



Tips for planning formal farm surveys in developing countries

Douglas Horton



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Tips for planning formal farm surveys in developing countries

Objectives. This guide is intended to enable you to:

- explain criteria for planning surveys
- describe the final use of survey results
- decide whether a formal survey is needed
- formulate survey objectives
- specify the information required
- prepare questionnaires
- select informants
- organize field work
- analyze data
- present results

Study materials

- Samples of formal and informal surveys.
- Appropriate farming area to practice formal surveys.

Practicals

- Analyze survey examples.
- Plan, execute, analyze, and report on surveys.

Questions

- 1 Name several information-gathering tools.
- 2 Why should you use a combination of tools?
- 3 What are the strengths and weaknesses of formal surveys?
- 4 What is generally the most neglected aspect of survey research?
- 5 What is often the quickest and easiest part of the entire survey process?
- 6 Why are many surveys never completed?
- 7 How can you minimize difficulties of field work?
- 8 How can you ensure validity and usefulness of information gathered?
- 9 What 10 questions should you keep in mind in planning surveys?
- 10 How should you start in planning a survey?
- 11 On what criteria should the decision of whether or not to conduct a formal survey be based ?
- 12 Describe the importance of survey objectives.
- 13 What information should you gather?
- 14 What two types of formal surveys can you use?
- 15 List six rules for preparing good questionnaires.
- 16 How should you use local terminology?
- 17 What is 'area sampling'?
- 18 What is an important requirement of survey results?
- 19 What is often the quickest and most effective means of processing survey data?
- 20 How should you present your survey results?

Tips for planning formal farm surveys in developing countries

- 1 Why plan?
- 2 Who will use the results?
- 3 Is a formal survey needed?
- 4 What should the survey accomplish?
- 5 What specific information should be gathered?
- 6 What type of survey should be used?
- 7 What should the questionnaire look like?
- 8 Who should be interviewed?
- 9 How should field work be organized?
- 10 How should data be analyzed?
- 11 How should results be presented?
- 12 Bibliography
- 13 Suggestions for trainers

Abstract. Formal surveys are powerful tools in gathering information from farmers in order to arrive at wise decisions in the implementation of agricultural development projects. However, formal surveys must be used with common sense and a dedication to clear focus by gathering only useful data. The temptation to construct long, awkward questionnaires involving interesting but essentially irrelevant questions must be avoided. Above all, however, we should demand that the survey yields information that will help us solve farmers' problems.

1 Why plan?

Questionnaire surveys are now an accepted tool of the trade for social scientists and others concerned with development problems in rural areas. Questionnaire surveys have been used and misused so often that a number of misunderstandings have built up around them.

Some development experts consider formal surveys to be the best and perhaps the only valid way to gather information on farming systems for planning or evaluating research and production programs. Others consider surveys to be of little or no use for these purposes.

Farmers have been 'administered' questionnaires for centuries by governments and scientists. For example, the first survey in the Mantaro Valley, Perú, was a complete household survey by Spanish conquistadores in the early 16th Century. Understandably, their patience with us in many world areas is running thin. For these and other reasons, we need survey questionnaires that are well focused, relatively short, inexpensive, but get the job done.

In fact, formal questionnaire surveys are one of several useful tools for gathering information on farming and rural life. Like any tool, they have strengths and weaknesses. In addition to the formal questionnaire survey, agricultural development practitioners should be familiar with a range of information-gathering tools including: literature review, study of maps, meteorological data and published statistics, informal surveys, direct field observation, formal surveys, and on-farm experimentation.

Some of the strengths and weaknesses of these tools are listed in Table 1.

Table 1. Strengths and weaknesses of different information-gathering tools for applied agricultural research.

