

# Planning land preparation, nursery establishment and transplanting

This module is directly related to Modules 6, 7 and 8, and References 12, 13 and 16. It discusses the planning of land preparation, nursery establishment and transplanting. The various stages of planning of land preparation are addressed first (Module 7), followed by determination of the right times to establish a nursery (Module 8) and to transplant. This module completes the cropping calendar developed with farmers in Module 6. Also in this module, the idea of putting into practise any new techniques learnt during PLAR-IRM sessions is introduced. Farmers will identify a so-called *IRM field*, where they will practise any new techniques or knowledge acquired. Recording forms for the IRM field are also introduced.

- 1 Summarize farmers' knowledge of land preparation for rice.
- 2 Complete the cropping calendar developed in Module 6: visualize nursery seeding and transplanting, and other activities such as land cleaning and leveling, plowing, basal fertilizer application, flooding.
- 3 Introduce the recording forms for the IRM field.



### Learning objectives

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

- Plan all activities related to rice-field preparation.
- Determine the right moment to establish their nursery, on the basis of expected transplanting period, taking into account farmers' socio-economic environment and prevailing weather conditions.
- Fill in the first page of the PLAR-IRM recording form for the IRM field.



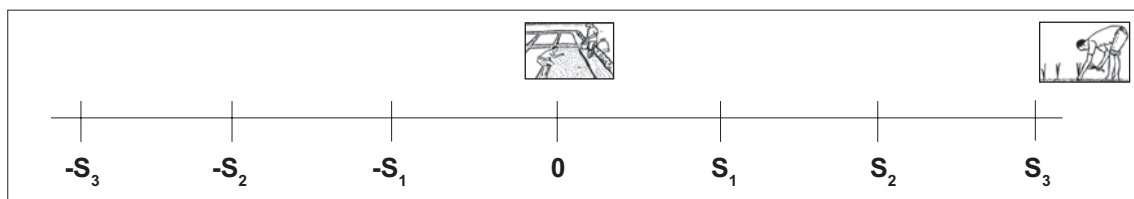
### Procedure

1. Farmers and the PLAR-IRM team meet at the PLAR-IRM Center. The facilitator briefly reviews the previous module and invites farmers' feedback.
2. One of the PLAR-IRM team members explains the learning objectives and procedures for the current module.
3. Brief summary of the various activities in land preparation (Module 7). For each activity, the corresponding 'figure' is viewed: land clearing, initial flooding, tillage, basal fertilizer application, leveling, drainage.

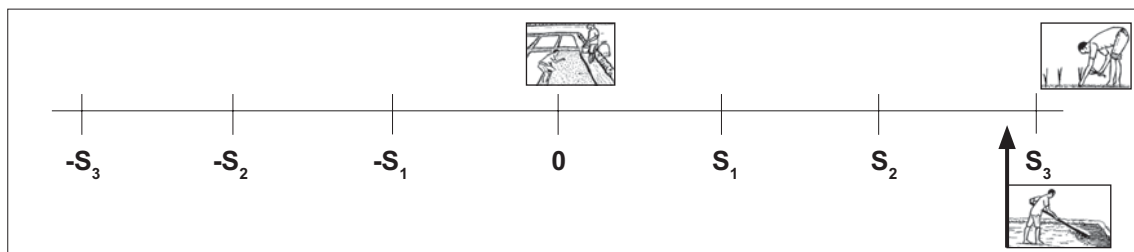
## Module 9

### Planning, land preparation, nursery establishment, and transplanting

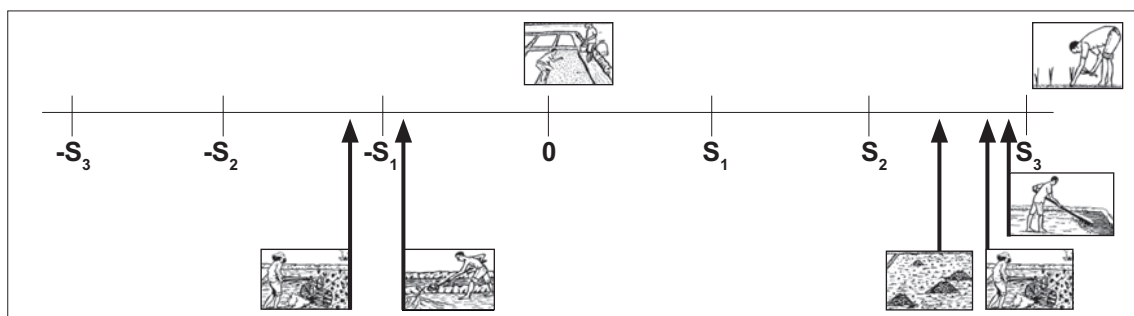
- Establishment of a cropping calendar from land preparation to transplanting.
  - The facilitator displays a piece of cotton fabric that has a horizontal line in the middle, subdivided into four weeks with a mark in the middle with '0' that indicates the seeding time in the nursery, a mark on the far left ( $-S_3$ ) that indicates three weeks before sowing, and a mark on the far right ( $S_3$ ) that indicates three weeks after sowing, which corresponds to transplanting time. The facilitator places the figures for seeding and transplanting.



