-2.0	0.819	33.4	17.6	12.9	6.3	4.6	7.1	0.4	8.8	2.5	6.5
1.1-1.4	0.751	36.4	12.7	12.6	7.9	4.3	7.5	0.5	10.3	1.7	6.1
0.9-1.1	0.734	33.8	13.9	13.8	6.2	5.0	8.4	0.5	9.6	3.2	5.7
0.8-0.9	0.670	32.3	17.9	11.2	5.5	5.1	9.3	0.4	8.6	2.6	7.1
0.7-0.8	0.686	31.1	19.6	10.7	5.8	6.4	8.0	0.5	8.4	3.9	5.7
0.6-0.7	0.715	31.0	16.2	13.9	4.7	6.1	7.9	0.5	8.6	3.0	8.0
0.5-0.6	0.710	37.5	9.3	15.4	6.3	4.7	8.9	0.4	5.8	3.7	8.1
0.4-0.5	0.730	28.9	16.0	16.7	6.5	6.5	6.3	0.3	6.8	2.1	10.0
< 0.4	0.744	33.0	4.9	20.1	7.0	6.1	7.1	0.3	7.0	2.6	11.8

1. Average Energy Requirement and Food Consumption Pattern according to Level of Expenditure

Household Expend. per Caput	No. of Households	Average			
		Household Size	Requirement calories/cap/day	Consumption grams/caput/day	Fats grams/caput/day
- 250	40	8.38	2237.9	971.6	24.2
- 500	95	7.99	2249.9	1913.2	52.2
- 1000	99	6.73	2228.8	2754.3	82.4
- 1500	23	5.13	2332.7	4921.1	134.9
> 1500	17	3.53	2275.7	7255.3	207.1
Total	274				
Average	46	7.07	2246.4	2388.0	67.6
					26.8

2. Economic and Social Indicators according to Level of Expenditure

Household Expend. per Caput	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households			
					STANDARD 4	STANDARD 7-8	FORM II and over	never attended school or else
- 250	2.4	207.8	162.0	3868.6	10.0	2.5	0.0	87.5
- 500	2.5	377.3	370.6	6725.8	10.5	7.4	4.2	77.9
- 1000	2.5	674.4	685.3	8086.8	19.2	6.1	2.0	71.7
- 1500	2.9	792.2	1258.1	12455.7	17.4	17.4	0.0	65.2
> 1500	3.6	1635.8	2746.0	12670.0	5.9	23.5	5.9	64.7

3. Geographic Distribution of Households according to Level of Expenditure

Household Expend. per Caput	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
- 250	14.6	0.0	14.6	0.0
- 500	34.7	0.0	34.7	0.0
- 1000	36.1	0.0	36.1	0.0
- 1500	8.4	0.0	8.4	0.0
> 1500	6.2	0.0	6.2	0.0

4. Source of Calorie Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.844	63.1	6.9	21.6	2.3	3.2	0.8	0.0	1.0	0.5	0.5
- 500	0.790	64.7	9.2	15.2	2.7	3.9	1.5	0.0	1.4	0.8	0.5
- 1000	0.723	59.6	13.2	12.9	3.9	3.6	2.0	0.1	3.0	1.2	0.5
- 1500	0.720	62.2	7.0	16.8	4.1	3.3	2.5	0.1	2.8	0.9	0.4
> 1500	0.640	39.6	13.3	25.3	6.7	5.7	2.9	0.1	3.2	2.7	0.6

5. Source of Protein Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.844	67.1	17.9	7.4	1.8	0.5	2.6	0.1	2.1	0.0	0.6
- 500	0.790	62.7	21.9	5.2	2.0	0.5	4.2	0.3	2.7	0.0	0.5
- 1000	0.723	53.2	28.7	4.4	2.5	0.3	4.9	0.4	5.1	0.0	0.6
- 1500	0.720	60.0	16.6	7.3	2.9	0.3	6.8	0.5	5.1	0.0	0.4
> 1500	0.640	36.9	30.1	13.4	4.5	0.3	7.7	0.7	5.7	0.0	0.6

6. Source of Fat Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.844	71.7	3.7	2.2	0.8	0.4	6.8	0.1	5.9	6.6	1.8
- 500	0.790	64.2	4.3	1.4	0.8	0.4	10.9	0.2	7.5	8.9	1.5
- 1000	0.723	52.3	5.6	1.1	1.0	0.3	12.5	0.2	14.3	11.2	1.5
- 1500	0.720	55.3	3.0	1.5	1.1	0.2	16.0	0.3	13.3	8.5	0.8
> 1500	0.640	32.0	5.4	2.4	1.7	0.3	17.6	0.4	14.2	24.8	1.1

7. Share of Food Expenditure according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.844	41.4	8.8	21.0	5.3	4.8	4.2	0.2	4.3	1.8	8.3
- 500	0.790	37.3	13.2	14.7	5.8	5.5	7.2	0.4	6.6	2.5	6.9
- 1000	0.723	30.8	18.0	11.3	6.9	4.6	7.8	0.5	10.6	3.0	6.5
- 1500	0.720	36.0	8.8	14.5	7.2	4.4	9.8	0.6	10.7	2.1	5.8
> 1500	0.640	20.4	13.3	18.5	8.8	6.0	9.1	0.7	9.7	5.0	8.5

1. Average Energy Requirement and Food Consumption Pattern according to Size of Household

Household Size	No. of Households	Average				
		Household Size	Requirement calories/cap/day	Consumption Protein grams/caput/day	Fats grams/caput/day	
1 M	11	1.00	2297.5	4623.9	118.1	47.5
2 - 3	32	2.50	2343.4	4238.2	117.0	48.6
4 - 5	56	4.55	2223.6	2695.0	76.8	28.6
6 - 7	72	6.44	2268.6	2603.4	73.0	28.8
8 - 10	59	8.86	2237.6	2400.1	68.5	27.8
11 - 15	35	12.51	2254.3	1928.1	55.4	21.9
16+ M	9	18.56	2176.6	1455.7	40.6	16.3
Total Average	274	7.07	2246.4	2388.0	67.6	26.8

2. Economic and Social Indicators according to Size of Household

Household Size	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households				
					STANDARD 4	STANDARD 7-8	FORM 11 never attended else		
1 M	1.4	534.3	1184.1	1386.1	0.	18.2	0.	81.8	0.
2 - 3	2.0	726.7	1131.2	6508.8	0.	12.5	0.	87.5	0.
4 - 5	2.1	638.9	623.6	5497.1	3.6	8.9	0.	87.5	0.
6 - 7	2.3	553.3	570.4	6102.3	16.7	2.8	4.2	76.4	0.
8 - 10	3.1	494.1	551.8	9298.0	22.0	10.2	5.1	61.0	1.7
11 - 15	3.4	465.1	532.7	13278.4	28.6	5.7	2.9	62.9	0.
16+ M	4.4	304.7	335.7	12456.1	11.1	11.1	0.	77.8	0.

3. Geographic Distribution of Households according to Size of Household

Household Size	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
1 M	4.0	0.	0.	0.
2 - 3	11.7	0.	4.0	0.
4 - 5	20.4	0.	11.7	0.
6 - 7	26.3	0.	20.4	0.
8 - 10	21.5	0.	26.3	0.
11 - 15	12.8	0.	21.5	0.
16+ M	3.3	0.	12.8	0.
Total	100.0	0.0	100.0	0.0

4. Source of Calorie Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.740	55.6	8.9	17.2	6.4	6.9	1.7	0.1	0.2	1.7	1.3
2 - 3	0.789	49.9	11.2	19.6	6.2	5.6	2.6	0.1	2.5	1.8	0.7
4 - 5	0.736	58.8	11.9	15.3	4.8	3.8	1.7	0.1	2.1	1.0	0.6
6 - 7	0.759	61.4	10.0	16.4	3.4	3.4	1.7	0.1	2.1	1.1	0.5
8 - 10	0.759	61.8	10.0	14.8	3.4	3.5	1.9	0.1	3.2	0.8	0.4
11 - 15	0.638	59.4	12.4	15.5	3.0	3.8	2.0	0.1	2.0	1.4	0.4
16+ M	0.775	62.2	9.7	16.6	2.0	3.6	2.0	0.1	2.1	0.8	0.9

5. Source of Protein Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.740	58.0	22.6	6.1	4.8	0.6	5.1	0.7	0.4	0.0	1.6
2 - 3	0.789	48.1	26.2	7.9	4.3	0.4	7.2	0.5	4.6	0.0	0.8
4 - 5	0.736	55.6	27.1	4.7	3.2	0.3	4.6	0.3	3.6	0.0	0.6
6 - 7	0.759	58.2	23.0	6.9	2.3	0.3	4.6	0.3	3.8	0.0	0.5
8 - 10	0.759	57.4	22.6	5.8	2.3	0.4	5.0	0.4	5.6	0.0	0.4
11 - 15	0.638	54.7	27.9	5.4	2.0	0.4	5.3	0.4	3.5	0.0	0.4
16+ M	0.775	59.1	22.6	5.8	1.4	0.5	5.4	0.4	3.8	0.0	1.1

6. Source of Fat Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.740	55.4	4.3	1.6	1.9	0.5	12.3	0.4	0.8	18.5	4.2
2 - 3	0.789	43.3	4.9	1.7	1.7	0.3	16.8	0.3	11.8	17.5	1.7
4 - 5	0.736	55.9	5.6	1.3	1.4	0.3	12.2	0.2	10.7	10.8	1.5
6 - 7	0.759	57.9	4.5	1.6	1.0	0.3	11.6	0.2	10.5	11.1	1.4
8 - 10	0.759	56.0	4.3	1.3	0.9	0.3	12.3	0.2	15.3	8.3	1.1
11 - 15	0.638	54.1	5.4	1.3	0.8	0.3	13.1	0.2	9.4	14.4	0.9
16+ M	0.775	58.3	4.3	1.4	0.6	0.4	13.2	0.2	10.2	8.0	3.2

7. Share of Food Expenditure according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.740	29.4	9.8	13.0	10.8	8.8	6.9	0.7	0.8	4.0	15.7
2 - 3	0.789	26.9	11.6	13.6	9.4	6.6	9.6	0.6	8.8	3.8	9.1
4 - 5	0.736	33.3	14.5	12.6	9.0	5.4	7.1	0.4	7.0	2.7	8.0
6 - 7	0.759	33.3	13.5	16.5	6.6	4.7	7.3	0.5	8.5	3.0	6.2
8 - 10	0.759	33.3	13.7	13.9	6.3	4.6	7.8	0.5	12.2	2.2	5.5
11 - 15	0.638	31.9	17.8	12.8	5.5	5.0	8.5	0.5	7.4	3.8	6.9
16+ M	0.775	35.0	15.0	14.1	3.7	4.3	8.2	0.5	8.8	2.0	8.4





## **Nyanza Province**

1. Average Energy Requirement and Food Consumption Pattern according to Nutrition Level

Food Consumption over Requirement	No. of Households	Average			
		Household Size	Requirement calories/ceap/day	Consumption grams/ceap/day	Fats grams/ceap/day
> 2.0	13	4.38	2231.9	5519.8	149.6
1.4-2.0	26	5.50	2266.3	3643.5	99.1
1.1-1.4	21	5.33	2240.8	2756.0	77.2
0.9-1.1	29	6.79	2245.4	2260.6	63.6
0.8-0.9	27	7.56	2270.6	1918.7	55.3
0.7-0.8	35	8.06	2291.4	1694.6	46.2
0.6-0.7	30	8.47	2267.5	1468.2	42.2
0.5-0.6	32	8.25	2310.9	1263.2	22.1
0.4-0.5	25	9.12	2305.4	1052.6	19.7
< 0.4	30	9.13	2301.0	720.2	20.9
Total	268				
Average	27	7.52	2281.0	1787.9	50.1
					25.8

2. Economic and Social Indicators according to Level of Nutrition

Food Consumption over Requirement	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					STANDARD 4	FORM 7-8	never attended school
> 2.0	1.8	934.7	911.5	5801.7	15.4	7.7	76.9
1.4-2.0	2.1	1029.9	675.9	4456.0	7.7	7.7	80.8
1.1-1.4	1.8	584.3	539.2	5024.9	9.5	4.8	81.0
0.9-1.1	3.0	644.6	508.9	6954.3	24.1	13.8	62.1
0.8-0.9	2.0	700.6	440.0	5272.3	14.8	7.4	74.1
0.7-0.8	3.7	382.1	385.7	8998.5	14.3	11.4	71.4
0.6-0.7	2.1	338.5	362.2	5798.2	3.3	6.7	86.7
0.5-0.6	2.8	359.5	295.0	5284.7	9.4	6.3	84.4
0.4-0.5	2.9	465.8	263.0	5029.0	12.0	4.0	84.0
< 0.4	2.1	257.8	191.7	3339.4	10.0	6.7	80.0

3. Geographic Distribution of Households according to Level of Nutrition

Food Consumption over Requirement	Percentage Distribution of Households			
	Total Rural	Central	Coast	Eastern Nyanza Rift Valley
> 2.0	4.9	0.	0.	0.
1.4-2.0	9.7	0.	0.	4.9
1.1-1.4	7.8	0.	0.	7.8
0.9-1.1	10.8	0.	0.	10.8
0.8-0.9	10.1	0.	0.	10.1
0.7-0.8	13.1	0.	0.	13.1
0.6-0.7	11.2	0.	0.	11.2
0.5-0.6	11.9	0.	0.	11.9
0.4-0.5	9.3	0.	0.	9.3
< 0.4	11.2	0.	0.	11.2

4. Source of Calorie Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.724	79.7	1.3	7.0	3.5	4.0	2.4	0.2	1.5	0.3	0.2
1.4-2.0	0.790	72.7	2.3	8.3	3.7	5.8	3.6	0.3	2.5	0.6	0.3
1.1-1.4	0.750	75.1	0.9	8.3	2.7	4.3	4.5	0.3	2.9	0.6	0.2
0.9-1.1	0.756	69.8	0.9	11.8	2.2	3.6	5.1	0.4	5.2	0.7	0.3
0.8-0.9	0.714	74.8	0.8	6.9	2.4	4.0	4.8	0.4	4.9	0.8	0.3
0.7-0.8	0.698	72.9	1.0	10.0	1.8	4.1	4.1	0.4	3.9	0.9	0.3
0.6-0.7	0.687	72.2	0.7	8.8	2.9	4.1	5.1	0.4	4.9	0.7	0.4
0.5-0.6	0.735	69.7	1.1	8.3	2.6	6.0	5.4	0.4	5.2	0.9	0.4
0.4-0.5	0.669	70.5	0.9	7.5	2.2	6.3	5.2	0.4	5.3	1.4	0.4
< 0.4	0.715	68.6	0.7	9.4	2.8	5.8	7.5	0.6	3.4	0.8	0.4

5. Source of Protein Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.724	81.0	3.1	2.1	2.3	0.7	6.8	1.1	2.7	0.0	0.2
1.4-2.0	0.790	72.3	5.4	2.5	2.5	0.9	9.9	1.7	4.5	0.0	0.3
1.1-1.4	0.750	73.5	2.2	2.4	1.8	0.6	12.3	1.9	5.1	0.0	0.3
0.9-1.1	0.756	67.4	2.1	3.4	1.4	0.4	13.6	2.0	9.1	0.0	0.3
0.8-0.9	0.714	71.1	1.7	2.0	1.5	0.4	12.6	1.9	8.4	0.0	0.3
0.7-0.8	0.698	72.4	2.3	3.1	1.3	0.6	11.2	1.7	7.1	0.0	0.4
0.6-0.7	0.687	69.1	1.7	2.5	1.8	0.5	13.3	2.4	8.4	0.0	0.4
0.5-0.6	0.735	66.7	2.6	2.4	1.7	0.8	14.2	2.3	8.9	0.0	0.3
0.4-0.5	0.669	67.8	2.1	2.2	1.4	0.7	14.0	2.1	9.4	0.0	0.4
< 0.4	0.715	64.2	1.6	2.6	1.8	0.7	19.6	3.3	5.8	0.0	0.4

6. Source of Fat Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.724	70.8	0.6	0.6	0.9	0.6	15.7	0.6	6.8	3.2	0.4
1.4-2.0	0.790	58.7	0.9	0.6	0.9	0.6	20.7	0.9	10.5	5.6	0.6
1.1-1.4	0.750	55.7	0.3	0.5	0.6	0.4	24.5	0.9	11.4	5.1	0.5
0.9-1.1	0.756	47.0	0.3	0.7	0.4	0.3	25.3	0.9	19.0	5.5	0.6
0.8-0.9	0.714	50.0	0.3	0.4	0.5	0.3	23.6	0.9	17.7	6.0	0.6
0.7-0.8	0.698	52.9	0.3	0.6	0.4	0.4	21.5	0.8	15.2	7.3	0.6
0.6-0.7	0.687	48.5	0.2	0.5	0.6	0.3	25.3	1.1	17.9	4.9	0.6
0.5-0.6	0.735	45.8	0.4	0.5	0.5	0.5	26.0	1.0	18.4	6.5	0.5
0.4-0.5	0.669	45.2	0.3	0.4	0.4	0.4	24.2	0.9	18.1	9.5	0.6
< 0.4	0.715	43.9	0.2	0.5	0.5	0.4	35.0	1.4	11.4	5.9	0.7

