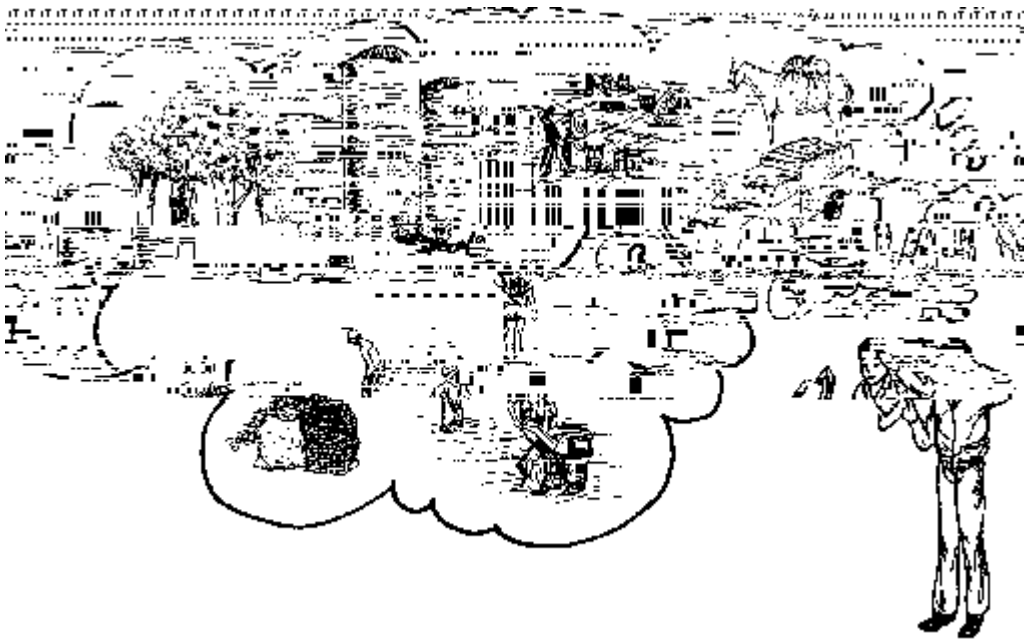
Chapter 4 - Application of the commodity systems assessment methodology

In the study of a commodity system, it is important to identify: (1) the inefficiencies within the system; (2) the factors adding costs to the product, and (3) cost effective solutions. To achieve this requires a comprehensive and systematic effort.

An ideal food system allows a product to move from the farm to consumer, arriving at the final destination at a price the consumer is willing to pay and with only minimal losses in quantity or quality. Losses which do occur in a food system indicate inefficiencies within that particular system. In many cases, the cost of reducing a loss - e.g. using cold storage or introducing an improved container - is greater than the value of the product saved by the innovation.



An underlying premise of this manual is that **the capacity to diagnose problems and identify solutions exists at the country level** whether that country is found in Africa, Asia, Latin America, or the Caribbean.

If society wants to improve the efficiency of existing food systems, it must increase the level of knowledge, technology and/or resources available to participants in the system and/or reduce the level of risk in production and marketing. For example, improved

market opportunities may motivate farmers to improve product quality by investing more money in farm inputs and cultural practices. Facilitating the availability of-financial resources to groups of farmers to permit the purchase of trucks, storage facilities and necessary equipment may also contribute to improved efficiency of commodity systems. Training of farmers and intermediaries in improved methods of management, production, postharvest handling, and marketing are examples of ways to increase the level of knowledge.

Any successful attempt to introduce innovations into a traditional commodity system will require an integrated effort between those who make the existing system work (farmers, traders, bankers, and truckers, among others) and those who would like to see the efficiency of the overall food systems improved (specialists, support institutions, politicians and other decision makers). Development of efficient commodity systems requires a joint effort between the private and public sectors.

To integrate the practical with the technical, or the private sector with the public sector, requires a detailed understanding of existing systems and how they operate. It requires the identification of the distinct actors in the system and an understanding of the role played by each. Generally, this type of information is not readily available in one document, one institution or the mind of one individual; however, it can be obtained and organized through a systematic effort.

The rest of Chapter 4 is intended to show how information on specific commodity systems can be collected and organized to identify major components, participants and priority constraints. This will facilitate the design of solutions and strategies oriented towards the improvement of food systems in third world countries. These solutions will be the focus of Chapter 5.

Formation of an Interdisciplinary Team

Describing and analyzing a commodity food system is a team effort requiring input from specialists from all the disciplines. One of the first steps in organizing the study of a commodity system is therefore the formation of an **Interdisciplinary Team**. The exact make-up of this **Team** will vary with the type of commodity, the availability of human resources and support institutions, and the results desired from the study. This **Team** should include the specialists most knowledgeable about the diverse components of the particular commodity system - persons from both the private and public sectors, particularly farmers, intermediaries, transporters, agroprocessors, storage facility operators, extension agents, planners, and policy makers.

If the proposed solutions might require support from public sector institutions, then persons from such institutions should be included on the **Interdisciplinary Team**. In this way the study serves as in-service training for the individuals and may facilitate favorable decision making during the implementation process.