- The facilitator explains that, during this session, the figures representing the main field preparation activities will be placed first.
- The facilitator asks farmers what activity they carry out right before transplanting and invites a volunteer farmer to place the corresponding figure below the line, at the right location in relation to transplanting.



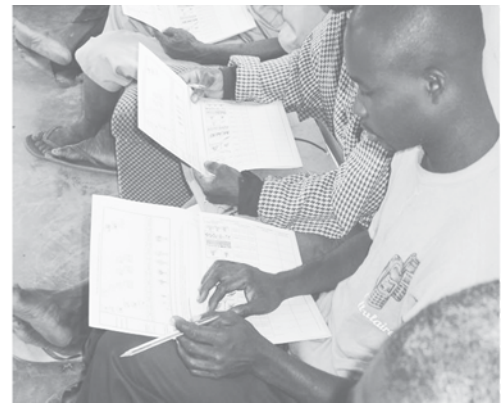
- Farmers discuss the time of the various activities and put the corresponding figures on the calendar according to the time of their implementation.



## Module 9

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- The facilitator helps farmers to agree on the optimal timing and on the time limits between activities according to the knowledge acquired in Module 7, to:
  - Reduce the negative effects of insect pests;
  - Enable weed and crop residues to decompose and restrict weed infestation;
  - Prepare a good soil bed for transplanting.
- 5. The facilitator then introduces the recording form for the IRM field (Annex 1) and explains in depth the first and second pages of the form.
  - The facilitator gives each farmer a recording form and explains that the purpose of this form is to help farmers to record their planned activities, monitor the implementation of those activities, and to make some specific observations during the cropping season. This module focuses on the recording of planned activities: what does the farmer plan to do and when?
  - The facilitator explains that the recording form is not used for all rice fields cultivated by a farmers, but only for the IRM field; each farmer, therefore, needs to identify a specific field where she/he intends to put the knowledge acquired during the PLAR-IRM sessions into practice; this field is referred to as the ‘IRM field.’ Clearly, farmers should not confine themselves to that field for the application of IRM practices. If they want, they can apply IRM practices on other rice fields. However, only the information related to the IRM field should be entered on the recording form. The farmer is invited to make a sketch of the IRM field on the first page of the recording form, showing a few reference points.
  - The facilitator then explains the various sections of the second page of the form, which aims to train farmers to visualize the planned practices for integrated rice management:
    - First the calendar time-line that is split into months and weeks;
    - Then, the figures that are found above the time-line.
  - The facilitator invites farmers to picture the time when they plan to implement an activity by putting an arrow from the figure to the time-line.
  - The facilitator invites a volunteer farmer to give an example of planning activities by proceeding step by step, as follows:
    - The farmer first determines the time when she/he plans to establish the nursery;
    - Then, the farmer pictures the planning of all activities to be implemented before transplanting by putting an arrow from the figures to the time-line. These activities are:



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land clearing, initial land flooding, first tillage, second tillage, basal fertilizer application, and leveling and drainage;

- Afterwards, the farmer visualizes the planning of other management practices such as transplanting, herbicide application, fertilizer application, harvest, threshing/drying and storage.
  - The facilitator invites each farmer to fill in the first and second pages of the recording form. PLAR-IRM members can help farmers to do this, if farmers request their help.
  - The facilitator explains that farmers should bring the recording form to each PLAR-IRM session.
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 summarize and conclude the session, and then invites farmers to the next session.



#### Time required

- Three hours



#### Materials required

- Strong packing paper, markers.
- Cotton cloth for schedule and corresponding figurines.
- Recording forms for each farmer.
- Pencils for each farmer.

#### Box 9

In *bkakpli*, during the session on time management before sowing, farmers discussed the reasons why there is an interval of two to three weeks between the first and second tillage. They said that it was necessary to: let weeds decompose, let weed seeds grow and uproot them afterwards, kill insects in the rice straw. During the second tillage, decomposed crop residues and weeds are distributed evenly and the field is puddled. In practice, there are many farmers who set up the nursery before the first tillage. Farmers understood that this is too early because the seedlings would then be too old at the time of transplanting.