

Making field observations: Transplanting and beginning of the vegetative phase

This module is the continuation of Module 11 and covers the observations made immediately after transplanting, i.e. at the beginning of the vegetative phase.



Learning objectives

At the end of this module, farmers will be able to:

- Discuss and review the importance of making regular field observations, better analyze the health of the growing crop and its environment, and take decisions for appropriate action.
- Decide on the observations to be made and on the ‘observation indicators’ related specifically to the transplanting phase and to the beginning of the vegetative phase.
- Record the information.

- 1 Recall the importance of the ‘observation indicator’ concept.
- 2 Review the recording form for the IRM field.
- 3 Make field observations on the IRM fields in sub-groups.
- 4 Summarize the observations in plenary session.
- 5 Continue to fill in the recording form for the IRM field.



Procedure

1. Farmers and the PLAR-IRM team meet at the PLAR-IRM Center. The facilitator briefly reviews the previous module and invites farmers’ feedback. The facilitator asks if the farmers have put in place any new practice on their IRM fields.
2. One of the PLAR-IRM team members explains the learning objectives and procedures for the current module.
3. The facilitator recalls the importance of making good observations and repeats the explanation of the concept of ‘observation indicator’ (Module 11).
 - ‘To observe’ means that one watches certain phenomena very carefully, such as plant development. These aspects are obvious because we find them relevant, i.e. they are ‘observation indicators.’ For instance, one observes that seedling density is not homogeneous (the nursery shows areas with a lot of seedlings and others with fewer).
 - An indicator is a sign that one observes in the field, indicating that, e.g. a plant is in good or poor health. The farmers must remember the exact word that means ‘indicator’ in their own language.
 - These observation indicators permit the understanding of what is happening now and what happened in the past; this kind of reasoning is called *analysis* of what we see, i.e. an effort at understanding the basic causes and factors determining plant development; e.g. the spots with few seedlings may be due to too much standing water (waterlogging) in that spot, which killed some the seedlings. However, two types of factors may be responsible: either

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management practices or environmental conditions could be the cause of waterlogging. For instance, poor field-leveling or drainage, which are farmer management practices, could be the reason. Therefore, in analyzing one tries to understand what has been observed.

- The main objective for making observations and analyzing these phenomena is to take sound decisions for action to change (improve) the situation or to prevent the phenomenon from re-occurring.
4. The facilitator invites the farmers to present the pages of the recording form for the IRM field that they have filled in (i.e. pages 1, 2 and 3), as explained in Modules 9 and 11.
 - Some farmers present their recording forms.
 - They state the difficulties encountered in filling in the recording form and these difficulties are discussed.
 - The facilitator proposes that farmers help each other; if necessary, the PLAR-IRM team can help farmers record their data after the session.
 5. The facilitator explains the field-observation *procedure* in PLAR-IRM.
 - The farmers are divided into four sub-groups of four or five farmers.
 - A farmer-facilitator and a farmer-rapporteur are chosen for each sub-group.
 - Each sub-group will visit four sites:¹
 - Two sites that have been transplanted about one week earlier—if possible, one field in ‘good’ (optimum) condition and another in ‘poor’ (less-than-optimum) condition;
 - Two other sites that have been transplanted about two to three weeks previously—if possible, one field in ‘good’ (optimum) condition and another in ‘poor’ (less-than-optimum) condition;
 - Sub-groups will make field observations; the farmers deciding which indicators are most relevant to them, i.e. those that allow *them* to judge field conditions and plant health.
 - Sub-groups will discuss and analyze what has been observed: links to be made between indicators (what is seen, i.e. effects) and environmental factors and farmers’ management practices (i.e. causes).
 6. The farmer sub-groups and the facilitator depart to the field. In turn, they all visit the four observation sites.
 - The facilitator helps the farmer-facilitator if necessary.²
 - The farmer-rapporteur takes notes.



1. The observation sites should be prepared in advance by the team of facilitators.

2. In the beginning, it is very important that the facilitator makes sure that ‘good’ observations are made, in order to obtain accurate analyses and efficient decisions.

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7. Back at the PLAR-IRM Center, the farmers report and comment on their results:
 - The farmer-rapporteur of the first sub-group presents the results for the first observation site, ‘Transplanting: Field 1.’
 - The facilitator synthesizes the results in the four-column table, in the row ‘Field 1.’
 - Afterwards, farmer-rapporteurs of other sub-groups ‘complete’ the first sub-group’s report by adding comments from their sub-groups that were not mentioned by the first sub-group, and the facilitator summarizes these in the table.