7. Share of Food Expenditure according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.724	46.3	1.6	7.8	6.9	6.1	15.9	1.7	9.0	1.2	3.7
1.4-2.0	0.790	36.6	2.5	7.5	6.0	8.1	18.7	2.1	12.2	1.9	4.3
1.1-1.4	0.750	36.8	0.9	7.6	4.5	5.9	23.6	2.3	12.0	2.0	4.5
0.9-1.1	0.756	36.6	0.8	9.2	3.1	4.7	22.7	2.2	13.3	2.2	5.5
0.8-0.9	0.714	37.6	0.7	5.6	3.5	5.5	22.4	2.2	15.4	2.2	4.8
0.7-0.8	0.698	39.4	1.0	8.9	2.9	6.5	19.3	1.9	11.2	2.6	6.2
0.6-0.7	0.687	36.0	0.6	6.9	4.1	7.5	23.8	2.7	14.0	1.8	6.0
0.5-0.6	0.735	33.2	1.1	6.4	3.8	5.3	22.8	2.5	12.8	2.4	6.5
0.4-0.5	0.669	34.7	1.2	5.9	3.2	8.5	23.6	2.3	11.5	3.7	5.4
< 0.4	0.715	30.4	0.6	6.6	3.7	6.7	30.2	3.3	10.6	2.0	5.8

1. Average Energy Requirement and Food Consumption Pattern according to Level of Expenditure

Household Expend. per Caput	No. of Households	A v e r a g e				
		Household Size	Requirement calories/cap/day	Consumption Protein grams/caput/day	Fats grams/caput/day	
- 250	67	8.99	2260.0	1054.8	29.0	13.9
- 500	119	7.82	2283.0	1704.8	48.2	25.1
- 1000	71	6.06	2291.7	2835.7	79.3	41.4
- 1500	9	5.56	2383.5	2958.9	82.6	45.2
> 1500	2	1.50	2601.0	4965.0	139.6	76.4
Total	268					
Average	45	7.52	2281.0	1787.9	50.1	25.8

2. Economic and Social Indicators according to Level of Expenditure

Household Expend. per Caput	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households				
					STANDARD 4	STANDARD 7-8	FORM 11 and over	never attended school else	
- 250	2.0	256.8	179.4	3716.0	6.0	3.0	1.5	89.6	0.
- 500	2.6	459.2	353.3	5898.8	10.9	7.6	4.2	77.3	0.
- 1000	2.8	865.1	657.9	6257.6	19.7	9.9	0.	70.4	0.
- 1500	2.5	662.2	1256.6	13849.1	11.1	11.1	11.1	66.7	0.
> 1500	2.6	4875.3	2613.3	2435.5	0.	50.0	0.	50.0	0.

3. Geographic Distribution of Households according to Level of Expenditure

Household Expend. per Caput	Percentage Distribution of Households				
	Total Rural	Central Coast	Eastern Nyanza Valley	Rift Western	
- 250	25.0	0.	0.	25.0	0.
- 500	44.4	0.	0.	44.4	0.
- 1000	26.5	0.	0.	26.5	0.
- 1500	3.4	0.	0.	3.4	0.
> 1500	0.7	0.	0.	0.7	0.

4. Source of Calorie Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.810	77.2	0.9	8.2	2.4	4.0	3.8	0.3	2.3	0.6	0.3
- 500	0.783	72.2	1.2	9.0	2.5	4.5	4.8	0.4	4.2	0.8	0.3
- 1000	0.693	72.1	1.0	8.5	2.9	5.2	4.6	0.4	4.3	0.7	0.3
- 1500	0.460	64.9	2.6	9.0	3.6	7.5	4.9	0.4	5.4	1.3	0.4
> 1500	0.452	59.5	0.	19.8	3.5	4.0	9.1	0.9	0.3	2.2	0.8

5. Source of Protein Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.810	76.7	2.1	2.5	1.6	0.6	10.5	1.6	4.1	0.0	0.3
- 500	0.783	69.7	2.8	2.7	1.7	0.6	12.8	2.1	7.4	0.0	0.3
- 1000	0.693	70.2	2.3	2.5	1.9	0.7	12.6	2.0	7.7	0.0	0.3
- 1500	0.460	62.8	6.0	2.6	2.3	0.6	13.5	2.0	9.8	0.0	0.4
> 1500	0.452	60.7	0.	5.8	2.2	0.2	24.5	5.2	0.6	0.0	0.7

6. Source of Fat Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.810	60.5	0.3	0.6	0.5	0.4	21.7	0.8	9.6	5.0	0.6
- 500	0.783	50.3	0.4	0.6	0.5	0.4	24.4	1.0	15.8	6.1	0.6
- 1000	0.693	50.9	0.3	0.5	0.6	0.4	23.9	0.9	16.4	5.6	0.5
- 1500	0.460	42.8	0.8	0.5	0.7	0.4	24.1	0.9	19.1	9.9	0.7
> 1500	0.452	33.5	0.	1.2	0.7	0.1	44.1	2.3	0.9	16.5	0.7

7. Share of Food Expenditure according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.810	43.5	1.1	7.9	4.3	6.0	20.9	2.1	7.3	1.9	5.0
- 500	0.783	36.5	1.2	7.6	3.8	5.9	22.4	2.4	12.2	2.2	5.8
- 1000	0.693	35.1	0.9	7.0	4.3	6.9	22.1	2.3	14.6	2.0	4.8
- 1500	0.460	30.9	2.0	6.1	4.4	9.2	20.0	1.8	17.8	3.1	4.7
> 1500	0.452	30.4	0.	11.0	3.5	4.3	29.7	4.0	1.1	4.2	11.9

1. Average Energy Requirement and Food Consumption Pattern according to Size of Household

Household Size	No. of Households	Average				
		Household Size	Requirement calories/cap/day	Consumption calories/cap/day	Protein grams/caput/day	Fats grams/caput/day
1 M	8	1.00	2200.0	5699.0	165.0	75.9
2 - 3	36	2.64	2389.4	2501.3	71.0	34.6
4 - 5	54	4.61	2319.7	2058.0	59.8	31.3
6 - 7	58	6.48	2272.0	1958.1	55.0	27.3
8 - 10	60	8.88	2282.4	1778.3	49.2	25.4
11 - 15	38	12.55	2265.8	1497.5	42.1	22.2
16+ M	14	19.79	2246.9	1475.2	39.7	21.4
Total	268					
Average	38	7.52	2281.0	1787.9	50.1	25.8

2. Economic and Social Indicators according to Size of Household

Household Size	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households				
					STANDARD 4	STANDARD 7-8	FORM 11 and over school	never attended	else
1 M	2.0	835.3	1356.0	1285.9	25.0	0.	0.	75.0	0.
2 - 3	1.5	725.2	536.5	1963.1	2.8	8.3	0.	88.9	0.
4 - 5	2.2	560.4	443.3	3786.4	9.3	7.4	3.7	79.6	0.
6 - 7	1.6	497.1	433.2	4585.3	10.3	3.4	3.4	82.8	0.
8 - 10	2.5	489.9	387.6	5197.6	11.7	6.7	1.7	80.0	0.
11 - 15	4.3	463.2	349.9	11330.1	23.7	7.9	5.3	63.2	0.
16+ M	5.5	423.5	294.5	16497.3	14.3	28.6	0.	57.1	0.

3. Geographic Distribution of Households according to Size of Household

Household Size	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
1 M	3.0	0.	0.	0.
2 - 3	13.4	0.	0.	0.
4 - 5	20.1	0.	13.4	0.
6 - 7	21.6	0.	20.1	0.
8 - 10	22.4	0.	21.6	0.
11 - 15	14.2	0.	22.4	0.
16+ M	5.2	0.	14.2	0.
		0.	5.2	0.

4. Source of Calorie Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.652	76.3	0.3	6.9	5.4	3.4	5.6	0.5	0.6	0.6	0.4
2 - 3	0.755	72.5	0.6	11.1	3.1	3.6	5.5	0.5	2.1	0.7	0.4
4 - 5	0.768	75.0	0.7	6.5	2.9	4.4	6.1	0.5	2.6	0.9	0.3
6 - 7	0.707	74.0	1.1	7.9	2.8	5.2	4.7	0.4	3.0	0.7	0.3
8 - 10	0.732	73.5	1.1	7.9	3.2	5.1	4.6	0.4	3.2	0.8	0.4
11 - 15	0.673	71.0	1.8	9.0	2.0	4.9	3.6	0.3	6.4	0.7	0.3
16+ M	0.787	68.5	1.1	13.4	1.7	4.3	3.6	0.2	6.3	0.7	0.2

5. Source of Protein Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.652	74.9	0.6	1.9	3.5	0.3	14.6	2.7	1.2	0.0	0.4
2 - 3	0.755	71.7	1.4	3.2	2.0	0.3	14.7	2.7	3.6	0.0	0.4
4 - 5	0.768	71.0	1.5	1.8	1.9	0.5	15.9	2.5	4.5	0.0	0.3
6 - 7	0.707	72.4	2.5	2.3	1.8	0.6	12.6	2.1	5.3	0.0	0.3
8 - 10	0.732	71.6	2.5	2.3	2.1	0.8	12.5	2.1	5.7	0.0	0.4
11 - 15	0.673	68.5	4.1	2.7	1.3	0.6	9.7	1.5	11.2	0.0	0.3
16+ M	0.787	68.5	2.7	4.1	1.1	0.6	10.0	1.1	11.6	0.0	0.2

6. Source of Fat Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.652	56.8	0.1	0.5	1.2	0.2	31.3	1.4	2.4	5.3	0.8
2 - 3	0.755	52.3	0.2	0.7	0.7	0.2	29.8	1.3	8.1	5.8	0.9
4 - 5	0.768	50.3	0.2	0.4	0.6	0.3	30.2	1.2	9.4	6.8	0.6
6 - 7	0.707	54.2	0.4	0.5	0.6	0.4	25.2	1.0	11.7	5.4	0.6
8 - 10	0.732	53.4	0.4	0.5	0.7	0.5	24.0	1.0	12.2	6.6	0.6
11 - 15	0.673	49.3	0.6	0.6	0.4	0.4	18.2	0.7	24.0	5.4	0.4
16+ M	0.787	48.9	0.4	0.8	0.3	0.4	18.7	0.5	24.1	5.5	0.3

7. Share of Food Expenditure according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.652	37.8	0.3	5.9	8.6	5.1	27.8	3.3	3.3	1.8	6.1
2 - 3	0.755	36.7	0.6	9.1	4.6	5.2	26.1	3.1	7.3	2.0	5.4
4 - 5	0.768	36.0	0.7	5.2	4.3	6.0	28.3	2.9	8.5	2.5	5.5
6 - 7	0.707	36.6	1.0	6.7	4.3	7.4	23.1	2.4	11.8	1.9	4.8
8 - 10	0.732	36.3	1.1	6.5	4.8	6.4	21.9	2.4	11.8	2.4	6.3
11 - 15	0.673	36.6	1.8	8.0	3.2	6.6	17.3	1.8	17.8	2.1	4.9
16+ M	0.787	39.6	1.1	11.4	2.6	5.7	17.0	1.3	15.1	2.0	4.2





## **Rift Valley Province**

1. Average Energy Requirement and Food Consumption Pattern according to Nutrition Level

Food Consumption over Requirement	No. of Households	Average			
		Household Size	Requirement calories/cap/day	Consumption Protein grams/caput/day	Fats
> 2.0	30	5.10	7878.6	215.7	111.1
1.4-2.0	21	6.95	3720.8	105.5	62.4
1.1-1.4	30	6.83	2744.9	79.5	47.4
0.9-1.1	32	6.69	2178.7	62.3	39.3
0.8-0.9	15	6.87	1866.0	53.9	34.2
0.7-0.8	22	8.32	2204.6	45.5	27.6
0.6-0.7	33	7.94	1463.9	42.2	26.7
0.5-0.6	19	10.47	2297.0	35.1	22.0
0.4-0.5	43	9.35	1012.4	27.8	17.9
< 0.4	27	10.33	744.1	21.1	15.0
Total	272				
Average	27	7.89	2261.8	59.2	35.2

2. Economic and Social Indicators according to Level of Nutrition

Food Consumption over Requirement	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					STANDARD 4 and below	STANDARD 7-8	FORM 11 and over
> 2.0	4.4	2410.1	1293.4	13291.0	26.7	20.0	6.7
1.4-2.0	3.7	857.2	809.5	15459.4	4.8	9.5	4.8
1.1-1.4	4.0	673.7	625.6	11060.0	10.0	20.0	0.
0.9-1.1	5.2	654.2	518.7	11284.0	12.5	9.4	0.
0.8-0.9	4.1	640.0	405.3	9996.8	13.3	6.7	0.
0.7-0.8	4.5	493.7	351.7	9971.1	9.1	18.2	0.
0.6-0.7	2.8	506.5	347.6	9657.8	21.2	3.0	0.
0.5-0.6	2.3	427.2	293.3	10787.8	5.3	15.8	0.
0.4-0.5	2.8	354.5	302.6	8038.3	7.0	4.7	0.
< 0.4	2.4	657.7	254.2	11283.4	7.4	7.4	3.7

3. Geographic Distribution of Households according to Level of Nutrition

Food Consumption over Requirement	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
> 2.0	11.0	0.	0.	11.0
1.4-2.0	7.7	0.	0.	7.7
1.1-1.4	11.0	0.	0.	11.0
0.9-1.1	11.8	0.	0.	11.8
0.8-0.9	5.5	0.	0.	5.5
0.7-0.8	8.1	0.	0.	8.1
0.6-0.7	12.1	0.	0.	12.1
0.5-0.6	7.0	0.	0.	7.0
0.4-0.5	15.8	0.	0.	15.8
< 0.4	9.9	0.	0.	9.9

4. Source of Calorie Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.738	85.5	0.1	3.1	0.3	2.7	1.4	0.0	6.5	0.2	0.2
1.4-2.0	0.696	76.8	0.2	4.3	0.6	3.8	2.0	0.1	11.6	0.4	0.3
1.1-1.4	0.712	73.0	1.8	5.1	0.6	4.2	2.6	0.1	11.8	0.7	0.3
0.9-1.1	0.767	69.3	0.2	5.5	0.7	6.3	3.0	0.1	14.1	0.3	0.4
0.8-0.9	0.787	69.1	0.2	5.7	0.4	5.9	3.0	0.1	14.9	0.2	0.4
0.7-0.8	0.815	68.7	0.2	8.1	0.6	6.2	1.9	0.1	13.6	0.3	0.3
0.6-0.7	0.787	65.8	0.8	7.5	0.9	6.5	3.8	0.1	14.0	0.3	0.3
0.5-0.6	0.791	63.6	0.6	9.9	1.0	7.1	2.9	0.1	14.1	0.2	0.5
0.4-0.5	0.699	58.2	0.6	12.5	1.0	8.5	3.8	0.1	14.4	0.4	0.5
< 0.4	0.690	51.6	0.1	13.5	1.1	9.0	5.1	0.2	18.5	0.4	0.6

5. Source of Protein Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.738	82.3	0.3	1.0	0.2	0.1	3.9	0.3	11.8	0.0	0.2
1.4-2.0	0.696	71.2	0.4	1.3	0.4	0.3	5.3	0.5	20.2	0.0	0.3
1.1-1.4	0.712	66.3	3.9	1.4	0.4	0.3	6.8	0.6	20.0	0.0	0.3
0.9-1.1	0.767	63.6	0.5	1.6	0.5	0.6	7.8	0.5	24.4	0.0	0.4
0.8-0.9	0.787	62.9	0.5	1.6	0.3	0.5	8.0	0.5	25.3	0.0	0.3
0.7-0.8	0.815	65.7	0.4	2.4	0.5	0.7	5.1	0.5	24.4	0.0	0.3
0.6-0.7	0.787	60.0	1.7	2.1	0.6	0.7	10.1	0.6	23.9	0.0	0.3
0.5-0.6	0.791	60.2	1.3	2.9	0.7	0.9	7.9	0.5	25.0	0.0	0.5
0.4-0.5	0.699	55.5	1.5	3.7	0.7	1.0	10.4	0.8	25.8	0.0	0.5
< 0.4	0.690	47.3	0.1	3.9	0.7	0.9	13.5	0.9	32.1	0.0	0.6

6. Source of Fat Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.738	64.7	0.1	0.2	0.1	0.1	7.6	0.1	25.7	1.3	0.1
1.4-2.0	0.696	48.7	0.1	0.2	0.1	0.2	8.9	0.2	38.4	2.8	0.3
1.1-1.4	0.712	45.0	0.5	0.3	0.1	0.2	11.3	0.2	37.8	4.4	0.3
0.9-1.1	0.767	49.6	0.1	0.3	0.1	0.3	12.4	0.2	43.5	2.1	0.4
0.8-0.9	0.787	39.9	0.1	0.3	0.1	0.3	12.4	0.2	45.1	1.3	0.3
0.7-0.8	0.815	43.3	0.1	0.4	0.1	0.4	8.3	0.2	45.1	1.8	0.3
0.6-0.7	0.787	38.3	0.2	0.4	0.2	0.4	15.7	0.2	42.5	1.9	0.3
0.5-0.6	0.791	39.0	0.2	0.5	0.2	0.5	12.6	0.2	45.0	1.2	0.6
0.4-0.5	0.699	34.2	0.2	0.6	0.2	0.5	16.0	0.3	45.0	2.4	0.5
< 0.4	0.690	26.0	0.0	0.6	0.2	0.4	18.9	0.3	50.8	2.3	0.6

