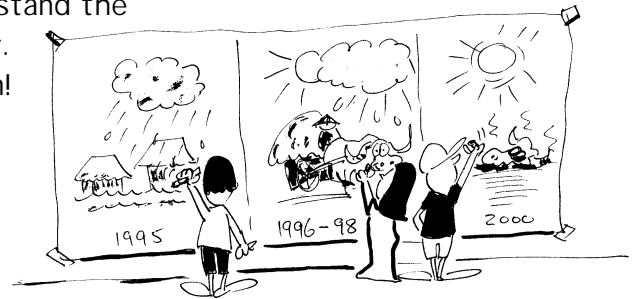


Ask them if they can remember the approximate year of each major event and write these into the top row.

3. Discuss with the farmers the main factors that have changed in their village and farming systems since the start of the timeline. These could be factors such as population, rice yields, food shortages and cattle numbers. Write these in the first column of the matrix.
4. Ask the farmers to show how these factors have changed over time, using scoring or weighting.
5. When completed, ask one farmer to summarise the historical calendar for the group. The discussion stimulated by producing the calendar will give a village story which will help you to understand the background to farmers' decisions better. Record the main points of this discussion!





## Seasonal Calendars

Farmers' problems often occur at particular times of year (e.g. dry season feed shortages). Seasonal calendars are a simple way to understand how important activities, problems or resources change throughout the year.

### How to make a Seasonal Calendar

1. Draw a matrix with months written along the top for the farmers to use in preparing their seasonal calendar. Make sure you use the local calendar to define the seasons or months. Often, these are different from the international calendar.

2. Together with the farmers, identify important activities, problems and resources that change seasonally (e.g. labour availability, cropping cycles, food availability and livestock diseases). Write these in the first column of the matrix.
3. Ask farmers to explain how each of these factors varies throughout the year. They can do this by:
  - drawing lines to show times of year when events happen (e.g. harvest time for a crop), or
  - scoring or weighting the importance of factors at different times of year (e.g. how bad are livestock disease problems in each month of the year).



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1. Ask the farmers in the focus-group 'What are the causes of this problem?'
2. Write each cause on a card, stick the card above the problem and draw an arrow to show the links to the problem (or other causes).
3. Then ask the group if there are other causes of the problem, building a 'cause diagram' above the problem (see diagram Step 2 on Page 101 ).
4. Then ask the farmers "What are the effects of this problem?"
5. Write each effect on a card. Attach each of these cards below the problem and draw an arrow to show the links from the problem (or other effects).
6. Continue asking about the effects of the problem, building an 'effect diagram' below the problem (see diagram Step 3 on Page 102).
7. Ask the farmers to consider all of the causes and ask if they have been able to do anything to minimise any of these in the past; i.e. coping mechanisms (see diagram Step 4 on Page 103 ).
8. Together, discuss what other possibilities there may be to solve the main problem (see diagram Step 5 on Page 104).

