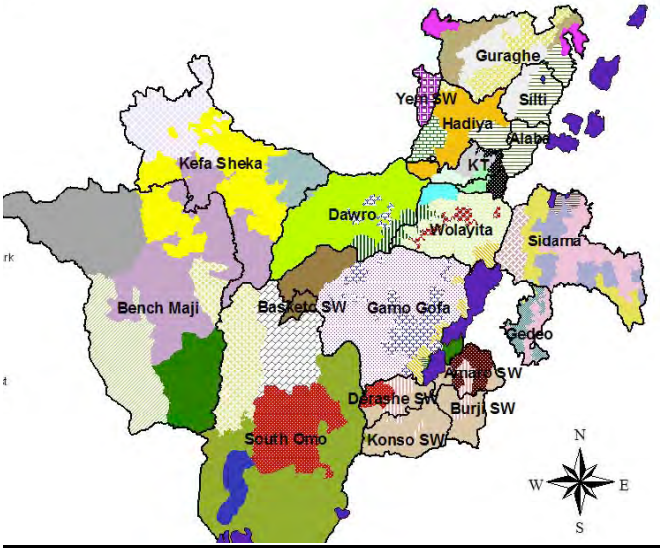
GOVERNMENT OF ETHIOPIA
DISASTER PREVENTION AND
PREPAREDNESS AGENCY

USAID
FROM THE AMERICAN PEOPLE

# LIVELIHOODS BASELINE FIELD HANDBOOK




**Livelihoods Integration Unit (LIU)**
**Implemented by F.E.G.**

**SEPTEMBER 2007**

## SOURCES OF INFORMATION

## PRINCIPLES OF RAPID RURAL APPRAISAL

**Management of bias:** Be aware of who you're talking to. It is always useful to know how long your informant has been in the area and what contact s/he has had with villagers themselves.

Be clear about the geographical area your informant is referring to.

Try to assess how the interview went. Were the respondents well-placed to know about the various subjects under discussion? What might have motivated the respondents to give certain answers?

**Optimal Ignorance:** For speed and efficiency, the team must have a clear idea of the minimum information set required.

**On the spot analysis:** Allowing follow-up and clarification of issues in the field.

**A learning process:** The researchers' understanding of the problem grows throughout the field study.

**Use of indigenous knowledge:** This is clearly central to the approach. But the researcher should also try to understand problems from the informants' point of view.

**Flexibility:** While the researcher must have a clear conception of what information s/he is trying to get, the approach must be sufficiently flexible to allow adaptation to any new situation arising in the field.

**Triangulation:** In the sense of getting two or three points of view, and cross-checking between these. In RRA this involves using different investigators, different respondents, different information sources and different techniques.

**HIGHLANDS DRAFT FIELD PROGRAMME**

| Day | Time | Location | Activity |
|---|---|---|---|
| 1 (Mon) | | | Travel to 1st woreda |
| 2 (Tue) | Morning & Afternoon | District 1 offices | Team splits to cover Interview forms 1 and 5 |
| | Morning/ Afternoon | 2 villages | After site selection, 1 team member + 1 woreda official goes to/telephones to nearby villages to inform of the team's visit on day 2 |
| 3 (Wed) | Morning | Village 1 | 1 community interview |
| | Afternoon | Village 2 | 1 community interview |
| 4 (Thu) | Morning | Village 1 | 4 WG interviews |
| | Afternoon | Village 2 | 4 WG interviews |
| 5 (Fri) | Morning | Travel to 2nd woreda | Assuming the woreda interview has been done by another team… |
| | Afternoon | 2 villages | Inform 2 villages of team's visit next day |
| 6 (Sat) | Morning | Village 3 | 1 community interview |
| | Afternoon | Village 4 | 1 community interview |
| 7 (Sun) | | | REST DAY |
| 8 (Mon) | Morning | Village 3 | 4 WG interviews |
| | Afternoon | Village 4 | 4 WG interviews |
| 9 (Tue) | | | Interim analysis day |
| 10 (Wed) | Morning & afternoon | Travel to 3rd woreda | Assuming the woreda is a distant woreda |
| 11 (Thu) | Morning & Afternoon | District 3 offices | Team splits to cover Interview forms 1 and 5 |
| | Morning/ Afternoon | 2 villages | After site selection, one team member + one woreda official goes to/telephones to nearby villages to inform them of the team's visit on day 2 |
| 12 (Fri) | Morning | Trader | Team splits to visit to markets |
| | Afternoon | Village56 | Team splits to do 2 comm interviews |
| 13(Sat) | Morning | Village 5 | 4 WG interviews |
| | Afternoon | Village 6 | 4 WG interviews |
| 14(Sun) | | | REST DAY |
| 15 (Mon) | Morning | Travel to 4th woreda | Assuming the woreda interview has been done by another team… |
| | Afternoon | 2 villages | Inform 2 villages of team's visit next day |
| 16(Tue) | Morning | Market | Team splits to visit to markets |
| | Afternoon | Village78 | Team splits to do 2 comm interviews |
| 17(Wed | Morning | Village 7 | 4 WG interviews |
| | Afternoon | Village 8 | 4 WG interviews |