7. Share of Food Expenditure according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.738	49.5	0.2	3.5	0.7	5.9	8.6	0.5	24.8	0.6	5.8
1.4-2.0	0.696	36.0	0.2	4.0	1.2	5.9	9.7	0.8	33.9	1.3	7.0
1.1-1.4	0.712	32.6	1.2	4.2	1.1	6.2	11.7	0.8	33.7	1.9	6.6
0.9-1.1	0.767	29.7	0.2	4.0	1.3	8.0	11.7	0.7	36.4	0.8	7.2
0.8-0.9	0.787	29.2	0.1	4.5	0.8	8.3	12.9	0.6	35.4	0.6	7.4
0.7-0.8	0.815	30.8	0.3	6.3	1.2	8.3	7.9	0.6	36.9	0.7	7.0
0.6-0.7	0.787	26.1	0.5	5.3	1.6	7.9	15.0	0.7	35.6	0.7	6.5
0.5-0.6	0.791	27.1	0.4	7.1	1.6	9.3	11.3	0.6	35.1	0.5	7.8
0.4-0.5	0.699	24.1	0.4	7.9	1.8	8.0	9.9	0.9	33.1	0.8	9.3
< 0.4	0.690	21.0	0.0	7.6	1.5	8.9	15.6	0.9	35.0	0.8	8.8

1. Average Energy Requirement and Food Consumption Pattern according to Level of Expenditure

Household Expend. per Caput	No. of Households	Average				
		Household Size	Requirement calories/cap/day	Consumption Protein grams/caput/day	Fats grams/caput/day	
- 250	54	10.06	2230.6	1045.9	27.7	15.6
- 500	115	8.34	2277.7	1621.7	45.2	27.2
- 1000	68	7.13	2245.2	2765.7	80.6	50.0
- 1500	19	4.79	2315.0	5317.7	149.6	86.2
> 1500	16	4.25	2334.7	8438.1	233.7	131.8
Total	272					
Average	45	7.89	2261.8	2107.3	59.2	35.2

2. Economic and Social Indicators according to Level of Expenditure

Household Expend. per Caput	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households				
					STANDARD 4	STANDARD 7-8	FORM 11 never attended school		
- 250	2.5	310.8	183.9	8617.7	7.4	3.7	1.9	87.0	0.
- 500	3.2	567.0	355.0	9809.8	12.2	10.4	1.7	75.7	0.
- 1000	4.5	846.4	663.0	11329.0	8.8	14.7	5.9	70.6	0.
- 1500	5.2	1950.5	1190.1	19005.3	15.8	26.3	5.3	52.6	0.
> 1500	4.2	2521.7	1959.9	14662.7	37.5	6.3	0.	56.3	0.

3. Geographic Distribution of Households according to Level of Expenditure

Household Expend. per Caput	Percentage Distribution of Households				
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western	
- 250	19.9	0.	0.	19.9	0.
- 500	42.3	0.	0.	42.3	0.
- 1000	25.0	0.	0.	25.0	0.
- 1500	7.0	0.	0.	7.0	0.
> 1500	5.9	0.	0.	5.9	0.

4. Source of Calorie Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.854	71.6	0.3	8.6	0.6	6.5	1.6	0.1	10.3	0.1	0.3
- 500	0.787	69.9	0.4	7.2	0.7	6.2	2.8	0.1	12.0	0.3	0.4
- 1000	0.710	71.6	0.7	5.0	0.6	4.7	2.9	0.1	13.8	0.4	0.3
- 1500	0.672	79.8	0.3	2.7	0.5	4.0	2.0	0.1	9.8	0.5	0.4
> 1500	0.656	76.6	0.4	7.3	0.5	2.9	2.5	0.1	9.0	0.4	0.3

5. Source of Protein Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.854	70.9	0.8	2.7	0.5	0.9	4.4	0.4	19.2	0.0	0.3
- 500	0.787	65.8	1.0	2.1	0.5	0.7	7.7	0.6	21.3	0.0	0.4
- 1000	0.710	64.5	1.6	1.4	0.4	0.4	7.6	0.5	23.4	0.0	0.3
- 1500	0.672	74.7	0.7	0.8	0.3	0.2	5.3	0.6	17.1	0.0	0.3
> 1500	0.656	73.0	0.9	2.2	0.4	0.1	6.7	0.4	16.1	0.0	0.2

6. Source of Fat Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.854	50.8	0.1	0.5	0.1	0.5	7.9	0.2	38.4	1.1	0.4
- 500	0.787	44.1	0.1	0.4	0.1	0.4	12.7	0.2	39.8	1.8	0.4
- 1000	0.710	42.0	0.2	0.3	0.1	0.2	12.1	0.2	42.4	2.3	0.3
- 1500	0.672	52.7	0.1	0.1	0.1	0.1	9.2	0.2	33.4	3.7	0.3
> 1500	0.656	52.0	0.1	0.4	0.1	0.1	11.8	0.2	32.1	3.1	0.2

7. Share of Food Expenditure according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.854	35.5	0.3	7.6	1.4	9.4	7.5	0.5	30.0	0.4	7.3
- 500	0.787	30.6	0.3	5.6	1.4	8.2	12.0	0.8	32.8	0.7	7.7
- 1000	0.710	30.9	0.5	4.0	1.0	6.6	12.4	0.7	36.8	1.0	6.0
- 1500	0.672	40.2	0.2	2.3	1.0	6.9	9.5	0.9	28.4	1.6	8.9
> 1500	0.656	37.2	0.5	6.5	1.1	5.2	11.9	0.6	29.1	1.3	6.6

1. Average Energy Requirement and Food Consumption Pattern according to Size of Household

Household Size	No. of Households	Average			
		Household Size	Requirement calories/cap/day	Consumption grams/caput/day	Fats grams/caput/day
1 M	8	1.00	2733.1	12195.4	335.4
2 - 3	21	2.38	2397.2	4330.2	119.6
4 - 5	47	4.55	2270.5	3123.5	88.6
6 - 7	67	6.49	2268.6	2033.3	56.3
8 - 10	70	8.97	2266.7	1901.9	34.9
11 - 15	45	12.42	2256.4	2148.3	32.5
16+ M	14	18.00	2200.7	1031.5	60.2
Total	272				29.6
Average	39	7.89	2261.8	2107.3	59.2

2. Economic and Social Indicators according to Size of Household

Household Size	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					4 and below	7-8	never attended school
1 M	4.5	4482.9	1802.4	3777.9	12.5	12.5	75.0
2 - 3	2.5	1948.5	989.6	5721.1	9.5	14.3	76.2
4 - 5	2.2	771.6	687.3	7294.5	17.0	12.8	68.1
6 - 7	3.4	790.5	470.5	10425.3	6.0	9.0	80.6
8 - 10	3.8	609.2	411.1	11378.2	10.0	14.3	72.9
11 - 15	4.9	644.3	452.1	15279.3	20.0	6.7	68.9
16+ M	4.9	345.1	304.9	20272.1	14.3	7.1	78.6

3. Geographic Distribution of Households according to Size of Household

Household Size	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
1 M	2.9	0.	0.	2.9
2 - 3	7.7	0.	0.	7.7
4 - 5	17.3	0.	0.	17.3
6 - 7	24.6	0.	0.	24.6
8 - 10	25.7	0.	0.	25.7
11 - 15	16.5	0.	0.	16.5
16+ M	5.1	0.	0.	5.1

4. Source of Calorie Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.860	83.6	0.9	4.4	0.3	2.8	1.9	0.1	5.8	0.2	0.2
2 - 3	0.773	70.0	0.5	8.3	0.6	5.5	2.9	0.1	11.1	0.6	0.4
4 - 5	0.749	73.7	1.2	5.2	0.7	5.0	2.8	0.1	10.5	0.4	0.4
6 - 7	0.758	66.7	0.2	9.8	0.7	5.6	2.5	0.1	13.7	0.3	0.4
8 - 10	0.756	72.2	0.3	6.3	0.6	5.0	2.9	0.1	11.9	0.4	0.3
11 - 15	0.727	76.3	0.5	4.6	0.5	4.8	2.1	0.1	10.7	0.3	0.3
16+ M	0.612	71.1	0.3	3.2	0.6	6.9	2.4	0.1	14.7	0.3	0.4

5. Source of Protein Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.860	80.1	2.1	1.3	0.2	0.1	5.2	0.3	10.4	0.0	0.2
2 - 3	0.773	66.7	1.1	2.4	0.4	0.3	8.0	0.7	19.9	0.0	0.4
4 - 5	0.749	68.2	2.8	1.5	0.4	0.3	7.5	0.5	18.3	0.0	0.3
6 - 7	0.758	63.4	0.5	2.9	0.5	0.5	6.9	0.6	24.4	0.0	0.4
8 - 10	0.756	67.2	0.7	1.9	0.4	0.5	7.8	0.5	20.7	0.0	0.3
11 - 15	0.727	71.5	1.1	1.3	0.4	0.5	5.8	0.4	18.8	0.0	0.2
16+ M	0.612	64.7	0.7	0.9	0.4	0.8	6.2	0.5	25.3	0.0	0.4

6. Source of Fat Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.860	64.3	0.3	0.3	0.1	0.1	9.9	0.2	23.0	1.7	0.3
2 - 3	0.773	44.3	0.1	0.5	0.1	0.2	13.1	0.3	37.0	4.0	0.4
4 - 5	0.749	47.3	0.4	0.3	0.1	0.2	12.8	0.2	35.3	3.0	0.4
6 - 7	0.758	41.1	0.1	0.5	0.1	0.3	11.1	0.2	44.4	1.7	0.4
8 - 10	0.756	45.0	0.1	0.3	0.1	0.3	12.7	0.2	38.6	2.3	0.3
11 - 15	0.727	50.3	0.1	0.3	0.1	0.3	9.9	0.2	36.8	1.8	0.2
16+ M	0.612	41.4	0.1	0.2	0.1	0.4	9.9	0.2	45.5	1.9	0.3

7. Share of Food Expenditure according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.860	47.4	0.8	4.6	0.7	5.7	11.1	0.6	22.2	0.7	6.2
2 - 3	0.773	31.4	0.3	6.2	1.1	8.1	12.2	0.9	29.8	1.5	8.5
4 - 5	0.749	33.1	0.9	4.2	1.3	7.6	12.5	0.7	30.4	1.2	8.1
6 - 7	0.758	28.7	0.1	7.5	1.4	7.6	10.3	0.7	35.6	0.7	7.3
8 - 10	0.756	32.2	0.3	5.3	1.2	6.9	12.9	0.8	32.9	1.0	6.6
11 - 15	0.727	37.1	0.4	4.0	1.1	7.1	10.2	0.6	32.3	0.8	6.4
16+ M	0.612	32.0	0.2	2.4	1.1	8.2	9.5	0.7	36.4	0.7	8.7





## **Western Province**

1. Average Energy Requirement and Food Consumption Pattern according to Nutrition Level

Food Consumption over Requirement	No. of Households	Average			
		Household Size	Requirement calories/cap/day	Consumption grams/cap/day	Fats
> 2.0	17	4.35	2181.9	6169.5	162.5
1.4-2.0	24	5.63	2219.2	3831.7	104.3
1.1-1.4	28	7.21	2258.8	2871.3	78.3
0.9-1.1	33	6.70	2237.3	2257.1	60.6
0.8-0.9	17	8.71	2211.4	1885.0	52.1
0.7-0.8	24	9.17	2234.2	1689.2	45.1
0.6-0.7	30	7.37	2305.1	1498.3	39.6
0.5-0.6	28	8.04	2276.7	1236.0	33.2
0.4-0.5	32	7.88	2248.0	1003.3	27.5
< 0.4	38	10.26	2248.3	661.2	17.9
Total Average	271	7.70	2248.8	1831.0	49.4
					24.9

2. Economic and Social Indicators according to Level of Nutrition

Food Consumption over Requirement	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					STANDARD 4	STANDARD 7-8	FORM 11 never attended school else
> 2.0	2.7	745.6	960.7	4160.1	0.	11.8	5.9
1.4-2.0	3.9	885.9	978.7	8200.6	12.5	12.5	8.3
1.1-1.4	2.5	375.3	585.1	5216.2	28.6	10.7	0.
0.9-1.1	3.5	404.9	504.4	4172.1	12.1	12.1	3.0
0.8-0.9	3.8	322.2	462.2	4281.5	29.4	5.9	0.
0.7-0.8	3.5	255.6	368.1	6127.9	29.2	12.5	0.
0.6-0.7	2.7	321.9	328.6	4495.3	26.7	13.3	0.
0.5-0.6	2.6	311.4	290.7	4225.5	21.4	7.1	0.
0.4-0.5	3.2	287.2	292.4	5271.7	18.8	9.4	0.
< 0.4	2.4	182.1	188.7	2936.6	28.9	15.8	0.

3. Geographic Distribution of Households according to Level of Nutrition

Food Consumption over Requirement	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
> 2.0	6.3	0.	0.	0.
1.4-2.0	8.9	0.	0.	0.
1.1-1.4	10.3	0.	0.	0.
0.9-1.1	12.2	0.	0.	0.
0.8-0.9	6.3	0.	0.	0.
0.7-0.8	8.9	0.	0.	0.
0.6-0.7	11.1	0.	0.	0.
0.5-0.6	10.3	0.	0.	0.
0.4-0.5	11.8	0.	0.	0.
< 0.4	14.0	0.	0.	0.

4. Source of Calorie Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.689	81.1	2.3	4.9	1.3	5.7	2.3	0.1	1.6	0.5	0.3
1.4-2.0	0.616	77.0	2.5	5.1	1.3	5.9	3.9	0.1	2.6	1.2	0.4
1.1-1.4	0.723	77.9	3.0	4.6	1.4	6.0	3.7	0.1	1.7	1.1	0.5
0.9-1.1	0.711	73.2	2.5	10.9	1.8	4.3	4.2	0.1	1.9	0.7	0.4
0.8-0.9	0.634	73.7	3.3	8.4	1.5	5.5	4.9	0.1	1.6	0.6	0.5
0.7-0.8	0.777	69.8	2.6	8.5	1.8	8.8	4.8	0.1	2.5	0.8	0.4
0.6-0.7	0.764	70.7	1.9	10.5	2.3	6.8	5.0	0.1	1.9	0.5	0.4
0.5-0.6	0.733	68.1	1.7	10.3	2.5	7.0	5.3	0.1	3.8	0.6	0.5
0.4-0.5	0.691	61.4	4.4	11.2	1.8	9.1	5.7	0.2	4.2	1.2	0.8
< 0.4	0.726	59.2	1.6	14.5	4.2	8.4	8.4	0.2	1.9	0.9	0.6

5. Source of Protein Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.689	80.9	5.6	1.5	0.9	0.6	6.7	0.4	3.0	0.0	0.3
1.4-2.0	0.616	74.7	5.9	1.5	0.9	0.5	10.7	0.5	4.7	0.0	0.4
1.1-1.4	0.723	75.3	7.2	1.4	1.0	0.7	10.3	0.5	3.1	0.0	0.5
0.9-1.1	0.711	72.5	6.1	3.3	1.0	0.6	11.8	0.6	3.5	0.0	0.4
0.8-0.9	0.634	70.6	7.8	2.5	1.0	0.7	13.4	0.6	2.9	0.0	0.5
0.7-0.8	0.777	69.3	6.2	2.6	1.3	1.2	13.6	0.7	4.7	0.0	0.4
0.6-0.7	0.764	70.3	4.6	3.2	1.7	1.0	14.4	0.8	3.6	0.0	0.4
0.5-0.6	0.733	66.7	4.1	3.1	1.9	1.0	15.0	0.7	7.1	0.0	0.5
0.4-0.5	0.691	58.8	10.4	3.3	1.3	1.1	15.7	0.9	7.6	0.0	0.8
< 0.4	0.726	58.4	3.8	4.4	3.1	1.2	23.5	1.3	3.7	0.0	0.6

6. Source of Fat Intake according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.689	70.7	1.0	0.4	0.3	0.5	14.4	0.2	7.1	4.8	0.6
1.4-2.0	0.616	57.5	0.9	0.3	0.3	0.3	20.6	0.3	9.9	9.3	0.6
1.1-1.4	0.723	60.7	1.1	0.3	0.3	0.5	20.4	0.2	6.7	9.1	0.6
0.9-1.1	0.711	58.6	1.0	0.8	0.4	0.4	24.2	0.3	8.0	5.9	0.5
0.8-0.9	0.634	57.4	1.2	0.6	0.6	0.5	27.3	0.3	6.5	5.1	0.9
0.7-0.8	0.777	53.6	0.9	0.6	0.4	0.8	26.5	0.4	10.1	6.3	0.5
0.6-0.7	0.764	55.4	0.7	0.7	0.5	0.7	28.7	0.4	7.7	4.5	0.6
0.5-0.6	0.733	48.9	0.6	0.7	0.6	0.6	28.0	0.3	14.6	5.1	0.7
0.4-0.5	0.691	41.9	1.5	0.7	0.4	0.7	28.7	0.4	15.4	9.3	1.1
< 0.4	0.726	40.2	0.5	0.9	0.9	0.7	41.8	0.6	6.8	6.8	0.9