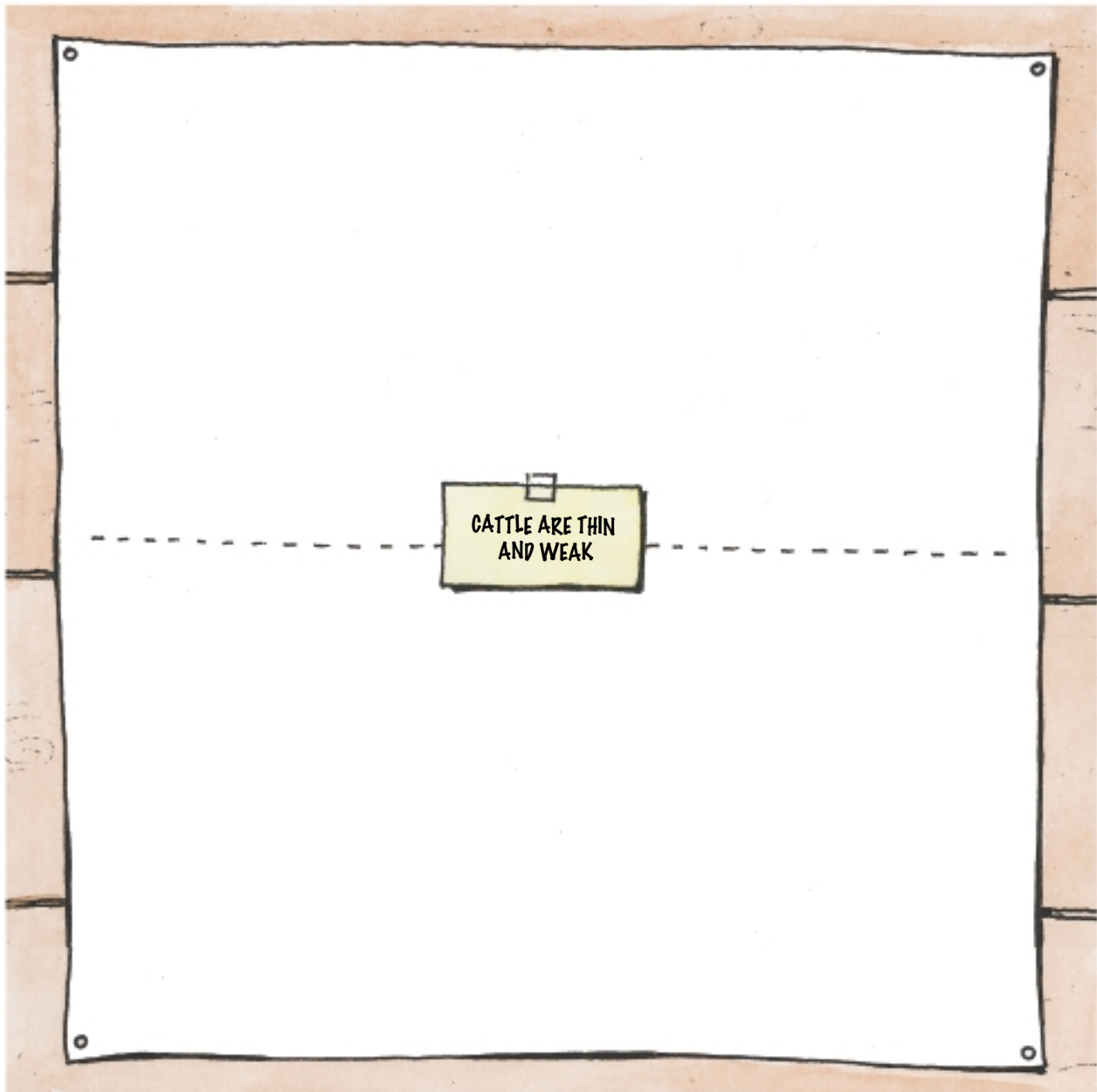


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