

tips
Information Sheets

Technical Information Put Simply



AVAILABLE TIPS SHEETS

The “tips” information sheets provide brief overviews on a variety of planning and evaluation topics. The available sheets are listed below.

100 Series – General Planning Tools

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200 Series – Survey Methods

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The Project Cycle

Learning is the key to good projects. Good managers learn both from their own experience and from other people. They will build on what appears to be working well and change what is not. It is said, “insanity is doing the same thing over and over and expecting different results.” This certainly applies to relief and development projects. How can we make sure that learning is an integral part of project planning and implementation? The project cycle is one helpful tool.

The project cycle is a map of the process of designing, implementing, and evaluating a project. Note that it is a “cycle”. We rarely get everything right the first time we do something. However, we can learn from our actions; ask a young child who has just snatched a burning stick from the fire! Or think of a farmer wanting to improve his maize harvest. He may try a number of different things – adding fertilizer, trying a different variety of maize, or perhaps irrigation. Whenever he tries something new, he will ask whether the maize harvest actually improved. Over time, he will learn what works best in his particular field.

The project cycle maps the relationship between doing (**action**), observing the results (**evaluation**), learning from what we have seen (**reflection**), and then applying those lessons to future actions (**planning**). Let’s look at these steps in a bit more detail.

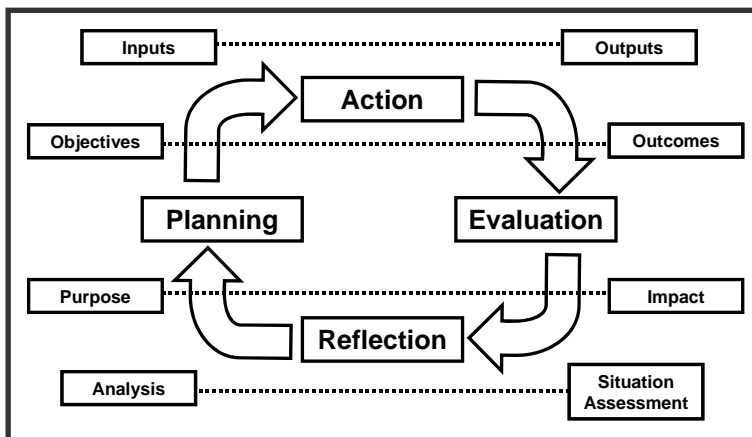
1. Reflection

Before getting down to detailed project planning, it is important to do some reflection. What is the current situation in the community? Who is affected and how? A **situation assessment** involves collecting information to answer these questions. Tools for conducting a food security assessment include the FEWS matrix (tips 302) and Household Economy Analysis (tips 301). Using information from the assessment, project planners do an **analysis** of the key factors affecting the population – describing the links between causes and effects and identifying areas where the project might realistically be able to intervene. The problem tree (tips 103) is a tool that is commonly used in analysis.

2. Planning

Once we have identified the key challenges facing the community and have a better understanding of the current situation, it is time to move into planning the project. First, it will be necessary to focus the project on a particular issue raised in the analysis. What we aim to do about this general issue becomes the **purpose** of the project. The purpose can be fairly general, and may not be achieved by this project alone. For example, we may aim to “Increase drought-affected farm families’ access to food.” This purpose is related to a broader development goal – sustainable access to food – to which we hope this project will contribute.

Once we know the purpose of a project, we can define more specific **objectives** that the project will achieve by the time it is completed. These objectives will be **Specific, Measurable, Achievable, Relevant, and Time-bound**. (For more on SMART objectives, see tips 104.) Our project’s objectives could include: “Increase beneficiary household maize yield by 20% after the first year”, “Decrease migration of men in search of work by 50% after six months”, and “Decrease distress sales of livestock by 70% by the end of the project”.



Before moving into the action phase, we still need to define what we will actually do. One way to do this is to identify the specific **outputs** that will lead to the **outcomes** that we named as our **objectives**. Outputs are the *direct* results of activities. For example: “20 km of irrigation canal de-silted”, “100 ha of land terraced”, or “2,000 seedlings planted”. In the planning phase, we identify the expected outputs that will lead to the expected outcomes (related to our objectives). The expected outputs help us to define the planned **activities**. In order to carry out these activities, we will need certain **inputs** (25 mt of maize seed, 2,000 hoes, resources for training sessions, etc.).

Once the planning phase is complete, we should have a clear picture of how the required **inputs** will be used in the planned **activities** to achieve the expected **outputs** that will lead to the desired **outcomes** (related to our **objectives**) that will contribute to the overall **impact** of the project (related to the **purpose**).

3. Action

Once plans are in place, and the inputs are available, the project activities can begin. Even while the project activities are underway, the project cycle continues to turn. Good managers will continually **monitor** the activities to make sure things are going according to plan and to modify any activities that are not functioning properly or are no longer appropriate. Feedback from field staff, observations, and project records all provide relatively rapid information on how the activities are progressing.

4. Evaluation

At the planning stage, we already identified the outputs, outcomes, and impact that the project was expected to achieve or contribute to. Thus, evaluation should never be just an “add-on” at the end of a project. Rather, it is an integral part of the project cycle.

Evaluations generally begin at the start of a project, with the collection of **baseline** information. Baseline information gives us a “snapshot” of important information (related to the expected results) before the project activities begin. Later, we can collect **follow-up** information and compare it with the baseline to see how much things have changed. If we want to measure whether distress sales have actually decreased by 70%, we need to know how many distress sales were taking place at the outset of the project and compare this with the number of sales taking place at the end of the project.

Often, organizations will conduct mid-term evaluations. This allows managers to respond if the activities do not appear to be achieving the expected results, rather than waiting until the end of the project to find out that it failed to achieve the intended results.

5. Reflection (again)

Once information has been collected in the evaluation phase, it is time to reflect on what we have learned. Taking lessons learned from the evaluation and information from any other available sources (experiences of other organizations, academic studies, tradition, etc.) we can make decisions to strengthen what works and change what does not. This feeds into the next cycle of planning, action, and evaluation.

One of the challenges facing local organizations is the enormous pressure they face from outside donor agencies that often dictate the terms of evaluation, based on their own needs (usually accountability to their own constituencies – governments or supporters). The need for accountability is real and important. However, if accountability is the sole focus of evaluation, and all of the information collected is simply sent off to outside agencies, the project cycle is broken. Too often, local organizations are engaged in results-based *measurement* (collecting information on the effectiveness of their activities) but not results-based *management* (actually using this information to strengthen and improve their own projects). It is up to local organizations to define the information they need to keep the project cycle going. It is up to donor agencies to strengthen and not break the local cycle of learning.

Hopefully, a mutual respect for the integrity of the project cycle will allow local and external agencies to work and learn together, in the interest of quality projects.

Resources

For more information on the project cycle, or other issues related to planning, monitoring, and evaluation, contact the Canadian Foodgrains Bank (crgb@foodgrainsbank.ca).

Logic Model

The logic model (LM) is a tool for project planning that is used widely in relief and development programs. The development of the LM takes planners through a series of steps to define in general terms what the project or program will accomplish and how.

The LM also provides a quick overview of the program logic that can be used to present a project to potential supporters and help identify gaps in project planning. Bear in mind that, while the LM is a useful tool, the process of developing it is as, or more important, than the end product.

The LM is divided into 6 distinct sections – inputs, activities, outputs, immediate outcomes, intermediate outcomes and ultimate outcome. Each of these components represents a step in the causal logic of a program. See the next page for LM examples.

1. Causal Relationship

The LM illustrates the steps that must take place in order to achieve the project's ultimate outcome. The inputs and activities are expected to result in specific **outputs** that lead to other changes in the community (**immediate and intermediate outcomes**) that in turn contribute to the overall purpose of the project (**ultimate outcome**). This chain of events – sometimes referred to as the "project logic" or "results chain" – shows the causal relationship between the activities and the project's results, based on the project cycle (see tips 101).