The team should be as few in number as possible but broad-based enough to cover all important components of the commodity system. If the group is too large for effective interchange, it may be sub-divided into two or more interdisciplinary teams which will meet from time to time to exchange knowledge and reach a consensus.

Another option that has worked successfully is to divide the group by discipline, allowing planners and economists to concentrate on **Preproduction**, agronomists, entomologists and other production-oriented people to work on **Production**, postharvest-related people to concentrate on **Postharvest**, and agricultural economists and marketing specialists to work on **Marketing and Distribution** (Malaysian Agricultural Research and Development Institute, 1988). Each group works separately as a team but reports frequently to the others in plenary session. In this option, each subgroup is composed of persons from similar disciplines; therefore, their analyses are more likely to be carried out in greater depth.

All Team members should make reference to Components 01 to 26 in Chapter 3 and the corresponding guideline questionnaires in Annex 1. The twenty-six components of a commodity system presented in Figure 3.1 are divided into four quadrants: preproduction, production, postharvest, and marketing/distribution.

The presentation of the information generated by the **Interdisciplinary Team** can be both descriptive and quantitative-presented in the form of text, tables, graphs, figures and maps. The following sections on **Preproduction, Production, Postharvest Handling**, and **Marketing and Distribution** present the steps to be taken and tools to be used by the **Interdisciplinary Team(s)** during the Commodity Systems Assessment. In many instances, examples of how the information can be presented for best effect and analysis are given in Annexes 3 through 13.

Preproduction

Most of the components described in this quadrant (Component 01-07, Figure 3.1) are applicable to more than one commodity and are of a more general nature than are the components of the remaining three sections, which tend to be crop specific.

In the description of the **Preproduction** phase it is important to assure that the **Interdisciplinary Team** includes specialists from central and agricultural planning units familiar with institutional structure and services from both public and private sectors. The **Team** should also include production specialists familiar with natural resources, environmental conditions and existing systems for the production and distribution of planting material.

One of the first types of analysis to be carried out by the **Interdisciplinary Team** is that regarding institutions. Given the often large number of public and private institutions involved in agriculture development activities, it is often a major achievement just to identify them and their respective divisions/units and functions relevant to the commodity under study. For each public sector institution pertinent to the production and marketing of the commodity of interest, a questionnaire similar to that shown in Annex 2-A should be completed.

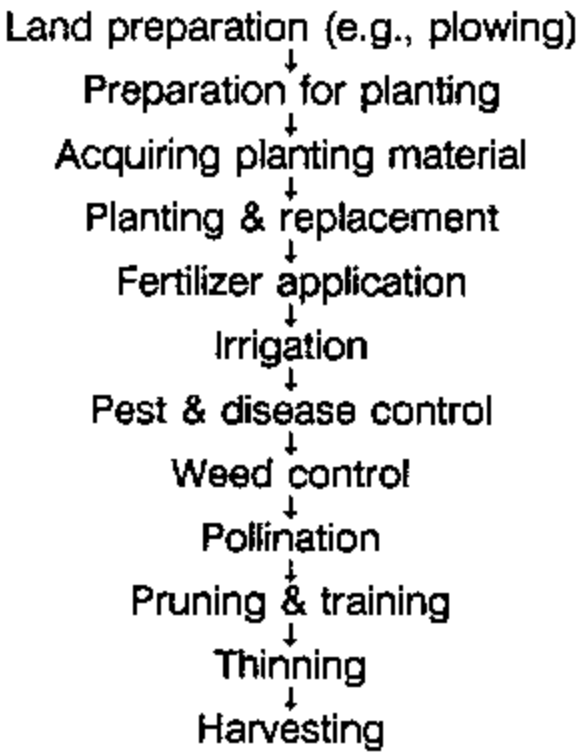
In the case of private institutions, care should be taken to identify organizations of farmers and other support groups which affect the production, postharvest handling or marketing of the commodity being studied. Profiles of representative farmers' organizations can be prepared, including information on their backgrounds, organizational structures, characteristics of members, experiences, problems, and needs (see questionnaire format in Annex 2-B).

Information on development projects and activities which affect the commodity system and are sponsored by private sector groups or bilateral, regional, international, or other types of development organizations, should be collected using the guideline questionnaire presented in Annex 2-C.

vegetables. Most crops are placed in the ground in the form of seed or plants. All require water, fertilizers, weed and pest control. Most undergo pollination and all are eventually harvested. This commonality among crops facilitates the design of a model which can be used for describing the production process for any crop.

The best starting place for an analysis of the production system is the identification of the diverse steps in the production process. For most crops this entails some variation of those shown in Figure 4.1. Based on this general model, steps can be added and/or deleted until all the important steps in the production process have been identified for the particular commodity being studied.

Figure 4.1: Steps in the production process of most crops



The formation of the **Interdisciplinary Team** should take into consideration these basic steps in the production process. This is to assure that the **Team** includes members with the necessary expertise for an in-depth and complete analysis. For each step in the production process, the **Team**

5. Why is the action carried out in that manner and not some other?
6. Where is the action carried out?

After discussion and analysis in plenary session, the **Interdisciplinary Team** -00893e6/F1 2048 Tf 0.0892 T

Form 4.2: Magnitude of losses caused by preharvest factors for commodity X in country Z

STEPS IN THE PRODUCTION PROCESS+	NOT SIGNIFICANT		SIGNIFICANT		VERY SIGNIFICANT	
	Quan*	Qual*	Quan*	Qual*	Quan*	Qual*

technological and/or economic terms. Their responses can be summarized using a format similar to that presented in Form 4.3.