7. Share of Food Expenditure according to Level of Nutrition

Food Consumption over Requirement	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
> 2.0	0.689	39.5	4.0	6.1	3.9	12.2	16.5	0.8	7.7	2.1	7.3
1.4-2.0	0.616	38.4	3.0	4.3	2.7	9.0	18.5	0.8	10.5	3.4	9.5
1.1-1.4	0.723	38.0	3.7	4.1	3.1	9.1	19.1	0.7	7.3	3.4	11.4
0.9-1.1	0.711	39.5	3.3	9.1	3.7	5.9	19.6	0.8	7.9	2.0	8.3
0.8-0.9	0.634	35.8	3.7	7.2	3.1	7.5	23.8	0.8	7.2	1.8	9.2
0.7-0.8	0.777	33.6	2.8	6.6	3.5	11.3	21.4	0.9	9.8	2.0	7.9
0.6-0.7	0.764	36.8	2.7	8.3	4.5	8.5	22.6	1.1	7.1	1.4	7.1
0.5-0.6	0.733	33.0	1.9	8.0	4.8	8.7	22.9	0.9	10.1	1.7	8.0
0.4-0.5	0.691	26.7	4.2	7.4	2.9	9.9	21.2	1.0	11.4	2.8	12.4
< 0.4	0.726	25.3	1.5	9.3	6.8	8.5	30.6	1.4	5.6	2.0	9.0

1. Average Energy Requirement and Food Consumption Pattern according to Level of Expenditure

Household Expend. per Caput	No. of Households	A v e r a g e			
		Household Size	Requirement calories/cap/day	Consumption grams/caput/day	Fats
- 250	69	8.41	2210.9	969.4	25.1
- 500	114	8.56	2256.3	1654.7	44.7
- 1000	65	6.51	2278.8	2825.9	76.6
- 1500	17	5.18	2265.6	4067.9	113.3
> 1500	6	3.50	2275.8	4406.9	121.0
Total	271				
Average	45	7.70	2248.8	1831.0	49.4
					24.9

2. Economic and Social Indicators according to Level of Expenditure

Household Expend. per Caput	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					STANDARD FORM 7-8	and over	never attended school
- 250	2.5	201.5	177.5	3311.5	21.7	11.6	2.9
- 500	3.0	302.9	341.9	4500.5	24.6	11.4	0.9
- 1000	3.6	434.8	671.3	5517.2	16.9	9.2	4.6
- 1500	3.1	1148.4	1180.9	9596.9	23.5	23.5	5.9
> 1500	3.7	1481.3	2050.5	6878.3	0.	0.	16.7
							83.3
							0.

3. Geographic Distribution of Households according to Level of Expenditure

Household Expend. per Caput	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
- 250	25.5	0.	0.	0.
- 500	42.1	0.	0.	25.5
- 1000	24.0	0.	0.	42.1
- 1500	6.3	0.	0.	24.0
> 1500	2.2	0.	0.	6.3
				2.2

4. Source of Calorie Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.819	70.3	2.4	12.6	2.2	5.9	4.1	0.1	1.5	0.5	0.3
- 500	0.756	73.4	2.4	8.0	1.6	6.7	4.5	0.1	2.3	0.6	0.4
- 1000	0.660	74.8	2.5	7.2	1.7	5.8	4.3	0.1	2.1	0.9	0.5
- 1500	0.634	70.0	3.7	5.8	2.1	7.4	5.1	0.1	3.4	1.8	0.5
> 1500	0.451	61.1	3.4	7.2	5.0	11.4	7.1	0.2	2.7	1.4	0.4

5. Source of Protein Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.819	71.5	5.9	4.0	1.7	0.9	12.0	0.7	2.9	0.0	0.4
- 500	0.756	71.8	5.7	2.4	1.2	0.9	12.7	0.7	4.3	0.0	0.4
- 1000	0.660	72.9	6.1	2.2	1.2	0.7	11.9	0.6	4.0	0.0	0.5
- 1500	0.634	66.5	8.5	1.7	1.5	0.6	13.9	0.7	6.2	0.0	0.5
> 1500	0.451	59.2	8.1	2.2	3.5	0.7	19.7	1.2	5.2	0.0	0.4

6. Source of Fat Intake according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.819	58.9	1.0	0.9	0.6	0.6	25.4	0.3	6.6	5.0	0.6
- 500	0.756	57.1	0.9	0.5	0.4	0.6	25.2	0.3	9.3	5.0	0.6
- 1000	0.660	57.1	0.9	0.5	0.4	0.5	23.3	0.3	8.6	7.6	0.9
- 1500	0.634	47.2	1.2	0.3	0.4	0.3	24.6	0.3	11.9	13.2	0.5
> 1500	0.451	40.9	1.1	0.4	1.0	0.4	35.1	0.5	9.5	10.5	0.4

7. Share of Food Expenditure according to Level of Expenditure

Household Expend. per Caput	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
- 250	0.819	36.7	2.9	11.2	4.8	8.3	20.6	1.0	6.0	1.7	6.9
- 500	0.756	36.1	3.0	6.8	3.4	9.2	21.7	0.9	8.4	1.8	8.7
- 1000	0.660	36.2	3.2	6.1	3.5	8.1	20.4	0.8	8.5	2.7	10.5
- 1500	0.634	29.9	3.6	4.2	3.7	10.0	21.2	0.9	12.1	4.5	10.0
> 1500	0.451	25.1	2.8	4.6	7.6	14.1	26.3	1.3	8.7	3.0	6.4

1. Average Energy Requirement and Food Consumption Pattern according to Size of Household

Household Size	No. of Households	Average			
		Household Size	Requirement calories/cap/day	Consumption grams/caput/day	Fats grams/caput/day
1 M	6	1.00	2875.0	5818.1	153.9
2 - 3	33	2.39	2376.8	2961.4	79.3
4 - 5	46	4.70	2263.0	1957.8	52.3
6 - 7	59	6.44	2274.5	2083.8	55.5
8 - 10	69	8.86	2242.2	1877.5	49.9
11 - 15	46	12.28	2229.2	1580.2	43.7
16+ M	12	19.25	2198.9	1297.0	36.0
Total	271				
Average	39	7.70	2248.8	1831.0	49.4
					24.9

2. Economic and Social Indicators according to Size of Household

Household Size	Average Size of Holding (hectares)	Average Income per caput	Average Expenditure per caput	Mean Value of Assets per Holding	Percentage of Head of Households		
					STANDARD 7-8	FORM II and over	never attended school else
1 M	3.1	1317.2	1327.0	3186.0	0.1	16.7	83.3
2 - 3	2.5	608.5	643.8	2030.2	9.1	3.0	87.9
4 - 5	2.7	394.4	438.0	2906.2	15.2	2.2	71.7
6 - 7	2.4	410.6	438.1	3317.1	22.0	1.7	62.7
8 - 10	3.4	289.5	433.3	7275.3	29.0	4.3	58.0
11 - 15	3.9	306.1	371.1	6447.6	28.3	19.6	47.8
16+ M	3.4	352.9	317.1	7541.4	16.7	0.1	66.7

3. Geographic Distribution of Households according to Size of Household

Household Size	Percentage Distribution of Households			
	Total Rural	Central Coast	Eastern Nyanza	Rift Valley Western
1 M	2.2	0.0	0.0	0.0
2 - 3	12.2	0.0	0.0	2.2
4 - 5	17.0	0.0	0.0	12.2
6 - 7	21.8	0.0	0.0	17.0
8 - 10	25.5	0.0	0.0	21.8
11 - 15	17.0	0.0	0.0	25.5
16+ M	4.4	0.0	0.0	17.0
				4.4

4. Source of Calorie Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Calorie Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.768	72.9	3.7	5.9	2.2	9.1	4.1	0.1	0.5	0.8	0.6
2 - 3	0.807	72.0	1.7	9.5	2.9	5.7	5.2	0.2	1.5	0.7	0.6
4 - 5	0.714	72.7	2.6	9.4	2.0	5.6	4.4	0.1	1.7	1.1	0.5
6 - 7	0.734	72.3	2.9	9.9	1.7	6.1	4.1	0.1	1.9	0.8	0.4
8 - 10	0.677	72.0	2.4	8.5	1.7	7.3	4.4	0.1	2.1	0.9	0.4
11 - 15	0.693	74.4	2.5	6.5	1.8	5.8	4.9	0.1	2.8	0.7	0.5
16+ M	0.652	72.7	3.2	5.0	1.8	7.8	4.5	0.1	3.5	0.9	0.5

5. Source of Protein Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Protein Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.768	72.9	9.1	1.8	1.6	0.4	11.7	0.6	1.2	0.0	0.6
2 - 3	0.807	71.2	4.2	2.9	2.1	0.5	14.7	1.0	2.8	0.0	0.6
4 - 5	0.714	71.9	6.2	2.9	1.5	0.7	12.4	0.7	3.2	0.0	0.5
6 - 7	0.734	71.8	7.1	3.0	1.2	0.8	11.5	0.6	3.5	0.0	0.4
8 - 10	0.677	71.6	5.8	2.6	1.3	0.9	12.7	0.7	4.1	0.0	0.4
11 - 15	0.693	70.8	5.9	1.9	1.3	0.8	13.2	0.6	5.1	0.0	0.5
16+ M	0.652	69.0	7.5	1.5	1.3	1.0	12.4	0.6	6.3	0.0	0.5

6. Source of Fat Intake according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Fat Intake									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.768	60.8	1.5	0.4	0.6	0.3	25.2	0.3	2.0	7.7	1.0
2 - 3	0.807	55.4	0.6	0.6	0.7	0.3	29.1	0.5	5.8	6.1	0.8
4 - 5	0.714	56.0	1.0	0.6	0.5	0.5	24.5	0.3	6.9	8.9	0.8
6 - 7	0.734	58.3	1.1	0.7	0.4	0.6	23.5	0.3	7.8	6.7	0.6
8 - 10	0.677	55.8	0.9	0.6	0.4	0.6	24.8	0.3	8.7	7.3	0.6
11 - 15	0.693	54.7	0.9	0.4	0.4	0.5	25.5	0.3	10.8	5.8	0.7
16+ M	0.652	53.1	1.1	0.3	0.4	0.7	23.7	0.3	13.2	6.7	0.6

7. Source of Food Expenditure according to Size of Household

Household Size	Share of Food Expend.	Percentage Distribution of Food Expenditure									
		Grains	Beans	Roots	Frt+Veg	Sugar	Meat+Egg	Fish	Milk	Oil+Fat	Other
1 M	0.768	39.4	3.7	4.5	4.1	13.9	18.0	0.7	2.6	2.1	11.0
2 - 3	0.807	34.6	2.1	7.2	5.4	8.0	22.7	1.2	5.2	1.9	11.7
4 - 5	0.714	35.1	3.1	7.8	4.1	7.8	20.7	0.9	7.1	3.0	10.3
6 - 7	0.734	37.0	3.8	8.5	3.6	8.6	19.9	0.8	8.1	2.3	7.4
8 - 10	0.677	33.7	2.9	7.3	3.6	10.5	21.5	0.9	8.4	2.5	8.8
11 - 15	0.693	36.5	2.8	5.3	3.6	7.6	22.1	0.9	9.9	2.1	9.2
16+ M	0.652	32.0	3.7	4.2	3.7	10.5	21.5	0.9	11.0	2.5	10.2





## **ANNEX 2**

### **Data Cross-Tabulation**

#### **Rural Kenya**

#### **Tables A2.1 to A2.15**

Table A2.1

CROSSTABULATION of Variable 7 ( CONS/REQ ) versus Variable 12 ( EXP/CAP )

Nr of Observations : 1634

EXP/CAP CONS/REQ	- 250	- 500	- 1000	- 1500	> 1500	Total
< 0.40	6.9	2.2	0.2	0.	0.	9.3
0.4-0.5	4.5	4.0	0.7	0.	0.	9.2
0.5-0.6	3.1	4.4	0.6	0.	0.	8.1
0.6-0.7	2.4	6.5	1.5	0.2	0.	10.6
0.7-0.8	1.4	6.7	1.8	0.2	0.1	10.2
0.8-0.9	0.7	5.1	2.6	0.1	0.	8.6
0.9-1.1	0.4	5.4	6.4	0.6	0.2	12.9
1.1-1.4	0.	3.9	7.1	1.2	0.2	12.5
1.4-2.0	0.	0.9	6.4	2.3	0.9	10.4
> 2.00	0.1	0.1	2.5	2.4	3.2	8.3
Total	19.5	39.2	29.7	7.0	4.6	100.0

After ROW - Normalization

EXP/CAP CONS/REQ	- 250	- 500	- 1000	- 1500	> 1500	Total
< 0.40	74.3	23.7	2.0	0.	0.	9.3
0.4-0.5	48.7	43.3	8.0	0.	0.	9.2
0.5-0.6	38.6	54.5	6.8	0.	0.	8.1
0.6-0.7	22.5	61.3	14.5	1.7	0.	10.6
0.7-0.8	13.9	66.3	17.5	1.8	0.6	10.2
0.8-0.9	8.6	60.0	30.7	0.7	0.	8.6
0.9-1.1	2.8	41.7	49.3	4.7	1.4	12.9
1.1-1.4	0.	31.4	56.9	9.8	2.0	12.5
1.4-2.0	0.	8.2	61.2	22.4	8.2	10.4
> 2.00	0.7	1.5	30.1	28.7	39.0	8.3
Total	19.5	39.2	29.7	7.0	4.6	100.0

After COLUMN - Normalization

EXP/CAP CONS/REQ	- 250	- 500	- 1000	- 1500	> 1500	Total
< 0.40	35.5	5.6	0.6	0.	0.	9.3
0.4-0.5	23.0	10.1	2.5	0.	0.	9.2
0.5-0.6	16.0	11.2	1.9	0.	0.	8.1
0.6-0.7	12.3	16.5	5.1	2.6	0.	10.6
0.7-0.8	7.2	17.2	6.0	2.6	1.3	10.2
0.8-0.9	3.8	13.1	8.8	0.9	0.	8.6
0.9-1.1	1.9	13.7	21.4	8.8	4.0	12.9
1.1-1.4	0.	10.0	23.9	17.5	5.3	12.5
1.4-2.0	0.	2.2	21.4	33.3	18.7	10.4
> 2.00	0.3	0.3	8.4	34.2	70.7	8.3
Total	19.5	39.2	29.7	7.0	4.6	100.0

Table A2.2

CROSSTABULATION of Variable 7 ( CONS/REQ ) versus Variable 13 ( HHSIZE )

Nr of Observations : 1634

HHSIZE CONS/REQ	1 M	2 - 3 M	4 - 5 M	6 - 7 M	8 -10 M	11 -15 M	16+ M	Total
< 0.40	0.	0.2	0.8	1.7	3.2	2.1	1.3	9.3
0.4-0.5	0.1	0.6	1.1	2.2	2.6	1.9	0.6	9.2
0.5-0.6	0.	0.4	1.3	1.9	2.4	1.5	0.6	8.1
0.6-0.7	0.1	0.5	2.0	2.3	3.1	1.9	0.6	10.6
0.7-0.8	0.1	0.6	1.7	2.1	3.1	1.8	0.8	10.2
0.8-0.9	0.1	0.7	1.5	2.3	1.9	1.7	0.4	8.6
0.9-1.1	0.1	1.0	3.2	3.6	3.1	1.3	0.5	12.9
1.1-1.4	0.3	1.8	3.4	3.2	2.5	1.2	0.1	12.5
1.4-2.0	0.6	2.4	2.4	2.2	1.7	1.0	0.1	10.4
> 2.00	1.8	2.4	1.1	1.5	0.9	0.6	0.1	8.3
Total	3.3	10.6	18.5	23.1	24.6	14.8	5.1	100.0

After ROW - Normalization

HHSIZE CONS/REQ	1 M	2 - 3 M	4 - 5 M	6 - 7 M	8 -10 M	11 -15 M	16+ M	Total
< 0.40	0.	2.6	8.6	18.4	34.2	22.4	13.8	9.3
0.4-0.5	1.3	6.7	12.0	24.0	28.7	20.7	6.7	9.2
0.5-0.6	0.	4.5	15.9	23.5	30.3	18.2	7.6	8.1
0.6-0.7	1.2	4.6	19.1	22.0	29.5	17.9	5.8	10.6
0.7-0.8	1.2	6.0	16.3	21.1	30.1	17.5	7.8	10.2
0.8-0.9	1.4	7.9	17.9	27.1	22.1	19.3	4.3	8.6
0.9-1.1	0.9	8.1	25.1	28.0	24.2	10.0	3.8	12.9
1.1-1.4	2.5	14.2	27.0	25.5	20.1	9.8	1.0	12.5
1.4-2.0	5.3	23.5	22.9	21.2	16.5	9.4	1.2	10.4
> 2.00	22.1	28.7	13.2	17.6	11.0	6.6	0.7	8.3
Total	3.3	10.6	18.5	23.1	24.6	14.8	5.1	100.0