- 4 –**DRAFT FIELD PROGRAMME - LOWLANDS (CAMPING)**

| Day | Time | Location | Activity |
|---|---|---|---|
| 1 (Thu) | | | Travel to 1st woreda |
| 2 Fri | Morning & Afternoon | District 1 offices | Team splits to cover Interview forms 1 and 5 |
| 3 Sat | Morning | Trader interv | |
| | Afternoon | Travel to V1 | |
| | Evening | Village 1 | 1 comm interview |
| 4 Sun | Morning | Village 1 | 4 WG interviews |
| | Afternoon | Travel to V2 | |
| | Evening | Village 2 | 1 comm interview |
| 5 Mon | Morning | Village 2 | 4 WG interviews |
| | Afternoon | | Travel to 2nd woreda |
| 6 Tue | | | REST DAY |
| 7 Wed | Morning | 2nd woreda | Assuming the woreda interview has been done by another team… |
| | Afternoon | Travel to V3 | |
| | Evening | Village 3 | 1 comm interview |
| 8 Thu | Morning | Village 3 | 4 WG interviews |
| | Afternoon | Travel to V4 | |
| | Evening | Village 4 | 1 comm interview |
| 9 (Fri) | Morning | Village 4 | 4 WG interviews |
| | Afternoon | | Travel to 3rd woreda |
| 10 (Sat) | | | Interim analysis day |
| 11(Sun) | | | REST DAY |
| 12 (Mon) | Morning & Afternoon | District 3 offices | Team splits to cover Interview forms 1 and 5 |
| 13Tue | Morning | Trader | |
| | Afternoon | Travel to V5 | |
| | Evening | Village 5 | 1 comm interview |
| 14Wed | Morning | Village 6 | 4 WG interviews |
| | Afternoon | Travel to V6 | |
| | Evening | Village 6 | 1 comm interview |
| 15(Thu) | Morning | Village 6 | 4 WG interviews |
| | Afternoon | | Travel to 4th woreda |
| 16 (Fri) | Morning | 4th woreda | Assuming the woreda interview was done by another team… |
| | Afternoon | Travel to V7 | |
| | Evening | Village 7 | 1 comm interview |
| 17 (Sat) | Morning | Village 7 | 4 WG interviews |
| | Afternoon | Travel to V8 | |
| | Evening | Village 8 | 1 comm interview |
| 18(Sun) | Morning | Village 8 | 4 WG interviews. PM to Mekele |

**SEASONAL CALENDAR**

| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
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**TIMELINE**

| DATE | EVENT |
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## INTERVIEWING

### INTRODUCTION TO THE INTERVIEW (VILLAGE LEVEL)

Welcome participants to the interview and thank them for coming.

Make it clear that you are not part of an official delegation or mission to the area, but that you are there to try and understand better what's going on. Show a genuine curiosity and desire to understand.

Explain the purpose of your visit. Avoid saying that the purpose is to assess food aid needs. Instead, you might explain that you are interested to find out what people are doing to help themselves, since this will help you better understand the best type of assistance.

Never make promises about assistance coming to the village. Explain that you are not personally the decision-maker.

### SEMI-STRUCTURED INTERVIEWS – TIPS

Questions can be asked (or answers provided) in any order. At the end of the interview, check that all the various questions have been posed.

The next question should often follow-on from the answer to the previous question.

Keep track of the story you are being told. Is it consistent? Clarify inconsistencies.

Finish enquiries into one topic before moving on to the next. But also follow the flow of the conversation, keeping a track of leads, so that you can follow these up later.

Cross-check as much as possible, both by asking the same question in different ways and by comparing the response of different people. But don't ask the same question over and over again.

### THE WEALTH BREAKDOWN – TIPS

Explain that we know that there are differences within every community – not all households are the same – some are better-off, some are worse off.

For our purposes, ‘poor/very poor’ means poorer than most households, while ‘better-off’ means better-off than most households (i.e. the ‘poor/very poor ‘ cannot constitute more than 50% of the population).

In this interview we are not just concerned with this village, we are concerned with the area in general.

If informants say that ‘everyone is the same now’, then ask them about differences within the community one year (or more) ago.

If, after proportional piling, one group looks very large, ask the key informants to explain differences within the group – subdivide the pile.

## FOCUS GROUP INTERVIEWS – TIPS

Make sure you understand to whom you are talking. Clarify which wealth group the interviewees represent. Check that their appearance corresponds with their supposed wealth group. Find out if any of them are related to participants in the community level interview.

Ask participants to represent their wealth group, not to speak as individuals.

Be clear about the time period to which the questions refer.

Remember the basic questions: who? what? where? when? why? how often? how long? how much? how many? what then? what else? what if?

And keep asking why…

## HOW TO TELL IF THINGS ARE GOING BADLY WRONG

Information is not being volunteered readily

One person dominating the discussion and refusing to allow others to participate

When you cross-check, things do not become clearer, and contradictions get worse

If the information were true, the informants would be dead

Members of the group cannot reach a consensus

## WHAT TO DO IF THINGS ARE GOING BADLY WRONG

Check again who is in the group. Sometimes problems arise because participants come from different wealth groups. In this case, reform the group, or even continue the interview with one participant only.

Sometimes explaining that things are not making sense - and that you will disregard the data if this continues - can lead to a change of attitude by the respondents.

If things are really bad, give up as soon as politely possible and move on to the next interview.

