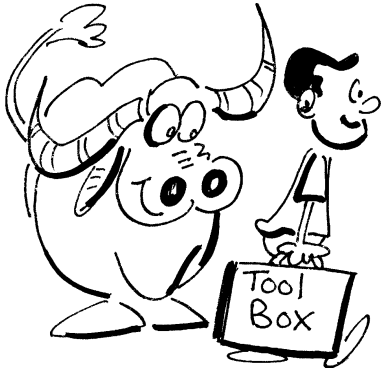


Tools

5



Tools



There are many tools that can help you work with farmers in developing agricultural technologies. We only describe a few which we have found useful and appropriate in many situations:

1. Ranking, scoring and weighting
2. Village walks
3. Village resource maps
4. Wealth analysis
5. Seasonal calendars
6. Historical calendars
7. Problem-cause diagrams
8. Preference analysis

These tools help you to:

- Break the ice - they can break down social barriers and encourage active involvement from all social groups. They can change a boring and formal meeting into an energetic and enjoyable interaction between you and the village.
- Improve your understanding of the complexity of farming systems. Do not forget, however, that your goal is help farmers improve their livelihoods, not just to gain a better understanding of their farming systems!



PH

As you gain experience in the field, you may need to modify these tools or you may need additional tools to help you achieve specific goals.

Some tips for all tools . . .

Give the pen to the farmers!

Holding the pen empowers farmers, encourages active participation and results in more meaningful maps.

Always record the main points of the discussion.

It is not the 'physical output' (e.g. the map or the calendar) of each tool that is the most important result, but the understanding you and the farmers gain from the discussions that are generated by using the tools. Before finishing a tool, ask one of the farmers to summarise the results of the exercise for the whole group.

Try to capture the views of different social groups in the village

Villages are never homogeneous. Different ethnic, gender and social groups within the village are likely to have very different views on many issues. It is often useful to form



RR



sub-groups (based on ethnic, gender or social differences), asking each sub-group to work on a separate version of the same tool. This brings out and captures the variety of views within the village and usually results in vigorous discussion when each sub-group reports its findings back to the whole group.



Encourage active participation

The output of all tools is only useful if all of the participants are actively contributing their ideas and experience. This is not possible if there are too many participants working on a tool. For most tools, there should be no more than 10 to 15 people. If there are many participants, you could split the group into sub-groups with common interests working on the same or different tools.

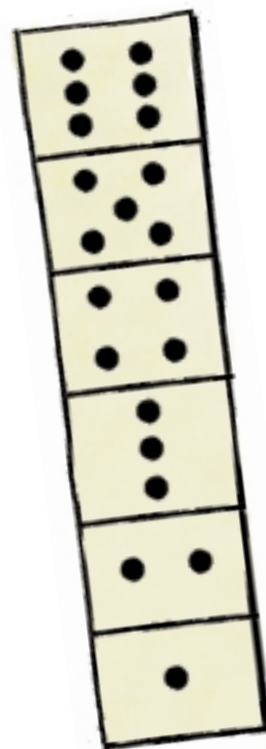


Ranking, scoring and weighting

You will often want to understand farmers' preferences, such as which problems are most important to them or which technology options they most prefer. Three simple techniques to help you do this are 'ranking', 'scoring' and 'weighting'.

How to use ranking

Ranking is useful when you are working with many farmers at one time. Ask the farmers to tell you their preferences in order, starting with their first preference, then their second preference and so on. To avoid getting the 'average' result from the meeting, you can give each farmer a 'ranking slip', such as the one at right, which they tear into squares to 'vote' for their preferences. In this example, there were six choices and the square with six dots meant the highest preference.



 1 5 10 OPTION 1
 1 5 10 OPTION 2
 1 5 10 OPTION 3
 1 5 10 OPTION 4
 1 5 10 OPTION 5
 1 5 10 OPTION 6

This tool is fast and allows you to analyse the data in more detail. For example, you can draw a coloured stripe on the slips that are given to men so you can tell the difference in preferences between men and women.

Two disadvantages of ranking are:

1. it forces farmers to order their preferences when they may actually like some of the choices equally, and
2. it is a relative measure of preference. That is, it does not tell you **how much** farmers prefer one choice over another.

How to use scoring

Scoring is useful when you are working with individual farmers. Ask the farmers to assign a number between 1 and 10 to the different choices, where '1' means a very low preference and '10' means a very high preference.

An advantage of scoring is that it tells you **how much** farmers prefer one choice over another. A disadvantage is that farmers sometimes give an 'average' score to most options so as not to offend the development worker.

Scoring can also be used with groups of farmers by giving each farmer a 'scoring slip' like the one at the left. You can draw coloured lines on some slips to help you understand the opinions of different groups of farmers (eg. give slips with blue lines drawn on them to women and with no lines on them to men).



TP

How to use weighting

Weighting is useful when you are working with individual farmers. Give the farmer a fixed number of 'counters' (such as 50 corn seeds). The farmer allocates all of these seeds to the different choices. The more important choices get a higher number of seeds.

Weighting helps us understand **how much** a farmer prefers one choice over another.