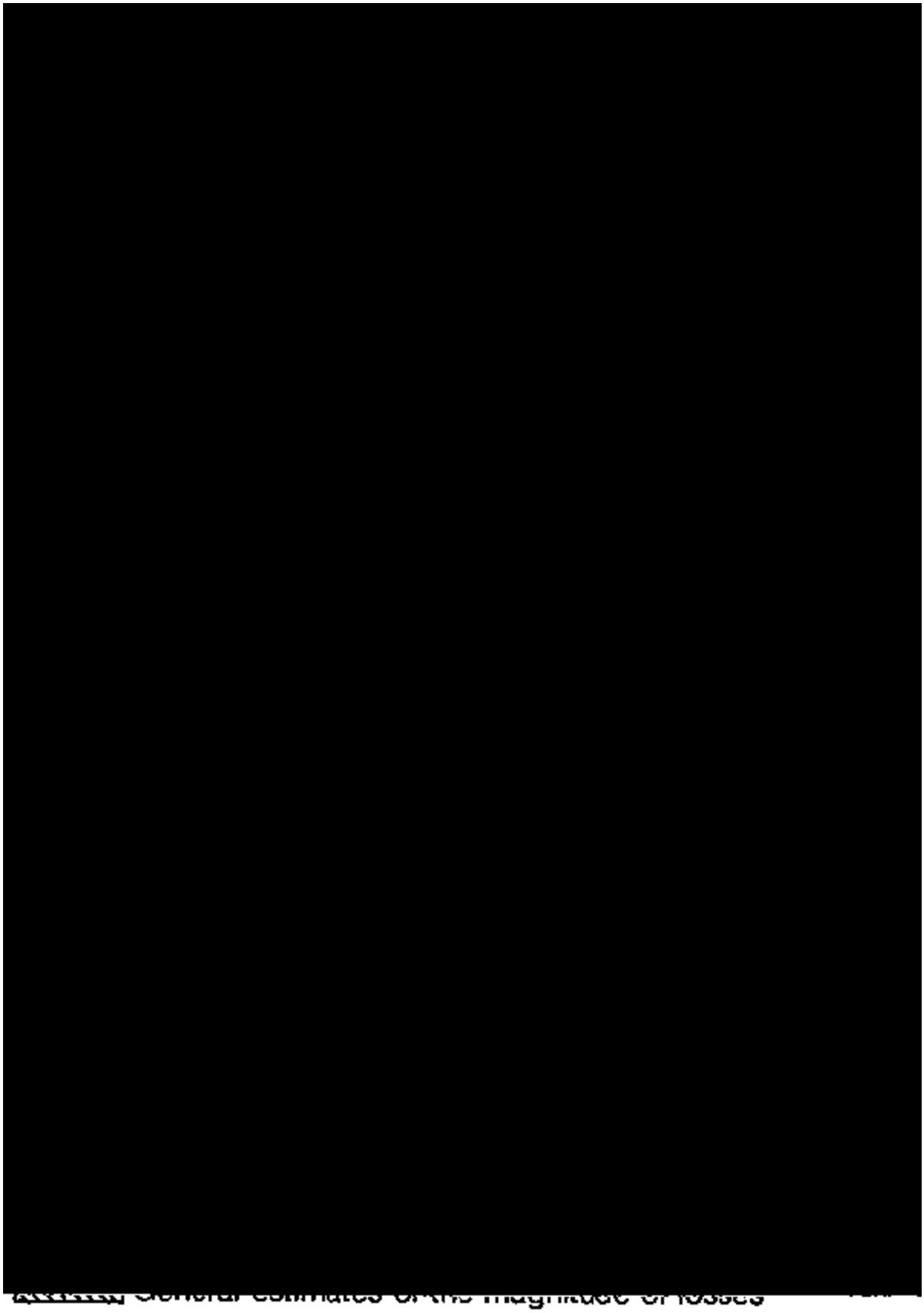
Form 4.3: Feasibility of reducing the preharvest factors causing preharvest or postharvest losses

STEPS IN THE PRODUCTION	REDUCIBLE IN TECHNOLOGICAL TERMS	REDUCIBLE IN ECONOMIC TERMS

DELAYS (WAITING): This occurs when conditions do not permit or do not require the immediate execution of a planned following step. When the delay is intentional, the action is classified as an "Operation."

STORAGE

Transport
Unloading
Wholesale
Loading
Transport
Unloading
Retail



Source: La Gra, Martinez y Martinez, 1982, p. 50.

Figure 4.3: Steps in the postharvest system for starfruit and estimated percentage losses in Malaysia, 1988

Source: Malaysian Agricultural Research and Development Institute, 1988, p. 47.