Tools	Strengths	Weaknesses
Literature review	Helps prevent 'reinventing the wheel'.	Requires time and access to good libraries.
Maps, meteorological data, statistical publications	Provide background data on agricultural sector.	May be inaccurate or too 'macro'.
Informal surveys	Provide rapid overview of land use and farming practices.	Allow little quantification and outsiders may consider data 'soft'.
Direct observations	Help avoid problems of farmer recall, and interpretation of verbal responses.	Logistical (transport) problem and small sample size.
Formal surveys	Quantification and large sample size.	Costly, time-consuming and computer-intensive.
On-farm experiments	Allow technologies to be tested under farmer conditions.	Very costly, small sample size, require at least one full crop season, logistical problems.

A carefully planned and executed questionnaire survey is an excellent tool for generating dependable, quantitative information on key variables in agricultural research. However, literature review and informal surveys are usually better for getting a general overview of an area's land use and farming practices.

Direct field observations and on-farm trials are also indispensable for understanding many aspects of agriculture, such as incidence of pests and diseases, potential yields, and the performance of new technologies on farmers' fields.

Surveys, field observations, and on-farm experiments all have the advantage of bringing researchers into direct contact with farmers, their production systems, and their problems. Their results, however, are 'time-frozen' – strongly influenced by present conditions.

For this reason, when using these information-gathering tools, it is important to put things into time perspective by asking questions about earlier periods, and reviewing available time series of data on, for example, production, prices, and weather in the area.

Ideally, the research team should use a combination of these tools, and not rely on any single tool. Where possible, a sequence of research steps should be followed. It is best to begin on-farm trials after becoming familiar with the area's production systems through survey work. Moreover, formal questionnaire surveys are most valuable after you have reviewed existing published information on the area (including maps and statistics) and conducted informal survey work in the area.

Planning is generally the most neglected aspect of survey research. Surveys are costly, and good planning is essential to insure that the investment made in a survey pays a high return. Doing the actual field work is often the quickest and easiest part of the entire survey process. The more tedious phases of planning, data processing, analysis, and presentation of results come before and after completion of the field work. These phases generally require more time than the field work itself.

Due to poor planning, inadequate budgeting, problems of analysis and writing, many surveys are never completed or formally presented. As a result, only a small fraction of the information recorded on farm survey questionnaires has ever been analyzed by researchers and even less has been reported in research publications.

Difficulties of field work, analysis, and presentation can be minimized through good planning. If insufficient attention is given to planning, innumerable problems which crop up during the field work and analysis are likely to inflate the cost of the survey, delay completion of the work, and raise questions as to the validity and usefulness of the information gathered.

In planning surveys, keep the following questions in mind:

- 1 Who will use the results?
- 2 Is a formal survey needed?
- 3 What should the survey accomplish?
- 4 What specific information should be gathered?
- 5 What type of survey should be used?
- 6 What should the questionnaire look like?

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- 7 Who should be interviewed?
 - 8 How should the field work be organized?
 - 9 How should the data be analyzed?
 - 10 How should results be presented?

The following sections address these questions. In planning a survey, it is logical to run through the questions in order, from 1 to 10. However, in practice, several questions must be addressed at the same time. For example, whether or not a survey is to be conducted depends in part upon who will use the results.

Researchers' needs may be satisfied with an informal survey, but policy makers may insist on a written report with statistical results based on a questionnaire survey. What kind of questionnaire is to be used also depends on the type of survey and who is to be interviewed.

We have found it useful to plan surveys by addressing the questions in the order presented, but continually checking back (refining objectives and specifying more clearly the information needed) and also jumping ahead (making sure that all the information recorded on the survey instrument can be adequately analyzed and will meet the needs of the intended users).

2 Who will use the results?

It is a waste of resources to conduct field surveys and then fail to analyze and disseminate their results. Often, research teams go into the field with a hastily drawn up questionnaire, no clear criteria for selecting informants, and little idea of how the information recorded on survey questionnaires will be used. This can be disastrous.

The primary goal of this Research Guide is to sensitize potential surveyors to the need of thinking ahead all the way to the final use of the information obtained, and then to plan each stage of the survey so that useful results will be obtained within the framework of time and resources available.