Distinguishing between outputs and outcomes is relatively easy to do when developing a LM. An output summarizes a group of completed activities done by the implementing partner. In these situations, the implementing partner has a significant amount of control in making sure the activities are done to achieve specific outputs. This control diminishes in the transition from the output to the outcome level. The outcomes are about changes in accessibility, skills, behaviors and practices of the project beneficiaries. For a food aid project, the output of a completed food distribution is the responsibility of the implementing partner. Increased food consumption, an intermediate outcome, is a change of practice that happens at the household level. Although the implementing partner can influence whether an outcome is achieved, their direct responsibility and activities are primarily at the output level.

Distinguishing between immediate outcomes and intermediate outcomes is more challenging and should begin by simply observing if there is a causal relationship between the two – **does the immediate outcome lead to the intermediate outcome?** In addition to the causal relationship, there is always a chronological separation

between immediate and intermediate outcomes. Immediate outcomes are short-term results and occur before intermediate outcomes which are longer-term in nature. In a food security project, an example of an output could be the delivery of workshops on growing drought tolerant crops. The immediate outcome would then be farmers planting these crops in the field (short-term result) and the intermediate outcome would be increased food production and food reserves (longer-term result).

The ultimate outcome generally represents a higher level of change that the project is working towards, but generally does not accomplish during the project's timeframe. The ultimate outcome of all projects supported by the Canadian Foodgrains Bank is improved food security.

In the end, the most important point to remember is that there must be a logical link between each of the LM components. On the next page, there are two LM examples. Although some components of the LM examples might be similar to your project, others will need to be adjusted to reflect the focus of your project.

2. Developing a LM

The first step in developing a LM begins with a situation assessment and analysis to clearly define the problem. As an example, assume that our analysis shows that 500 households are food insecure in a specific district. We may use a tool like the **problem tree** (tips 103) to define the roots of this problem. Having described the problem and potential solutions, we can begin to plan our project.

The next step is clarifying what are the outcomes that we are trying to achieve with this project, and then work our way back to the activities and inputs that are required in order to achieve those results. It is best to begin with defining the ultimate outcome, and it may be improved food security for 500 households in a specific area. One of the causes of food insecurity identified in our analysis could be that households are not getting enough food to eat because of poor harvests following a drought when everyone lost their seed and sold their tools. Therefore, one of our **intermediate outcomes** may be to increase agriculture production. One of the **immediate outcomes** required to achieve this **intermediate outcome** could be the adoption of improved farming practices by farmers. The **activities** would include running workshops to introduce improved farming methods, an activity and responsibility of the implementing partner. Farmers may require certain **inputs** such as seeds or tools to practice the improved farming method, especially if the farming method involves the introduction of new seed varieties.

Once we have defined the three outcome levels, outputs, activities, and inputs, check the logic by moving back and forth, or up and down within the LM. You can follow the logic as a series of IF-THEN statements: IF we have these inputs (trained personnel) and do these activities (run workshops on improved farming methods), THEN we will achieve specific outputs (completed workshops). IF we have these outputs, THEN we should see specific immediate outcomes (farmers implementing the improved

farming methods in their fields). IF we achieve these immediate outcomes, THEN we should see intermediate outcomes (increased food production). IF we achieve this outcome, we should see this ultimate outcome (improved food security).

Developing a strong LM comes with experience, and usually requires a significant amount of adjustment until it reflects a clear logical structure of the project.

LOGIC MODEL DESCRIPTION AND EXAMPLES

| HOW? | | | WHAT? | | WHY? |
|---|--|--|---|--|---|
| INPUTS | ACTIVITIES | OUTPUTS | IMMEDIATE OUTCOMES | INTERMEDIATE OUTCOMES | ULTIMATE OUTCOME |
| Human and physical resources | The things you "do" with your inputs – the actions | Product or service stemming from a completed group of activities | Short-term results emerging from the outputs that often represent a change in knowledge or skill | Medium-term results emerging from immediate outcomes that usually represent a change in behavior or practice | Longer-term results emerging from the intermediate outcomes that the project is working towards |
| FOOD AID EXAMPLE | | | | | |
| Food Funds Vehicles Personnel Warehouses Office supplies | Registration and verification of beneficiary households Procurement and delivery of food to warehouse Warehousing control and dispatch Food distribution | Registration and verification of beneficiary households completed Commodities procured Monthly food distributions completed | Increased food availability for beneficiary households | Increased food consumption by beneficiary households | Improved food security for displaced people living in X region |
| AGRICULTURE FOOD SECURITY EXAMPLE | | | | | |
| Funds Vehicles Office space Office supplies Base camp Tools, seeds and cassava cuttings Personnel | Community meetings Registration of beneficiaries Purchase and distribution of tools, seeds and cassava cuttings Farmer trainings on crop management and drought tolerant crops Follow-up farmer visits Field days | Tools, cassava cuttings and maize seeds distributed Farmer trainings on crop management and drought tolerant crops completed Follow-up farmer visits conducted Field days organized | Increased adoption of improved agriculture production methods Increased planting of drought tolerant crops | Increased agriculture production Increased proportion of annual household food needs produced | Improve the food security of 500 drought affected households in X region |

Resources

Managing for Change: Introducing the Art of Results Based Management

<http://www.foodgrainsbank.ca/uploads/RBM%20primer%20Splash%20and%20Ripple%20Jan09.pdf>

RBM Tools at CIDA: How-to Guide

[http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLImages/Public_Engagement/\\$file/RBM-How-to-Guide-e.pdf](http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLImages/Public_Engagement/$file/RBM-How-to-Guide-e.pdf)

For more information on the project cycle, or other issues related to planning, monitoring, and evaluation, the Canadian Foodgrains Bank (cfgb@foodgrainsbank.ca).

The Problem Tree

In the project cycle, situation assessment and analysis are crucial steps that move us from reflection into planning. Usually, a project focuses on one or a few core problems. Understanding the core problem and its causes is important if the project is to effectively address the effects of that problem on the community. The problem tree is one method of mapping out core problems, along with their causes and effects, helping project planners to identify clear and manageable objectives.

Like any other tree, the problem tree has three parts: a trunk, roots, and branches. The trunk is the core problem. The roots represent the causes of the core problem and the branches represent its effects. Like the roots of a tree, the causes of the core problem are not always immediately apparent, but if we do not understand the causes there is little we can do to address the problem.

Think of a farmer having trouble with her corn. The plants are stunted and yellow. Painting the plants green will make them the right colour, but will do nothing to make them healthier – in fact it will probably finish them off! Instead, by identifying the real problem (nitrogen deficiency) and its causes (poor soil, excess moisture), the farmer will be able to use more appropriate methods – like adding fertilizer,

improving soil drainage, or using a crop rotation that includes legumes.

A Group Exercise

Problem trees should be developed as a group exercise to help project planners discuss how various issues in the community are linked together. It may be useful for a variety of stakeholders to participate in the exercise so that the problem tree represents a negotiated and shared view of the situation. Or, it may be more helpful for various stakeholders to produce their own trees as a starting point for discussing differing perspectives.

The exercise requires some cards, pens, and sticky tape.

Identify the Core Problem(s)

The exercise begins with the group listing negative statements that describe the situation being analyzed.