Form 4.5: Identification of participants and their respective actions in the postharvest process for commodity X in country Z

STEPS IN THE POSTHARVEST SYSTEM*	WHO TAKES ACTION	WHAT ACTION TAKEN?	HOW ACTION TAKEN?	WHEN ACTION TAKEN?	WHY ACTION TAKEN?	WHERE ACTION TAKEN?
Harvest						

Loading						
Transport						
Unloading						
Waiting						
Stacking						
Storage						
Loading						
Transport						
Unloading						
Wholesale						
Loading						
Transport						
Unloading						
Retail						

* "Quan" = Quantity of losses; "Qual" = Quality of losses.

+ The steps should be modified to reflect the commodity system being studied.

Note: *Place "X" in the appropriate column for each step in the system. In those cases where "X" indicates significant or very significant, provide further details in writing. When reliable quantified loss information is available, replace "X" with a percentage.*

As was done in the analysis of the production system, the **Interdisciplinary Team** can ask the question:

decisions about what crops to plant, when to plant, which and how many inputs to apply, how much and what source of labor to use, when to harvest, and when to sell to whom. The intermediary is also thinking of the market when s/he decides what products to buy, what quantities, what quality and at what price; how and when to transport, select, store, package and sell the produce. **Marketing is the integrating force for all these different decisions.**

Developing countries are keen to increase their earnings of foreign exchange. They normally attempt to do this either by increasing their domestic production of imported items or by increasing their exports of traditional and non-traditional products. Most countries attempt to do both.

Effective marketing, whether local, regional, or extra-regional, requires the ability to provide some minimum quantity of an agreed-upon-quality product to a given market on a regular basis and at a competitive price. When analyzing the marketing distribution system, it is necessary to generate information which will permit a good understanding of the system and its potential for development.

Form 4.7: Feasibility of reducing postharvest losses in technological and economic terms

STEPS IN THE POSTHARVEST SYSTEM*	REDUCIBLE IN TECHNOLOGICAL TERMS		REDUCIBLE IN ECONOMIC TERMS	
	Yes	No	Yes	No
Harvest				
Transport				
Assembly				
Packing				
Loading				
Transport				
Unloading				
Waiting				
Stacking				
Storage				
Loading				
Transport				
Unloading				
Wholesale				
Loading				
Transport				
Unloading				
Retail				

* Note: *The steps should be modified to reflect the commodity system being studied.*

The make-up of the **Interdisciplinary Team** should include persons knowledgeable of marketing institutions, transportation, agroprocessing, and both domestic and export marketing. As identified in the final quadrant of Figure 3.1, the components dealing with marketing, distribution and agro-processing should be identified, described and analyzed.

Emphasis should be given to the collection of information concerning:

- participants in the marketing system;
- market channels;
- prices, marketing costs and profitability;
- availability and access to financing;
- service institutions and quality of services provided;
- characteristics of consumer demand (domestic and abroad);
- agroprocessing capabilities;
- availability of transport;
- available marketing infrastructure; and
- potential to supply domestic and export markets.

The team should determine the marketing channels for the commodity under study by reviewing the literature on the commodity and interviewing hands-on marketing persons. The information obtained can then be summarized graphic form following the model presented in Figure 2.1-C.

This type of diagram provides three kinds of information:

1. Types of traders or intermediaries involved in the marketing of a specific commodity;
2. Alternative channels followed by the product from farm to consumer; and
3. Estimated percentage of the total amount of produce moving through each point in the commodity system.

Form 4.5 in the Postharvest section will facilitate the identification of the different types of participants involved in the postharvest process, including the diverse marketing intermediaries. Specific information on channels followed and the percentage of total crop moving through each point should be determined or estimated by review of national production and marketing statistics, literature and interviews with knowledgeable persons. Fo marketing persons.m4z (75 c 0 -0.08935 1484 8600 Tm 100.20 Tz (intermedialEuTj /onnair148

be a less than 10% increase in demand. If price increases by 10%, there will be less than a 10% decrease in demand.

Price elasticities of demand are useful in determining how consumers are likely to react under given price situations. If price elasticities are available, they should be utilized in the projections of demand for the commodity being studied.

In the analysis of demand, whether domestic or foreign, consumer demand characteristics must be identified and described to help determine the real potential of a particular market as well as the national ability to supply that market. For any commodity it is necessary to know the intended consumer's preference in such things as size, color, weight, flavor, texture, degree of maturity, and preference for package. In addition, it is important to identify potential constraints such as pests, diseases, insecticide residues, and other factors that might affect ability to market.

Form 4.8 is suggested as one method for summarizing such information. An example of the application of this method to four export markets for Malaysian starfruit is demonstrated in Annex 9.