**LIVELIHOODS: MAIN CATEGORIES & CHARACTERISTICS**

| Main Categories of Livelihood | Main characteristics | Additional notes: |
|---|---|---|
| Agriculture | Example of main types of Agricultural Livelihood Zones:<br>Rainfed and/or Irrigated<br>Food crop and/or Cash crop<br>Crop surplus or crop deficit zone<br>Hand and/or animal/mechanical traction<br>Short or long rains dependent<br>Lowland – highland – mid-highland<br>High potential – low potential | In this type of zone, the main activity is crop production, typically supplemented by livestock keeping but on a small scale (e.g. 1-2 dairy cattle and poultry for most households)<br><br>We want to rank the main crops consumed and the main crops sold. |
| Pastoral | Indicate:<br>Agro-ecological zone | Pastoral livelihoods are those where the core or main activity is the raising of livestock.<br><br>We want to rank the main types of livestock based on their importance to household food and income. |
| Agro-Pastoral | Indicate whether:<br>Crops more/less important than Livestock<br><br>Plus any of the agricultural or pastoral characteristics | Agro-pastoralists both herd livestock and grow crops. |
| Fishing | Indicate whether:<br>Sea, Lake, River, Pond etc.<br>Offshore and/or Inshore<br>Boats, Nets and/or Lines | In this type of zone, fishing typically provides both a source of food and a source of income. |
| Labour Based | Indicate whether:<br>Plantation – Ranch – Urban<br>Local work – seasonal migration – long-term migration<br>Type of plantation (tea etc.) | In this type of zone the majority of people derive their income from labour and purchase most of their food[1] |
| Hunter-Gatherer | Indicate whether:<br>Hunting of animals more/less important than gathering of wild plants | Hunter-Gathers derive a substantial proportion of their *FOOD* from hunting and gathering (not just income, as in the case of pastoralists that may collect and sell charcoal, for example.) |
| Other (e.g. Mining, Trading) | Indicate main characteristics | Include any other types of livelihood pattern not listed above. |

[1]This will apply to many workers employed full time on large commercial ranches and plantations (e.g. tea or coffee estates). It does not apply to smallholders growing their own tea or coffee (whose livelihood is agricultural). People that both farm and find work on ranches or plantations (perhaps seasonally) can be described as having an agriculture + labour-based livelihood. Similarly, people that both farm and find work in urban areas also have an agriculture + labour-based livelihood. This is true whether the urban area is close by or distant (in which case 1-2 or family members may migrate for all or part of the year).

**Checklist of Food and Income Sources, and Expenditure**

| Food | Income | Expenditure |
|---|---|---|
| ▪ Cereals: Maize, sorghum, millet. teff<br>▪ Pulses: beans, chickpeas, ground nuts<br>▪ Tubers: cassava, sweet potatoes, ensete<br>▪ Milk<br>▪ Meat (beef and chicken), guinea fowls, pig, sheep, goat<br>▪ Wild foods, game, fish<br>▪ Gifts<br>▪ Loans<br>▪ Food Aid<br>▪ Purchase, barter, payment in kind<br>▪ Stocks<br>▪ Labour for food<br>▪ Safety Net<br>▪ A meal given to daily labourers or poor HHs<br>▪ Beer | ▪ Sale of crops/crop residues<br>▪ Sale of livestock/livestock products (milk, ghee, skins) from: cattle, sheep, goats, donkeys, pigs, poultry<br>▪ Unskilled casual labour (agricultural labour, construction, brick-making)<br>▪ Skilled casual labour (carpentry, brick laying)<br>▪ Paid domestic work<br>▪ Livestock herding (if performed for another household and paid for in food/ cash by that household)<br>▪ Salaried Employment<br>▪ Remittance (i.e. money sent by someone living outside the village)<br>▪ Collection (firewood, charcoal, grass, honey, berries, bush meat, minerals)<br>▪ Fishing<br>▪ Transport (e.g. taxi, pickup etc.)<br>▪ Self-employment (brewing, handicrafts)<br>▪ Petty Trade (purchase and resale of good on a very small scale)<br>▪ Trade (purchase and resale of goods on a larger scale, e.g. livestock brokers, coffee brokers, maize traders)<br>▪ Small business (e.g. village kiosks, tea stalls, grain mills)<br>▪ Rental/hire (e.g. housing, vehicles, livestock for ploughing/transport)<br>▪ Cash savings & loans (record % paid back and after what period)<br>▪ Agro-processing: oil press, oil, salt preparation, rice polishing, bee-keeping, fruit drying<br>▪ Gifts | ▪ Cereals, pulses, meat, milk, vegetables<br>▪ Sugar, tea<br>▪ Soap<br>▪ Salt/Pepper<br>▪ Oil<br>▪ Other sauce items (e.g. fish/veg)<br>▪ Grinding<br>▪ Paraffin<br>▪ Firewood/charcoal<br>▪ Primary (books) + secondary school<br>▪ Basic medical care<br>▪ Livestock inputs (pest control, drugs, vet.services, fodder, concentrate, minerals, labour).<br>▪ Crop Inputs: ploughing, seeds, fertiliser, fungicide, insecticide, labour (nursery, planting, staking, weeding, spraying, harvesting, processing), materials.<br>▪ Clothing<br>▪ Gifts<br>▪ Beer<br>▪ Tobacco<br>▪ Travel<br>▪ Funerals |