After COLUMN - Normalization

HHSIZE CONS/REQ	1 M	2 - 3 M	4 - 5 M	6 - 7 M	8 -10 M	11 -15 M	16+ M	Total
< 0.40	0.	2.3	4.3	7.4	12.9	14.0	25.3	9.3
0.4-0.5	3.7	5.7	6.0	9.5	10.7	12.8	12.0	9.2
0.5-0.6	0.	3.4	7.0	8.2	10.0	9.9	12.0	8.1
0.6-0.7	3.7	4.6	10.9	10.1	12.7	12.8	12.0	10.6
0.7-0.8	3.7	5.7	8.9	9.3	12.4	12.0	15.7	10.2
0.8-0.9	3.7	6.3	8.3	10.1	7.7	11.2	7.2	8.6
0.9-1.1	3.7	9.8	17.5	15.6	12.7	8.7	9.6	12.9
1.1-1.4	9.3	16.7	18.2	13.8	10.2	8.3	2.4	12.5
1.4-2.0	16.7	23.0	12.9	9.5	7.0	6.6	2.4	10.4
> 2.00	55.6	22.4	6.0	6.4	3.7	3.7	1.2	8.3
Total	3.3	10.6	18.5	23.1	24.6	14.8	5.1	100.0

Table A2.3

CROSSTABULATION of Variable 7 ( CONS/REQ ) versus Variable 14 ( FRMSIZE )

Nr of Observations : 1634

FRMSIZE CONS/REQ	<0.5 HA	0.5-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-8.0	>8.0 HA	Total
< 0.40	1.8	1.7	1.9	1.7	0.6	0.2	1.0	0.4	9.3
0.4-0.5	1.8	1.2	2.3	1.0	1.0	0.6	0.4	0.7	9.2
0.5-0.6	1.1	1.2	2.1	1.3	0.9	0.4	0.5	0.5	8.1
0.6-0.7	1.5	2.1	2.1	1.5	1.6	0.6	0.7	0.6	10.6
0.7-0.8	1.4	1.6	2.0	1.5	0.7	1.0	1.0	0.9	10.2
0.8-0.9	1.3	1.1	1.7	1.8	0.8	0.4	0.9	0.7	8.6
0.9-1.1	1.5	2.0	3.1	1.7	0.9	0.8	1.6	1.4	12.9
1.1-1.4	1.3	1.7	2.6	2.1	1.3	1.2	1.3	0.9	12.5
1.4-2.0	1.8	1.7	2.0	1.4	1.0	0.9	1.0	0.7	10.4
> 2.00	0.9	1.3	2.0	1.0	0.9	0.6	1.0	0.6	8.3
Total	14.4	15.6	21.8	15.1	9.7	6.5	9.3	7.4	100.0

After ROW - Normalization

FRMSIZE CONS/REQ	<0.5 HA	0.5-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-8.0	>8.0 HA	Total
< 0.40	19.7	18.4	20.4	18.4	5.9	2.0	10.5	4.6	9.3
0.4-0.5	20.0	13.3	25.3	11.3	10.7	6.7	4.7	8.0	9.2
0.5-0.6	13.6	15.2	26.5	15.9	11.4	5.3	6.1	6.1	8.1
0.6-0.7	13.9	19.7	19.7	14.5	15.0	5.2	6.4	5.8	10.6
0.7-0.8	13.9	15.7	19.3	15.1	7.2	10.2	9.6	9.0	10.2
0.8-0.9	15.0	12.9	20.0	20.7	9.3	4.3	10.0	7.9	8.6
0.9-1.1	11.4	15.6	23.7	12.8	7.1	6.2	12.3	10.9	12.9
1.1-1.4	10.8	13.7	21.1	17.2	10.3	9.3	10.8	6.9	12.5
1.4-2.0	17.1	15.9	19.4	13.5	10.0	8.2	9.4	6.5	10.4
> 2.00	11.0	15.4	24.3	12.5	11.0	6.6	11.8	7.4	8.3
Total	14.4	15.6	21.8	15.1	9.7	6.5	9.3	7.4	100.0

After COLUMN - Normalization

FRMSIZE CONS/REQ	<0.5 HA	0.5-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-8.0	>8.0 HA	Total
< 0.40	12.7	11.0	8.7	11.3	5.7	2.8	10.5	5.8	9.3
0.4-0.5	12.7	7.8	10.6	6.9	10.1	9.3	4.6	9.9	9.2
0.5-0.6	7.6	7.8	9.8	8.5	9.4	6.5	5.3	6.6	8.1
0.6-0.7	10.2	13.3	9.5	10.1	16.4	8.4	7.2	8.3	10.6
0.7-0.8	9.7	10.2	9.0	10.1	7.5	15.9	10.5	12.4	10.2
0.8-0.9	8.9	7.1	7.8	11.7	8.2	5.6	9.2	9.1	8.6
0.9-1.1	10.2	12.9	14.0	10.9	9.4	12.1	17.1	19.0	12.9
1.1-1.4	9.3	11.0	12.0	14.2	13.2	17.8	14.5	11.6	12.5
1.4-2.0	12.3	10.6	9.2	9.3	10.7	13.1	10.5	9.1	10.4
> 2.00	6.4	8.2	9.2	6.9	9.4	8.4	10.5	8.3	8.3
Total	14.4	15.6	21.8	15.1	9.7	6.5	9.3	7.4	100.0

Table A2.4

CROSSTABULATION of Variable 7 ( CONS/REQ ) versus Variable 15 ( SHOWNC )

Nr of Observations : 1634

SHOWNC CONS/REQ	0.0-0.2	0.2-0.4	0.4-0.6	0.6-0.8	0.8-1.0	Total
< 0.40	2.0	1.8	1.9	2.3	1.4	9.3
0.4-0.5	1.2	1.8	2.4	2.1	1.5	9.2
0.5-0.6	1.6	1.3	1.9	2.0	1.3	8.1
0.6-0.7	1.8	1.7	2.6	2.1	2.4	10.6
0.7-0.8	1.5	1.7	2.3	2.2	2.5	10.2
0.8-0.9	0.8	1.3	2.0	2.4	2.0	8.6
0.9-1.1	1.9	3.0	2.1	3.2	2.6	12.9
1.1-1.4	1.6	1.3	2.6	2.9	4.0	12.5
1.4-2.0	1.7	1.3	1.5	2.4	3.5	10.4
> 2.00	1.0	0.9	1.0	1.3	4.0	8.3
Total	15.1	16.1	20.3	23.1	25.3	100.0

After ROW - Normalization

SHOWNC CONS/REQ	0.0-0.2	0.2-0.4	0.4-0.6	0.6-0.8	0.8-1.0	Total
< 0.40	21.1	19.1	20.4	24.3	15.1	9.3
0.4-0.5	13.3	20.0	26.7	23.3	16.7	9.2
0.5-0.6	19.7	15.9	23.5	25.0	15.9	8.1
0.6-0.7	17.3	15.6	24.3	20.2	22.5	10.6
0.7-0.8	15.1	16.3	22.3	21.7	24.7	10.2
0.8-0.9	9.3	15.7	22.9	28.6	23.6	8.6
0.9-1.1	14.7	23.2	16.6	25.1	20.4	12.9
1.1-1.4	12.7	10.8	21.1	23.0	32.4	12.5
1.4-2.0	15.9	12.4	14.1	23.5	34.1	10.4
> 2.00	12.5	11.0	12.5	16.2	47.8	8.3
Total	15.1	16.1	20.3	23.1	25.3	100.0

After COLUMN - Normalization

SHOWNC CONS/REQ	0.0-0.2	0.2-0.4	0.4-0.6	0.6-0.8	0.8-1.0	Total
< 0.40	13.0	11.0	9.3	9.8	5.6	9.3
0.4-0.5	8.1	11.4	12.0	9.3	6.0	9.2
0.5-0.6	10.5	8.0	9.3	8.7	5.1	8.1
0.6-0.7	12.1	10.3	12.7	9.3	9.4	10.6
0.7-0.8	10.1	10.3	11.1	9.5	9.9	10.2
0.8-0.9	5.3	8.4	9.6	10.6	8.0	8.6
0.9-1.1	12.6	18.6	10.5	14.0	10.4	12.9
1.1-1.4	10.5	8.4	13.0	12.4	15.9	12.5
1.4-2.0	10.9	8.0	7.2	10.6	14.0	10.4
> 2.00	6.9	5.7	5.1	5.8	15.7	8.3
Total	15.1	16.1	20.3	23.1	25.3	100.0

Table A2.5

CROSSTABULATION of Variable 7 ( CONS/REQ ) versus Variable 10 ( HHSEX )

Nr of Observations : 1634

HHSEX CONS/REQ	MALE	FEMALE	Total
< 0.40	8.0	1.3	9.3
0.4-0.5	8.2	1.0	9.2
0.5-0.6	6.8	1.3	8.1
0.6-0.7	8.7	1.9	10.6
0.7-0.8	8.3	1.9	10.2
0.8-0.9	6.8	1.8	8.6
0.9-1.1	9.7	3.2	12.9
1.1-1.4	9.6	2.9	12.5
1.4-2.0	7.4	3.0	10.4
> 2.00	5.5	2.8	8.3
Total	79.0	21.0	100.0

After ROW - Normalization

HHSEX CONS/REQ	MALE	FEMALE	Total
< 0.40	86.2	13.8	9.3
0.4-0.5	89.3	10.7	9.2
0.5-0.6	84.1	15.9	8.1
0.6-0.7	82.1	17.9	10.6
0.7-0.8	81.3	18.7	10.2
0.8-0.9	79.3	20.7	8.6
0.9-1.1	75.4	24.6	12.9
1.1-1.4	77.0	23.0	12.5
1.4-2.0	71.2	28.8	10.4
> 2.00	66.2	33.8	8.3
Total	79.0	21.0	100.0

After COLUMN - Normalization

HHSEX CONS/REQ	MALE	FEMALE	Total
< 0.40	10.1	6.1	9.3
0.4-0.5	10.4	4.7	9.2
0.5-0.6	8.6	6.1	8.1
0.6-0.7	11.0	9.0	10.6
0.7-0.8	10.5	9.0	10.2
0.8-0.9	8.6	8.5	8.6
0.9-1.1	12.3	15.2	12.9
1.1-1.4	12.2	13.7	12.5
1.4-2.0	9.4	14.3	10.4
> 2.00	7.0	13.4	8.3
Total	79.0	21.0	100.0

Table A2.6

CROSSTABULATION of Variable 7 ( CONS/REQ ) versus Variable 3 ( PROVINCE )

Nr of Observations : 1634

PROVINCE CONS/REQ	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
< 0.40	0.7	1.5	1.3	1.8	1.7	2.3	9.3
0.4-0.5	0.7	1.3	1.0	1.5	2.6	2.0	9.2
0.5-0.6	1.0	1.5	0.7	2.0	1.2	1.7	8.1
0.6-0.7	1.6	1.8	1.5	1.8	2.0	1.8	10.6
0.7-0.8	1.3	2.2	1.7	2.1	1.3	1.5	10.2
0.8-0.9	1.7	1.7	1.6	1.7	0.9	1.0	8.6
0.9-1.1	3.4	2.0	1.7	1.8	2.0	2.0	12.9
1.1-1.4	3.4	1.7	2.5	1.3	1.8	1.7	12.5
1.4-2.0	1.7	1.6	2.8	1.6	1.3	1.5	10.4
> 2.00	1.8	0.9	2.0	0.8	1.8	1.0	8.3
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

After ROW - Normalization

PROVINCE CONS/REQ	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
< 0.40	7.9	15.8	13.8	19.7	17.8	25.0	9.3
0.4-0.5	8.0	14.0	11.3	16.7	28.7	21.3	9.2
0.5-0.6	12.1	18.9	9.1	24.2	14.4	21.2	8.1
0.6-0.7	15.0	17.3	13.9	17.3	19.1	17.3	10.6
0.7-0.8	13.3	21.7	16.3	21.1	13.3	14.5	10.2
0.8-0.9	19.3	20.0	18.6	19.3	10.7	12.1	8.6
0.9-1.1	26.5	15.6	13.3	13.7	15.2	15.6	12.9
1.1-1.4	27.5	13.7	20.1	10.3	14.7	13.7	12.5
1.4-2.0	16.5	15.3	26.5	15.3	12.4	14.1	10.4
> 2.00	21.3	10.3	24.3	9.6	22.1	12.5	8.3
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

After COLUMN - Normalization

PROVINCE CONS/REQ	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
< 0.40	4.2	9.1	7.7	11.2	9.9	14.0	9.3
0.4-0.5	4.2	7.9	6.2	9.3	15.8	11.8	9.2
0.5-0.6	5.6	9.4	4.4	11.9	7.0	10.3	8.1
0.6-0.7	9.2	11.3	8.8	11.2	12.1	11.1	10.6
0.7-0.8	7.7	13.6	9.9	13.1	8.1	8.9	10.2
0.8-0.9	9.5	10.6	9.5	10.1	5.5	6.3	8.6
0.9-1.1	19.7	12.5	10.2	10.8	11.8	12.2	12.9
1.1-1.4	19.7	10.6	15.0	7.8	11.0	10.3	12.5
1.4-2.0	9.9	9.8	16.4	9.7	7.7	8.9	10.4
> 2.00	10.2	5.3	12.0	4.9	11.0	6.3	8.3
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

Table A2.7

CROSSTABULATION of Variable 12 ( EXP/CAP ) versus Variable 13 ( HHSIZE )

Nr of Observations : 1634

HHSIZE EXP/CAP	1 M	2 - 3 M	4 - 5 M	6 - 7 M	8 -10 M	11 -15 M	16+ M	Total
- 250	0.1	0.7	2.5	4.5	5.6	4.0	2.0	19.5
- 500	0.3	2.7	6.7	9.1	10.8	7.2	2.4	39.2
- 1000	0.7	3.9	7.4	7.6	6.7	2.9	0.6	29.7
- 1500	0.8	1.8	1.2	1.3	1.2	0.5	0.1	7.0
> 1500	1.3	1.5	0.7	0.5	0.3	0.2	0.	4.6
Total	3.3	10.6	18.5	23.1	24.6	14.8	5.1	100.0

After ROW - Normalization

HHSIZE EXP/CAP	1 M	2 - 3 M	4 - 5 M	6 - 7 M	8 -10 M	11 -15 M	16+ M	Total
- 250	0.6	3.8	12.9	23.0	28.9	20.4	10.4	19.5
- 500	0.8	6.9	17.0	23.2	27.6	18.4	6.1	39.2
- 1000	2.5	13.0	24.9	25.7	22.4	9.7	1.9	29.7
- 1500	11.4	26.3	17.5	19.3	16.7	7.0	1.8	7.0
> 1500	29.3	33.3	14.7	10.7	6.7	5.3	0.	4.6
Total	3.3	10.6	18.5	23.1	24.6	14.8	5.1	100.0

After COLUMN - Normalization

HHSIZE EXP/CAP	1 M	2 - 3 M	4 - 5 M	6 - 7 M	8 -10 M	11 -15 M	16+ M	Total
- 250	3.7	6.9	13.6	19.4	22.9	26.9	39.8	19.5
- 500	9.3	25.3	36.1	39.5	44.0	48.8	47.0	39.2
- 1000	22.2	36.2	40.1	33.2	27.1	19.4	10.8	29.7
- 1500	24.1	17.2	6.6	5.8	4.7	3.3	2.4	7.0
> 1500	40.7	14.4	3.6	2.1	1.2	1.7	0.	4.6
Total	3.3	10.6	18.5	23.1	24.6	14.8	5.1	100.0



Table A2.8

CROSSTABULATION of Variable 12 ( EXP/CAP ) versus Variable 14 ( FRMSIZE )

=====

Nr of Observations : 1634

FRMSIZE EXP/CAP	<0.5 HA	0.5-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-8.0	>8.0 HA	Total
- 250	3.9	3.6	4.2	2.9	1.7	0.9	1.3	1.0	19.5
- 500	5.7	6.4	7.9	6.5	4.0	2.3	3.6	2.8	39.2
- 1000	3.7	4.4	7.2	4.0	2.8	2.3	2.9	2.4	29.7
- 1500	0.7	0.9	1.4	0.9	0.8	0.9	0.8	0.7	7.0
> 1500	0.5	0.3	1.2	0.9	0.4	0.2	0.7	0.4	4.6
Total	14.4	15.6	21.8	15.1	9.7	6.5	9.3	7.4	100.0

After ROW - Normalization

=====

FRMSIZE EXP/CAP	<0.5 HA	0.5-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-8.0	>8.0 HA	Total
- 250	20.1	18.6	21.4	14.8	8.8	4.4	6.6	5.3	19.5
- 500	14.5	16.2	20.1	16.7	10.1	5.9	9.2	7.2	39.2
- 1000	12.3	14.8	24.3	13.4	9.5	7.6	9.9	8.2	29.7
- 1500	9.6	13.2	20.2	12.3	11.4	12.3	11.4	9.6	7.0
> 1500	10.7	6.7	25.3	18.7	9.3	5.3	14.7	9.3	4.6
Total	14.4	15.6	21.8	15.1	9.7	6.5	9.3	7.4	100.0