Quite often, the amount of information needed is far less than what researchers would like to know. Surveying is costly. Therefore, planning a survey should start with a determination of who will use the information generated, and how.

3 Is a formal survey needed?

Often, when confronted with a 'new' situation – geographical area or farming system – we assume that the best way to understand it is to conduct a survey. In fact, neither the area nor the system are 'new'. They are just new to us. For this reason, we may learn a great deal by reading publications, statistics, theses, and mimeographed reports. In addition, using key informant interviewing, 'windshield surveys', and other techniques, we can gain much useful information without conducting a formal questionnaire survey.

Is a formal survey needed? This question can only be answered on the basis of our broader research goals, present information, and resources available – professional skills, funding, and time available.

The decision of whether or not to conduct a formal survey should be based on results of an informal survey conducted in the area. In many cases, especially where the time available is short and where experienced leadership for running a formal survey is not available, the best decision may be to use informal survey techniques and review literature, statistics, and maps.

Our own experience indicated that for developing a profile of farming systems in an area, and/or planning on-farm trials, it is ideal to conduct informal surveys. This can be followed up by a focused formal questionnaire survey, designed to quantify key aspects of the farming systems identified in the informal survey phase. In many cases, we have moved directly from the informal survey to on-farm trials. Under no circumstances do we recommend formal surveys or trials in farmers' fields without a prior informal survey.

To survey or not to survey, here are some examples.

Example 1

Several years ago, I was going to conduct a questionnaire survey on a large sugar-producing cooperative in northern Perú. However, after learning that 7 questionnaire surveys had been done in the same area during the previous year, I decided to extract results from these studies rather than conduct my own.

Example 2

In 1979, the leaders of a farming systems team in the Philippines decided that informal survey techniques were more appropriate than formal survey techniques because several questionnaire surveys had been conducted in the same area in previous years.

Example 3

In 1980, an on-farm research team in the Machachi region of highland Ecuador decided to base on-farm trials on informal survey results, rather than wait the additional year needed for conducting and analyzing a formal questionnaire survey.

A formal survey was administered parallel to the first year of on-farm trials and its results were used in redesigning the second year's trials.

Example 4

In a 3-year farming systems project in the Mantaro Valley of highland Perú, a formal single-visit survey followed a study of land use and ecology. Results of this questionnaire survey have been used in more than 10 later studies of agricultural production in the Andes, and also provided useful information for planning on-farm experiments in the area.

4 What should the survey accomplish?

Farm surveys tend to take on a life of their own. Once a survey is underway, researchers tend to forget why it is being done.

One of the greatest dangers in planning a formal survey is focusing attention on preparation of the questionnaire before defining the survey's objectives. Therefore, it is extremely important that the research team define both the overall project goals and the specific survey goals before working on the questionnaire. The objectives of the formal survey should be written down and consulted often in order to keep later stages of planning and implementation 'on track'.

Example

In planning a survey in the Tarma Valley of Perú, one of CIP's research teams stated as their basic survey objective: "To describe the farming system". This was too broad.

After much discussion it was restated: "To identify crucial aspects of the horticultural farming system which influence farmers' decision to adopt or reject new botanical seed technology". This narrower statement of the survey's objective reflected the purpose of the survey within the team's research project.

5 What specific information should be gathered?

What do we need to learn from the survey? This depends on our research goals, the present state of knowledge, and the feasibility of obtaining information through a formal questionnaire survey. At this point, it is important to keep in mind that much information which is interesting is not necessarily useful.

Since gathering and analyzing information is costly, attention should be focused on gathering only information which is useful for solving the problem at hand: for example, planning next year's experiments. Too often, survey teams generate a mass of general information which is never used, and at the same time fail to record information on a few key points which would have been extremely useful for planning on-farm trials.