## FOOD COMPOSITION TABLES - kcals per 1kg (1000g) of Food

| Cereals | kcal | kg/d |
|---|---|---|
| Barley | 3390 | 0.62 |
| Maize, white, whole | 3630 | 0.58 |
| Maize meal, refined 60-80% | 3600 | 0.58 |
| maize, green | 1230 | 1.71 |
| millet, whole grain | 3630 | 0.58 |
| Millet flour | 3650 | 0.58 |
| Rice - parboiled, lightly milled | 3540 | 0.59 |
| Oats | 3880 | 0.54 |
| sorghum | 3550 | 0.59 |
| sorghum flour | 3530 | 0.59 |
| Teff, whole grains | 3450 | 0.61 |
| Wheat whole | 3440 | 0.61 |
| Wheat flour | 3480 | 0.6 |
| Pasta | 3420 | 0.61 |
| | | |
| **Roots and tubers** | | |
| Cassava flour | 3420 | 0.61 |
| Cassava, fresh | 1530 | 1.37 |
| plantain, ripe, raw | 1280 | 1.64 |
| irish potato raw | 750 | 2.8 |
| sweet potato, pale raw | 1140 | 1.84 |
| taro | 1130 | 1.86 |
| yam, flour | 3170 | 0.66 |
| yam, fresh | 1040 | 2.02 |
| ensete | 2000 | 1.05 |
| | | |
| **Grain legumes** | | |
| beans, dried | 3390 | 0.62 |
| peas, dried, cowpeas | 3400 | 0.62 |
| lentil, dried | 3390 | 0.62 |
| soya bean, dried | 3820 | 0.55 |
| | | |
| **Nuts and seeds** | | |
| Groundnut, dried | 5790 | 0.36 |
| groundnuts, fresh | 3320 | 0.63 |
| pumpkin seeds (no coat) | 6100 | 0.34 |
| | | |
| **Fruit** | | |
| Baobab, ripe, raw | 2800 | 0.75 |
| banana, ripe, raw | 1160 | 1.81 |
| citrus, orange | 530 | 3.96 |
| mango | 630 | 3.33 |
| avocado | 1650 | 1.27 |
| papaya | 390 | 5.38 |
| apple | 610 | 3.44 |

| Sugars | kcal | kg/d |
|---|---|---|
| sugar | 4000 | 0.53 |
| soft drinks, commercial | 450 | 4.67 |
| | | |
| **meat, poultry, eggs** | | |
| beef, mod fat | 2350 | 0.89 |
| beef, lean | 2020 | 1.04 |
| goat meat | 1450 | 1.45 |
| eggs | 1580 | 1.33 |
| | | |
| **fish** | | |
| fish, dried | 3090 | 0.68 |
| fresh fish | 950 | 2.21 |
| | | |
| **milk** | | |
| milk, whole, cow | 640 | 3.28 |
| milk, whole, sheep | 1080 | 1.94 |
| milk, whole, goat | 710 | 2.96 |
| milk, skimmed cow | 340 | 6.18 |
| DSM vit A-enriched | 3550 | 0.59 |
| | | |
| **Oils and fats** | | |
| butter | 7450 | 0.28 |
| ghee | 8280 | 0.25 |
| margarine | 7650 | 0.27 |
| sunflower oil | 9000 | 0.23 |
| | | |
| **Other** | | |
| beer, local | 350 | 6 |
| honey | 2860 | 0.73 |
| | | |
| **Blended foods** | | |
| CSB/WSB corn/wheat soya blend | 3600 | 0.58 |
| Soy fortified cornmeal | 3920 | 0.54 |
| High protein biscuits | 4640 | 0.45 |
| protein-enriched ration | 4500 | 0.47 |
| | | |
| **Vegetables** | | |
| leaves, dark green | 480 | 4.38 |
| leaves, medium green | 280 | 7.5 |
| leaves, light green | 230 | 9.13 |
| pumpkin | 360 | 5.83 |
| onions | 480 | 4.38 |
| tomatoes | 200 | 10.5 |
| | | |

**Food contributions to % kcals** based on 2100 kcals pp

| **Cereals** | 3500 kcals/kg | | | **HH size** | |
|---|---|---|---|---|---|
| **kg per year** | **4** | **5** | **6** | **7** | **8** |
| **25** | 3% | 2% | 2% | 2% | 1% |
| **50** | 6% | 5% | 4% | 3% | 3% |
| **100** | 11% | 9% | 8% | 7% | 6% |
| **200** | 23% | 18% | 15% | 13% | 11% |
| **300** | 34% | 27% | 23% | 20% | 17% |
| **400** | 46% | 37% | 30% | 26% | 23% |
| **500** | 57% | 46% | 38% | 33% | 29% |
| **600** | 68% | 55% | 46% | 39% | 34% |
| **700** | 80% | 64% | 53% | 46% | 40% |
| **800** | 91% | 73% | 61% | 52% | 46% |
| **900** | | 82% | 68% | 59% | 51% |
| **1000** | | 91% | 76% | 65% | 57% |
| **1100** | | | 84% | 72% | 63% |
| **1200** | | | 91% | 78% | 68% |
| **1300** | | | | 85% | 74% |
| **1400** | | | | 91% | 80% |
| **1500** | | | | | 86% |
| **1600** | | | | | 91% |

| **Pulses** | 3400 kcals/kg | | | **HH size** | |
|---|---|---|---|---|---|
| **kg per year** | **4** | **5** | **6** | **7** | **8** |
| **100** | 11% | 9% | 7% | 6% | 6% |
| **200** | 22% | 18% | 15% | 13% | 11% |
| **300** | 33% | 27% | 22% | 19% | 17% |
| **400** | 44% | 35% | 30% | 25% | 22% |
| **500** | | | 37% | 32% | 28% |
| **600** | | | 44% | 38% | 33% |
| **700** | | | | 44% | 39% |
| **800** | | | | | 44% |