After COLUMN - Normalization

=====

FRMSIZE EXP/CAP	<0.5 HA	0.5-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-8.0	>8.0 HA	Total
- 250	27.1	23.1	19.0	19.0	17.6	13.1	13.8	14.0	19.5
- 500	39.4	40.8	36.1	43.3	40.9	35.5	38.8	38.0	39.2
- 1000	25.4	28.2	33.1	26.3	28.9	34.6	31.6	33.1	29.7
- 1500	4.7	5.9	6.4	5.7	8.2	13.1	8.6	9.1	7.0
> 1500	3.4	2.0	5.3	5.7	4.4	3.7	7.2	5.8	4.6
Total	14.4	15.6	21.8	15.1	9.7	6.5	9.3	7.4	100.0

Table A2.9

CROSSTABULATION of Variable 12 ( EXP/CAP ) versus Variable 15 ( SHOWNC )

Nr of Observations : 1634

SHOWNC EXP/CAP	0.0-0.2	0.2-0.4	0.4-0.6	0.6-0.8	0.8-1.0	Total
- 250	4.0	3.5	3.7	3.8	4.5	19.5
- 500	5.9	6.4	8.6	8.9	9.4	39.2
- 1000	3.9	4.1	5.9	7.5	8.3	29.7
- 1500	0.8	1.4	1.2	2.0	1.6	7.0
> 1500	0.5	0.7	1.0	0.9	1.5	4.6
Total	15.1	16.1	20.3	23.1	25.3	100.0

Diagonal Sum : 19.8 Upper Triangle Sum : 59.9 Lower Triangle Sum : 20.3  
 Diagonal Sum extended : 53.1 Above extended Diagonal : 38.6 Below extended Diagonal : 8.3

After ROW - Normalization

SHOWNC EXP/CAP	0.0-0.2	0.2-0.4	0.4-0.6	0.6-0.8	0.8-1.0	Total
- 250	20.8	17.9	18.9	19.5	23.0	19.5
- 500	15.0	16.2	22.0	22.8	24.0	39.2
- 1000	13.2	13.8	19.8	25.3	28.0	29.7
- 1500	11.4	20.2	16.7	28.9	22.8	7.0
> 1500	10.7	16.0	21.3	18.7	33.3	4.6
Total	15.1	16.1	20.3	23.1	25.3	100.0

After COLUMN - Normalization

SHOWNC EXP/CAP	0.0-0.2	0.2-0.4	0.4-0.6	0.6-0.8	0.8-1.0	Total
- 250	26.7	21.7	18.1	16.4	17.6	19.5
- 500	38.9	39.5	42.5	38.6	37.2	39.2
- 1000	25.9	25.5	28.9	32.5	32.9	29.7
- 1500	5.3	8.7	5.7	8.7	6.3	7.0
> 1500	3.2	4.6	4.8	3.7	6.0	4.6
Total	15.1	16.1	20.3	23.1	25.3	100.0

Table A2.10

CROSSTABULATION of Variable 12 ( EXP/CAP ) versus Variable 10 ( HHSEX )

Nr of Observations : 1634

HHSEX EXP/CAP	MALE	FEMALE	Total
- 250	16.2	3.2	19.5
- 500	32.1	7.1	39.2
- 1000	23.0	6.7	29.7
- 1500	4.5	2.4	7.0
> 1500	3.1	1.5	4.6
Total	79.0	21.0	100.0

After ROW - Normalization

HHSEX EXP/CAP	MALE	FEMALE	Total
- 250	83.3	16.7	19.5
- 500	81.9	18.1	39.2
- 1000	77.4	22.6	29.7
- 1500	64.9	35.1	7.0
> 1500	68.0	32.0	4.6
Total	79.0	21.0	100.0

After COLUMN - Normalization

HHSEX EXP/CAP	MALE	FEMALE	Total
- 250	20.5	15.5	19.5
- 500	40.7	33.8	39.2
- 1000	29.1	32.1	29.7
- 1500	5.7	11.7	7.0
> 1500	4.0	7.0	4.6
Total	79.0	21.0	100.0

Table A2.11

CROSSTABULATION of Variable 12 ( EXP/CAP ) versus Variable 3 ( PROVINCE )

Nr of Observations : 1634

PROVINCE EXP/CAP	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
- 250	0.8	4.6	2.4	4.1	3.3	4.2	19.5
- 500	5.6	6.5	5.8	7.3	7.0	7.0	39.2
- 1000	7.0	4.2	6.1	4.3	4.2	4.0	29.7
- 1500	2.2	0.6	1.4	0.6	1.2	1.0	7.0
> 1500	1.8	0.3	1.0	0.1	1.0	0.4	4.6
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

After ROW - Normalization

PROVINCE EXP/CAP	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
- 250	4.1	23.6	12.6	21.1	17.0	21.7	19.5
- 500	14.2	16.7	14.8	18.6	17.9	17.8	39.2
- 1000	23.7	14.0	20.4	14.6	14.0	13.4	29.7
- 1500	31.6	8.8	20.2	7.9	16.7	14.9	7.0
> 1500	38.7	6.7	22.7	2.7	21.3	8.0	4.6
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

After COLUMN - Normalization

PROVINCE EXP/CAP	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
- 250	4.6	28.3	14.6	25.0	19.9	25.5	19.5
- 500	32.0	40.4	34.7	44.4	42.3	42.1	39.2
- 1000	40.5	25.7	36.1	26.5	25.0	24.0	29.7
- 1500	12.7	3.8	8.4	3.4	7.0	6.3	7.0
> 1500	10.2	1.9	6.2	0.7	5.9	2.2	4.6
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

Table A2.12

CROSSTABULATION of Variable 13 ( HHSIZE ) versus Variable 3 ( PROVINCE )

Nr of Observations : 1634

PROVINCE HHSIZE	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
1 M	1.0	0.2	0.7	0.5	0.5	0.4	3.3
2 - 3 M	1.8	1.4	2.0	2.2	1.3	2.0	10.6
4 - 5 M	3.3	2.8	3.4	3.3	2.9	2.8	18.5
6 - 7 M	3.7	3.7	4.4	3.5	4.1	3.6	23.1
8 -10 M	4.8	4.0	3.6	3.7	4.3	4.2	24.6
11 -15 M	2.3	2.4	2.1	2.3	2.8	2.8	14.8
16+ M	0.5	1.6	0.6	0.9	0.9	0.7	5.1
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

After ROW - Normalization

PROVINCE HHSIZE	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
1 M	31.5	7.4	20.4	14.8	14.8	11.1	3.3
2 - 3 M	16.7	13.2	18.4	20.7	12.1	19.0	10.6
4 - 5 M	17.9	14.9	18.5	17.9	15.6	15.2	18.5
6 - 7 M	15.9	16.2	19.1	15.4	17.8	15.6	23.1
8 -10 M	19.4	16.4	14.7	14.9	17.4	17.2	24.6
11 -15 M	15.7	16.5	14.5	15.7	18.6	19.0	14.8
16+ M	9.6	31.3	10.8	16.9	16.9	14.5	5.1
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

After COLUMN - Normalization

PROVINCE HHSIZE	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
1 M	6.0	1.5	4.0	3.0	2.9	2.2	3.3
2 - 3 M	10.2	8.7	11.7	13.4	7.7	12.2	10.6
4 - 5 M	19.0	17.0	20.4	20.1	17.3	17.0	18.5
6 - 7 M	21.1	23.0	26.3	21.6	24.6	21.8	23.1
8 -10 M	27.5	24.9	21.5	22.4	25.7	25.5	24.6
11 -15 M	13.4	15.1	12.8	14.2	16.5	17.0	14.8
16+ M	2.8	9.8	3.3	5.2	5.1	4.4	5.1
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

Table A2.13

CROSSTABLATION of Variable 14 ( FRMSIZE ) versus Variable 3 ( PROVINCE )

Nr of Observations : 1634

PROVINCE : FRMSIZE :	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
<0.5 HA	1.2	3.3	2.3	2.3	2.8	2.5	14.4
0.5-1.0	2.0	2.9	3.1	3.8	1.8	2.1	15.6
1.0-2.0	4.9	3.7	4.3	3.2	2.8	2.8	21.8
2.0-3.0	2.9	2.1	2.3	2.6	2.6	2.6	15.1
3.0-4.0	2.2	1.3	1.7	1.0	1.8	1.8	9.7
4.0-5.0	1.4	0.9	0.9	1.0	1.3	1.1	6.5
5.0-8.0	1.7	1.1	1.3	1.5	1.2	2.4	9.3
>8.0 HA	1.1	1.0	0.9	0.9	2.3	1.2	7.4
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

After ROW - Normalization

PROVINCE : FRMSIZE :	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
<0.5 HA	8.1	22.9	16.1	16.1	19.5	17.4	14.4
0.5-1.0	12.5	18.4	19.6	24.3	11.4	13.7	15.6
1.0-2.0	22.4	17.1	19.9	14.8	12.9	12.9	21.8
2.0-3.0	19.4	13.8	15.0	17.0	17.4	17.4	15.1
3.0-4.0	22.6	13.2	17.6	10.1	18.2	18.2	9.7
4.0-5.0	21.5	13.1	13.1	15.9	19.6	16.8	6.5
5.0-8.0	18.4	11.8	13.8	16.4	13.2	26.3	9.3
>8.0 HA	14.9	13.2	12.4	12.4	31.4	15.7	7.4
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

After COLUMN - Normalization

PROVINCE : FRMSIZE :	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
<0.5 HA	6.7	20.4	13.9	14.2	16.9	15.1	14.4
0.5-1.0	11.3	17.7	18.2	23.1	10.7	12.9	15.6
1.0-2.0	28.2	23.0	25.9	19.8	16.9	17.0	21.8
2.0-3.0	16.9	12.8	13.5	15.7	15.8	15.9	15.1
3.0-4.0	12.7	7.9	10.2	6.0	10.7	10.7	9.7
4.0-5.0	8.1	5.3	5.1	6.3	7.7	6.6	6.5
5.0-8.0	9.9	6.8	7.7	9.3	7.4	14.8	9.3
>8.0 HA	6.3	6.0	5.5	5.6	14.0	7.0	7.4
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

Table A2.14

CROSSTABULATION of Variable 15 ( SHOWNC ) versus Variable 3 ( PROVINCE )

Nr of Observations : 1634

PROVINCE SHOWNC	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
0.0-0.2	1.4	8.8	2.4	0.6	0.5	1.5	15.1
0.2-0.4	4.0	4.8	2.7	1.7	0.8	2.1	16.1
0.4-0.6	4.7	1.6	3.6	3.5	2.6	4.3	20.3
0.6-0.8	4.4	0.9	4.3	5.0	3.4	5.2	23.1
0.8-1.0	2.9	0.2	3.7	5.6	9.4	3.5	25.3
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

After ROW - Normalization

PROVINCE SHOWNC	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
0.0-0.2	9.3	57.9	15.8	4.0	3.2	9.7	15.1
0.2-0.4	25.1	29.7	16.7	10.6	4.9	12.9	16.1
0.4-0.6	22.9	7.8	17.8	17.5	13.0	21.1	20.3
0.6-0.8	19.0	3.7	18.8	21.4	14.6	22.5	23.1
0.8-1.0	11.4	1.0	14.7	22.0	37.0	14.0	25.3
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

After COLUMN - Normalization

PROVINCE SHOWNC	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
0.0-0.2	8.1	54.0	14.2	3.7	2.9	8.9	15.1
0.2-0.4	23.2	29.4	16.1	10.4	4.8	12.5	16.1
0.4-0.6	26.8	9.8	21.5	21.6	15.8	25.8	20.3
0.6-0.8	25.4	5.3	25.9	30.2	20.2	31.4	23.1
0.8-1.0	16.5	1.5	22.3	34.0	56.3	21.4	25.3
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

Table A2.15

CROSSTABULATION of Variable 10 ( HHSEX ) versus Variable 3 ( PROVINCE )

Nr of Observations : 1634

PROVINCE HHSEX	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
MALE	12.7	13.8	12.2	13.2	13.3	13.9	79.0
FEMALE	4.7	2.4	4.5	3.2	3.4	2.7	21.0
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

After ROW - Normalization

PROVINCE HHSEX	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
MALE	16.0	17.4	15.5	16.7	16.8	17.6	79.0
FEMALE	22.4	11.7	21.6	15.5	16.0	12.8	21.0
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0

After COLUMN - Normalization

PROVINCE HHSEX	CENTRAL	COAST	EASTERN	NYANZA	RIFT V.	WESTERN	Total
MALE	72.9	84.9	73.0	80.2	79.8	83.8	79.0
FEMALE	27.1	15.1	27.0	19.8	20.2	16.2	21.0
Total	17.4	16.2	16.8	16.4	16.6	16.6	100.0



## **ANNEX 3**

**Results for Multiple Regression Analysis**

**for**

**Nutrition Level (R)**

**and**

**Calorie Consumption Per Caput**

**Rural Kenya and By Province**

**Tables A3.1 to A3.14**



Table A3.1 : Multiple Regression Analysis - Calorie Intake per Household Member in EASTERN Province - KENYA

EQN	R-SQU	DF	EXP/HHS	ASS/HHS	HHS	FMSZ/HHS	OWNC/TOTC	DMV-SEX	CONSTANT
1	0.73	272	0.73432 ( 27.3)						3.14900
2	0.74	271	0.77310 ( 25.3)	-0.05374 ( -2.6)					3.26200
3	0.74	270	0.74828 ( 23.4)	-0.05182 ( -2.5)	-0.07965 ( -2.4)				3.54610
4	0.75	269	0.74267 ( 23.2)	-0.02995 ( -1.2)	-0.10658 ( -2.9)	-0.14995 ( -1.7)			3.53430
5	0.75	268	0.74641 ( 22.8)	-0.03198 ( -1.3)	-0.10518 ( -2.9)	-0.14649 ( -1.7)	-0.04557 ( -0.6)		3.54610
6	0.74	271	0.70994 ( 25.0)		-0.08285 ( -2.5)				3.44880
7	0.73	271	0.74857 ( 26.6)			-0.11814 ( -1.7)			3.09910
8	0.75	270	0.72441 ( 25.4)		-0.11786 ( -3.3)	-0.20530 ( -2.8)			3.48880
9	0.75	269	0.72616 ( 25.1)		-0.11743 ( -3.3)	-0.20551 ( -2.8)	-0.03180 ( -0.4)		3.49490
10	0.73	271	0.73615 ( 27.0)				-0.03677 ( -0.5)		3.15790
11	0.74	270	0.71159 ( 24.7)		-0.08240 ( -2.5)		-0.03042 ( -0.4)		3.45450
12	0.73	270	0.73659 ( 26.6)				-0.03807 ( -0.5)	-0.00419 ( -0.1)	3.15710
13	0.74	269	0.71302 ( 24.6)		-0.08422 ( -2.5)		-0.03621 ( -0.5)	-0.01913 ( -0.4)	3.45730
14	0.73	270	0.74795 ( 26.4)			-0.12007 ( -1.7)		0.00976 ( 0.2)	3.10100
15	0.75	269	0.72463 ( 25.3)		-0.11821 ( -3.3)	-0.20466 ( -2.8)		-0.00456 ( -0.1)	3.48910
16	0.74	269	0.75015 ( 26.1)			-0.11989 ( -1.7)	-0.03738 ( -0.5)	0.00571 ( 0.1)	3.10910
17	0.75	268	0.72669 ( 25.0)		-0.11802 ( -3.3)	-0.20436 ( -2.8)	-0.03429 ( -0.4)	-0.00824 ( -0.2)	3.49580

Table A3.2 : Multiple Regression Analysis - Calorie Intake over Calorie Requirements in NYANZA Province - KENYA

3QN	R-SQU	DF	EXP/HHS	ASS/HHS	HHS	FRMSZ/HHS	OMNC/TOTC	DMV-SEX	CONSTANT
1	0.56	266	0.65789 ( 18.3)						-4.15490
2	0.56	265	0.66012 ( 16.2)	-0.00319 ( -0.1)					-4.14820
3	0.59	264	0.58785 ( 14.0)	0.01598 ( 0.6)	-0.17207 ( -4.7)				-3.52420
4	0.60	263	0.58885 ( 14.0)	0.03179 ( 1.1)	-0.19773 ( -5.0)	-0.15999 ( -1.7)			-3.53300
5	0.66	262	0.63786 ( 16.3)	-0.01006 ( -0.4)	-0.17179 ( -4.7)	-0.06626 ( -0.8)	0.68124 ( 7.1)		-4.08950
6	0.59	265	0.60021 ( 16.3)		-0.16865 ( -4.7)				-3.50420
7	0.56	265	0.65658 ( 17.4)			0.01003 ( 0.1)			-4.15020
8	0.59	264	0.61060 ( 16.3)		-0.18614 ( -4.9)	-0.12564 ( -1.4)			-3.49550
9	0.66	263	0.63073 ( 18.4)		-0.17559 ( -5.0)	-0.07772 ( -1.0)	0.67297 ( 7.2)		-4.09400
10	0.63	265	0.68116 ( 20.5)				0.68802 ( 7.1)		-4.74810
11	0.66	264	0.62457 ( 18.5)		-0.16473 ( -5.0)		0.68050 ( 7.3)		-4.10600
12	0.63	264	0.68285 ( 20.7)				0.69950 ( 7.3)	0.11676 ( 2.3)	-4.78880
13	0.66	263	0.62825 ( 18.4)		-0.15578 ( -4.5)		0.68500 ( 7.4)	0.04163 ( 0.8)	-4.15540
14	0.56	264	0.65989 ( 17.5)			-0.00701 ( -0.1)		0.09786 ( 1.7)	-4.18400
15	0.59	263	0.61227 ( 16.2)		-0.18203 ( -4.6)	-0.12603 ( -1.4)		0.01940 ( 0.3)	-3.51660
16	0.63	263	0.67873 ( 19.6)			0.03209 ( 0.4)	0.70217 ( 7.3)	0.11445 ( 2.2)	-4.77540
17	0.66	262	0.63448 ( 18.3)		-0.16663 ( -4.6)	-0.07824 ( -1.0)	0.67747 ( 7.2)	0.04205 ( 0.8)	-4.14380