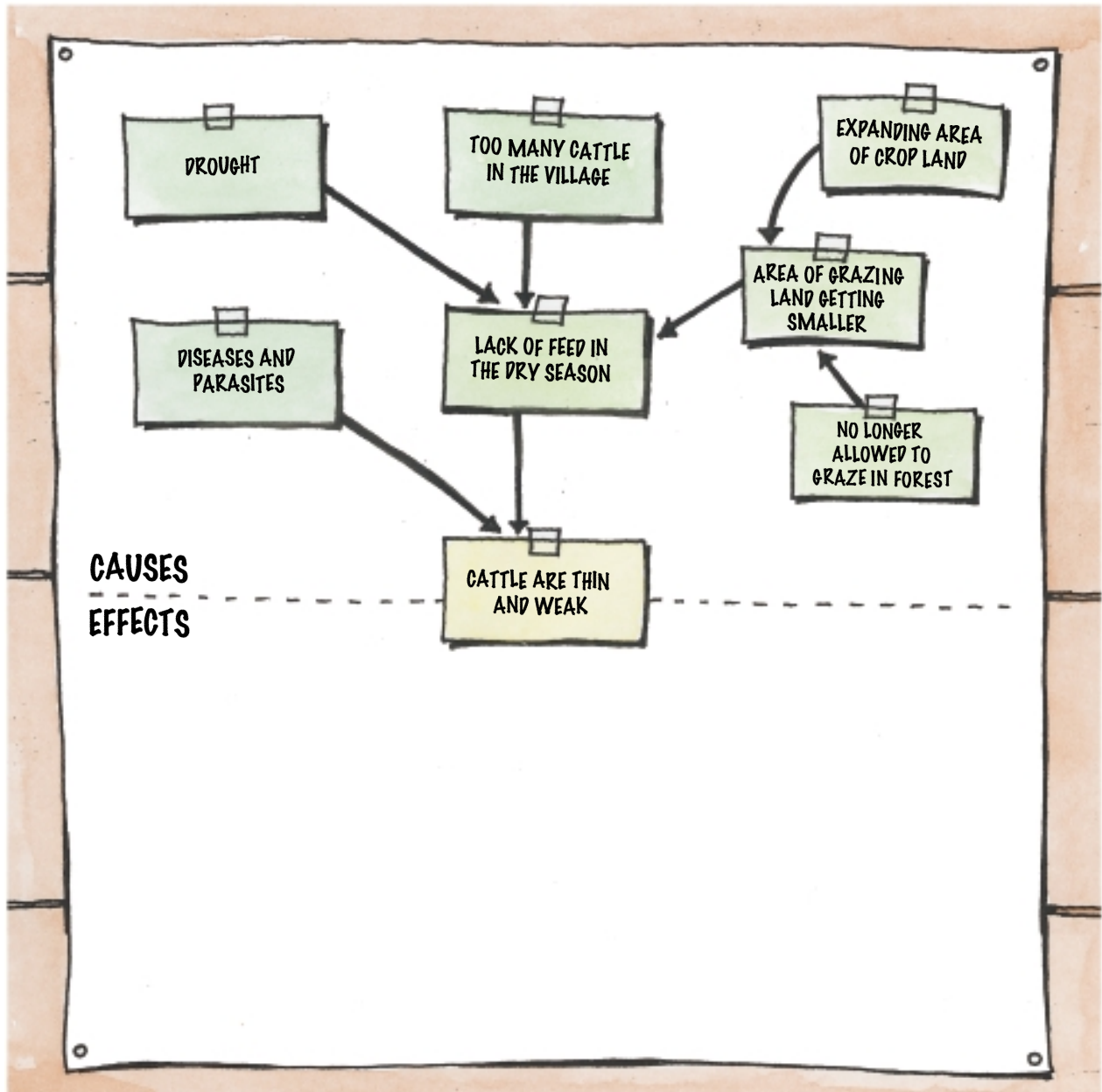