| **Oil/Butter** | 9000 kcals/kg | | | **HH size** | |
|---|---|---|---|---|---|
| **litres per week** | **4** | **5** | **6** | **7** | **8** |
| **0.5** | 8% | 6% | 5% | 4% | 4% |
| **1** | 15% | 12% | 10% | 9% | 8% |
| **2** | 31% | 24% | 20% | 17% | 15% |
| **3** | 46% | 37% | 31% | 26% | 23% |
| **4** | | | | 35% | 31% |

| **Sugar** | 4000 kcals/kg | | | **HH size** | |
|---|---|---|---|---|---|
| **kg per week** | **4** | **5** | **6** | **7** | **8** |
| **1** | 7% | 5% | 5% | 4% | 3% |
| **2** | 14% | 11% | 9% | 8% | 7% |
| **3** | 20% | 16% | 14% | 12% | 10% |
| **4** | 27% | 22% | 18% | 16% | 14% |
| **5** | | 27% | 23% | 19% | 17% |
| **6** | | | 27% | 23% | 20% |
| **7** | | | | 27% | 24% |
| **8** | | | | | 27% |

| **Milk** | 640 kcals/kg | | | **HH size** | |
|---|---|---|---|---|---|
| **litres per year** | **4** | **5** | **6** | **7** | **8** |
| **100** | 2% | 2% | 1% | 1% | 1% |
| **200** | 4% | 3% | 3% | 2% | 2% |
| **300** | 6% | 5% | 4% | 4% | 3% |
| **500** | 10% | 8% | 7% | 6% | 5% |
| **750** | 16% | 13% | 10% | 9% | 8% |
| **1000** | 21% | 17% | 14% | 12% | 10% |
| **1500** | 31% | 25% | 21% | 18% | 16% |
| **2000** | 42% | 33% | 28% | 24% | 21% |
| **2500** | 52% | 42% | 35% | 30% | 26% |
| **3000** | | 50% | 42% | 36% | 31% |
| **3500** | | 58% | 49% | 42% | 37% |
| **4000** | | | 56% | 48% | 42% |
| **4500** | | | | 54% | 47% |
| **5000** | | | | | 52% |

| **Meat (beef)** | 2360 kcals/kg | | | **HH size** | |
|---|---|---|---|---|---|
| **kg per year** | **4** | **5** | **6** | **7** | **8** |
| **25** | 2% | 2% | 1% | 1% | 1% |
| **75** | 6% | 5% | 4% | 3% | 3% |
| **150** | 12% | 9% | 8% | 7% | 6% |
| **225** | 17% | 14% | 12% | 10% | 9% |
| **300** | 23% | 18% | 15% | 13% | 12% |
| **375** | | 23% | 19% | 16% | 14% |
| **450** | | | 23% | 20% | 17% |
| **525** | | | | 23% | 20% |
| **600** | | | | | 23% |

| **Cassava** | 1530 kcals/kg | | | **HH size** | |
|---|---|---|---|---|---|
| **kg per year** | **4** | **5** | **6** | **7** | **8** |
| **100** | 5% | 4% | 3% | 3% | 2% |
| **200** | 10% | 8% | 7% | 6% | 5% |
| **300** | 15% | 12% | 10% | 9% | 7% |
| **400** | 20% | 16% | 13% | 11% | 10% |
| **500** | 25% | 20% | 17% | 14% | 12% |
| **600** | 30% | 24% | 20% | 17% | 15% |
| **700** | 35% | 28% | 23% | 20% | 17% |
| **800** | 40% | 32% | 27% | 23% | 20% |
| **900** | 45% | 36% | 30% | 26% | 22% |
| **1000** | 50% | 40% | 33% | 29% | 25% |
| **1100** | 55% | 44% | 37% | 31% | 27% |
| **1200** | 60% | 48% | 40% | 34% | 30% |
| **1300** | 65% | 52% | 43% | 37% | 32% |
| **1400** | 70% | 56% | 47% | 40% | 35% |
| **1500** | 75% | 60% | 50% | 43% | 37% |
| **1600** | 80% | 64% | 53% | 46% | 40% |
| **1700** | 85% | 68% | 57% | 48% | 42% |
| **1800** | 90% | 72% | 60% | 51% | 45% |
| **1900** | | 76% | 63% | 54% | 47% |
| **2000** | | | | | 50% |

| **Other root crops** | 1130 kcals/kg | | **HH size** | | |
|---|---|---|---|---|---|
| **kg per year** | **4** | **5** | **6** | **7** | **8** |
| **100** | 4% | 3% | 2% | 2% | 2% |
| **200** | 7% | 6% | 5% | 4% | 4% |
| **300** | 11% | 9% | 7% | 6% | 6% |
| **400** | 15% | 12% | 10% | 8% | 7% |
| **500** | 18% | 15% | 12% | 11% | 9% |
| **600** | 22% | 18% | 15% | 13% | 11% |
| **700** | 26% | 21% | 17% | 15% | 13% |
| **800** | 29% | 24% | 20% | 17% | 15% |
| **900** | 33% | 27% | 22% | 19% | 17% |
| **1000** | 37% | 29% | 25% | 21% | 18% |
| **1100** | 41% | 32% | 27% | 23% | 20% |
| **1200** | 44% | 35% | 29% | 25% | 22% |
| **1300** | 48% | 38% | 32% | 27% | 24% |
| **1400** | 52% | 41% | 34% | 29% | 26% |
| **1500** | 55% | 44% | 37% | 32% | 28% |
| **1600** | 59% | 47% | 39% | 34% | 29% |
| **1700** | 63% | 50% | 42% | 36% | 31% |
| **1800** | 66% | 53% | 44% | 38% | 33% |
| **1900** | 70% | 56% | 47% | 40% | 35% |
| **2000** | 74% | 59% | 49% | 42% | 37% |