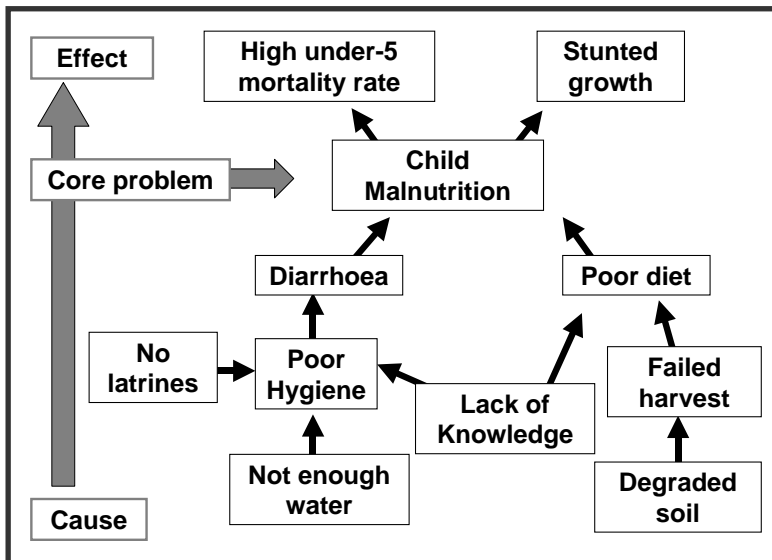
These statements should be written down on cards and posted so that everyone can see them (on a wall or on the floor). Once people agree that most of the important issues have been identified, group the negative statements that have some similarities or common links. Looking for similarities and links among the statements should help you to identify a core problem (or problems).

Once the group agrees on the core problem, write it clearly on a card and post it where everyone can see it.

Identify Causes and Effects

Examine the other negative statements that the group has posted. How are they related to the core problem? Some may be *causes* – they lead to the core problem. Place these cards below the core problem. Others are *effects* – they stem from the core problem.

Place these cards above the core problem. Others may be more general problems that could be classified as *overall constraints* – for example, poor governance, insecurity, or national debt. It is most likely that your project will not be able to address these broader concerns directly, even though they are affecting the community. Place these cards off to the side. Clarify or discard any statements that are unclear.



A Simple Problem Tree

Continue to arrange the causes and effects, noting their

relationships to each other. Remember that one thing leads to another. The goal here is to provide a relatively simple road map of how one problem leads to another, which leads to another, and how these problems are related to the core problem that you have identified.

In most cases, the group will note that reality is very complicated. Relationships between causes and effects often go both ways. Most problems do not follow a simple, linear progression. It is important to identify these interactions, but try to stick to the most important links. If the problem tree becomes too cluttered, it will not be a useful tool. You are seeking a balance: enough detail to provide useful information, but simple enough that you can clearly see the main links between problems.

Once you have arranged the cards in a way that best shows the links between problems, ask whether any important causes are missing. If so, add them in on separate cards. Likewise, ask whether any important effects of the core problem are missing and add these in.

Check your Logic

Check the logic of the problem tree by starting at the causes and working up to the effects. Each problem or group of problems should logically lead to the next.

Copy the problem tree onto a sheet of paper, using lines and arrows to show the links between causes and effects.

The Solution Tree

When the group is satisfied that the problem tree provides a good overview of the main challenges facing the community, it is time to identify how a project might make a difference. In other words, it is time to turn the problem tree into a *solution tree* (also known as an *objectives tree*).

Keeping in mind the likely *stakeholders* (beneficiaries, project staff, donors, local government, etc.) and constraints of the project, identify which of the causes might be realistically addressed by the project. For each negative statement, come up with a positive statement that describes a solution to the problem. For example, "People lack access to clean drinking water" could be turned into, "Provide people with access to clean drinking water". These positive statements provide a basis for selecting project *objectives* – the specific goals that your project will aim to achieve. Again, focus only on those objectives that the project will realistically address, given the constraints of budget, time frame, and staff.

By turning the core problem into a positive statement, you can identify the project's *purpose* – the broader goal to which the project will contribute.

Identifying the objectives will help project planners to come up with activities – concrete actions that will achieve those objectives.

While the problem tree identified *causes* and *effects*, the solution tree describes *means* (activities) and *ends* (the results that the project plans to achieve). Again, one thing leads to another – activities to *outputs* (immediate results like roads built and trees planted) to *outcomes* (changes in people's lives like increased income and improved diet) to *impact* (long-term changes like decreased infant mortality and food security).

Once you have identified the purpose, objectives, activities, and results in this way, you can easily construct a logical framework (tips 102) that illustrates how the project will achieve its goals and how the results will be measured. The overall constraints identified in the problem tree will help you identify the *risks and assumptions* that will affect project success.

There is no magic in the problem tree. It is simply a way of mapping out how one thing leads to another – problems and solutions. As you become more familiar with this approach to planning, you may find ways to make it more appropriate to your own situation. If it gets people talking and helps you to see the big picture, it is working.

Resources

The Australian Agency for International Development (AusAID) has a useful step-by-step guide to developing a problem tree, with examples:

<http://www.ausaid.gov.au/ausguide/ausguidelines/1.html>

An FAO-supported project in Eritrea used the problem tree as one way of engaging farmers in a situation analysis. You can read the article at:

http://www.fao.org/sd/2001/KN1001a_en.htm

For more information on problem trees, or other issues related to planning, monitoring, and evaluation, contact the Canadian Foodgrains Bank (cfgb@foodgrainsbank.ca).

Defining Objectives

Objectives are the specific goals that a project is designed to achieve. Clearly defined objectives make it much easier to identify expected results and design project activities. Ideally, project objectives are based on a sound situation assessment and lead to relevant project activities and results, as laid out in the project cycle (tips 101).

Of course, this does not mean that all projects are designed this way, or follow a straight path from situation assessment to project evaluation. However, well-defined objectives can be a helpful transition from describing the problem (perhaps using tools such as the problem tree – tips 103) to identifying parts of a solution, including the inputs, activities, and expected results.

Broad Purpose

Before defining specific objectives, it is important to state the project's overall goal: its broad purpose. Many things may determine the broad purpose, including the focus of the organization designing the project, the context, and the culture. The Canadian Foodgrains Bank has defined some categories for ways in which food assistance can promote food security. These may assist organizations in defining their own broad purpose:

1. **Availability:** Increasing the availability of locally appropriate food through external food assistance.
2. **Access:** Local market access to food through fair market pricing and/or improving purchasing power including job creation, income generation etc.
3. **Local food production:** Increasing local food production on a sustainable basis.
4. **Environmental investment:** Agroforestry, soil and water conservation projects etc., which protects, rehabilitates and/or restores local environments.
5. **Post-harvest technology:** Improving methods of post-harvest/shipment food handling and storage.
6. **Social context:** Reduction and/or resolution of conflict and/or building community infrastructure.
7. **Community organization** that empowers local populations.
8. **Co-operative formation that strengthens the** community's ability to enhance its own well-being.

'SMART' objectives are:

Specific
Measurable
Achievable
Relevant
and
Time-bound.

Specific Objectives

In order to accomplish the broad purpose, it is necessary to decide on some specific objectives. These objectives should refer to what is expected as a result of the project and not just focus on the activities themselves. This way, objectives help people understand **why** the activities are being done.

Many organizations use the SMART guidelines for objectives. In other words, objectives should be:

Specific: Clearly defining exactly what the project should accomplish helps to focus activities. Use verbs that are clearly understood. e.g. *'reduce'* or *'increase'* instead of *'change'*. If possible, include specific information on who is involved, and where. e.g. *'reduce the sale of household assets by subsistence farmers in Tana River.'*

Measurable: Think about how the objective might be evaluated. e.g. *'reduce the number of people who said they were hungry'* instead of just *'reduce hunger'*. It might be useful to state how much change is expected. e.g. *'reduce malnutrition by 20%'* instead of just *'reduce malnutrition'*.

Achievable: Is it reasonably possible to achieve the objective? e.g. *'eliminate poverty'* is a bit *ambitious*.

Relevant: Does the objective really reflect the priorities of the communities and organizations involved? **participation** in the planning process helps to ensure that your objectives are truly relevant.

Time-Bound: Objectives that have a clear time frame are more likely to be met. Think about when it might be possible to see change in the community. e.g. *'reduce the incidence of diarrhea among children under 5 by December 1999.'*

A complete objective should answer the questions *'who'* *'what'* *'when'* and *'where'*. For example:

'Reduce the incidence of diarrhea [what] among children under 5 [who] by December 1999 [when] in Lofa county [where].'

Clearly defined objectives lead to sensibly planned project activities (the *'how'*) and evaluation.