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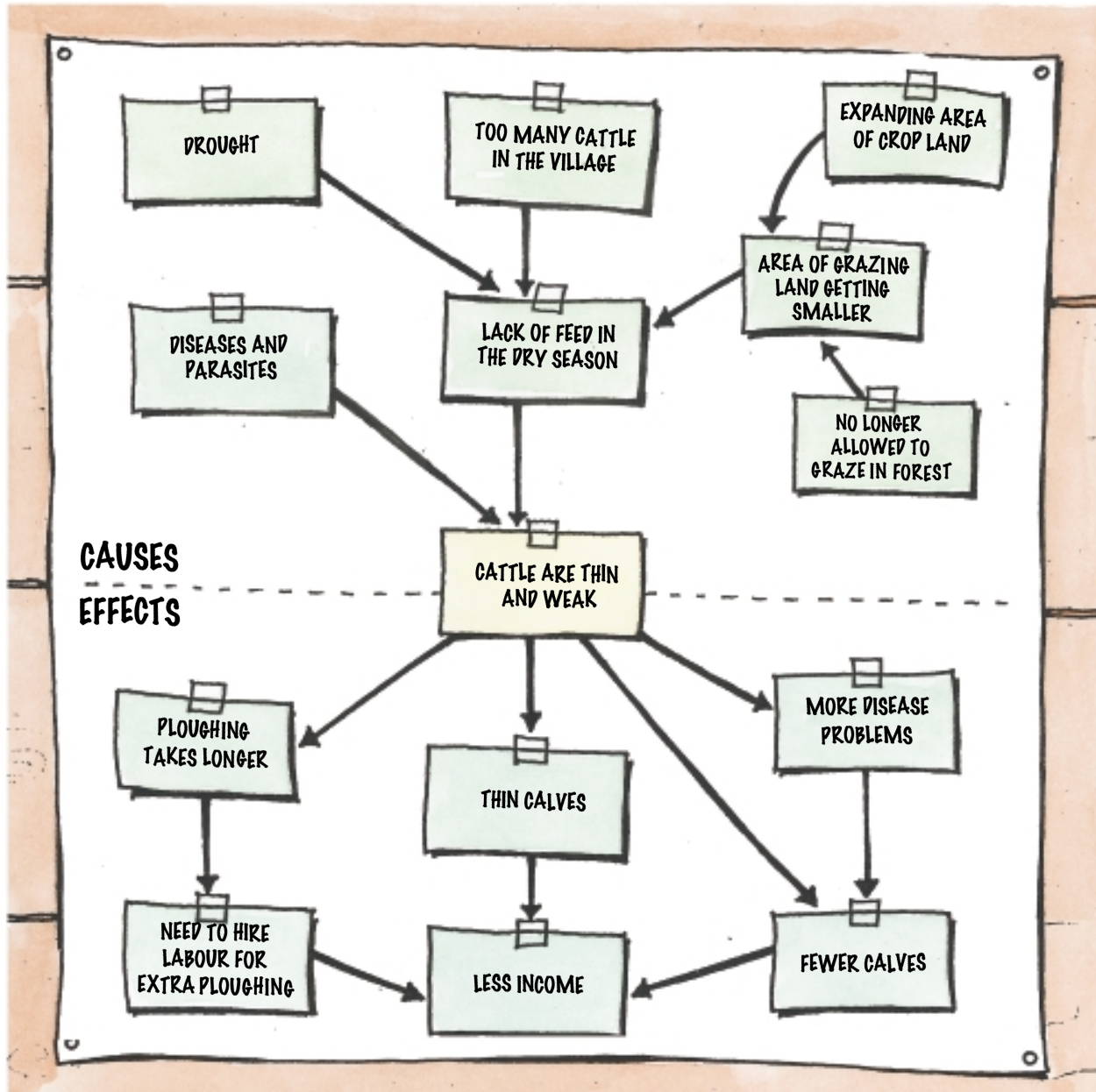
Problem-Cause Diagram (Step 1): What is the main problem?