| **Irish potatoes** | 750 kcals/kg | | HH size | | |
|---|---|---|---|---|---|
| **kg per year** | 4 | 5 | 6 | 7 | 8 |
| **100** | 2% | 2% | 2% | 1% | 1% |
| **200** | 5% | 4% | 3% | 3% | 2% |
| **300** | 7% | 6% | 5% | 4% | 4% |
| **400** | 10% | 8% | 7% | 6% | 5% |
| **500** | 12% | 10% | 8% | 7% | 6% |
| **600** | 15% | 12% | 10% | 8% | 7% |
| **700** | 17% | 14% | 11% | 10% | 9% |
| **800** | 20% | 16% | 13% | 11% | 10% |
| **900** | | 18% | 15% | 13% | 11% |
| **1000** | | | 16% | 14% | 12% |
| **1100** | | | | 15% | 13% |
| **1200** | | | | | 15% |

| **Oil seeds (GN/sesame/flax)** | 3320 kcals/kg | | **HH size** | | |
|---|---|---|---|---|---|
| **kg per year** | **4** | **5** | **6** | **7** | **8** |
| **100** | 11% | 9% | 7% | 6% | 5% |
| **200** | 22% | 17% | 14% | 12% | 11% |
| **300** | 32% | 26% | 22% | 19% | 16% |
| **400** | 43% | 35% | 29% | 25% | 22% |
| **500** | 54% | 43% | 36% | 31% | 27% |
| **600** | 65% | 52% | 43% | 37% | 32% |
| **700** | | 61% | 51% | 43% | 38% |
| **800** | | | 58% | 50% | 43% |
| **900** | | | 65% | 56% | 49% |
| **1000** | | | | 62% | 54% |
| **1100** | | | | 68% | 60% |
| **1200** | | | | | 65% |

| **Bananas (+skin)** | 777 kcals/kg | | | **HH size** | |
|---|---|---|---|---|---|
| **kg per year** | **4** | **5** | **6** | **7** | **8** |
| **100** | 3% | 2% | 2% | 1% | 1% |
| **200** | 5% | 4% | 3% | 3% | 3% |
| **300** | 8% | 6% | 5% | 4% | 4% |
| **400** | 10% | 8% | 7% | 6% | 5% |
| **500** | 13% | 10% | 8% | 7% | 6% |
| **600** | 15% | 12% | 10% | 9% | 8% |
| **700** | 18% | 14% | 12% | 10% | 9% |
| **800** | | 16% | 14% | 12% | 10% |
| **900** | | 18% | 15% | 13% | 11% |
| **1000** | | | 17% | 14% | 13% |

| **Enset (Kocho)** | 2000 kcals/kg | | | **HH size** | |
|---|---|---|---|---|---|
| **kg per year** | **4** | **5** | **6** | **7** | **8** |
| **100** | 7% | 5% | 4% | 4% | 3% |
| **200** | 13% | 10% | 9% | 7% | 7% |
| **300** | 20% | 16% | 13% | 11% | 10% |
| **400** | 26% | 21% | 17% | 15% | 13% |
| **500** | 33% | 26% | 22% | 19% | 16% |
| **600** | 39% | 31% | 26% | 22% | 20% |
| **700** | 46% | 37% | 30% | 26% | 23% |
| **800** | 52% | 42% | 35% | 30% | 26% |
| **900** | 59% | 47% | 39% | 34% | 29% |
| **1000** | 65% | 52% | 43% | 37% | 33% |
| **1100** | | 57% | 48% | 41% | 36% |
| **1200** | | 63% | 52% | 45% | 39% |
| **1300** | | 68% | 57% | 48% | 42% |
| **1400** | | | 61% | 52% | 46% |
| **1500** | | | 65% | 56% | 49% |
| **1600** | | | 70% | 60% | 52% |
| **1700** | | | | 63% | 55% |
| **1800** | | | | 67% | 59% |
| **1900** | | | | | 62% |
| **2000** | | | | | 65% |

| **General fruit/veg** | 500 kcals/kg | | | **HH size** | |
|---|---|---|---|---|---|
| **kg per year** | **4** | **5** | **6** | **7** | **8** |
| **50** | 1% | 1% | 1% | 0% | 0% |
| **100** | 2% | 1% | 1% | 1% | 1% |
| **150** | 2% | 2% | 2% | 1% | 1% |
| **200** | 3% | 3% | 2% | 2% | 2% |
| **250** | 4% | 3% | 3% | 2% | 2% |
| **300** | 5% | 4% | 3% | 3% | 2% |
| **350** | | 5% | 4% | 3% | 3% |
| **400** | | | 4% | 4% | 3% |
| **450** | | | | 4% | 4% |
| **500** | | | | | 4% |