Resources

For more information on the defining objectives, or other issues related to planning, monitoring, and evaluation, contact the Canadian Foodgrains Bank (crgb@foodgrainsbank.ca).

Choosing Indicators

Indicators are signs that can identify vulnerable communities and individuals, and show changes that have happened in a community over time. Just as road signs direct travelers toward the places they need to go, and tell them when they have arrived, good indicators can help us to know more specifically what a project is trying to achieve, and whether the expected results were actually achieved.

Choosing the right indicators can be a difficult task. Different indicators are right in different situations. Targeting indicators should tell us which people or communities are vulnerable and give us information that can be used in developing a program. Results indicators should be sensitive to change over time and show whether or not the program made a difference.

While the specific characteristics of good indicators will be different in each community and program, the 'right' indicators are **relevant, believable, sensitive, and affordable**.

Relevant Indicators

Relevant indicators provide information that is directly linked to the needs of the community and the program. Indicators that are not relevant are a waste of time and money, as the information they provide will probably never be used to evaluate the program or improve conditions in the community. In the past, many development projects have been accused of using a '**blunderbuss approach**.' A blunderbuss was an early type of gun, which shot a great number of bullets in many directions at once. Only a few bullets would hit the target while the rest were wasted. In the same way, using a large number of indicators may mean they 'hit the target' once or twice, but much of the effort is wasted collecting irrelevant information. This can be avoided with '**optimal ignorance**' -- only collecting information that is really needed. This saves time, money and frustration.

Two important ingredients for choosing relevant indicators are **clearly stated project objectives**, and a **high level of community involvement**.

Canadian Foodgrains Bank members are responsible to the communities involved in food programs, and to the people who donate food and money to these projects. Sometimes these two groups have different views of what is relevant. People close to the communities want information that will help them to maintain and improve programs. People who donate food and money would like to make sure that the resources are being used in the best possible way. It is very important that these groups come to an agreement on what information is relevant. People

will not take care in collecting information they feel is irrelevant. Too often, the community's voice is ignored in project planning. Community visits, relationship building and consultation are very important, as they allow local people to participate more directly in planning and evaluation.

Believable Indicators

What indicators actually mean often requires interpretation. For instance, a high number of households selling off their assets is often interpreted to mean that the population faces food insecurity. Believable indicators are more clearly interpreted. When the meaning of a particular indicator is clear, it is easier to believe that the interpretation is correct.

The meaning of indicators can be understood through theory. Scientific theory suggests certain believable food security indicators. The Canadian Foodgrains Bank has resource people and materials to help its partners understand some of the scientific theory in areas like health, nutrition and economics. It is important that these

scientific theories be used along with local theories and understanding. Everyone learns when there is good dialogue.

Past experience and community stories also help people to interpret the meaning of certain indicators. If certain conditions or signs have been associated with food insecurity in the past, people will expect those conditions or signs to identify food insecurity in the future. An important part of the process is listening to community stories and experiences of food insecurity.

This is especially important for understanding **proxy indicators**. Proxy indicators are not direct measures. They provide information about conditions that are harder to measure. For example, school attendance may be a proxy indicator of energy levels among children. Scientific theory, local theory and stories should be used to assess whether a proxy indicator is believable.

Believable indicators must be based on good quality data collected using sound methods. Important issues include sample selection (*tips* 201), questionnaire design (*tips* 203), and the way the indicators are measured. As the quotation in the box points out, even the most sophisticated sounding indicators are only as good as the quality of the original data collected. The Canadian Foodgrains Bank offers its partners advice and feedback on their methods of evaluation.

"The government is very keen on amassing statistics. They collect them, add them, raise them to the n^{th} power, take the cube root and prepare wonderful diagrams. But you must never forget that every one of those figures comes in the first instance from the village watchman, who just puts down what(ever he) pleases."

-- Sir Josiah Stamp, Inland Revenue Dept, Great Britain 1886-1919

Sensitive Indicators

Sensitive indicators detect differences over time and between different groups. Good results indicators can detect change between an initial (baseline) measurement and later (follow-up) measures taken during and/or after a project has been implemented. If an indicator does not respond to change, it may give the false impression that a project made no difference even though in reality the project did make a difference. For example, height-for-age (stunting) is sometimes used as an indicator of child nutrition. However, research shows that children who experience food shortage during their first two years of life will probably never fully catch up in height, even if they have plenty of food in later years. Even if a project makes a big change in child nutrition, we may not see a big change in height-for-age in the short term.

Sometimes indicators are insensitive to change over time because they only tell part of the story. For example, weights and heights are often used to evaluate nutrition. However, some research suggests that only about 15% of the energy in food targeted to a child will actually help that child grow and develop. The rest goes toward the child's activity and family members. Here, weights and heights measure only part of the impact that a program might have. This makes them less sensitive to change over time.

It is also important to note how quickly indicators will respond to change over time. Some indicators -- often called leading indicators -- reflect change quite quickly. Examples of leading indicators include market prices, asset sales, and changes in food source (e.g. eating famine foods). These often predict changes that will be reflected in other indicators later on. For example, death rates may take longer to change. It is important to keep in mind the time frame of the evaluation when choosing indicators that will be sensitive to change within that period.

Good targeting indicators detect the differences between groups of people who need extra food and those who do not. Sometimes, measures for groups of people hide true differences within those groups. For example, measures of household food availability may not tell us about households where there is unequal sharing of food within the household. In some areas, women and children may have very different levels of food security than the men in the same household. In the same way, measuring total food availability for whole regions or nations does not tell us about specific groups who suffer food insecurity because of inequitable distribution within those regions or countries.

Affordable Indicators

Cost in time and money often limits the number and type of indicators that can be used. Large surveys and rigorous evaluations can be very expensive. Some groups

ask why they should spend time and money on evaluation when those valuable resources could be used to feed more people. This is an important question, which is often hard to answer. If done well, evaluation can actually reduce the cost of programming through better targeting of assistance and increasing the effectiveness of programs. As discussed in the first section, evaluation can also help organizations be more responsive and responsible to the communities receiving assistance.

One way of making indicators more affordable is to use **'appropriate imprecision.'** This means that measures should not be more rigorous or precise than they need to be. Just as it is a waste of time and money to measure indicators that are not relevant, it is a waste of time and money to collect information that is more detailed than required.

Reduce the cost of evaluation by:

- Using existing data where available
- Collecting only relevant information (optimal ignorance)
- Collecting only the level of detail required (appropriate imprecision)
- Using wise sampling methods

The **Sphere Project** is a recent initiative that seeks to improve the quality of humanitarian responses to disasters. The project involves a large number of organizations worldwide and has consulted with a range of experts in five main areas: water and sanitation, nutrition, food aid, shelter and site planning, and health. The Sphere Project Manual is a good resource for any organization planning an emergency response project, as it provides indicators for situation assessments and program evaluations within each of the five themes.

Selecting indicators that are relevant, believable, sensitive and affordable requires some thought and attention at the outset of a project. However, a few good indicators can go a long way toward simplifying and strengthening situation assessment and project evaluation.

Resources

Riely F et al. (1995) Food Security Indicators and Framework for Use in the Monitoring and Evaluation of Food Aid Programs. FANTA Guide:

www.fantaproject.org

The Sphere Project: Humanitarian Charter and Minimum Standards in Disaster Response:

www.sphereproject.org

For more information on selecting indicators, or other issues related to planning, monitoring, and evaluation, contact the Canadian Foodgrains Bank (crgb@foodgrainsbank.ca).

Appreciative Inquiry

Appreciative inquiry is a tool that can be used to assess a situation. Information is often overlooked when we work in a results-based framework. Yet there is a lot of important information that cannot be summed up in terms of numbers and percentages. This infosheet does not pretend to provide a complete list of the other participatory tools. Interviews and focus groups provides some basic information on conducting interviews and focus groups in food security assessments.

Why use a participatory tool?