Stage of observation	Observed indicators	Analysis	Decisions made
<i>Transplanting</i>			
Field 1			
Field 2			
<i>Beginning of vegetative phase</i>			
Field 1			
Field 2			

- Then the farmer-rapporteur of the second sub-group presents the results of the second observation site, ‘Transplanting: Field 2.’
 - The facilitator synthesizes the results in the row ‘Field 2.’
 - Then, he/she invites the farmer-rapporteurs of the other sub-groups to complete the table.
 - And so on for ‘Beginning of vegetative phase Fields 1 and 2.’
8. The facilitator then introduces the fourth page of the recording form: this is meant to train the farmers in recording the information concerning the field observations made at transplanting and at the beginning of the vegetative phase.
 - The facilitator stresses the importance of recording the information and focuses on the fact that recording concerns the plot(s) identified by the farmer where he/she intends to implement the practices learnt during the PLAR-IRM sessions; therefore, recording will concern the IRM plot, of which a sketch is made on the first page of the recording form.
 - The facilitator explains the four indicators used in evaluating transplanting (as found on the recording form):
 - Field leveling;
 - Plant spacing (distance between hills);
 - Number of seedlings per hill;
 - Transplanting depth.

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And the six indicators used in evaluating the beginning of the vegetative phase:

- Recovery after transplanting shock;
- Color of plants;
- Plant vigor and health;
- Cleanliness of field, absence of weeds;
- Water depth;
- Tillering.

☛ *The facilitator explains the importance of each of the indicators.*

- The facilitator explains that the farmers can note their degree of satisfaction for the state of health in their IRM field by ticking a box under the face corresponding to their judgment, for instance:

- Gives complete satisfaction, he/she checks the box under 
- Gives moderate satisfaction, he/she checks the box under 
- Gives no or only little satisfaction, he/she checks the box under 

- The farmers will then further analyze the indicators that give no or little satisfaction. They will explain the reasons for their judgment and give details of factors responsible for these signs of poor or less-than-optimum condition, thereby trying to establish links between the indicators and the causes or factors leading to these signs or conditions. For these same indicators, the farmers are questioned about the decisions they will take to improve the field (by changing their management practices) and to prevent the phenomenon from re-occurring.
- The facilitator invites each farmer to fill in page 4 of the recording form; the facilitator can help to fill in the form, if the farmer asks for help.
- The facilitator also invites the farmers to record some information on the management practices in the IRM field. This information should be recorded on page 6 of the recording form, in the last table.

9. Evaluation: the facilitator asks what the farmers appreciated (or did not appreciate), what they learnt, and what they intend to do with their newly obtained knowledge. The facilitator specifically asks which new ideas this module has generated and how farmers intend to put these into practise on their IRM fields.

10. The facilitator asks a volunteer farmer to conclude the session, and then invites farmers to the next session.



Time required

- Three hours

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Materials required

- Strong packing paper and markers; notebook; recording forms.
- Four observation sites identified by the facilitators:
 - Two with a field in ‘transplanting stage’;
 - Two with a field at the beginning of the vegetative phase;
 - Preferably one field with good management practices and another where management practices, as taught during the PLAR sessions, have not been accurately implemented.

Box 14

In Lokakpli, as well as in Bamoro, five fields were visited by four sub-groups of farmers. After the four sub-groups had visited the fields, we discussed with the farmers the observations they made, the indicators they used, the important analysis to make and the actions to undertake. We stressed the necessity of making relevant observations and accurate analyses in order to make appropriate decisions for action. During the discussions, the following indicators were mentioned:

Observations on	Indicators
1. Plant health	Color, height compared to age, vigor (individual plants)
2. Plant density	Presence of empty spaces, number of individual plants (in clumps, high or low density), replacement of missing seedlings
3. Tillage quality	Incorporation of weeds, tillage depth
4. Leveling quality	Presence of water, dry or flooded parts
5. Quality of bunds	Height, width, cleanliness
6. Condition of canals	Cleanliness, fissures
7. Status of nursery bed	Height, width, length; leveling, fineness of soil (lack of clods), location
8. Transplanting	Mode, spacing of hills
9. Beginning of vegetative phase	Start of growth, soil cover, empty spaces, diseases, weeds

The farmers were able to define and agree upon these indicators themselves, which then served as a basis for finalizing the recording form for the IRM field.

