



**LAND AND SOIL EXPERIMENTAL  
RESEARCH (LASER)  
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Central Statistical Agency of Ethiopia – World Bank – World Agroforestry Centre

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**ENUMERATOR MANUAL**

*Post-Harvest*

January 2014

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## **Introduction: Post-Harvest**

The Central Statistical Agency of Ethiopia, The World Bank, and the World Agroforestry Centre (ICRAF) have partnered to execute this methodological validation project.

In the post-planting phase data was collected on household composition, labor and non-labor inputs, land quality, and crop type. During this phase, up to two fields were randomly selected for objective measurement and soil testing. The objective measurements conducted during the post-planting phase included field area measurement using GPS, field area measurement using compass and rope, and field slope using clinometer. Soil samples were also collected from the randomly selected fields according to the training and protocols provided by ICRAF.

Throughout the post-planting phase, crop-cutting was also conducted on pure stand maize. Due to the geographical variation in our sample, the crop-cutting activities spanned several months (September 2013 – February 2014, *expected*).

Following the extensive post-planting and crop-cutting activities, it is necessary to administer a second household questionnaire to the same households in order to collect data on the crop production. In the analytical phase of the project, yields will be the primary outcome analyzed and, therefore, the production from each field must be known.

## **Fieldwork Organization**

The 5 mobile field teams will be deployed to the same EAs in which they conducted the post-planting and crop-cutting activities. However, the teams do not need to follow the same route. The post-harvest route will be based on the geographical location of the site and the time of the harvest (for example, if the harvest is late, the EA will be moved towards the end of the route). It is very important that the EAs are not visited until the harvest is completed.

It is expected that each enumerator will complete approximately 3 PH interviews per day, if not more. Therefore, if there are no more crop-cutting activities in the EA, the team should stay in each EA no more than 2 days.

Post-harvest fieldwork will begin immediately following the post-harvest training (January 14-17, 2014) and is expected to be completed by the end of February 2014.

## **Keys to successful post-harvest fieldwork:**

1. **The enumerators must interview the same households they were responsible for in the post-planting phase.** Exceptions may be made only if there was a change in staff and the enumerator is no longer with the team.
2. **The post-harvest questionnaire may not be administered until after the crop-cutting is completed *and* the household has harvested the full crop-cutting field.** If there is an EA with crop-cutting during the post-harvest phase, do not ask the post-harvest questionnaire until you go back to the site to return the dry crop. This will give the household time to harvest the full field before answering the PH questionnaire.
3. **Every effort should be made to delay the post-harvest visit until after all the *meher* harvest is completed.** If necessary, the team may re-arrange their route to revisit EAs with late harvests at a later date.

## **Post-Harvest Questionnaire**

The post-harvest questionnaire has the following sections:

<b>Section</b>	<b>Topic</b>
Cover	Household Identifiers and Interview Details
PH1. Household Roster	Name, age, and sex for all household members
PH2. Harvest	Harvest data for all cultivated fields
PH3. Crop Disposition	Sales and usage of all crops
PH4. Harvest Labor	Labor data for all cultivated fields

### **Cover**

The post-harvest cover page will be completed in the same way as the cover for the post-planting questionnaire.

**Q1-7:** Record the code and name of the region, zone, woreda, kebele, enumeration area (EA), cluster ID, and household ID. These codes should be copied from the Household List Form. The cluster ID is a unique number for every EA between 1 and 85. The 4-digit household ID is also unique.

**Q8:** Write the name of the current household head. The head of household is the member of the given household who holds the role of decision maker in that household; other residents normally recognize this individual as their head. In most cases, the household head takes part in the economy, control, and the welfare of the household in general.

**Q9:** Record the GPS coordinates (latitude and longitude) of the dwelling in the space provided after allowing adequate time for the GPS unit to acquire a signal. Remember, the GPS must acquire at least 4 satellites. The instructions for creating and saving the coordinates of the household are listed below.

**For Household GPS Coordinates:**

- a) Stand outside the Northwest corner of the house. Allow the GPS unit to acquire at least 4 satellites.
- b) Press the MENU button two times to arrive at the main menu.
- c) Highlight MARK WAYPOINT and press the Thumb Stick. The coordinates will be listed under the heading "Location". Record these on the paper form.
- d) Rename the waypoint to match the "HHID-PH". Use the Thumb Stick to highlight the waypoint name which is located at the top of the page next to the flag icon. Press the Thumb Stick, delete the number that is filled in automatically and enter the HHID as it appears on the questionnaire. Click DONE when you have entered the HHID.

**PH1: Household Roster**

This section provides the name, age, sex, and ID number for each household member.

The CAPI program will automatically fill this section with all individuals listed in the post-planting questionnaire.

Upon clicking "enter" to move forward to the next section, you will be asked if there are any new members to be added. If there are new members, click "yes" and enter the name, age, and sex of all new members. If there are no new members, click "no" and proceed to the next section.

## PH2: Harvest

This section is very important. It asks the household about the harvest on all of the fields. This section should include all crops (field crops, permanent crops, tree crops and root crops).