Table A3.3 Multiple Regression Analysis - Calorie Intake per Household Member in NYANZA Province - KENYA

EQN	R-SQU	DF	EXP/HHS	ASS/HHS	HHS	FRMSZ/HHS	OMNC/TOTC	DMV-SEX	CONSTANT
1	0.58	266	0.67267 ( 19.2)						3.49190
2	0.58	265	0.66676 ( 16.8)	0.00843 ( 0.3)					3.47440
3	0.62	264	0.59030 ( 14.5)	0.02871 ( 1.1)	-0.18206 ( -5.1)				4.13470
4	0.62	263	0.59090 ( 14.5)	0.03959 ( 1.5)	-0.19973 ( -5.2)	-0.11017 ( -1.2)			4.12860
5	0.68	262	0.63904 ( 16.9)	-0.00144 ( -0.1)	-0.17430 ( -5.0)	-0.01827 ( -0.2)	0.66794 ( 7.2)		3.58300
6	0.62	265	0.61251 ( 17.2)		-0.17591 ( -5.0)				4.17060
7	0.58	265	0.66385 ( 18.1)			0.06767 ( 0.8)			3.52360
8	0.62	264	0.61808 ( 17.0)		-0.18529 ( -5.0)	-0.06739 ( -0.8)			4.17530
9	0.68	263	0.63802 ( 19.2)		-0.17484 ( -5.2)	-0.01991 ( -0.3)	0.66676 ( 7.4)		3.58230
10	0.65	265	0.69555 ( 21.5)				0.67654 ( 7.2)		2.90860
11	0.68	264	0.63644 ( 19.5)		-0.17206 ( -5.4)		0.66869 ( 7.5)		3.57920
12	0.65	264	0.69616 ( 21.5)				0.68070 ( 7.2)	0.04225 ( 0.8)	2.89390
13	0.68	263	0.63243 ( 19.2)		-0.18182 ( -5.4)		0.66378 ( 7.4)	-0.04543 ( -0.9)	3.63310
14	0.58	264	0.66448 ( 18.0)			0.06444 ( 0.8)		0.01856 ( 0.3)	3.51720
15	0.62	263	0.61227 ( 16.7)		-0.19956 ( -5.2)	-0.06604 ( -0.8)		-0.06746 ( -1.2)	4.24870
16	0.65	263	0.68297 ( 20.2)			0.10282 ( 1.3)	0.68927 ( 7.3)	0.03484 ( 0.7)	2.93660
17	0.68	262	0.63397 ( 18.9)		-0.18450 ( -5.2)	-0.01935 ( -0.3)	0.66191 ( 7.3)	-0.04533 ( -0.9)	3.63600

Table A3.4 Multiple Regression Analysis - Calorie Intake over Calorie Requirements in Rift Valley Province - KENYA

EQN	R-SQU	DF	EXP/HHS	ASS/HHS	HHS	FMSZ/HHS	OWNC/TOTC	DMV-SEX	CONSTANT
1	0.64	270	0.80730 ( 22.0)						-5.08010
2	0.64	269	0.80363 ( 19.5)	0.00613 ( 0.2)					-5.10040
3	0.65	268	0.75826 ( 16.4)	0.01059 ( 0.3)	-0.10212 ( -2.1)				-4.66040
4	0.65	267	0.75557 ( 16.2)	0.00450 ( 0.1)	-0.09354 ( -1.8)	0.04328 ( 0.5)			-4.63460
5	0.76	266	0.68884 ( 17.7)	-0.04485 ( -1.6)	-0.18552 ( -4.3)	0.02026 ( 0.3)	1.12870 ( 11.1)		-4.54380
6	0.65	269	0.76507 ( 18.3)		-0.10097 ( -2.1)				-4.63050
7	0.64	269	0.78779 ( 19.5)			0.08512 ( 1.2)			-4.99390
8	0.65	268	0.75788 ( 17.5)		-0.09235 ( -1.8)	0.04710 ( 0.6)			-4.62120
9	0.76	267	0.66795 ( 18.1)		-0.19487 ( -4.6)	-0.01621 ( -0.3)	1.10200 ( 11.0)		-4.67680
10	0.74	269	0.75112 ( 23.5)				1.00560 ( 9.9)		-5.48900
11	0.76	268	0.66569 ( 18.6)		-0.19170 ( -4.7)		1.09960 ( 11.0)		-4.67350
12	0.74	268	0.74607 ( 23.1)				1.00680 ( 9.9)	0.06248 ( 1.1)	-5.47180
13	0.76	267	0.66391 ( 18.5)		-0.18879 ( -4.6)		1.09890 ( 11.0)	0.03809 ( 0.7)	-4.67540
14	0.64	268	0.78276 ( 19.2)			0.08666 ( 1.2)		0.05861 ( 0.9)	-4.97580
15	0.65	267	0.75521 ( 17.3)		-0.08836 ( -1.7)	0.04996 ( 0.7)		0.04620 ( 0.7)	-4.62300
16	0.74	267	0.73066 ( 20.7)			0.06758 ( 1.1)	1.00340 ( 9.9)	0.06385 ( 1.2)	-5.40160
17	0.76	266	0.66587 ( 17.9)		-0.19153 ( -4.4)	-0.01383 ( -0.2)	1.10100 ( 11.0)	0.03745 ( 0.7)	-4.67820

Table A3.5 Multiple Regression Analysis - Calorie Intake per Household Member in RIFT VALLEY Province - KENYA

EQN	R-SQU	DF	EXP/HHS	ASS/HHS	HHS	FRMSZ/HHS	OWNC/TOTC	DMV-SEX	CONSTANT
1	0.66	270	0.82861 ( 22.8)						2.52150
2	0.66	269	0.82523 ( 20.2)	0.00565 ( 0.2)					2.50280
3	0.67	268	0.75821 ( 16.7)	0.01224 ( 0.4)	-0.15082 ( -3.2)				3.15260
4	0.67	267	0.75312 ( 16.5)	0.00071	-0.13455 ( -2.7)	0.08200 ( 1.0)			3.20150
5	0.77	266	0.69056 ( 17.7)	-0.04556 ( -1.7)	-0.22078 ( -5.1)	0.06042 ( 0.9)	1.05810 ( 10.5)		3.28670
6	0.67	269	0.76609 ( 18.7)		-0.14948 ( -3.2)				3.18720
7	0.66	269	0.79700 ( 20.0)			0.13792 ( 1.9)			2.66130
8	0.67	268	0.75348 ( 17.8)		-0.13437 ( -2.7)	0.08260 ( 1.1)			3.20360
9	0.76	267	0.66934 ( 18.1)		-0.23028 ( -5.4)	0.02337 ( 0.4)	1.03100 ( 10.3)		3.15160
10	0.74	269	0.77725 ( 23.9)				0.91920 ( 8.9)		2.14780
11	0.76	268	0.67260 ( 18.8)		-0.23483 ( -5.7)		1.03440 ( 10.4)		3.14680
12	0.74	268	0.77552 ( 23.5)				0.91960 ( 8.9)	0.02142 ( 0.4)	2.15370
13	0.76	267	0.67302 ( 18.7)		-0.23552 ( -5.7)		1.03450 ( 10.4)	-0.00901 ( -0.2)	3.14730
14	0.66	268	0.79536 ( 19.8)					0.01910 ( 0.3)	2.66720
15	0.67	267	0.75347 ( 17.7)		-0.13435 ( -2.7)	0.08261 ( 1.1)		0.00023 ( 0.0)	3.20360
16	0.74	267	0.74792 ( 20.9)			0.12105 ( 1.9)	0.91353 ( 8.9)	0.02387 ( 0.4)	2.27950
17	0.76	266	0.66979 ( 18.1)		-0.23098 ( -5.4)	0.02286 ( 0.4)	1.03120 ( 10.3)	-0.00796 ( -0.1)	3.15190

Table A3.6 : Multiple Regression Analysis - Calorie Intake over Calorie Requirements in WESTERN Province - KENYA

EQN	R-SQU	DF	EXP/HHS	ASS/HHS	HHS	FRMSZ/HHS	OMNC/TOTC	DMV-SEX	CONSTANT
1	0.62	269	0.74413 ( 21.0)						-4.69420
2	0.62	268	0.71836 ( 17.6)	0.03808 ( 1.3)					-4.77400
3	0.64	267	0.68761 ( 16.6)	0.03196 ( 1.1)	-0.12532 ( -3.1)				-4.31910
4	0.64	266	0.68500 ( 16.6)	0.05997 ( 1.8)	-0.15922 ( -3.6)	-0.16243 ( -1.8)			-4.35270
5	0.69	265	0.69172 ( 18.2)	0.02772 ( 0.9)	-0.20670 ( -4.9)	-0.23906 ( -2.8)	0.65790 ( 6.9)		-4.46550
6	0.63	268	0.70841 ( 19.3)		-0.12828 ( -3.2)				-4.24170
7	0.62	268	0.74009 ( 19.7)			0.02546 ( 0.3)			-4.67940
8	0.64	267	0.71654 ( 19.1)		-0.14725 ( -3.3)	-0.08439 ( -1.0)			-4.22380
9	0.69	266	0.70610 ( 20.5)		-0.20222 ( -4.9)	-0.20531 ( -2.7)	0.67078 ( 7.1)		-4.40950
10	0.67	268	0.73184 ( 21.9)				0.57516 ( 6.0)		-4.95940
11	0.69	267	0.68821 ( 20.1)		-0.15372 ( -4.1)		0.61383 ( 6.6)		-4.43490
12	0.68	267	0.73282 ( 22.4)				0.57611 ( 6.2)	0.21029 ( 3.5)	-4.99990
13	0.70	266	0.69429 ( 20.5)		-0.13514 ( -3.6)		0.60995 ( 6.6)	0.17453 ( 2.9)	-4.53190
14	0.64	267	0.73928 ( 20.1)			0.03687 ( 0.5)		0.21073 ( 3.3)	-4.71290
15	0.65	266	0.71981 ( 19.4)		-0.12259 ( -2.7)	-0.05655 ( -0.7)		0.17439 ( 2.7)	-4.32790
16	0.68	266	0.73786 ( 21.4)			-0.03271 ( -0.5)	0.58323 ( 6.2)	0.20897 ( 3.5)	-5.02190
17	0.70	265	0.70919 ( 20.8)		-0.17933 ( -4.3)	-0.17851 ( -2.3)	0.65988 ( 7.1)	0.15559 ( 2.6)	-4.49930



Table A3.7 : Multiple Regression Analysis - Calorie Intake per Household Member in WESTERN Province - KENYA

EQN	R-SQU	DF	EXP/HHS	ASS/HHS	BHS	FRMSZ/HHS	OWNC/TOTC	DMV-SEX	CONSTANT
1	0.65	269	0.76647 ( 22.3)						2.90080
2	0.65	268	0.73905 ( 18.7)	0.04050 ( 1.4)					2.81590
3	0.68	267	0.69637 ( 17.7)	0.03200 ( 1.1)	-0.17392 ( -4.5)				3.44730
4	0.68	266	0.69458 ( 17.7)	0.05124 ( 1.6)	-0.19721 ( -4.6)	-0.11157 ( -1.3)			3.42420
5	0.72	265	0.70073 ( 19.2)	0.02177 ( 0.7)	-0.24060 ( -6.0)	-0.18159 ( -2.2)	0.60115 ( 6.6)		3.32120
6	0.67	268	0.71721 ( 20.6)		-0.17690 ( -4.6)				3.52490
7	0.65	268	0.75144 ( 20.8)			0.09460 ( 1.3)			2.95580
8	0.68	267	0.72153 ( 20.3)		-0.18698 ( -4.4)	-0.04489 ( -0.6)			3.53430
9	0.72	266	0.71202 ( 21.6)		-0.23708 ( -6.0)	-0.15508 ( -2.1)	0.61127 ( 6.8)		3.36510
10	0.69	268	0.75540 ( 23.1)				0.51782 ( 5.6)		2.66210
11	0.72	267	0.69851 ( 21.4)		-0.20044 ( -5.6)		0.56826 ( 6.4)		3.34600
12	0.69	267	0.75614 ( 23.4)				0.51854 ( 5.6)	0.15850 ( 2.7)	2.63150
13	0.72	266	0.70229 ( 21.6)		-0.18889 ( -5.2)		0.56584 ( 6.4)	0.10851 ( 1.9)	3.28570
14	0.66	267	0.75082 ( 21.0)			0.10336 ( 1.4)		0.16176 ( 2.6)	2.93010
15	0.68	266	0.72362 ( 20.4)		-0.17129 ( -4.0)	-0.02717 ( -0.4)		0.11100 ( 1.8)	3.46810
16	0.69	266	0.74958 ( 22.0)			0.04261 ( 0.6)	0.50926 ( 5.5)	0.16023 ( 2.7)	2.66030
17	0.73	265	0.71388 ( 21.7)		-0.22328 ( -5.5)	-0.13893 ( -1.9)	0.60470 ( 6.7)	0.09377 ( 1.6)	3.31100

Table A3.8 : Multiple Regression Analysis - Calorie Intake over Calorie Requirements in RUKAL KENYA

EQN	R-SQU	DF	EXP/HHS	ASS/HHS	HHS	FRMSZ/HHS	OMNC/TOTC	DMV-SEX	DM-COAST	DM-EASTN	DM-NYANZA	DM-WESTN	CONSTANT
1	0.65	1632	0.70746 ( 54.8)										-4.46140
2	0.65	1631	0.71998 ( 48.2)	-0.01627 ( -1.7)									-4.43130
3	0.66	1630	0.68022 ( 43.1)	-0.01472 ( -1.5)	-0.10686 ( -7.0)								-3.99990
4	0.66	1629	0.68074 ( 43.1)	-0.01959 ( -1.8)	-0.10027 ( -6.0)	0.03527 ( 1.0)							-3.99550
5	0.67	1628	0.68144 ( 44.0)	-0.03117 ( -2.9)	-0.10500 ( -6.4)	0.01818 ( 0.5)	0.26197 ( 8.2)						-4.05430
6	0.66	1631	0.66869 ( 48.2)		-0.10740 ( -7.0)								-4.02500
7	0.65	1631	0.69542 ( 50.8)			0.07566 ( 2.6)							-4.41370
8	0.66	1630	0.66792 ( 47.1)		-0.10590 ( -6.5)	0.00825 ( 0.3)							-4.02590
9	0.67	1629	0.66137 ( 47.5)		-0.11358 ( -7.1)	-0.02326 ( -0.8)	0.24957 ( 7.9)						-4.09910
10	0.66	1631	0.69891 ( 54.9)				0.24267 ( 7.6)						-4.54370
11	0.67	1630	0.65932 ( 48.2)		-0.10933 ( -7.2)		0.24636 ( 7.8)						-4.10070
12	0.66	1630	0.69256 ( 54.4)				0.24624 ( 7.8)	0.10183 ( 4.7)					-4.52840
13	0.67	1629	0.65879 ( 48.3)		-0.09855 ( -6.4)		0.24850 ( 7.9)	0.07118 ( 3.2)					-4.13370
14	0.65	1630	0.69056 ( 50.6)			0.06968 ( 2.4)		0.09516 ( 4.3)					-4.40200
15	0.66	1629	0.66725 ( 47.2)		-0.09516 ( -5.7)	0.01083 ( 0.4)		0.06769 ( 3.0)					-4.05690
16	0.67	1629	0.68592 ( 51.0)			0.04373 ( 1.5)	0.24042 ( 7.5)	0.10012 ( 4.6)					-4.49910
17	0.67	1628	0.66062 ( 47.5)		-0.10241 ( -6.2)	-0.02078 ( -0.7)	0.25135 ( 8.0)	0.07079 ( 3.2)					-4.13210
18	0.69	1626	0.66696 ( 48.9)		-0.11471 ( -7.8)		0.43497 ( 12.1)		0.30055 ( 10.1)	0.14444 ( 5.7)	0.04498 ( 1.7)	0.05321 ( 2.1)	-4.33060
19	0.70	1625	0.66727 ( 49.1)		-0.10219 ( -6.8)		0.44167 ( 12.3)	0.08275 ( 3.9)	0.30883 ( 10.3)	0.14312 ( 5.6)	0.04838 ( 1.9)	0.05953 ( 2.3)	-4.37970
20	0.66	1626	0.67440 ( 46.6)		-0.10159 ( -6.2)	0.02473 ( 0.8)			0.12279 ( 4.5)	0.10956 ( 4.1)	0.05953 ( 2.2)	0.03309 ( 1.2)	-4.13250
21	0.67	1625	0.67455 ( 46.7)		-0.09032 ( -5.4)	0.02743 ( 0.9)		0.07045 ( 3.1)	0.12768 ( 4.7)	0.10812 ( 4.1)	0.06274 ( 2.3)	0.03818 ( 1.4)	-4.17210
22	0.67	1626	0.65641 ( 46.8)		-0.10240 ( -6.2)	-0.01818 ( -0.6)	0.25598 ( 8.0)	0.06752 ( 3.1)		0.06063 ( 2.5)	-0.01900 ( -0.8)		-4.11630