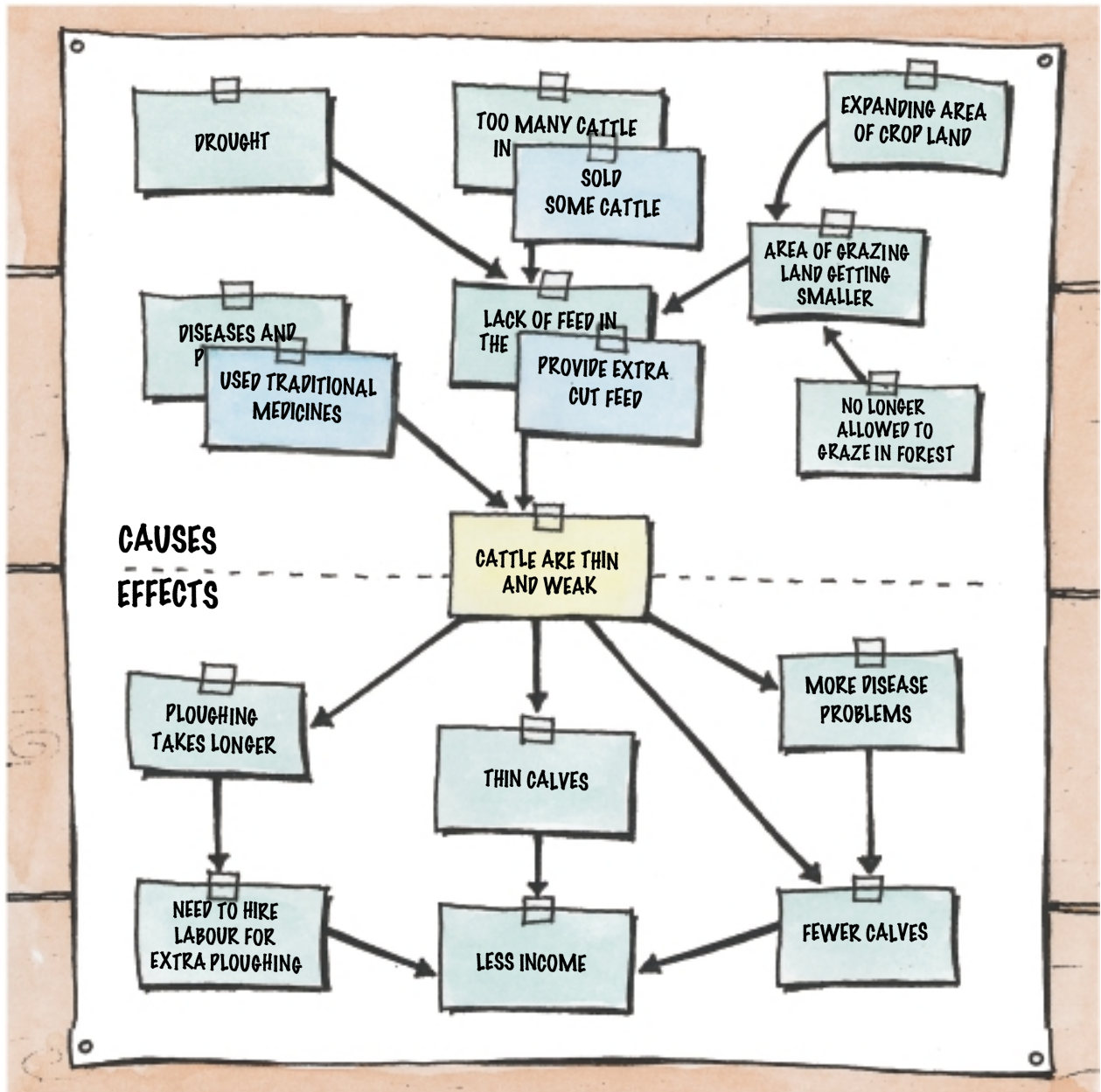
Problem-Cause Diagram (Step 2): What are the causes of this problem?