Participants in our food aid and food security projects and programs have often been victims of a natural disaster, a conflict, social exclusion and/or chronic poverty. These experiences are often accompanied by a sense of powerlessness and hopelessness. Becoming a recipient of food aid can reinforce these negative feelings. This can occur at both an individual and community level. Communities that require food aid are often communities that have been disempowered – either by the initial shock of the problem they are facing or by the damaging coping strategies they have been forced to adopt in order to survive. Communities are not always consulted about what they would like to see relief introduced in their communities. Even when communities are consulted, their views are often solicited in a way that excludes the marginalized voices in their society. Participatory tools can provide a means of soliciting true participation in the communities in which we work. Meaningful participation in relief and development projects can empower and restore hope in devastated communities.

Participatory tools, when used to solicit information on the situation in the community, on social relations and on the effectiveness of an intervention, often yield amazingly useful, accurate and relevant information to be used for project planning, implementation and evaluation purposes. After all, who knows a community better than its average citizens? Many times this information from the community is known but organizations have no way of documenting, recording and reporting the information to others. Often communities can explain what would otherwise be hard to understand. Often their input will change what a project does or how it does it – often making the project more effective. Yet how do you justify this change if you don't have the information and analysis to prove that the change needed to happen? Participatory tools provide a means not only of collecting information, but of analyzing and recording that information so that it can be useful for the implementing organization as well as for reporting purposes.

There is such a diversity of participatory tools available to use that there is always a tool to be found to fit every circumstance. The two most well-known participatory tools are the interview and the focus group discussion.

Because these two tools are already the subject of a TIPS sheet (202), we will not be discussing them further here.

There are lots of other participatory tools that are less well known but very useful. can provide descriptive information that explains the food security situation in more depth than quantitative data such as anthropometric measures (see tips 204) or market prices. Interviews and focus groups can provide background information for an initial food security assessment, including possible problems that a project might encounter. They may also provide information for evaluations, such as people's perceptions of a particular program or unexpected ways in which a program affected food security. Interviews and focus groups may suggest questions or indicators for a quantitative study, or they can involve community members in the interpretation of quantitative results.

Which tool should I use?

Of course, which tool you choose to use is going to depend on what kind of information you are looking to collect, who you want to ask and how long you have to collect the information. Here are some tools to consider as well as some examples of when they may be useful.

Community mapping consists of asking community **Transect Walks** are designed to collect observations about **Time Lines** are useful for thinking through when things **Sequencing Diagramming** is a useful way to get people to express **Card Sorting Ranking and Scoring Matrixes**

As explained in the infosheet on choosing a sample (tips 201), participants should be chosen to represent the larger group being studied. Although random selection is sometimes used, non-random selection based on particular characteristics is often appropriate for interviews and focus groups. For interviews, it is often useful to interview key people in the community such as leaders, health workers, and representatives of co-operatives or women's groups. Remember that people's perspectives may be influenced by their social position, level of responsibility and education. Thus, it is important to hear a range of voices in the community. Similarly, focus groups should include a variety of people. Sometimes, having a variety of people in one group can increase the learning as people challenge each other and discuss the issues. However, a diverse focus group might also silence some voices, as people tend to offer socially acceptable opinions. For example, a mixed group of men and women may have very different dynamics than two separate groups of men and women. The number of people in a single focus group is also an important consideration. In general, focus groups include 6-12 people. Smaller groups are best where individuals have more to share, while larger groups are better when a broader cross-section of opinion is desired.

Analyzing qualitative information

Regardless of the tool chosen, once the information is collected, you will need to analyze this information in order to be able to draw conclusions from it. Many of the tools described above contain some element of community-level analysis. The focus, then, of the final analysis then

In general, broader questions should be asked first, leading to more specific questions later in the interview or discussion. Also, more important questions should be asked closer to the beginning of an interview or discussion, to ensure that there is enough time and energy to discuss the issues.

Who asks the questions?

The person asking the questions may also influence the interview or focus groups. Beware of situations where participants may be intimidated by the interviewer, or feel the need to please the interviewer by giving positive rather than accurate information. For example, if an interviewer clearly represents the organization providing food or funds for a project, he or she is likely to hear lots of good things about the project! Local interviewers are less likely to encounter this problem, and will have a better understanding of local language and cultural context. It is often worth the extra time required to train local interviewers and make sure they understand the goals of the evaluation. Translators can be used when the interviewer does not speak the local language, but beware of 'editorializing,' where translators insert some of their own beliefs and perceptions into the 'answers.'

To increase confidence in the reporting, information from an interview or focus group can be compared with information from other interviews or focus groups, and with information from other sources such as physical measurements, clinic records or market prices.

Recording the Information

The information may be stored as notes taken during the interview, as actual transcripts of conversation, or as

collective records such as notes made on chart paper or overheads. Ideally, an assistant should take notes to avoid disrupting the interview or discussion. Where it is appropriate, a tape recorder can provide useful information such as exact quotes from the discussion. Creating written transcripts based on taped interviews can be very time consuming and costly, but the transcripts can be very useful in more formal analyses. Quotations – whether recorded by hand or on tape – can illustrate particular points of view in the participants' own words.

Reporting the Information

As in all reports, information collected using participatory tools should be presented with a clear description of the context and the methods used. It is important that the reader know where the information is coming from and how it was collected.

If you decide to use appreciative inquiry to assess a situation, either before or after your project is implemented, please let us know.

Resources

Stewart DW, Shamdasani PN (1990) Focus groups: Theory and Practice. London:Sage

Goshen University provides a good range of links to participatory methods, including semi-structured interviews and focus groups:

www.goshen.edu/soan/soan96p.htm

You can order or download Catholic Relief Services' Rapid Rural Appraisal and Participatory Rural Appraisal Manual at:

www.catholicrelief.org/what/overseas/rra_manual.cfm

Also, check out the Food Aid Management website:

www.foodaidmanagement.org (click on Monitoring and Evaluation)

For more information on participatory tools or any other planning, monitoring or evaluation issues, contact the Canadian Foodgrains Bank at the address below, or email inquiries to cfgb@foodgrainsbank.ca

Hunger, Nutrition and HIV/AIDS

HIV/AIDS is a global crisis with nearly 40 million people affected – 95% are in countries where malnutrition is high. African AIDS is decreasing health, economic, and social progress. It is also reducing life expectancy, deepening poverty, and increasing food insecurity.

Why is HIV/AIDS important to consider in food programming?

It is necessary to understand how HIV/AIDS relates with food aid, food security and nutrition, in order to identify appropriate policy and program changes to better cope with these realities. Thoughtful programming can restore hope to communities overwhelmed by multiple losses.

HIV/AIDS has significantly reduced the ability of people to cope with hunger and is contributing to hunger, making communities more vulnerable to shocks. HIV/AIDS worsens food crises in the following ways:

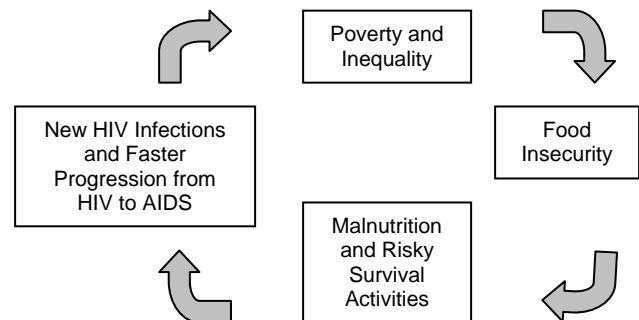
1. HIV/AIDS reduces food security, as it kills and sickens more and more young adults who are in their productive years, including agricultural workers.
2. HIV/AIDS reduces access to food by diverting household income to medical and funeral expenses.
3. Women are biologically, economically, socially, and culturally more vulnerable to HIV/AIDS than men, and it is women who are traditionally more knowledgeable and skilful at gathering foods and at nurturing social networks that are required during food shortages.
4. HIV/AIDS places an increasingly heavier burden of care on rural women as more HIV+ people are leaving urban areas and returning to their villages to die.
5. Life expectancy reductions due to AIDS will have a major impact on the transmission of both assets and skills to the next generation.
6. The common hunger-mitigation strategy of reducing food consumption has serious consequences for HIV+ individuals who have higher nutritional needs, contributing to the earlier onset of AIDS and death.
7. Many hungry women and adolescent girls resort to selling their bodies for food, dramatically increasing their risk of HIV infection.