Village Walks

Before you start working in a new village, you need to familiarise yourself with the geography, farming systems, natural resources, problems and opportunities of the village. Village walks are a quick way to gain these insights. Having some understanding of the village situation will help you facilitate participatory diagnosis.

How to organise a Village Walk

Ask one or two farmers to take you on a walk, covering the range of farming systems and natural resources in the area. During the walk, stop when you see something unusual and interesting, ask questions about what you see, probe the farmers' answers and compare it with what you have experienced in other villages.

Be aware that you may get a limited view of village issues since you are only talking with a few farmers. You should check any interesting issues that emerge during a village walk by raising them at the participatory diagnosis.



NR

Some tips . . .

- Invite farmers from different social groups in the village to join you on the walk. This will give you a broader view of the issues in the village.
- If there are two development workers, it is always useful to split up and go on separate village walks; one with the women farmers and the other with the men.





Village Resource Maps

Village resource maps show the physical features and resources farmers consider important in their village. Often, they are the first activity you do with farmers in a participatory diagnosis. They help break down social barriers and encourage active participation of everyone in a meeting.

How to make a Village Resource Map

Ask the farmers to draw a map of the important physical features and resources of their village. Commonly, farmers will draw features such as the village boundary, roads, houses, rivers, schools and other public buildings. You may find it useful to suggest that the farmers draw their village boundary first because sometimes they will start drawing

their map in a very detailed way and then find they have run out of paper to draw the rest of the village resources. Encourage them to include their natural and agricultural resources, such as cropping areas, grazing areas, forests and fish ponds.

Make sure that . . .

- Farmers do the drawing, not you! It is their perceptions that are important, not yours.
- No one dominates the drawing of the map. It is common for a village headman to start drawing the map. You will need to actively encourage others in the meeting to draw! After only a short time you will find that many people are involved.



TP



TP



Wealth Analysis

In any village there are differences in livelihood security. Some people are poor and other people are relatively better-off. Wealth analysis is a tool that helps you

- define these 'wealth groups' in a village,
- identify who in the village belongs to each group,
- understand the main characteristics of each group, and
- understand why some people are poor while others are relatively better-off.

Using the results of wealth analysis, you can target your activities to particular groups in the village (e.g. poor households will not benefit from technologies that improve large animal production systems, if they only keep small animals).

Remember that the results of wealth analysis cannot be used to say that there are more poor people in one village than another because the definition of what is 'poor' or 'better-off' is different for each village.



PH

How to do Wealth Analysis

Ask the farmers:

1. If there are different groups of people in the village based on wealth and how would they describe these groups. For instance, farmers may say there are three groups of people in the village: 'poor' (with food shortages every year), 'moderate' (with food shortages occasionally) and 'better-off' (with enough food each year with occasional surpluses).
2. To allocate all households in the village to these wealth groups. One way to do this is to mark each house on the village resource map with a colour indicating to which wealth group the household belongs.



NR

Allocating households to different wealth groups sometimes can be difficult and contentious to do in a large meeting. A useful alternative is to work with a small number of farmers to do the allocation and report the results back to the village for verification.

3. To describe the main characteristics of each group. These may be characteristics such as labour availability, area of lowland rice fields and literacy. See the example output of a wealth analysis in the Table opposite.
4. To discuss why some farmers in the village are poor while others are relatively better-off. For example, many of the households in the 'better-off' group may be those who settled first in the village and were able to choose the best land. Some 'poor' households may be widows with little available family labour.

Example output from a Wealth Analysis

<p>'Poor' Group ('Food shortages every year') 18 farmers</p>	<p>'Medium' Group ('Occasional food shortages') 35 farmers</p>	<p>'Better-Off' Group ('Enough food all year round') 16 farmers</p>
<ul style="list-style-type: none"> • rice shortages every year • no lowland rice area • have only chickens and ducks • cannot purchase replacements if animals die • poor housing • settled in the village recently • have to sell labour and therefore lack labour for their own farm • don't have money to buy medicine • have to borrow rice every year and have difficulty repaying their debts 	<ul style="list-style-type: none"> • sufficient/surplus rice in some years • less land than the 'well-off' group • fewer livestock than the 'well-off' group • can buy replacements if animals die • poorer housing than the 'well-off' group • have many different activities for income and livelihood • weave cloth for sale • exchange labour 	<ul style="list-style-type: none"> • surplus rice every year • have both lowland and upland fields • raise pigs, chickens, ducks and buffalo or cattle for sale • can purchase replacements if animals die • substantial house • have money/capital • have education • know how to utilize their resources well • were the first settlers in the village, so got the best land



Historical Calendars

Most smallholder farming systems are experiencing rapid change. When you visit a village, all you see is a snapshot in time. Historical calendars help you to understand major trends in the farming systems and highlight major problems.

How to make a Historical Calendar

1. Draw a matrix with time along the top row.
2. Establish a timeline for the calendar.
To do this, ask the farmers how far they can remember back in their village. This is the starting point in the timeline. Then ask the farmers what major events they can remember happening in the village since that time (e.g. a major flood or the building of a school).