Example

A survey in the Sabana de Bogota, Colombia, was conducted to estimate the demand for certified potato seed. In this case, no information was obtained on non-seed-related topics. This sharp focusing of the questionnaire allowed completion of a survey of 60 producers and presentation of results to the National Potato Program in 30 days. An earlier agro-economic survey in the area required over one year for data processing, and final results were never presented, either verbally or orally.

6 What type of survey should be used?

Two types of formal surveys can be used: single-visit surveys and multiple-visit surveys. The single-visit survey is less expensive and its results can be analyzed and presented in a shorter time. Two disadvantages of the single-visit survey are:

- farmers may not accurately recall events which took place several months ago (for example, dates and rates of labor use)
- the length of a single interview (around an hour) is not enough for getting detailed information on many aspects of the farming system

The multiple-visit survey allows researchers to gather information over one or more cropping cycles and to develop a more complete picture of the farm and household economy. The multiple-visit survey is, however, much more costly than the single-visit survey and it is logistically more complex. In addition, survey results are available only after a sequence of visits is complete and a considerable amount of data is assembled, processed, and synthesized.

Single- and multiple- visit surveys are complementary, and should be used together where possible.

Example 1

In the Mantaro Valley of highland Perú, a single-visit survey of 250 producers was conducted in late 1977. Then, a sub-set of 50 producers was visited several times during the 1977/1978 production cycle to obtain detailed information on potato production technologies, costs, and benefits.

In 1979, a researcher selected a subset from the original 250 producers for a marketing study and visited farmers three times. First, to update the production system information; second, to obtain information on market plans; and finally, after harvest, to observe actual market behavior.

Example 2

In the Tarma region of Perú, results of an informal survey were used to select two zones for more detailed study. Thirty farmers were interviewed once in each of these areas (single-visit survey), and later, three producers in each area were interviewed several times (multiple-visit survey) to obtain more complete information on horticultural production systems for use in farm budgeting analysis.

Example 3

After conducting a single-visit survey and initiating on-farm trials in Huancayo and Cañete (Perú), production costs and returns were studied on farms where trials were being conducted, using multiple-visit survey techniques.

7 What should the questionnaire look like?

When people plan a questionnaire survey, they often look for a model to copy. Their goal is to find a list of questions to ask farmers. This is a mistake, since in most cases, the survey schedule should be prepared from scratch to meet the specific needs of the research project.

Six rules of thumb for preparing good questionnaires are:

- Distinguish between researchers' questions and questions for farmers.
- Be specific and concrete, not general and vague.
- Use boxes or tables, not questions.
- Use local terminology and logic.
- Pretest and precode.
- Be brief.

Distinguish between researchers' questions and questions for farmers. In preparing the questionnaire, include only questions which farmers can answer. These answers are then used by researchers in answering the broader questions.

Example

In one field study, an important question for the research team was: "Why did farmers begin producing potatoes for market 10 years ago?" When farmers were asked this question, their responses ranged from, "because that is when I began farming", to, "because my family always grew potatoes".

In fact, commercial potato production began when a road was constructed into the area, greatly reducing transport costs to market. This illustrates the point that while farmers can provide researchers with a vast amount of information about their production practices and household economy, the information which researchers look for and their use of data depend upon their own analytical framework.

Be specific and concrete, not general and vague. Be specific and to the point with a questionnaire, because vague questions elicit vague responses which are difficult or impossible to interpret. General, open-ended questions are usually the first ones which come to mind, but these must be thought through and carefully rephrased if they are to elicit useful information.

Example

In the first draft of one questionnaire, we asked, "What are your principal crops?" In reviewing the question, we realized three problems. First, the term 'principal' was ambiguous; one crop could be 'principal' in terms of planted area, another in terms of quantity harvested, and yet others in terms of gross income, net income, or employment absorption.

Second, while our research interest was in the irrigated, vegetable-producing area, many producers had crops in both rainfed and irrigated areas; our question did not distinguish between the two.