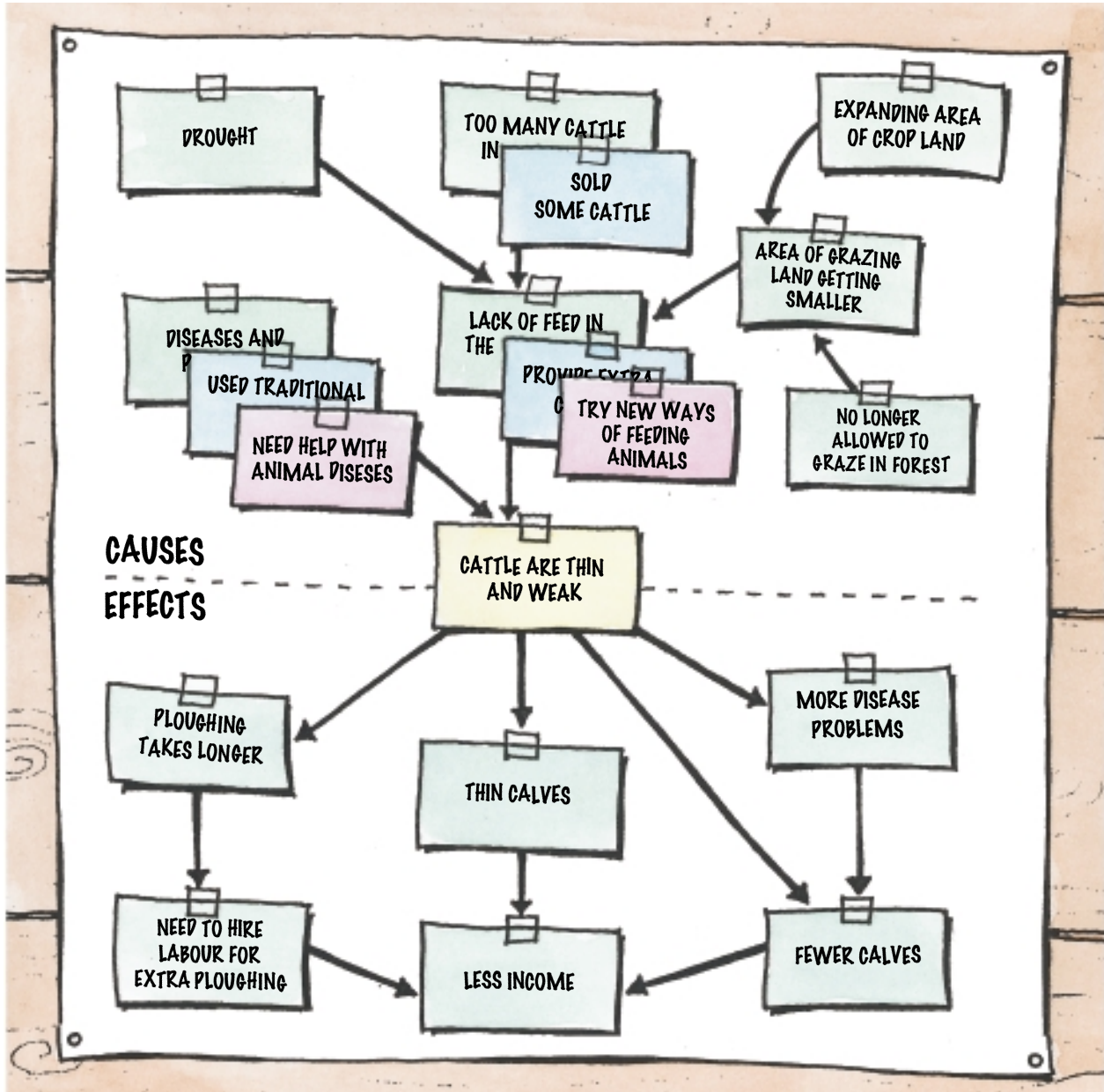
Problem-Cause Diagram (Step 3): What are the effects of this problem?



Problem-Cause Diagram (Step 4): How do farmers cope with the problem?



Problem–Cause Diagram (Step 5): How can we overcome the main problem?





## Preference Analysis

When you evaluate technologies with farmers you want to find out which options they prefer and why. You will already have some understanding of this from the discussions you had with farmers during your regular monitoring visits. Towards the end of the evaluation period (e.g. the cropping season) you may want to conduct a more-formal evaluation to record and analyse these preferences. A tool that will help you do this is 'Preference Analysis'.

### How to do a Preference Analysis

Preference Analysis has two steps:

1. collecting data with individual farmers, and
2. analysing the results with the focus-group.



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### Step 1. Collecting data with individual farmers

With each focus-group farmer:

1. Draw up a matrix like the example opposite.
2. Write into the matrix the technology options the farmer is testing.
3. Ask the farmer to allocate weights to the options (usually 50 counters).
4. Summarise the weighting and ask the farmer to confirm that this is correct.
5. Using open-ended and probing questions ask about the option the farmer liked best. For example, 'Why do you like 'Simuang' and 'Marandu' better than the other grasses?' Write the answers in the 'positive criteria' cell.
6. Then ask if there are any things the farmer does not like about this option. Write the answers in the 'negative criteria' cell.
7. Repeat these questions for all technology options.
8. Briefly summarise the positive and negative criteria and ask the farmer to confirm that this is correct.