The Interrelationship between HIV/AIDS, Hunger and Nutrition

Food and nutrition are fundamentally intertwined with HIV transmission and the impacts of AIDS. Food insecurity and malnutrition increase vulnerability to the impacts of HIV/AIDS and HIV/AIDS in turn worsens these conditions.

Malnutrition increases the progression of HIV infection. This contributes to the earlier onset of AIDS due to an increased susceptibility to opportunistic infections such as TB, thrush and herpes. In turn, HIV infection accelerates

the cycle of inadequate dietary intake, nutrient utilization and disease that leads to malnutrition. This increases the importance of nutritional considerations when designing rations for populations with a high prevalence of HIV/AIDS.



Nutrient requirements are different for the two phases of HIV infection, which are defined by the absence or presence of illness symptoms: asymptomatic and symptomatic. During the asymptomatic phase, energy requirements increase by 10% and during the symptomatic phase energy requirements increase by 20-30% and by 50-100% for children with weight loss.

It is women who are primarily responsible for household food production and caring for the sick and the children. This means that the labour impact of HIV/AIDS falls more on women. Women's nutritional status will affect their work productivity, which in turn affects household food security.

Improving maternal nutrition during pregnancy and lactation enhances birth outcomes and the mother's ability to breastfeed and provide adequate care for her children and may reduce mother-to-child-transmission of HIV. Mother-to-child-transmission is the main source of HIV infection in children.

Good nutritional health increases the effectiveness of antiretroviral therapy. Antiretroviral drugs can interact negatively with food and nutrients. Therefore, improved attention to drug-food interactions and nutritional health can increase drug effectiveness, food consumption, nutrient usage and nutritional status.

Improving nutrition can replace the body's stores of micronutrients, stabilize weight loss, preserve muscle mass, prevent diarrhea, speed recuperation from HIV-related infections, and prepare for and manage AIDS-related symptoms that compromise food consumption and dietary intake.

Targeting HIV/AIDS Affected People

Targeting must be sensitive to HIV/AIDS related stigma. Talk to the community to understand the level of stigma and norms and practices surrounding HIV/AIDS.

Where few people know their HIV status, use the following criteria to assist targeting:

- constant diarrhea
- STDs
- persistent coughing /recurring TB
- swollen lymph nodes
- thrush
- "permed hair"

The presence or absence of HIV/AIDS need not be a specific criterion for targeting assistance. Existing targeting methods that identify the poorest and most vulnerable should also be able to identify vulnerability relating to HIV/AIDS.

When targeting the vulnerable in areas of high HIV/AIDS prevalence, include the following groups to ensure HIV/AIDS-affected are not missed:

- orphans and vulnerable children and youth
- pregnant and lactating women
- malnourished
- people undergoing TB treatment
- terminally and/or chronically ill
- elderly

To make certain that HIV/AIDS-affected individuals, households and groups are included in food projects, conduct community meetings prior to food distributions to discuss the objectives and basic procedures of the project.

Do not assume that community leaders (usually male) speak for the interests of the whole community. Always involve women in identifying beneficiaries and in representing the community's interests and the needs and opinions of women. Due to the increased burden of care borne by women because of HIV/AIDS, women are more aware of the HIV/AIDS-related needs of the community. It is especially important to do gender analysis in HIV/AIDS-affected communities. Refer to Gender Analysis TIPS sheet.

Project Design

Project considerations when responding to HIV/AIDS:

Partnering - HIV/AIDS is a complex, multi-sectoral issue. No one agency can hope to do everything, therefore attempt to work with local and national groups. Examples of groups to partner with include Home Based Care projects, health clinics, community health workers, other NGOs, and government health workers.

Integration into Pre-existing Programming – Food projects can add to existing relief and development efforts, and can strengthen relationships with communities and local structures. This can also help build new relationships.

Food Distribution – Consider whether changes are needed for the following distribution issues to meet the needs of people affected with HIV/AIDS: nutritional adequacy and quality of food basket; supplementary rations; fortification; palatability; ease of preparation; weight of ration packages; and distance, delivery and

distribution mechanisms.

Nutrition and Health Activities – Think about including the following activities to meet HIV/AIDS-related issues: nutrition education, hygiene training, clean water access, sanitation, food safety interventions, and HIV prevention. Refer to Nutrition Activities TIPS sheet.

HIV Prevention Education - Due to the large numbers of people drawn to food distribution sites, this can be a chance to distribute information regarding HIV prevention. This can be an opportunity to partner with an organization with this educational capacity. HIV prevention information should also target the truck drivers delivering the food as it has been proven that they are involved in the transmission of HIV.

Reduction of Mother-to-Child-Transmission - Improved maternal nutrition combined with HIV testing, information, counselling, and antiretroviral drug provision is essential in reducing the probability of mother-to-child-transmission. Supplementary feeding to support the additional energy requirements of pregnancy and lactation can benefit not only HIV+ women but all women who are pregnant and lactating.

Supplementary Rations – Food for orphans and for their caregivers may permit better integration of orphans into the community, increase school attendance, prevent risky sexual behaviour and reduce stress on the community.

Food for Work - Demographic changes due to HIV/AIDS affect who is available to work in food-for-work projects. As a result, these projects need to be suitable for young and elderly workers. Food-for-work may need to be combined with free food distribution. Food-for-work projects may not be an appropriate response for HIV/AIDS-affected households.

Livelihood Diversification Training - Older orphans and child-headed households are good candidates for training to increase livelihood diversification to deal with the labour constraints of affected households.

Examples of agriculture and livelihood projects that can address HIV/AIDS-related vulnerabilities include:

- Promote low-input, low-labour crops, agricultural practices and technologies,
- Provide seeds for home and community gardens that support the nutritional needs of the most vulnerable members of the community.

Resources

FANTA - *HIV/AIDS: A Guide for Nutritional Care and Support*. Available:

http://www.fantaproject.org/downloads/pdfs/HIVAIDS_Guide02.pdf

For more information on the impact of HIV/AIDS on food aid and food security projects, or other issues related to planning, monitoring, and evaluation, contact the Canadian Foodgrains Bank (cfgb@foodgrainsbank.ca).

Who Should I Ask?: Choosing a Sample

There are many different ways to decide who will take part in an evaluation. Sometimes, everyone is included in an evaluation. This is called a *census*. However, a census can be very costly and time-consuming, especially when the population is large. Often, evaluations are based on a smaller group within the population: a *sample*. It is not easy to decide how large a sample should be or who should be in it.

Sampling methods depend on the type of data we need (qualitative or quantitative), the method of evaluation (focus groups, household survey, clinical measurement), and characteristics of the population involved. Since sample observations are used to tell us things about the whole group of people we are interested in, samples should be **representative**. That is, the characteristics of the sample should be similar to the population as a whole.

Defining the Population

First, it is important to clearly define the population that the sample group will represent. The population may be all children under five, women, the elderly, or an entire refugee camp. The list of all members of this population is often called a **sampling frame**. The individual members of this sampling frame, be they children, women, refugees or households, are often called **sampling units**, because they are eligible to be selected into the sample group.

Each sampling method described below is simply a way of choosing a smaller number (sample) of individuals or households from the larger, defined population.

Convenience Sampling

The only reason people are selected for a convenience sample is because they are easily available. Asking about the income of the first 10 households on the road in a village is an example of a convenience sample. There is no way we can be sure that their answers represent the community. It could be that the wealthiest people live in that area, or the poorest. This method is low cost, but scientifically weak.