Third, given the highly dynamic market environment of the area, this year's 'principal crop' might not be last year's. After lengthy discussions, we replaced the initial question with three:

- *"In 1981, what were your principal crops in terms of total value of production (include only those planted in the lower irrigated part of the valley)?"*
- *"Do you also have land parcels in the high zone?"*
- *"In 1981, what were your principal crops in terms of total value of production planted in the high zone?"*

Use boxes or tables, not questions. Questions written on interview schedules should generally not be read to farmers by interviewers. Instead, they should serve to remind interviewers what specific information is to be obtained. Obtaining this information might require background explanation and several questions rather than one.

We also found it useful to provide space in boxes on the interview schedule for noting down information, rather than listing a long series of questions. To use this approach, interviewers must know what information is to be obtained and how it is to be used. This in-depth knowledge can best come from involvement of the interviewers in the preparation of the questionnaire. If this is not possible, careful training, pretesting, and modifications in the questionnaire are necessary to ensure that all interviewers will use the same criteria in filling them out.

Example

A single general question can be reformulated as a table for noting down specific and detailed information. In the first draft of a questionnaire the following question appeared: "How do you finance your production costs?"

Own resources

Credit from the Agrarian Bank

Merchants

Other sources

In the final version, the question was replaced with a table (check appropriate box):

<i>Crop</i>	<i>Agrarian banks</i>	<i>Other banks</i>	<i>Merchants</i>	<i>Others (specify)</i>
<i>1</i>				
<i>2</i>				
<i>3</i>				
<i>4</i>				

Note that space was left for 4 crops; information was gathered on these same 4 crops in all other sections of the questionnaire.

Use local terminology and logic. In developing a questionnaire, use local terminology and list the questions or areas of interest in a logical sequence. Useful local terms should be noted during informal surveys, and international equivalents for local units of measurement (for example, for time, weight, volume, and distance) should be established. These terms and units should then be used in the questionnaire.

Example

In areas where land is commonly measured in 'manzanas' (parts of Guatemala) or in 'topos' or in 'yugadas' (Perú), these units rather than acres or hectares, were used in the questionnaire survey.

Similarly, where potato production is measured in sacks or cans, these units rather than kilograms or tons, were used.

During the informal surveys, equivalents between the local units and conventional metric units were established which permitted conversion of all data into metric units during processing of the survey results.

Pretest and precode. When the research team feels the questionnaire is in reasonably final form, they should pretest it in two stages:

- first, the research team should test the questionnaire on each other; or on friends, to know whether or not the questions elicit reasonable responses

-
- then they should test the questionnaire on a few producers in the study areas for fine tuning

It is also useful to 'precode' the questionnaire prior to conducting the survey. This allows the research team to see precisely how information will be processed and if results provide answers to the key question. Precoding also helps standardize the criteria to be used by interviewers when they formulate questions to farmers.

Example

In a Peruvian survey, precoding the questionnaire helped clarify which questions required yes/no answers and which required quantitative estimates. This helped simplify the questionnaire, minimize errors and inconsistencies in field work, and simplify data coding and processing.

As a result of good planning, in only two weeks, the five members of the survey team interviewed 70 producers and coded all information on the questionnaires.

Be brief. Minimize the time required for the interview. Farmers are busy people who often become bored answering questionnaire surveys, especially poorly planned ones read by poorly trained interviewers who know little about the subject matter.

8 Who should be interviewed?

More has been written about the theory of sampling than about practical aspects of selecting a sample of farmers for a survey. Where feasible, an attempt should be made to randomize the selection of informants. The attempt to randomize selection of informants minimizes biases introduced by interviewing more accessible or better-known farmers, who are not representative of the majority. However, the ideal of random sampling is seldom achievable.

The first problem in selecting a random sample of informants is to define the study's 'universe'. If the project is directed toward seed potato growers, then the universe of informants may be those appearing on the Ministry of Agriculture's official list of seed producers. If, on the other hand, the project addresses the needs of horticulturalists, then the universe may be those farmers in irrigated areas presently growing vegetables.