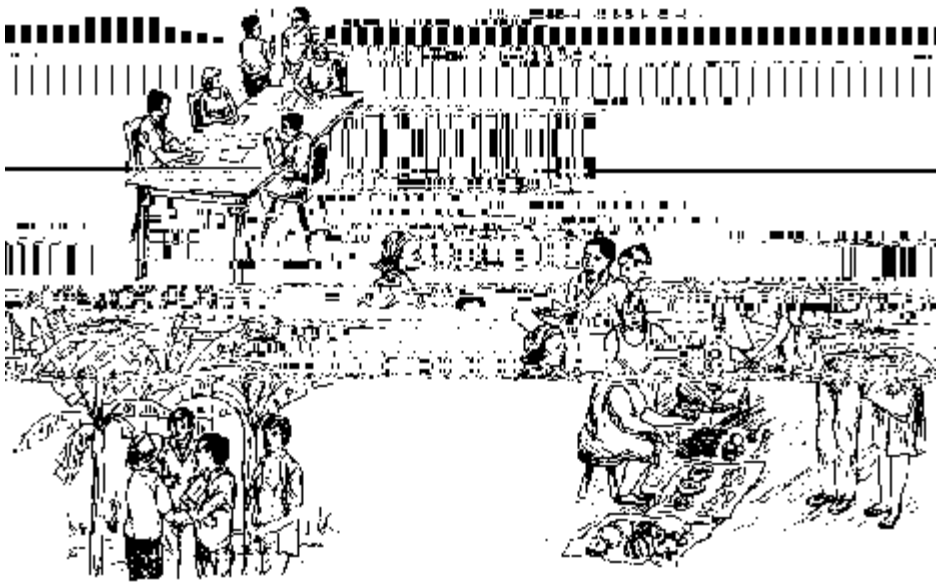
Form 4.8: Characteristics of demand for commodity X in country Z

DEMAND CHARACTERISTICS*	**INFORMATION FOR INTENDED MARKET**	
	Domestic	**Export**
Preferred cultivar:		
Preferred size:		
Preferred weight:		
Preferred color:		
Preferred flavor:		
Desired texture:		
Preferred degree maturity:		
Preferred type package:		
No. units per package:		
Preferred wt/package:		
Other preferences:		
Constraints:		
Pest problems:		
Disease problems:		
Insecticide residues:		
Quarantine restrictions:		
Other constraints:		

* Note: *This list should be modified based on available information and information needs for the commodity being studied.*

Chapter 5 - Identifying solutions to problems

Now that the CSAM has facilitated a better understanding of a commodity system and its problems, it is easier to identify possible solutions. The **Interdisciplinary Team** will have identified and described the principal characteristics of the participants and their actions throughout the commodity system. As this team obtains information about the characteristics of pre-production, production, harvest, postharvest, and marketing, each member will begin to decide what is working well within the system and what is not. The team members will be able to link problems and their causes with particular participants - e.g., farmers, intermediaries, companies, organizations, institutions, and others. This information, when properly organized and analyzed, will lead to the design of solutions, expressed in the form of projects.



The objective of this chapter is to present some instruments which will facilitate the identification and organization of problems and their causes, and the design of solutions.

Problem analysis

Problems occur at all points in any commodity system and come in all sizes. Small problems occurring on the farm - e.g., poor pruning and improper harvesting - may become very large problems in the marketplace when the produce cannot be sold due to poor quality. Someone who observes a farmer in the marketplace unable to sell his produce might conclude that the problem is in the market. In fact, the inability to market a product is usually an indicator of problem(s) in the commodity system. Unless we know the root problem and its causes, we cannot design effective solutions.

Any analysis of problems affecting commodity systems must necessarily look for causes in each component of the respective commodity system.

Problem analysis has been defined [Deutsche Gesellschaft fur Technische Zusammenarbeit (GTZ), 1983] as a set of techniques to:

- analyze the existing situation surrounding a given problem condition,
- identify the major problems and the core problem of a situation, and
- visualize the cause-effect relationships in a Problem Tree diagram.

The starting point in problem analysis, therefore, should be the identification of as many of the related problems as possible and their respective causes.

As should be apparent from any analysis of a commodity system, the problems vary in accordance with the type of participant. Farmers, for example, may have problems related to land, labor, information, financial resources, cultural practices, management, markets, and many more. The farmers' problems are likely to cover the full range, from planning all the way through the system to marketing.

Problems exper tive causes.

Brainstorming for problems in a commodity system can be facilitated if the participants are brought together in a comfortable and informal setting with a discussion leader and rapporteur. While the group leader stimulates discussion, the rapporteur lists all the problems and causes of problems suggested by the participants. At this stage the problems are listed as they arise, in no particular order.

Brainstorming sessions should be carried out with all members of the **Interdisciplinary Team** after each has had ample opportunity to review the available information on the commodity system. The group leader must insure that the problems presented are **existing ones**, not potential or anticipated ones or personal opinions.

During the brainstorming session, members of the **Interdisciplinary Team** will suggest problems and causes of problems negatively affecting a particular commodity system. During this process, one suggestion will lead to another, creating a cross-fertilization of ideas. Once the respective team members have exhausted their supply of ideas, the recorder will produce a listing of all the problems. This list should be distributed to each participant for review and modification and a final list should be prepared.

Problem checklist

Once the brainstorming session is completed, the **Interdisciplinary Team** may choose to review the checklist of Potential Problems presented in Annex 11. Since this is a rather long list, it could take several hours or days to analyze point by point. To avoid inappropriate use of scarce time, the checklist should be reviewed quickly by each team member, to jog the memory, with the purpose of identifying important problems or causes of problems that may have been overlooSE0Nce the brainstorming sessons.