Purposive Sampling

Purposive sampling involves choosing individuals from a population based on certain characteristics. For example, an evaluation team may choose to interview two mothers from low-income households, two mothers from higher-income households, a street vendor, a health worker and an elder because they will each have specific insights into the food security of a community. This method is low-medium cost. It is best suited to subjective-qualitative measurement (focus groups, interviews) where we are interested in the perspectives and experience of particular groups or individuals.

Random Sampling

Random sampling uses statistical probabilities to select a sample. Evaluators can decide how many people will be in the sample but the selection of each individual is left to random chance. Random sampling methods are most commonly used with quantitative data collection. Because sampling units are chosen at random, there is less chance of *bias* – incorrect results due to the exclusion of certain groups or types of people (e.g. surveying only people who live close to the centre of town, those who are in hospital, or those with children in school will not give results that reflect the wider community). There are several types of random sampling.

Simple Random Sampling gives each person the same chance of being chosen. Imagine a bag that contains one bean for each person in a village. Some beans are red and some beans are white. Each person picks a bean. Only those who pick a red bean are included in the sample. Each person has the same chance of being selected (equal to the number of red beans divided by the number of white beans). Other examples of simple random sampling include selecting households on a walk through the village, skipping a certain number of homes each time; writing names on pieces of paper and pulling them from a bag; or using a computer to generate random numbers that identify participants.

Cluster Sampling uses simple random sampling in more than one stage. Clusters may be households, villages, counties, hospitals or any other sub-group of individual sampling units. In the first round, a sample of clusters is chosen. For example: a subset of villages chosen from all the villages in a particular region. Once the clusters have been chosen, we can evaluate all individuals within the cluster or choose a random sample within each cluster. Cluster sampling is often used in large or remote populations.

Sound sampling methods reduce the risk of drawing mistaken conclusions from any survey. You will find more information on sample size calculation and selection methods in the resources listed below.

A sample is a smaller group of individuals (*children, women, refugees, households etc*) **that represents a larger population with similar characteristics.**
Choosing a sample can save time and money.

Resources

FANTA Project Sampling Guide. Title II Indicator Guides, 1999.
World Vision Canada, Design and Implementation of Nutrition Surveys, an excerpt from the MICA Guide.
Both are available at: www.foodaidmanagement.org/mne3.htm
For more information on sampling or any other planning, monitoring or evaluation issues, contact the Canadian Foodgrains Bank or email: ctgb@foodgrainsbank.ca

Interviews and Focus Groups

Food security is a complex subject. To understand why certain groups or communities do not have enough food, it is important to ask people in communities about their food situation. **Interviews** are one-on-one discussions whereas **focus groups** allow several people to discuss issues at the same time. This infosheet provides some basic information on conducting interviews and focus groups in food security assessments.

Why use interviews and focus groups?

Interviews and focus groups can provide descriptive information that explains the food security situation in more depth than quantitative data such as anthropometric measures (see **tips** 204) or market prices. Interviews and focus groups can provide background information for an initial food security assessment, including possible problems that a project might encounter. They may also provide information for evaluations, such as people's perceptions of a particular program or unexpected ways in which a program affected food security. Interviews and focus groups may suggest questions or indicators for a quantitative study, or they can involve community members in the interpretation of quantitative results.

Who should participate?

As explained in the infosheet on choosing a sample (**tips** 201), participants should be chosen to represent the larger group being studied. Although random selection is sometimes used, non-random selection based on particular characteristics is often appropriate for interviews and focus groups. For interviews, it is often useful to interview key people in the community such as leaders, health workers, and representatives of co-operatives or women's groups. Remember that people's perspectives may be influenced by their social position, level of responsibility and education. Thus, it is important to hear a range of voices in the community. Similarly, focus groups should include a variety of people. Sometimes, having a variety of people in one group can increase the learning as people challenge each other and discuss the issues. However, a diverse focus group might also silence some voices, as people tend to offer socially acceptable opinions. For example, a mixed group of men and women may have very different dynamics than two separate groups of men and women. The number of people in a single focus group is also an important consideration. In general, focus groups include 6-12 people. Smaller groups are best where individuals have more to share, while larger groups are better when a broader cross-section of opinion is desired.

Asking the questions

Interviews may be structured, semi-structured or in-depth. Structured interviews follow a pre-set list of questions and are useful for gathering specific pieces of information in

which the evaluator is interested. Semi-structured interviews ask a few open-ended questions that focus on specific topics of interest. Depth interviews identify a general area of interest and allow the person being interviewed to determine the specific issues for discussion. Further questions generally follow up what the respondent says. The specific, predetermined questions of a structured interview tend to ask 'what' happened, focusing on particular 'facts,' while open-ended questions tend to ask 'why.' Questions for focus groups should generally be open-ended to promote good discussion among the participants.

Keep control of the discussion:

- know what you want to find out
- ask questions that focus on the information you need
- give appropriate verbal and non-verbal feedback

In general, broader questions should be asked first, leading to more specific questions later in the interview or discussion. Also, more important questions should be asked closer to the beginning of an interview or discussion, to ensure that there is enough time and energy to discuss the issues.

Who asks the questions?

The person asking the questions may also influence the interview or focus groups. Beware of situations where participants may be intimidated by the interviewer, or feel the need to please the interviewer by giving positive rather than accurate information. For example, if an interviewer clearly represents the organization providing food or funds for a project, he or she is likely to hear lots of good things about the project! Local interviewers are less likely to encounter this problem, and will have a better understanding of local language and cultural context. It is often worth the extra time required to train local interviewers and make sure they understand the goals of the evaluation. Translators can be used when the interviewer does not speak the local language, but beware of 'editorializing,' where translators insert some of their own beliefs and perceptions into the 'answers.'

To increase confidence in the reporting, information from an interview or focus group can be compared with information from other interviews or focus groups, and with information from other sources such as physical measurements, clinic records or market prices.

Recording the Information

The information may be stored as notes taken during the interview, as actual transcripts of conversation, or as collective records such as notes made on chart paper or overheads. Ideally, an assistant should take notes to

avoid disrupting the interview or discussion. Where it is appropriate, a tape recorder can provide useful information such as exact quotes from the discussion. Creating written transcripts based on taped interviews can be very time consuming and costly, but the transcripts can be very useful in more formal analyses. Quotations – whether recorded by hand or on tape – can illustrate particular points of view in the participants' own words.

Reporting the Information

As in all reports, information from interviews and focus groups should be presented with a clear description of the context and the methods used. It is important that the reader know where the information is coming from and how it was collected.

With some careful planning, sensitive questioning and clear reporting, interviews and focus groups can provide valuable information for food security assessments and project evaluations.

Resources

Stewart DW, Shamdasani PN (1990) Focus groups: Theory and Practice. London: Sage

Goshen University provides a good range of links to participatory methods, including semi-structured interviews and focus groups:

www.goshen.edu/soan/soan96p.htm

You can order or download Catholic Relief Services' Rapid Rural Appraisal and Participatory Rural Appraisal Manual at:

www.catholicrelief.org/what/overseas/rra_manual.cfm

Also, check out the Food Aid Management website:

www.foodaidmanagement.org (click on *Monitoring and Evaluation*)

For more information on interviews and focus groups or any other planning, monitoring or evaluation issues, contact the Canadian Foodgrains Bank at the address below, or email inquiries to cfgb@foodgrainsbank.ca

Designing a Questionnaire

Questionnaires are often used for situation assessments and project evaluations. As a carefully selected set of questions, a questionnaire has some advantages. Hired interviewers can be trained fairly quickly to collect the information, results can be analyzed relatively efficiently, and asking the same questions of everyone makes it easier to compare different individuals, households and communities. Questionnaires can be a very useful tool to collect specific, key pieces of information such as the number of people in a village that own livestock, the proportion of households that do not have sufficient income to buy food, or how often people are eating certain foods. In order to understand some of the more complex issues such as social interactions, perceptions of hunger, or justice issues, it may be more appropriate to use a more flexible and open-ended method such as interviews or focus groups (see *tips* 202).