Table A3.9 Multiple Regression Analysis - Calorie Intake per Household Member in RURAL KENYA

EQN	R-SQU	DF	EXP/HHS	ASS/HHS	HHS	FRMSZ/HHS	OWNC/TOTC	DMV-SEX	DM-COAST	DM-EASTN	DM-NYANZA	DM-WESTN	CONSTANT
1	0.67	1632	0.72163 ( 57.3)										3.17800
2	0.67	1631	0.73316 ( 50.3)	-0.01497 ( -1.6)									3.20570
3	0.68	1630	0.68430 ( 44.8)	-0.01307 ( -1.4)	-0.13130 ( -8.8)								3.73570
4	0.68	1629	0.68502 ( 44.8)	-0.01977 ( -1.9)	-0.12221 ( -7.6)	0.04859 ( 1.5)							3.74190
5	0.70	1628	0.68568 ( 45.7)	-0.03072 ( -3.0)	-0.12669 ( -8.0)	0.03244 ( 1.0)	0.24756 ( 8.0)						3.68620
6	0.68	1631	0.67407 ( 50.2)		-0.13178 ( -8.9)								3.71350
7	0.67	1631	0.70530 ( 52.9)			0.10272 ( 3.6)							3.24280
8	0.68	1630	0.67208 ( 49.0)		-0.12790 ( -8.1)	0.02131 ( 0.7)							3.71120
9	0.69	1629	0.66591 ( 49.4)		-0.13515 ( -8.7)	-0.00840 ( -0.3)	0.23534 ( 7.7)						3.64210
10	0.68	1631	0.71355 ( 57.4)				0.22966 ( 7.4)						3.10020
11	0.69	1630	0.66517 ( 50.3)		-0.13361 ( -9.1)		0.23418 ( 7.7)						3.64160
12	0.68	1630	0.71037 ( 56.9)				0.23145 ( 7.4)	0.05099 ( 2.4)					3.10780
13	0.69	1629	0.66509 ( 50.2)		-0.13211 ( -8.8)		0.23447 ( 7.7)	0.00990 ( 0.5)					3.63700
14	0.67	1630	0.70308 ( 52.6)					0.04345 ( 2.0)					3.24810
15	0.68	1629	0.67201 ( 49.0)		-0.12682 ( -7.8)	0.02157 ( 0.7)		0.00685 ( 0.3)					3.70800
16	0.68	1629	0.69881 ( 53.0)			0.07610 ( 2.7)	0.22132 ( 7.1)	0.04802 ( 2.2)					3.15880
17	0.69	1628	0.66580 ( 49.3)		-0.13361 ( -8.4)	-0.00806 ( -0.3)	0.23558 ( 7.7)	0.00975 ( 0.5)					3.63760
18	0.71	1626	0.67416 ( 51.0)		-0.13834 ( -9.7)		0.41477 ( 11.9)		0.29281 ( 10.1)	0.13285 ( 5.4)	0.05507 ( 2.2)	0.05581 ( 2.2)	3.40770
19	0.71	1625	0.67424 ( 51.0)		-0.13512 ( -9.3)		0.41649 ( 12.0)	0.02131 ( 1.0)	0.29494 ( 10.2)	0.13251 ( 5.4)	0.05595 ( 2.2)	0.05743 ( 2.3)	3.39510
20	0.69	1626	0.68001 ( 48.6)		-0.12329 ( -7.8)	0.03748 ( 1.3)			0.12422 ( 4.7)	0.10046 ( 3.9)	0.06968 ( 2.6)	0.03647 ( 1.4)	3.59440
21	0.69	1625	0.68003 ( 48.6)		-0.12170 ( -7.5)	0.03786 ( 1.3)		0.00996 ( 0.5)	0.12491 ( 4.7)	0.10026 ( 3.9)	0.07013 ( 2.7)	0.03719 ( 1.4)	3.58880
22	0.70	1626	0.66276 ( 48.6)		-0.13301 ( -8.3)	-0.00500 ( -0.2)	0.23737 ( 7.6)	0.00695 ( 0.3)		0.05424 ( 2.3)	-0.00780 ( -0.3)		3.64570

Table A3.10 Multiple Regression Analysis - Calorie Intake over Calorie Requirements in CENTRAL Province - KENYA

EQN	R-SQU	DF	EXP/THS	ASS/THS	HHS	FRMSZ/HHS	OWNC/TOIC	DMV-SEX	CONSTANT
1	0.64	282	0.65551 ( 22.2)						-4.22530
2	0.64	281	0.60761 ( 17.4)	0.06456 ( 2.5)					-4.37890
3	0.70	280	0.53718 ( 16.0)	0.02930 ( 1.2)	-0.21400 ( -7.0)				-3.28700
4	0.71	279	0.55313 ( 16.4)	-0.01760 ( -0.6)	-0.17999 ( -5.5)	0.20835 ( 2.7)			-3.19590
5	0.72	278	0.54484 ( 16.4)	-0.02570 ( -0.9)	-0.20186 ( -6.2)	0.14470 ( 1.9)	0.28725 ( 3.7)		-3.17510
6	0.70	281	0.55542 ( 18.4)		-0.22176 ( -7.5)				-3.18070
7	0.67	281	0.60172 ( 20.2)			0.32775 ( 5.6)			-4.00560
8	0.70	280	0.54388 ( 18.1)		-0.18132 ( -5.6)	0.18148 ( 2.9)			-3.24950
9	0.72	279	0.53157 ( 17.9)		-0.20337 ( -6.3)	0.10689 ( 1.7)	0.28183 ( 3.6)		-3.25330
10	0.65	281	0.64022 ( 21.9)			0.29524 ( 3.6)			-4.28570
11	0.71	280	0.53579 ( 18.1)		-0.22801 ( -7.9)		0.32433 ( 4.4)		-3.21760
12	0.67	280	0.63096 ( 22.2)			0.32620 ( 4.1)	0.18398 ( 4.4)	-4.29240	
13	0.72	279	0.53973 ( 18.4)		-0.20707 ( -7.0)	0.34057 ( 4.6)	0.11236 ( 2.8)	-3.31980	
14	0.69	280	0.59942 ( 20.6)			0.30518 ( 5.3)	0.14434 ( 3.5)	-4.02100	
15	0.71	279	0.54817 ( 18.3)		-0.16301 ( -4.9)	0.18103 ( 3.0)	0.09732 ( 2.4)	-3.33630	
16	0.69	279	0.59493 ( 20.6)			0.25711 ( 4.3)	0.22729 ( 2.8)	-4.09980	
17	0.73	278	0.53565 ( 18.3)		-0.18402 ( -5.6)	0.10160 ( 1.6)	0.29988 ( 3.9)	0.11040 ( 2.8)	-3.35200

Table A3.1.1 Multiple Regression Analysis - Calorie Intake per Household Member in CENTRAL Province - KENYA

EQN	R-SQU	DF	EXP/HHS	ASS/HHS	HHS	FMSZ/HHS	OMNC/TOTC	DMV-SEX	CONSTANT
1	0.67	282	0.68333 ( 23.9)						3.31750
2	0.68	281	0.63539 ( 18.9)	0.06462 ( 2.6)					3.16370
3	0.74	280	0.56067 ( 17.6)	0.02722 ( 1.2)	-0.22702 ( -7.9)				4.32200
4	0.74	279	0.57605 ( 18.0)	-0.01800 ( -0.7)	-0.19423 ( -6.3)	0.20088 ( 2.8)			4.40990
5	0.76	278	0.56831 ( 18.1)	-0.02557 ( -0.9)	-0.21465 ( -7.0)	0.14143 ( 2.0)	0.26829 ( 3.6)		4.42930
6	0.74	281	0.57761 ( 20.2)		-0.23422 ( -8.3)				4.42080
7	0.71	281	0.62898 ( 22.0)			0.33118 ( 5.9)			3.53950
8	0.74	280	0.56659 ( 19.9)		-0.19559 ( -6.4)	0.17340 ( 3.0)			4.35500
9	0.75	279	0.55511 ( 19.8)		-0.21616 ( -7.1)	0.10382 ( 1.7)	0.26290 ( 3.5)		4.35150
10	0.68	281	0.66917 ( 23.6)				0.27354 ( 3.5)		3.26150
11	0.75	280	0.55921 ( 19.9)		-0.24009 ( -8.8)		0.30418 ( 4.3)		4.38610
12	0.69	280	0.66271 ( 23.7)				0.29514 ( 3.8)	0.12831 ( 3.1)	3.25680
13	0.75	279	0.56091 ( 20.0)		-0.23107 ( -8.2)		0.31117 ( 4.4)	0.04839 ( 1.3)	4.34210
14	0.71	280	0.62756 ( 22.1)			0.31724 ( 5.6)		0.08916 ( 2.2)	3.52990
15	0.74	279	0.56812 ( 19.9)		-0.18907 ( -6.0)	0.17324 ( 3.0)		0.03463 ( 0.9)	4.32410
16	0.72	279	0.62384 ( 22.1)			0.27738 ( 4.8)		0.10119 ( 2.5)	3.46460
17	0.76	278	0.55682 ( 19.8)		-0.20802 ( -6.6)	0.10160 ( 1.7)	0.27049 ( 3.6)	0.04643 ( 1.2)	4.31000

Table A3.12 Multiple Regression Analysis - Calorie Intake over Calorie Requirements in COAST Province - KENYA

EQN	R-SQU	DF	EXP/HHS	ASS/HHS	HHS	FRMSZ/HHS	OWNC/TOTC	DMV-SEX	CONSTANT
1	0.69	263	0.72642 ( 24.1)						-4.51350
2	0.69	262	0.74622 ( 23.4)	-0.03274 ( -1.8)					-4.42930
3	0.70	261	0.79253 ( 22.3)	-0.03405 ( -1.9)	0.09389 ( 2.8)				-4.88230
4	0.71	260	0.79026 ( 22.5)	-0.06054 ( -3.1)	0.12494 ( 3.6)	0.20544 ( 2.9)			-4.82160
5	0.72	259	0.79111 ( 22.8)	-0.06643 ( -3.4)	0.12817 ( 3.7)	0.20400 ( 2.9)	0.21936 ( 2.4)		-4.84540
6	0.70	262	0.77107 ( 22.7)		0.09211 ( 2.7)				-4.96120
7	0.69	262	0.71759 ( 22.6)			0.05444 ( 0.9)			-4.47540
8	0.70	261	0.76143 ( 22.1)		0.10719 ( 3.1)	0.10447 ( 1.7)			-4.96150
9	0.70	260	0.75983 ( 22.2)		0.10842 ( 3.1)	0.09523 ( 1.5)	0.17994 ( 1.9)		-4.99220
10	0.69	262	0.72271 ( 24.1)				0.18038 ( 1.9)		-4.53180
11	0.70	261	0.76848 ( 22.7)		0.09483 ( 2.8)		0.19051 ( 2.1)		-4.99380
12	0.69	261	0.72192 ( 23.8)				0.17872 ( 1.9)	0.01048 ( 0.2)	-4.52830
13	0.70	260	0.77076 ( 22.8)		0.11038 ( 3.1)		0.18125 ( 2.0)	0.06899 ( 1.3)	-5.04660
14	0.69	261	0.71619 ( 22.3)			0.05404 ( 0.9)		0.01847 ( 0.4)	-4.46990
15	0.70	260	0.76339 ( 22.2)		0.12773 ( 3.4)	0.11223 ( 1.8)		0.08543 ( 1.5)	-5.02900
16	0.69	260	0.71480 ( 22.4)			0.04478 ( 0.7)	0.17313 ( 1.8)	0.01006 ( 0.2)	-4.49660
17	0.71	259	0.75169 ( 22.3)		0.12680 ( 3.4)	0.10277 ( 1.6)	0.16880 ( 1.8)	0.07674 ( 1.4)	-5.05090

Table A3.13 Multiple Regression Analysis - Calorie Intake per Household Member in COAST Province - KENYA

EQN	R-SQU	DF	EXP/HHS	ASS/HHS	HHS	FRMSZ/HHS	OWNC/TOIC	DMV-SEX	CONSTANT
1	0.71	263	0.73565 ( 25.5)						3.15350
2	0.72	262	0.75449 ( 24.8)	-0.03115 ( -1.8)					3.23360
3	0.72	261	0.79285 ( 23.2)	-0.03224 ( -1.9)	0.07777 ( 2.4)				2.85830
4	0.73	260	0.79094 ( 23.4)	-0.05456 ( -2.9)	0.10392 ( 3.1)	0.17308 ( 2.6)			2.90950
5	0.73	259	0.79159 ( 23.5)	-0.05905 ( -3.1)	0.10639 ( 3.2)	0.17198 ( 2.6)	0.16747 ( 1.9)		2.89130
6	0.72	262	0.77253 ( 23.7)		0.07608 ( 2.3)				2.78360
7	0.71	262	0.72899 ( 24.0)			0.04105 ( 0.7)			3.18210
8	0.72	261	0.76496 ( 23.1)		0.08793 ( 2.6)	0.08209 ( 1.4)			2.78340
9	0.72	260	0.76378 ( 23.2)		0.08884 ( 2.6)	0.07529 ( 1.2)	0.13242 ( 1.5)		2.76080
10	0.72	262	0.73293 ( 25.5)				0.13244 ( 1.5)		3.14000
11	0.72	261	0.77062 ( 23.7)		0.07809 ( 2.4)		0.14078 ( 1.6)		2.75960
12	0.72	261	0.73482 ( 25.3)				0.13640 ( 1.5)	-0.02503 ( -0.5)	3.13170
13	0.72	260	0.77123 ( 23.6)		0.08228 ( 2.4)		0.13829 ( 1.5)	0.01860 ( 0.3)	2.74530
14	0.71	261	0.73042 ( 23.8)			0.04146 ( 0.7)		-0.01893 ( -0.4)	3.17650
15	0.72	260	0.76567 ( 23.1)		0.09540 ( 2.6)	0.08491 ( 1.4)		0.03108 ( 0.6)	2.75880
16	0.72	260	0.72936 ( 23.8)			0.03439 ( 0.6)	0.13211 ( 1.5)	-0.02535 ( -0.5)	3.15610
17	0.72	259	0.76437 ( 23.1)		0.09469 ( 2.6)	0.07769 ( 1.3)	0.12887 ( 1.4)	0.02445 ( 0.5)	2.74210

Table A3.14 Multiple Regression Analysis - Calorie Intake over Calorie Requirements in EASTERN Province - KENYA

DF	R-SQU	EXP/HHS	ASS/HHS	HHS	FRMSZ/HHS	OMNC/TOTC	DMV-SEX	CONSTANT
1	0.72	0.72900 ( 26.6)						-4.53600
2	0.73	0.76733 ( 24.6)	-0.05310 ( -2.5)					-4.42430
3	0.73	0.74743 ( 22.8)	-0.05156 ( -2.4)	-0.06385 ( -1.9)				-4.19660
4	0.73	0.74409 ( 22.6)	-0.03856 ( -1.6)	-0.07985 ( -2.1)	-0.08911 ( -1.0)			-4.20360
5	0.73	0.74995 ( 22.3)	-0.04174 ( -1.7)	-0.07766 ( -2.1)	-0.08369 ( -0.9)	-0.07145 ( -0.9)		-4.18510
6	0.73	0.70928 ( 24.4)		-0.06703 ( -2.0)				-4.29350
7	0.72	0.73994 ( 25.8)			-0.09057 ( -1.3)			-4.57420
8	0.73	0.72059 ( 24.5)		-0.09438 ( -2.6)	-0.16037 ( -2.1)			-4.26220
9	0.73	0.72352 ( 24.4)		-0.09364 ( -2.6)	-0.16071 ( -2.1)	-0.05347 ( -0.7)		-4.25200
10	0.72	0.73188 ( 26.4)				-0.05750 ( -0.7)		-4.52200
11	0.73	0.71213 ( 24.2)		-0.06625 ( -1.9)		-0.05239 ( -0.7)		-4.28350
12	0.72	0.72833 ( 25.8)				-0.04682 ( -0.6)	0.03439 ( 0.7)	-4.51510
13	0.73	0.71041 ( 23.9)		-0.06405 ( -1.9)		-0.04541 ( -0.6)	0.02303 ( 0.5)	-4.28680
14	0.72	0.73690 ( 25.5)			-0.09998 ( -1.4)		0.04763 ( 1.0)	-4.56510
15	0.73	0.71882 ( 24.4)		-0.09161 ( -2.5)	-0.16554 ( -2.2)		0.03654 ( 0.8)	-4.26430
16	0.72	0.73962 ( 25.3)			-0.09976 ( -1.4)	-0.04624 ( -0.6)	0.04262 ( 0.9)	-4.55510
17	0.73	0.72146 ( 24.1)		-0.09136 ( -2.5)	-0.16516 ( -2.2)	-0.04385 ( -0.6)	0.03182 ( 0.7)	-4.25570