SYSTEM WHERE PROBLEM OCCURS	PRIORITY PROBLEMS (X)	QUALITY, QUANTITY, PRICE OR OF COMMODITY
AGRICULTURAL POLICY:		
- credit	X	no loan portfolios for bull
- planning	X	bias towards non-food crops, e.g., cotton

A **problem tree diagram** a way of **visualizing** the cause and effect relationships
r

more complete the understanding of the commodity system and the greater the probability of designing effective solutions.

The problem analysis can be concluded when the **Interdisciplinary Team** decides that the essential information has been included in the causal network and shows the cause-effect relationships which characterize the problem situation being analyzed.

Objectives analysis

The objectives analysis is the process whereby the problems are converted into objectives or goals towards which activities can be directed. It also includes an analysis of the objectives to determine whether they are practical and can be achieved.

In carrying out the **objectives analysis** there are five basic steps:

1. All the negative statements shown on the problem tree are restated as positive statements.

2. All the "objectives" are reviewed to assure that they are desirable and realistically achievable in an acceptable time frame.

3. Those objectives which do not meet the conditions mentioned in (2) are modified: those which are undesirable or cannot be achieved are deleted.

4. Any new objectives which are desirable or necessary to complement existing ones should be added to the diagram.

5. The "means-end" relationships thus d

3. A technological package must be developed and published in the form of a tech-pack for the training of farmers: therefore, this objective was added.

Figure 5.2: Objectives tree for the production and marketing of paw paw (papaya) in Barbados, 1988 (derived from Figure 5.1: Problem tree)

** For lack of space, the following problems are listed vertically. They should be shown in boxes like the other objectives at this level.*

By starting at the bottom the **objectives tree** and working upwards, it can be seen that the achievement of the lower level objectives will lead to the achievement of the objective at the next highest level. Each objective seems to be realistic and attainable within the actual circumstance of the local culture and environment. Thus we can conclude that the objectives contained in this tree diagram are viable and can give direction to development projects.

Analysis of strategy alternatives and project identification

Continuing with the Barbados papaya example, Figure 5.3 shows some worksheet notations which can help in an analysis of the situation. Each of the rows of objectives has been assigned a number from one (top row) to 7 (bottom row) in the right-hand margin. The objectives in the top rows are quite general whereas those in the bottom rows are more specific. If the problem tree had been developed to its full extent, the bottom-most rows would be even more specific. As the objectives become more specific, they might better be called **expected results or outputs.** For example, in row 7, expected results can include: a papaya tech-pack, trained staff, an organized research program, an irrigation system, wind breaks, improved cultural practices, improved tools, improved postharvest handling, trained laborers, and a packing shed. From row 6, an expected result might be an improved system for production and distribution of planting material.

A few of the objectives in rows 1 and 3 are somewhat out of place when compared with the others. That is, they deal with inflation, health hazards and consumption of imported temperate fruits and need not necessarily be included when considering action to improve the production and marketing of fruits. These can be eliminated without affecting the strategy to be developed and, in fact, have been crossed out in Figure 5.3. Upon analysis of the remaining objectives in rows 1 to 4, it becomes obvious that they are closely interrelated, i.e., they deal either with import substitution or export development, both of which affect foreign exchange earnings.

If an attempt were made to define one General Objective which encompasses all these objectives (rows 1 to 4) it might be the following:

"Increase the domestic supply and exports of good quality fruit."

At the fifth level of objectives (Figure 5.3), there is a distinct dichotomy in which one branch (see circle #1) specifies objectives to be achieved within public sector institutions, e.g., Ministry of Agriculture, and the other branch (see circle #2) specifies objectives which can best be achieved by working directly with the private sector

(farmers, intermediaries, etc.). Since target groups are different in each case, and since the institutional objective deals with fruit whereas the other deals only with papaya, it would make sense to consider these as two distinct project areas within an overall strategy.

Figure 5.3: Identification of alternative strategies and projects, based on the objective tree (Figure 5.2)

** For lack of space, the following problems are listed vertically. They shou*

1. List all types of participants (persons, intermediaries, groups, companies, organizations, institutions, projects and others) identified in the analysis of the commodity system. These are all potential target, support, or opposition groups (Note: at this point the reader should refer to Forms 4.1 and 4.5 where different participants in the production and postharvest systems were identified).

2. Review the list to determine whether each represents a homogeneous unit or whether the group can be further subdivided - e.g., government institutions can be divided into the Ministry of Agriculture, Planning Unit, and Marketing Board. Intermediaries may be categorized as wholesalers, retailers, and exporters.

3. Characterize and analyze each participant, considering his/her social characteristics, organizational structure, status, interests, motives, attitudes, strengths, weaknesses, shortcomings, and potential role to be played.

4. Identify possible positive and negative consequences of introducing changes into the commodity system and the potential impact upon the diverse participants.

5. Fill in Form 5.1 indicating whether participants are **target, support** or **opposition** groups, or whether they belong to some other group **affected** by changes in the system. Describe how they are affected, emphasizing the economic or social impact.