## HOUSEHOLD SIZE AND COMPOSITION

**Population breakdown**
(typical developing country)

| Age | % of population | |
|---|---|---|
| | Male | Female |
| 0-4 | 6.3% | 6.1% |
| 5-9 | 6.0% | 5.7% |
| 10-14 | 5.4% | 5.1% |
| 15-19 | 4.9% | 4.6% |
| 20-59 | 24.8% | 23.8% |
| 60+ | 3.4% | 3.8% |
| Total | 50.8% | 49.2% |

**Household composition**
(based upon typical country population breakdown)

| | % pop | Household size | | | | |
|---|---|---|---|---|---|---|
| | | 5 | 6 | 7 | 8 | 9 |
| Adult men | 25% | 1.2 | 1.5 | 1.7 | 2.0 | 2.2 |
| Adult women | 24% | 1.2 | 1.4 | 1.7 | 1.9 | 2.1 |
| 15-19 years | 10% | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 |
| Children/aged | 42% | 2.1 | 2.5 | 2.9 | 3.3 | 3.8 |
| Total | 100% | | | | | |

**Can be used to cross-check the number of children at school and to crosscheck household labour availability**

## WEIGHTS AND MEASURES

| Name of Measure | | | | |
|---|---|---|---|---|
| Item | Weight of measure in kg | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

## YIELDS AND SEED RATES

| Crop | Yield (kg/ha) | Seed rate (kg/ha) | Seed rate (% harvest) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

## TIME:

**1 month = 4.3 weeks**

**Table 1: Factors to Convert to Cereal Equivalents**

| ***Food Item*** | ***kcals/kg*** | ***Multiplication factor*** |
|---|---|---|
| cereals/pulses | 3500 | 1 |
| plantain, ripe, raw | 1300 | 0.37 |
| enset (kocho) | 2000 | 0.57 |
| cassava, fresh | 1530 | 0.44 |
| irish potato | 750 | 0.21 |
| other root crops | 1000 | 0.29 |
| oilseeds | 5700 | 1.63 |
| whole milk | 650 | 0.19 |
| sugar | 4000 | 1.14 |
| Ghee/butter | 7865 | 2.25 |
| vegetable oil | 9000 | 2.57 |

**Table 2: Annual Cereal Requirements by Household Size**

| ***Household size*** | ***Annual cereal requirement*** | | |
|---|---|---|---|
| | ***Kg*** | ***50 kg sacks*** | ***100 kg sacks*** |
| 2 | 440 | 8.8 | 4.4 |
| 3 | 660 | 13.2 | 6.6 |
| 4 | 880 | 17.6 | 8.8 |
| 5 | 1100 | 22 | 11 |
| 6 | 1300 | 26 | 13 |
| 7 | 1550 | 31 | 15.5 |
| 8 | 1750 | 35 | 17.5 |
| 9 | 1950 | 39 | 19.5 |
| 10 | 2200 | 44 | 22 |
| 11 | 2400 | 48 | 24 |
| 12 | 2650 | 53 | 26.5 |

**Herd Dynamics – Reference Values (per 100 animals at start of year)**

| CATTLE | Herds with Plough Oxen | | | Herds without Plough Oxen | | |
|---|---|---|---|---|---|---|
| **Wealth Group** | **P** | **M** | **R** | **P** | **M** | **R** |
| Total (start of year) | 100 | 100 | 100 | 100 | 100 | 100 |
| Oxen | 0 | 19 | 16 | 0 | 0 | 0 |
| Breeding females | 47 | 38 | 32 | 41 | 41 | 41 |
| Births | 33 | 27 | 23 | 33 | 29 | 29 |
| Sales/slaughter | 31 | 32 | 11 | 31 | 16 | 16 |
| Deaths | 9 | 8 | 7 | 9 | 8 | 8 |
| Purchase/gifts | 7 | 13 | 0 | 7 | 0 | 0 |
| Total (end of year) | 100 | 100 | 105 | 100 | 105 | 105 |
| Offtake (%) | 31% | 32% | 11% | 31% | 16% | 16% |

| | CAMELS | | | SHOATS | | |
|---|---|---|---|---|---|---|
| **Wealth group** | **P** | **M** | **R** | **P** | **M** | **R** |
| Total (start of year) | 100 | 100 | 100 | 100 | 100 | 100 |
| Breeding females | 62 | 54 | 54 | 55 | 55 | 55 |
| Births | 27 | 24 | 24 | 66 | 66 | 66 |
| Sales/slaughter | 23 | 11 | 11 | 63 | 31 | 31 |
| Deaths | 9 | 8 | 8 | 24 | 24 | 24 |
| Purchase/gifts | 5 | 0 | 0 | 22 | 0 | 0 |
| Total (end of year) | 100 | 105 | 105 | 100 | 110 | 110 |
| Offtake (%) | 23% | 11% | 11% | 63% | 31% | 31% |

## LIVESTOCK PRODUCTION VARIABLES – AFRICAN, PASTORAL

### Milk Production

| | Length of gestation (months) | No. months between births | Length of lactation (days) | Milk output (l/day) | Milk output (l/animal/year) |
|---|---|---|---|---|---|
| Cattle | 9 | 17 | 270 | 1 | 191 |
| Camels | 12 | 27 | 365 | 3.75 | 616 |
| Sheep | 5 | 11 | 45 | 0.5 | 25 |
| Goats | 5 | 9 | 45 | 0.7 | 42 |

### Meat Production

| | Cattle | Camels | Sheep | Goats |
|---|---|---|---|---|
| Meat per carcass (kg) | 100 | 245 [1] | 10-20 | 10-40 |
| Kcal content of meat | 2360 | 4870 | 4040 | 720 |

