

# Assessing farmers' knowledge and evaluating implementation of IRM practices

It is useful to assess, on a regular basis, whether the objectives set at the beginning of PLAR-IRM are being achieved. PLAR mainly aims at improving farmers' knowledge and encouraging farmers to put this knowledge of improved and integrated rice management into practise. Thus, we can evaluate whether the time invested in the weekly PLAR-IRM sessions actually contributes to improving farmers' knowledge as well as motivating them to try out new practices. Although each farmer can assess his/her knowledge on an individual basis, e.g. through the observations made and the information recorded on the recording form of his/her IRM field, it is useful to test farmers' knowledge in small groups. This is what this module focuses on. The knowledge test is conducted in the form of multiple-choice questions. This makes processing the results obtained by the small groups easier, which further stimulates the debate on knowledge gaps and the discrepancies between farmer knowledge and actual practices.

- ❶ Explain the evaluation procedure.
- ❷ Conduct evaluation in sub-groups.
- ❸ Compile results during plenary meeting.



### Learning objectives

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

- Assess the knowledge they have acquired.
- Discuss discrepancies between knowledge and practices, and elaborate on the reasons for the discrepancies.



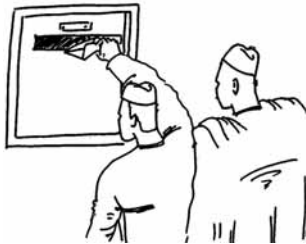
### Procedure

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 explains the evaluation *procedure*.
  - The farmers are divided into four sub-groups.
  - A farmer-facilitator and a farmer-rapporteur are chosen for each sub-group.
  - Each sub-group of farmers will visit the four sites that have been already chosen,<sup>1</sup> which may include:
    - A field in preparation phase (before nursery establishment);

1. The team of facilitators is to prepare the observation sites in advance; refer to section 'Materials required.'

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- A prepared nursery bed that has yet to be sowed;
  - A nursery with young seedlings;
  - A field with recently transplanted seedlings.
  - At each site there is a ballot box and an envelope with four forms next to it (one for each sub-group) and a few multiple-choice questions that farmers are to answer.
  - The farmer-facilitator will read the multiple-choice questions and farmers will choose their answers by general agreement.
  - The answer sheet will be put in the ballot box before the sub-group leaves that site for the next one.
  - Then, farmers will make field observations using observation indicators (refer to Module 11) and discuss the management practices applied in the field and differences between the new knowledge (or good practices) and management practices applied in the field.
  - The sub-groups will then move to the next observation site and repeat the same procedure.
  - After visiting all sites, the sub-groups will return to the PLAR-IRM Center.
4. The sub-groups of farmers and facilitators proceed to the field. In turn, each sub-group visits all four sites that the PLAR-IRM team identified before the session.
- The PLAR facilitator encourages the farmer-facilitator in his/her role.
  - The farmer-rapporteur takes notes:
    - The sub-group first tackles the multiple-choice questions; the idea is not only to agree on the answer and write it down, but also to give the reasons of their choice;
    - Afterwards, farmers make field observations and discuss the management practices and discrepancies between the good practices learnt through PLAR and those applied in the field.
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5. Return to the PLAR-IRM Center. Compilation of results:
- Ballot boxes are opened successively and a volunteer farmer reads the answers to the multiple-choice questions. The facilitator makes a summary of results in a preset table (see 'Materials required' section *below*).
  - After completing the second column of the table, the facilitator repeats the questions one after the other and encourages debate on:
    - Different answers among the groups;
    - More thorough knowledge, i.e. why do farmers make this choice, which reflects 'factorial knowledge.'<sup>2</sup>

2. 'Factorial knowledge' means that the learners are not only capable of reproducing facts learnt, but they are also in the position to argue reasons for the facts known.

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Site/question	Number of answers per choice	Management practices observed
<b>Site 1</b>		
Question 1		
	Choice 1:	
	Choice 2:	
	Choice 3:	
Question 2 ...	Choice 1:	
	Choice 2:	
	Choice 3:	
<b>Site 2</b>		
<b>Site 3</b>		
<b>Site 4</b>		

- Then the results of field observations are presented:
  - The farmer-rapporteur of the first sub-group presents the results of the first observation site and the facilitator sums up the results in the third column of the table;
  - 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;
  - Farmers discuss the differences in sub-group results and the facilitator stimulates a debate on differences between knowledge and practices observed in the field;
  - The facilitator leads a debate on possible gaps in knowledge and goes on to elaborate certain topics if needed;
  - After closing the debate on the first site, the second, third and fourth sites are dealt with.
- 6. 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.
- 7. The facilitator asks volunteer farmers to conclude the session, and then invites farmers to the next session.



#### Time required

- Three hours

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#### Materials required

- Four lists of multiple-choice questions (Box 13).
- Four ballot boxes, e.g. cartons previously containing reams of A4 paper with a slot made in the lid, or a small basket. Next to each ballot box, an envelope is placed with four sheets with identical multiple-choice questions. After filling-out the form, farmers place the form in the ballot box.
- The team of facilitators identifies four sites preferably where farmers do not fully follow the 'good' practices as treated in the PLAR-IRM sessions:
  - A field in preparation stage (before nursery establishment);
  - A nursery ready to be seeded;
  - A nursery with young seedlings;
  - A field with recently transplanted seedlings.

On the morning of the Module 13 session, the facilitator puts the four ballot boxes at the four sites and the envelope with the forms to fill-in next to it.

- Strong packing paper with the preset table already drawn (*see* step 5).

#### Box 13

##### Site 1: Field preparation

1. The time interval between the first and second land preparation should be:  
 3 weeks                       1 week                       Does not matter
2. The soil type found in your inland-valley lowland is mainly:  
 Loamy-sandy                       Loamy-clayey                       Sandy

##### Site 2: Nursery and seedlings

1. The ideal age of plants to transplant is:  
 At least 5 weeks                       Between 2 and 3 weeks                       Does not matter
2. For 1 nursery bed of 10 m x 1 m (i.e. 10 m<sup>2</sup>), how many kilograms of good-quality seeds should I use?  
 2 kg                       4 kg                       6 kg
3. For how long do I prime the rice seeds before sowing?  
 2 to 3 days                       Half a day                       5 days

##### Site 3: Transplanting

1. How many seedlings do I transplant per hill?  
 1 to 2                       2 to 3                       More than 4
2. How deep should the transplanting be?  
 More than 5 cm                       3 cm                       Does not matter
3. How many days after transplanting does it take a young plant to re-establish growth and development?  
 4 to 5 days                       More than 10 days                       Less than 3 days