6. In the case of ongoing projects, identify those which complement, duplicate or compete with the proposed project.

7. Develop strategies for dealing with the more important persons, groups and/or ongoing projects.

Form 5.1: Expected impact of efforts to modify a commodity system

PARTICIPANTS IN COMMODITY SYSTEM*	**HOW AFFECTED**	
	Positive Effects	**Negative Effects**
Target groups:		
-		
-		
-		
-		
Support groups:		
-		
-		
-		
-		
Other groups affected		
-		
-		

-		
-		
Ongoing projects affected		
-		
-		
-		
-		

* Note: *Refer to Forms 4.1 and 4.5 to identify the participants.*

Projects benefiting large numbers of participants are more likely to receive support during the implementation phase. Projects having a negative impact upon some participants with strong economic and/or political clout are more likely to run into delays during the implementation phase.

Based on the results of the **participant analysis**, the **Interdisciplinary Team**, in coordination with planners, should attempt to reach a general consensus as to **whose interests and views are to be given priority when carrying out problem analysis and project design.**

To return to the Barbados papaya example, the participant analysis showed that the FAO had just initiated a technical assistance program to assist the Ministry of Agriculture in rationalizing its agricultural policy. Additionally, interviews with specialists determined that the Caribbean Development Bank (CDB) had just authorized a loan to the Barbados Development Bank to establish a line of credit for fruit producers. Consequently, since these two problem areas were felt to be well on their way to being resolved, both were excluded from the two circled areas which encompass possible project ideas (Figure 5.3). Nevertheless, both the FAO and the CDB actions remain integral parts of an overall strategy to improve fruit production in Barbados.

If the two circled areas are to be considered possible project areas, then the level 5 objectives in Figure 5.3 can be considered the specific objectives for each project, i.e.:

- Improve institutional services for fruit producers, and
- Improve the quality of papaya produced in Barbados.

Thus far in this **analysis** we have identified a general objective, two specific objectives (one for each project) and various expected results or outputs. Furthermore, logic tells us that if we continue one step further, we could Identify a number of specific activities which will be required to achieve the expected outputs. These would undoubtedly include such things as training, planning and construction of physical facilities, planting wind breaks, diagnosing farmers' specific needs for planting materials, and designing and testing new tools.

Summary of project identification

In synthesis, the analysis of Figures 5.1 to 5.3 has resulted in the following:

- A causal relationship has been identified between problems on the farm, postharvest handling, public sector institutions and the country's balance of payments situation.

- It therefore stands to reason that resolution of the problems at the lower levels of the problem tree could produce a positive impact on the overall economy of the country.

- The objectives tree facilitated the identification of objectives and desired results which should in turn lead to the formulation of projects to overcome the identified problems.

- By identifying participants, ongoing actions, and means-end relationships, conditions are set to identify priority project areas.

Given this information, a strategy for developing the papaya industry in Barbados can be summarized as follows:

Execute a series of actions through both public and private sectors to remove the on-farm production and postharvest handling constraints and thus significantly increase the availability of good quality papaya for the domestic and exports markets. Efforts should concentrate on improving the institutional services for fruit producers in general, including improved planting material for papaya, and improving infrastructure and human resources in selected production zones. An ongoing research and information network will be established within the Ministry of Agriculture.

Such a strategy led to the identification of the five actions or projects presented in Table 5.2.

Criteria for establishing priorities

Because there may not be sufficient resources to implement all the projects simultaneously, some projects may have to precede others. In the Barbados case, for example, the development of good quality planting material is undoubtedly of the highest priority while such actions as the institutionalization of a supply system for farm inputs, while important, is of a lower level of priority.

Table 5.2: Prioritization of actions and projects for the development of the paw paw (papaya) industry in Barbados

CRITERIA*	ACTIONS AND PROJECTS				
	Generate Quality Planting Material	**Improve Supply of Farm Inputs**	**Install Irrigation System**	**Improve Harvest Tools**	**Construct Packing Shed**
1. Technical feasibility	5	5	5	5	5
2. Benefits/costs	5	3	5	4	4
3. Social Impact	5	2	1	1	4
4. Political feasibility	5	5	5	5	5
Total	20	15	16	15	15
5. Falls within national objectives	yes	yes	yes	yes	yes
6. Falls within executing institution's objectives	yes	yes	no	yes	no
7. Priority of timeliness	5	3	3	2	3

With respect to timeliness, the first action is of highest priority, to be followed by actions two, three and five, then action number four, in that order. The reason for this ordering is that the generation of quality planting material is a precondition for the others, i.e., there is no need for farm inputs, an irrigation system, picking tools and a packing shed if the problem of poor planting material cannot be resolved. Farm inputs and irrigation will be required before harvesting tools and a packing shed are purchased; however, the packing shed should be initiated with sufficient time to assure that it is ready by harvest.

At this point it is useful to ask another question:

- What important political or bureaucratic decisions must be made before implementation can take place?

This question should be asked for each project identified. Sometimes the implementing agency is unable to execute certain actions without the authorization of another agency or institution. Some examples:

- Permission may be required from the Water Resources Department before an irrigation system can be installed.

- A policy change may be required before a new marketing strategy can be applied.