This information will show you which technology options are promising and give you a better understanding of the criteria farmers use to choose among the technology options.

Basic matrix for evaluating five grass varieties

Farmers name: <b>MARY SUMBAWA</b> Date: <b>11 MARCH 2002</b> Interviewer: <b>PAPANG GABUNADA</b>					
Weighting	Technology options				
	<b>RUZI</b>	<b>GAMBA</b>	<b>SIMUANG</b>	<b>NAPIER</b>	<b>MARANDU</b>
	<b>3</b>	<b>6</b>	<b>20</b>	<b>2</b>	<b>19</b>
Positive criteria	<b>SOFT LEAVES</b> <b>EASY SEED PRODUCTION</b>	<b>STAYS GREEN IN DRY SEASON</b>	<b>HIGH YIELD IN THE WET SEASON</b> <b>ANIMALS LIKE IT</b> <b>GOOD SEED</b>	<b>EASY TO CUT</b>	<b>HIGH YIELD</b> <b>STAYS GREEN IN DRY SEASON</b> <b>LIKED BY ANIMALS</b>
Negative criteria	<b>TURNS BROWN IN DRY SEASON</b> <b>LOW YIELD</b> <b>COULD BE A WEED</b>	<b>BECOMES STEMMY IF NOT CUT FREQUENTLY</b> <b>LEAVES GET BROWN SPOTS</b>	<b>NEEDS FERTILISER</b>	<b>DIES DURING THE DRY SEASON</b> <b>TOO MUCH STEM</b> <b>NEEDS FERTILISER</b>	



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## Step 2. Analysing the results with the focus-group

Summarise the results of the weightings (see Table opposite) and present these results to a meeting of the focus-group. Using this example, you would:

1. Describe the main results as follows: seven farmers liked 'Marandu' and 'Simuang', while two farmers clearly preferred 'Ruzi' to all other varieties.
2. Ask the seven farmers why they chose 'Marandu' and 'Simuang'. They might explain that they selected these two varieties because 'Simuang' was the best variety for the wet season and 'Marandu' was the best variety for the dry season.
3. Then ask the two farmers why they chose 'Ruzi'. They might explain that they selected 'Ruzi' because it spreads quickly and would be a good variety to control soil erosion on their steep land.
4. Facilitate a discussion of all of the results. You may, for instance, find that some of the seven farmers think that using 'Ruzi' to control soil erosion is a good idea and they'd like to try that as well.



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This example illustrates an important point about Preference Analysis: do not dismiss the preferences of farmers who differ from the majority. They may have had an innovative idea on how to use the technology or they may have different conditions on their farms. There may be many other farmers in the village who have similar needs to these farmers.

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*You are looking for a range of technology options which suit different situations in a village, NOT an 'average' recommendation.*

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**Take Note!**

Farmers name	Weightings of technology options				
	Ruzi	Gamba	Simuang	Napier	Marandu
Mary Sumbawa	3	6	20	2	19
Andi Amala	6	7	15	5	17
Endang Kandali	27	6	8	6	3
Redwan Chalaka	4	4	19	6	17
Fatima Usaha	3	5	17	3	21
Noviati Hakim	32	6	5	4	3
Ugan Romjali	3	4	18	6	19
Asep Iskandar	5	4	17	4	20
Intan Yangindah	3	5	21	2	18

### **Some tips . . .**

- Do not ask farmers to do Preference Analysis until they have had enough time to build experience with the new technologies.
- Do not give advice during the Preference Analysis. If farmers ask for your advice, explain that you would be happy to discuss the technologies after the Preference Analysis.
- It is useful to prepare a permanent matrix on a large piece of paper and cover it with plastic. This allows you to write on the matrix with whiteboard pens and re-use the matrix with all farmers.
- It is difficult for farmers to compare more than six technology options in one Preference Analysis.