### Please note:

- **This section must be answered for all cultivated fields found in the post-planting questionnaire.**
- **We are asking the farmer only about the harvest of the crop they had on the field at the time of the post-planting visit.**
  - If the farmer has planted and harvested a second crop on the same field in the meher season, you must make it clear to the respondent that we are only asking about the crop that was present when you conducted the post-planting interview. This is true even if the farmer planted the same crop again. For example, if a farmer had teff on field 1 during the post-planting visit and then he harvested it and re-planted teff (second meher harvest), we want information **only** on the first harvest.

**Parcel ID, Field ID, Crop ID, and Crop Code:** These codes will be automatically completed in the CAPI program. The list of all parcels, fields, and crops will be copied directly from the Crop Details section of the post-planting questionnaire.

Remember, **we are only interested in the crops that were on the field at the time of the post-planting questionnaire**. If the household has planted additional crops or acquired additional fields since the time of the post-planting interview, we will not record this information.

**Q2:** Record the ID of the respondent. The respondent should be the best informed on the field and crop.

**Q3:** Ask the respondent if they have started the harvest of that crop on the specific field. If “no”, skip to Q6 and continue the questionnaire by asking for the *estimated* harvest. If there are many crops that have not been harvested in the EA, the team should make every effort to delay the questionnaire (by moving to a different EA first).

**Q4:** Ask the respondent if they have finished the harvest of that crop on the specific field. If “no”, answer Q5 and continue the questionnaire by asking for the *estimated* total harvest. If there are many crops that have not been completely harvested in the EA, the team should make every effort to delay the questionnaire (by moving to a different EA first).

**Q5:** If the household has not finished the harvest of the crop on that particular field, ask what percentage (%) of the harvest is finished as of the date of the interview.

**Q6:** Using the Ethiopian Calendar, enter the month and year that the harvest started and finished. If the harvest has not yet started or finished, enter the estimated date(s).

If there is no particular production period (such as for some tree and root crops), use the last 12 months from the date of the post-harvest interview date. Enter the month and year accordingly. If there is a particular production period for the crop (even tree or root crops), this production period must be used.

The period of time entered in Q6 is what we will ask about in the remaining questions of section *PH2. Harvest* and *PH3. Crop Disposition*.

### **Production Questions**

Questions 7 – 13 ask about the production of crop on the particular field. When asking the quantity of the harvest, we will pay special attention to the condition of the crop the respondent is reporting in.

The crop conditions tell us about the state of the harvest. For example, a respondent may report maize production as fresh maize or as grain – the quantities are very different.

Please see the attached document with examples of common crop conditions for each crop.

It is important we record quantities separately if they are in different conditions. For example, suppose a farmer tells us he harvested 1 big madaberia of fresh maize and 2 big madaberia of grain. Can we say he harvested 3 big madaberia of maize? No! We must keep the two conditions separate.

**Q7:** Ask the respondent what was the main condition the crop was harvested in.

**Q8:** Ask the respondent how much they harvested in this condition. The respondent may use any standard or local units. If the respondent reports the quantity in kilograms, skip to question 10. *Do not force the respondent to report in kilograms.* Remember, if the crop harvest on the field is not yet completed, ask for the estimated total for the season.

**Q9:** Ask the farmer to convert the total amount of harvest for this condition from the field (the amount listed in Q8) to kilograms.

**Q10:** Ask the farmer if there are any other crop conditions he has harvested in. If “yes”, answer questions 11 – 13 as you did for questions 7 – 9 but for the second crop condition. The total harvest should be equal to the amount in Q8 + Q12.

**Q14:** Ask the respondent if the area harvested was less than the area planted. A field may not be fully harvested if there are portions that were completely damaged or there was severe theft. If the harvest is not yet completed at the time of the post-harvest interview, ask if the area the household *expects* to

harvest is less than the area planted. If the area harvested is the same as the area planted, skip to Q17.

**Q15:** Ask the respondent what percentage (%) of the area planted has been harvested (or, in the case the harvest is not yet complete, is *expected* to be harvested).

**Q16:** Ask the respondent the main reason the harvested area (or expected harvested area) is less than the planted area. Note: this question asks about the problems the household faced on *the area that was not harvested*. If there was damage or underproduction on the harvested area, this will be asked in questions 17-19.

**Questions 17-19** ask about damage to the **harvested area** of the field.

**Q18:** If the answer to Q17 is "yes", ask for the main cause of the damage. Note, questions 17-19 ask about damage on the **harvested area** of the field for the specific crop (not on areas that were not harvested).

**Q19:** Ask the respondent and enter the percentage (%) of the harvested area of the specific crop that was damaged.

**Q20:** Enter up to two persons from the household, in order of importance. The ID of the person who makes most of the decisions and has the most influence concerning how the specific crop output is used from that field should be entered as the "primary decision-maker". The "use of the crop output" refers to how the crop was used: it could be sold, consumed by the household, used for animal feed, etc. If there is another person in the household who makes decisions or assists the primary decision-maker, enter this person's ID as the "secondary decision-maker". The primary and secondary decision-maker IDs must be different.