Notes: [1] 225 kg meat (2950 kcals/kg) + 20 kg hump fat (9000 kcals/kg)

**Calculation of butter/ghee production** (assuming all milk made into butter or ghee)
kg butter = litres milk x 0.0425 kg ghee = litres milk x 0.038

### Herd Dynamics – Reference Values

| CATTLE | Herds with Plough Oxen | | | | | | Herds without Plough Oxen | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total (start of year) | 1 | 3 | 5 | 10 | 15 | 25 | 3 | 5 | 10 | 15 | 25 | 50 |
| Oxen | 0 | 0 | 1 | 1.5 | 2.5 | 4 | - | - | - | - | - | - |
| Breeding females | 0.5 | 1.5 | 2 | 3 | 5 | 8 | 1.5 | 2 | 4 | 6 | 10.5 | 20.5 |
| Births | 0.5 | 1 | 1.5 | 2 | 3.5 | 5.5 | 1 | 1.5 | 3 | 4.5 | 7.5 | 14.5 |
| Sales/slaughter | 0.5 | 1 | 1 | 1 | 1.5 | 2.5 | 1 | 1 | 1.5 | 2.5 | 4 | 8 |
| Deaths | 0 | 0.5 | 0.5 | 0.5 | 1 | 1.5 | 0.5 | 0.5 | 1 | 1 | 2 | 4 |
| Purchase/gifts | 0 | 0.5 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 |
| Total (end of year) | 1 | 3 | 5 | 10.5 | 16 | 26.5 | 3 | 5 | 10.5 | 16 | 26.5 | 52.5 |
| Offtake (%) | 50% | 33% | 20% | 10% | 10% | 10% | 33% | 20% | 15% | 17% | 16% | 16% |

| | CAMELS | | | | | | SHOATS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total (start of year) | 3 | 5 | 10 | 15 | 25 | 50 | 2 | 5 | 10 | 25 | 50 | 100 |
| Breeding females | 2 | 2.5 | 5.5 | 8 | 13.5 | 27 | 1 | 3 | 5.5 | 14 | 27.5 | 55 |
| Births | 1 | 1 | 2.5 | 3.5 | 6 | 12 | 1.5 | 3 | 6.5 | 16.5 | 32.5 | 66 |
| Sales/slaughter | 0.5 | 0.5 | 1 | 1.5 | 2.5 | 5.5 | 1.5 | 1.5 | 3 | 8 | 15.5 | 31 |
| Deaths | 0.5 | 0.5 | 1 | 1 | 2 | 4 | 0.5 | 1 | 2.5 | 6 | 12 | 24 |
| Purchase/gifts | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 |
| Total (end of year) | 3 | 5 | 10.5 | 16 | 26.5 | 52.5 | 2 | 5.5 | 11 | 27.5 | 55 | 110 |
| Offtake (%) | 17% | 10% | 10% | 10% | 10% | 11% | 75% | 30% | 30% | 32% | 31% | 31% |

Notes: [1] The above figures are derived from computer models based on field data.
[2] All figures are approximate and represent the mid-point of a range.
[3] %offtake = sales + slaughters as a % of initial holding.
[4] Sales (and therefore offtake) tend to be high when herd sizes are low. Purchase and/or gifts are an important mechanism for replacing the large number of animals sold.

## The Role of the Teamleader/Co-teamleader

| | |
|---|---|
| **In the field – managing the field work** | |
| 11 | Contact woreda officials and arrange work schedule. |
| 12 | Ensure woreda officials understand program objectives, and have received secondary data forms. Arrange date for pick up of forms. |
| 13 | Verification of livelihood zones, PA, population and census. Check the PAs within the livelihood zone, Check the population and census data. |
| 14 | Work with project driver to ensure that both vehicles are fueled and ready to travel to villages |
| 15 | Ensure appointments for coming days are arranged and team members know which wealth group they are interviewing. |
| 16 | Remind teams of the reference year. |
| 17 | Provide team members with support to help them improve their interviewing skills. Activities to include:<br>- Make corrections,<br>- Share lessons learned with team members.<br><br>This should be done EVERY DAY. You should NOT wait until the end of the fieldwork for a given livelihood zone to do this because then it will be too late if there are interviews that don't add up. |
| **In the field – mentoring the team** | |
| 18 | Organize regular meetings to discuss findings and information gaps and to ensure that everyone is aware of the schedule for subsequent days. |
| 19 | Observe trainees interviews (including introduction, language used). |
| 20 | When there are two co-team leaders – share the mentoring and data entry between you. |
| 21 | Guide the preliminary analysis after each interview. (see table 3 which describes the internal cross-checks to be made each day) |
| 22 | Collect and check all the interview forms and provide feedback to the trainees. |
| 23 | Every evening enter the community and wealth group interviews into the computer. |
| 24 | Compare the interview formats results with the computer results and check that the data is similar. |
| 24 | Share lessons learnt, questions, problems identified with team members on a daily basis. |
| 25 | Organize and lead the interim analysis after 4 wealth group interviews (wealth breakdowns, income and expenditure, what did team members find surprising, land size, contact labor, any gaps in the forms and why, ghee for hair etc.). |
| 26 | Enter in some of the bullet points into the livelihood zone profile in the field. |
| 27 | Enter all the wealth group interviews into the baselines storage sheet before the analysis starts. |