Ideally, a list can be made of the universe of potential informants, and from this list a sample can be randomly drawn. We used this technique with success in one small, well defined area where village authorities could name the operators of all farm fields.

In most cases, we have not found it possible to obtain complete lists of producers in the study universe. For this reason, we usually use another sampling technique known as 'area sampling'.

Figure 1 (the Mantaro valley of highland Perú) shows a grid drawn over a map of the study area. Each space on the grid is assigned a number, and randomly selected points are located on this grid. The survey team then attempted to locate the operator of the field under the point.

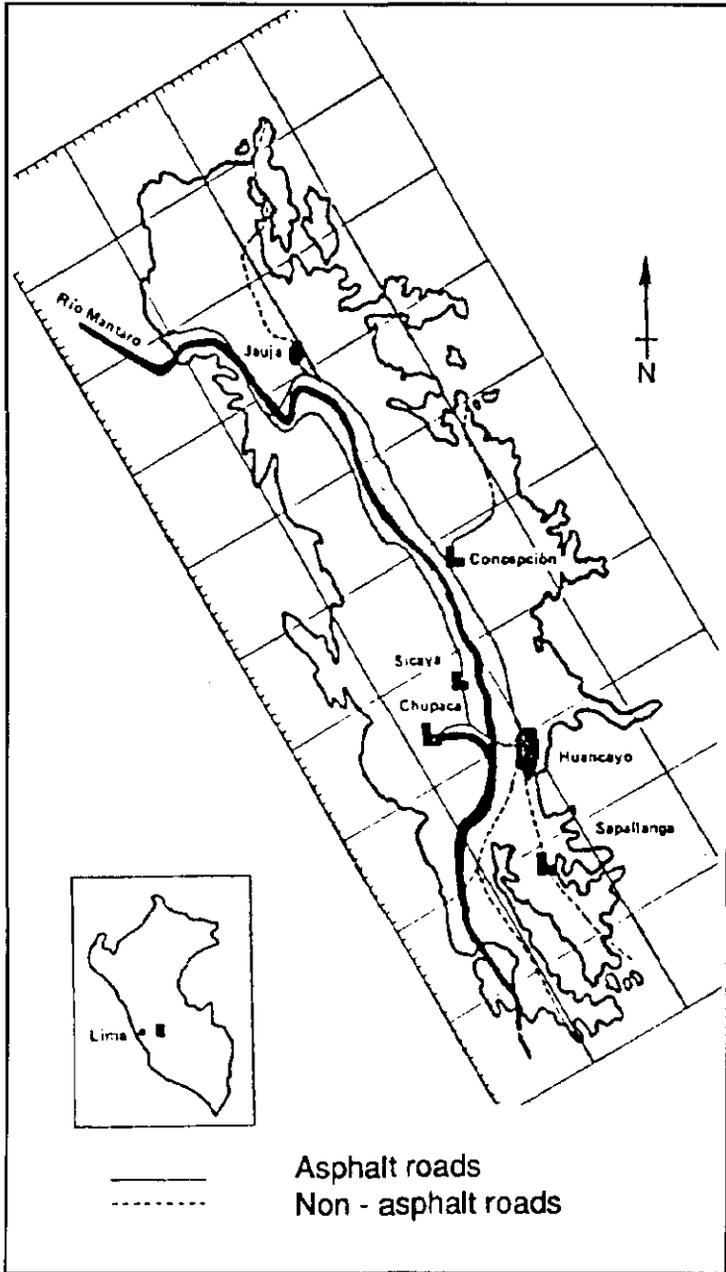


Figure 1. 'Area sampling' in the Mantaro valley of highland Perú.