### PH3: Crop Disposition

This section collects data on how the crops were used and any crop sales.

This section is asked at the crop level, so you do not need to worry about which field the crop came from. There will be one line for each crop grown by the household. For example, if the household has two fields with maize, there will only be one line in this section for all maize. As in the *PH2. Harvest* section, we will ask about the condition of the crop and report different conditions separately.

The CAPI program will automatically fill in the crop codes in Q1. Again, we are only asking about crops that were planted at the time of the post-planting questionnaire. **The questions should be asked only of the harvest from the crops that were in the field at the time of the post-planting interview.**

**Q2:** Record the ID of the respondent. The respondent should be the best informed on the crop.

**Q3:** Ask the respondent if any member of the household sold any of the crop either for cash or in-kind, through a trade for another good or service.

**Q4:** Ask the respondent in what condition the crop was sold and record the code. If a certain crop was sold in more than one condition and/or state, enter the main condition in Q4. The other conditions can be recorded in questions 9 and 14.

**Q5:** Ask the respondent how much they sold in this condition. The respondent may use any standard or local units. If the respondent reports the quantity in kilograms, skip to question 7. *Do not force the respondent to report in kilograms.* The quantity reported here should be the amount of crop sold in the condition provided in question 4.

*Remember, only crops that were planted at the post-planting interview should be included. For example, if a farmer planted and harvested teff two times in the meher season on the same field, only the teff that was on the field when the post-planting interview was conducted should be included.*

**Q6:** Ask the respondent to convert the total amount of sales for this condition (the amount listed in Q5) to kilograms.

**Q7:** Ask the respondent and enter the total value of all crop sold in the condition provided in question 4. This should be the total value of sales for the quantity listed in question 5, including the estimated Birr value of all in-kind sales.

**Q8:** If the crop was sold in any other condition, answer questions 9-12 for the second condition. Follow the same instructions as above.

**Q13:** If the crop was sold in any other condition, answer questions 14-17 for the third condition. Follow the same instructions as above.

**Q18:** You may enter up to two household member IDs. If only one person kept or decided what to do with the earnings from the sale of this crop, enter the ID of that person in the first column and leave the

second column blank (in CAPI it will show as “0”). If two people kept or decided what to do with the earnings from the sale of this crop, enter the ID of the primary decision maker in the first column and the ID of the other person in the second column.

**Q19:** This question asks how the crop was used by the household. For each of the activities listed, enter the percent of the harvest of this crop that was used for that activity.

After asking the respondent the percentage of the crop used for HOUSEHOLD CONSUMPTION, SEED, SALE, WAGES IN-KIND, ANIMAL FEED, and OTHER, the **enumerator should check that the total is 100.**

If there are **post-harvest losses (for example, rotted crop, insect or rodent damage, etc) that were not used for animal feed**, enter this in this percentage in the “other” column.

#### **PH4: Harvest Labor**

This section asks detailed questions about the harvest labor used on each cultivated field.

The parcel ID, field ID, and field description will be automatically filled by the CAPI program based on the post-planting data.

**Q2:** Record the ID of the respondent. The respondent should be the best informed on the field.

**Q3:** This question asks about household labor related to harvesting and threshing activities. Include all household members who were involved in these harvesting and threshing activities on this field.

For each household member who participated in harvesting and threshing activities on this field, complete the following:

**Household member ID:** record the household member ID from the household roster.

**Weeks:** record the number of weeks that this household member engaged in harvesting and threshing activities.

**Average number of working days in a week:** ask how many days on average this household member spent on the harvesting and threshing activities in this field during those weeks. For example, if a person worked an average of 3 days per week for 4 weeks, the response to this question would be “3”.

**Average number of working hours in a day:** ask how many hours on average this household member spent on the harvesting and threshing activities in this field during those days. For example, if a person worked an average of 5 hours per day, 3 days per week, for a total of 4 weeks, the response to this question would be “5”.

**Q4:** This question asks about the hired labor for harvesting and threshing activities. The laborers are broken up into three groups: men, women, and children under 15. For each group, complete the following:

**Number of laborers:** Ask the number of hired laborers in the group (men, women, or children) that worked on this field for harvesting and threshing activities in the current agriculture season.

**Number of days worked:** Ask the number of days these laborers spent on harvesting and threshing activities in this field in the current agriculture season.

**Total amount paid per day:** Ask the total amount that the household paid in one day in the current agriculture season for the harvesting and threshing activities on this field. This should be recorded in birr. If payment was made in-kind, estimate the value in birr.

**Q5:** This question asks about the laborers used for harvesting and threshing activities that were used free of charge or as exchange laborers. These laborers are broken up into three groups: men, women, and children under 15. For each group, complete the following:

**Number of laborers:** Ask the number of hired laborers in the group (men, women, or children) that worked on this field for harvesting and threshing activities in the current agriculture season.

**Number of days worked:** Ask the number of days these laborers spent on harvesting and threshing activities in this field in the current agriculture season.