- A change in the organizational structure of an institution may require cabinet approval.

If these possible bottlenecks can be identified during the design stage, then strategies can be developed to keep them from becoming hindrances to the project during implementation.

Other useful questions are:

- What are government development-policy priorities?
- Is available manpower sufficient to implement the project?
- Will the action or project complement or compete with similar actions by other donor or support groups?
- Are there any other local, regional, or national conditions which may affect project implementation?

Project profiles

4. Projects have clearly defined objectives which tend to be innovative, rather than perpetuating an existing situation.

Hence, a project is a set of interrelated activities aimed at a common goal/objective and implemented during a given period of time with a predetermined quantity of resources (goals + resources + activities + time).

If we accept this definition of a project, then we can prepare a project profile by:

1. Defining its goals, objectives and expected outputs;
2. Describing the project's principal activities;
3. Indicating the resource requirements; and
4. Establishing a time frame for the beginning and ending of the project.

Anyone capable of analyzing a commodity system and identifying priority problems and needs is also capable of identifying a project idea and expressing it in the form of a project profile.

The key to project identification and formulation Is knowing what the priority problems are. Since the priority problems have been neatly organized in the problem tree (Figure 5.1), converted to objectives in the objectives tree (Figure 5.2) and analyzed in alternative strategy analysis (Figure 5.3), the writing of a **project profile** is a straightforward task. That is, the commodity system analysis has identified all the basic information necessary to prepare one, or several, **project profiles**.

While different people and organizations use different outlines for **project profiles**, basically they all contain the same type of information to greater or lesser degrees. Based on our definition of a project given above, the following minimum information should be included in a **project profile**:

1. **Title** (reflects the most important feature of the project).
2. **Definition of problems/justification** (derived from the problem tree).
3. **Goals** or general objectives (derived from an analysis of objectives tree and alternative strategies).
4. **Specific objectives** (derived from analysis of the objectives tree and alternative strategies).
5. **Expected outputs** (identified from the lower levels of the objectives tree). The expected outputs are the results wanted at the end of the project.
6. **Activities to be executed** under the project which will produce the expected outputs. (These are a logical extension of the expected outputs and must be carried out to achieve the expected outputs.)
7. **Expected duration** of the project (determined by the time required to complete all project activities in their proper sequence).
8. **Estimate of costs** (derived from an analysis of inputs required to implement activities).
9. **Implementing organization or agency** (determined through an evaluation of organizational capability, source of funding, and local politics).

Project profiles are short descriptions of potential projects. As noted, they can be written in many different formats. Annex 12 presents two **project profiles** developed following the guidelines presented in this manual (Chapter 5) and based on Figure 5.3.

General observations on the use of CSAM and project profiles

The purpose of this manual is to provide a methodology to study a particular commodity, from planning production to final distribution and consumption, and to identify priority problems occurring along the way and the means of resolving them. The careful reader now has the necessary information and tools to identify problems and to prepare project profiles. However, you cannot feed a child project profiles, nor are they useful for purchasing health care or school books. What then do we do with a project profile?

The answer, of course, is to move them into the proper channels which will lead to funding. This funding can then be used to execute priority activities which will improve the efficiency of food systems. These outputs hopefully will generate economic or social benefits for the intended beneficiaries of the project.

In any country, there are a number of local, national, multinational, international, bilateral and non-governmental organizations active in agricultural development activities. Some organizations only provide loans; others only grants or technical assistance. Still others may provide loans, grants and technical assistance. While some organizations only work through governments, others only provide their assistance through the private sector. Some development organizations provide financial and technical assistance based on lime more than a two page profile. Others may require several volumes of additional information before they release a dollar.

In whatever circumstances, **the project profile plays a key role in obtaining assistance from development organizations.** Project profiles resulting from the application of the CSAM represent the principal results of a thorough, albeit rapid, appraisal of a commodity system. Those individuals who have managed the implementation of the CSAM must insure that decision-makers, when presented with project profiles, understand the tremendous effort that has gone into the identification of priority problems and the subsequent design of appropriate solutions expressed in project format. A CSAM implementation report will sometimes help in this respect, but often decision-makers are too busy to go into the details of a larger report. Still, in one way or another, they must be made aware of how the project profile has been developed and made to understand the validity of its recommendations.

If a project profile is submitted to a potential donor who likes the project and offers to finance it, so much the better However, in most cases, project profiles are not immediately financed since they normally do not provide the potential donor with sufficient information to determine feasibility and level of risk. Still, it is the project profile which either stimulates the donors to ask for additional information (a positive sign) or inform you that they are not interested (avoiding further waste of time). Profiles, therefore, are a very important tool for agricultural development.

Good profiles may lead either to direct assistance or, if additional information is required, they may become the first step In the project cycle followed by development banks. This project cycle includes: project formulation and evaluation; appraisal and negotiation;

project financing and implementation; monitoring and evaluation. One way of contributing to a good project cycle of agriculture development is by learning to prepare good project proposals. The first step in this process is learning to write a good project profile.

Many donor agencies require the use of the **Logical Framework** (Rosenberg and Posner, 1979) for the presentation of a project proposal. The appei6 Tm9u9E6Menberg and