In the case of sampling from a list of producers, survey results can be extrapolated to the entire area directly. But where area sampling is used, a weighting formula must be applied in extrapolating results. This results from the fact that the probability of a point's falling on a farm is directly proportional to the size of the farm. Hence, area sampling biases results in favor of the larger producers. Procedures for weighting an area sampling are presented in Alarcón and Rubio (1982).

The sample size should be determined on the basis of two considerations:

- degree of variability within the area
- budget available for the study

In a large area with great variation in soil, rainfall, irrigation and farm types, an attempt should be made to define agro-ecological zones with a reasonable degree of internal uniformity. Ideally, 25-30 interviews should be made in each zone. In smaller areas, or where ecological conditions and farming systems are less variable, fewer interviews may suffice.

9 How should field work be organized?

Good planning and organization can minimize the hardships of field work. It is important to maintain a strong team spirit during the survey. Transportation is critical, and requires an adequate budget. Interviewers should be familiar with the survey objectives and with criteria for selecting informants and filling out questionnaires.

Adequate per diem, transport and essential supplies (including raincoats and boots in rainy areas) help keep morale up and allow the survey team to function under difficult circumstances. Daily schedules should be flexible so that interviews can be arranged with farmers at their convenience. Interviews can be early in the morning, late in the evening, or at mid-day in isolated fields.

For obvious reasons, we have found it easier to maintain the necessary staff morale and logistical support for quick (2–3 weeks) single-visit surveys than for multiple-visit surveys.

10 How should data be analyzed?

If the results of a survey are to be used in future stages of a research or development project, it is important that they be made available quickly. Two data processing methods are:

- manual
- computerized

Tabulation of the data by hand and processing with simple calculators is often the quickest and most effective means of processing survey data. However, it does not permit complex cross tabulations or other sophisticated analyses, and it is not generally feasible for processing large surveys.

However, the use of computers on the other hand implies a longer start-up time, to create and check data set and prepare programs for special analyses; but has the advantage of allowing more complex analysis of larger data sets.

Where the survey team has direct access to mini-computers and adequate software, computerized processing is the logical course. This is rapidly becoming the case. However, where researchers do not have experience with computer processing or direct access to computer facilities, manual processing can be more appropriate for small surveys.

Example 1

A single-visit survey was conducted in the Carchi region of northern Ecuador. The Ecuadorian research team did not have access to computer facilities, so information was sent to CIP for processing.

Considerable difficulties arose in interpreting information on the questionnaires, and processing was slow.

After several months, in order to make essential information available for planning the coming season's on-farm trials, the questionnaires were returned to Ecuador for hand processing by the original survey team.

In a few weeks, basic statistics on varieties grown, seed rates, yields, fertilization levels, and major pest and disease problems were generated.

Example 2

In the Colombian survey mentioned earlier (section 5) the basic results of the survey were presented only 15 days after field work was completed. All data processing and analysis were done using hand calculators.

11 How should results be presented?

Survey results can be presented in many ways ranging from sophisticated scientific publications to straightforward presentation of results using a minimum of professional jargon. We have found that the best type of survey report for applied agricultural research is organized around the objectives of the survey.

The survey report should begin with an introductory section placing the survey within the context of the larger research or development project, followed by brief sections outlining the procedures used and principal results obtained. Simple tables can be included in the text to illustrate major findings. More detailed tables presenting more general findings and useful background information should be placed in appendices at the end of the report.

We have also found it useful to prepare two reports at the end of a survey:

- an 'initial' survey report which is written immediately after the field work
- a 'final' report which is prepared after data processing

The first report is useful for capturing impressions and insights of the research team which may be forgotten during the quantitative data processing. In many cases, these observations are helpful for interpreting quantitative survey results, and vice versa. Also, the first report should contain a critical evaluation of the effectiveness of the questionnaire and survey implementation.

Example

The initial survey report prepared by a research team evaluating the feasibility of introducing true potato seed in a highland area of Perú indicated that farmers did not understand certain questions concerning the advantages and disadvantages of using seed beds in horticultural crop production.

In addition, the report noted that an important horticultural area within the region had not been covered by the formal survey, and concluded that in future studies, more emphasis should be placed on informal, exploratory surveys, in order to better define areas and topics for in-depth study, and terminology to be used on questionnaires.

The final survey report should be tailored to meet the needs of its users. In cases where the same research team conducts both the survey and later project activities, such as on-farm trials, an extensive survey report may not be needed. Nevertheless, it is useful for the team to write a survey report for four reasons:

- the discipline of data processing and writing helps clarify survey findings
- results will be useful for planning and interpreting results of the trials
- survey results will also be useful for later evaluation of the entire applied research effort
- survey results can make a useful contribution to the small published literature on farming systems in developing countries

In many cases, an important function of the survey is to communicate to other researchers new information on farming systems in the area. In these cases, the survey report should address major questions, assumptions, or beliefs of these groups.

Example

Many potato researchers believe that small-scale highland Peruvian farmers use traditional varieties, low levels of fertilization and pesticides, and traditional tillage practices because they do not know about recommended improved practices.

During the Mantaro Valley surveys, it became apparent that small-scale farmers were well informed about recommended practices, but did not adopt many of them because they were not better than their own practices, in economic terms.

For this reason, our survey reports stressed the rationality of small-scale farmers' practices and how careful research was needed to identify areas where improvements could be made in potato production. We discouraged promotion of complex technological packages which were not likely to meet the needs of most farmers.

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13 Suggestions for trainers

If you use this Research Guide in training:

Generally:

- Distribute handouts (including this Research Guide) to trainees one or several days before your presentation, or distribute them at the end of the presentation.
- Do not distribute handouts at the beginning of a presentation, otherwise trainees will read instead of listening to you.
- Ask trainees not to take notes, but to pay full attention to the training activity. Assure them that your handouts (and this Research Guide) contain all relevant information.
- Keep your training activities practical. Reduce theory to the minimum that is necessary to understand the practical exercises.
- Use the questions on page 4 (or a selection of questions) for examinations (quizzes, periodical tests, and so on). Allow consultation of handouts and books during examinations.
- Promote interaction of trainees. Allow questions, but do not deviate from the subject.
- Respect the time allotted.

Specifically:

- At the beginning of your training activity, present the following question to participants (blackboard, overhead transparency, ...):
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"How do you expect farmers to react to technology innovations?"

Ask each participant to write the answers on cards (10 x 15 cm) using felt-tip pens and big letters, well-readable from a distance; one to three words per answer, one answer per card. Allow five minutes.

Ask one or two participants to recollect and, with the help of all participants, to group the cards on a free wall space (scotch/sellotape) into the categories 'positive', 'negative', 'in-between', or similar categories.

Ask participants to compare their answers with their experience during the following formal farm surveys. Discuss the experience after the survey.

- Present and discuss the major points of this Research Guide as introduction to tips for planning formal farm surveys in developing countries (45–60 minutes).
- Explain local circumstances and logistics of the survey (30 minutes).
- Conduct the planning of formal farm surveys in developing countries, and discuss conclusions. One morning and one afternoon, respectively, should be enough if the practical is part of a course on a topic other than on-farm research, farming systems research, or similar. In these latter courses you certainly want to spend more time on formal farm surveys.



International Institute of Tropical Agriculture (IITA)
Institut international d'agriculture tropicale (IITA)
Instituto Internacional de Agricultura Tropical (IITA)

The International Institute of Tropical Agriculture (IITA) is an international agricultural research center in the Consultative Group on International Agricultural Research (CGIAR), which is an association of about 50 countries, international and regional organizations, and private foundations. IITA seeks to increase agricultural production in a sustainable way, in order to improve the nutritional status and well-being of people in tropical sub-Saharan Africa. To achieve this goal, IITA conducts research and training, provides information, collects and exchanges germplasm, and encourages transfer of technology, in partnership with African national agricultural research and development programs.

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