Designing a good questionnaire takes time and attention. There is an art, as well as a science, to questionnaire design. Before setting out to design a new questionnaire from scratch, it is a good idea to find out whether questionnaires already exist that could be used or modified to gather the required information. A little bit of research with other organizations and government agencies could save a lot of work in creating an entirely new questionnaire. The Canadian Foodgrains Bank can provide some sample questionnaires for basic food security data collection.

Once specific information needs have been clearly identified, and a questionnaire seems appropriate, an evaluator must decide how the questionnaire will be administered, choose specific questions, structure the questionnaire, pre-test and implement the questionnaire.

Administering the Questionnaire

In areas where many people cannot read, interviewers are commonly used to administer questionnaires in food assistance situations. The content and flow of the questionnaire, as well as the training of the interviewers, are very important in order to maintain people's interest and ensure that accurate information is collected.

Many of the important qualities of an interviewer are covered in *tips* 202. The interviewer should be trained to put the interviewee at ease, and to set aside his/her own opinions or interpretations of the responses. There may also be a need for translation. If not trained in the local language, interviewers should ensure that the person translating questions and answers is not adding to or changing the information. Interviewers should also be

trained to respond to common questions people may have about the survey – its purpose and ways in which the information will be used. People need to be assured that their answers will be kept confidential – especially if there are questions that relate to sensitive issues (local politics, sexual behaviours etc.). The quality of information gathered will depend heavily on the interviewer's social skills. People are much more likely to respond honestly to an interviewer who is non-threatening, open and trustworthy. Verbal and body language are very important – and must be appropriate in the local culture.

The Questions

In deciding on specific questions, there are two key issues: *what* information each question asks for, and *how* the question is asked.

The information that questions should ask for will depend on the objectives and expected results of the project (*tips* 101 and 104). Remember the principle of 'optimal ignorance' – only collect information that is really needed. Carefully examine each question in a questionnaire, to determine 'is this information *useful* or is it merely *interesting*?' Ask how each piece of information will be used in the planning or analysis of the project. Extra time and resources are often wasted asking for information that will never be put to use.

The wording of questions will influence the answers that people give. Here are some important things to consider when designing the questions:

Value loading: Certain words may influence people, or indicate that a certain response is expected. For example asking

"Has the famine caused your family to miss meals in the last month?" may produce different responses than simply "Has your family missed any meals in the last month?" Using a value-loaded word like "famine" may cause people to over-estimate their level of food insecurity. Using such words in a food security assessment may result in inaccurate information, or unrealistically raise people's expectations about what will be done in their community.

Precise wording: Questions can often be interpreted in many different ways. Try to be as precise as possible to ensure that people understand exactly what is being asked. For example "Does your family have enough food?" is fairly vague. How much food is "enough"? A better way to ask the question might be "How many times does your family eat per day?" (This example illustrates a dilemma: when questions are made more precise, they often become more limited in scope. Here, the more precise question about number of meals per day may not

The wording of questions and the structure of the questionnaire will influence the answers people give.

Make sure questions have these qualities:

- precise
- non-leading
- simple
- clear
- good structure
- logical flow

accurately describe people who eat several times a day, but only consume very small amounts. It is probably better to ask a second question about the quantity of food consumed at a typical meal. Thus, two precise questions may be needed to provide the information requested in one vague question.) Asking for numerical data can improve the precision of a question. However, beware of numerical questions that are too demanding. For example, instead of asking, "What percentage of your animals did you lose in the flood?" it is probably better to ask two questions: "How many animals did you have before the flood?" and "How many of your animals did you lose in the flood?" Be precise with time periods. Most food security information changes significantly over time. When asking how many times a family eats per day, clarify whether this refers to the last week, month, or season.

Leading Questions: People sometimes have a desire to give the "right" answers to a questionnaire – whether or not they are actually true. Avoid suggesting a particular response. For example, "Has the health of your family improved as a result of this project?" may be too directive. Instead, consider asking a less obvious question such as, "Has the health of your family changed over the last three months?" or, "What has changed as a result of this project?" Words like "change" are less leading than "improve" or "worsen." The revised questions also avoid assuming a link between the project and any effects on health. The questionnaire should explore whether such links exist, not assume them.

Double questions: Each question should focus on one issue only. Avoid confusing issues with double questions. For example, the question "Have you sold livestock in the last month in order to buy food or seed?" could be confusing. The question does not distinguish between those who did not sell livestock and those who did sell livestock for other reasons. A better approach may be to ask two questions: "Have you sold livestock in the last month?" and, if yes, why?

Question structure: How structured should the questions be? Open-ended questions are good starting points for discussion (e.g. "What are the main factors affecting food security in this community), while more structured questions are useful for obtaining specific pieces of information. Structured questions may require:

Short answers: "What is the staple food in this area?"

Numerical answers: "How many animals have you sold in the last month?"

Yes/no answers: "Have any members of your family left the community to look for employment?"

Multiple choice answers: "What is your main source of food?"

1. relief; 2. purchase; 3. relatives; 4. farming; 5. other"

Although structured questions are easier to analyze, they may miss important information due to their narrow focus. Often a mix of open- and closed-ended questions maximizes the efficiency and flexibility of the questionnaire.

Checking for accuracy: Given the possibility that people may be influenced by the way a question is asked, or may misinterpret a question, it is helpful to ask for important information in more than one way. For example, if a questionnaire focuses on food intake, it may be useful to ask about total quantities of food consumed over a one-week or one-month period, as well as amounts consumed at an average meal and the average number of meals per day. Consistent answers give greater confidence of accuracy.

Pre-testing the Questionnaire

Before the main survey begins, the questionnaire should be tested to check how well it works. Initial pre-testing can be done by practicing interviews with various people, including some of the people for whom the questionnaire was designed. After the first few interviews, ask respondents how they found the questionnaire. It is not too late to change the questionnaire to make it clearer and easier to use.

Some questions to ask:

Does the questionnaire miss some key information? Should multiple-choice questions include other possible answers? Can respondents follow the questionnaire or do they get confused or frustrated? Are questions repeated unnecessarily? Are questions understood and answered properly, or are there confusing words or phrases? Is the questionnaire too long?

No questionnaire is ever perfect. However, a little extra time and care in the design of a questionnaire can avoid many problems, and greatly improve the quality of information available for planning and evaluation.

Resources

Sudman, S. and Bradburn, N. Asking Questions: A Practical Guide to Questionnaire Design. New York: Wiley, 1978

FAO. Conducting Small-scale Nutrition Surveys: A Field Manual 1990.

World Vision Canada, Design and Implementation of Nutrition Surveys, an excerpt from the MICA Guide. Download a copy in Word format from:

www.foodaidmanagement.org/mne3.htm

For more information on designing questionnaires or any other planning, monitoring or evaluation issues, contact the Canadian Foodgrains Bank at the address below, or email inquiries to cfgb@foodgrainsbank.ca

Sizing up the Situation: Anthropometric Indicators

The word 'anthropometric' sounds rather important and technical. It is actually made up of two words: *anthropos*, which means 'human'; and *metric*, which means 'measure.' So, quite simply, anthropometric means 'measuring people.' In nutritional studies, this generally means measuring people's weight and height.

Reference Population

We know that people who are not eating enough food will become thin and lose weight. Likewise, if growing children go without sufficient food for long enough, they may not be as tall as other children their age. However, children

come in all different sizes. How can we know when a child is starting to get too thin, or is not growing as well as they could be? It is easier to make these decisions when there are healthy children to compare with. The WHO provides a 'Road to Health' chart that gives the height and weight of healthy

children. In many parts of the world, it may not be appropriate to compare a child's height to that of an American child. Some people are naturally taller than Americans and some are naturally shorter, regardless of how well they eat. A new, more global reference is being developed.

Children who do not get enough to eat during their first two years of life may never reach full height, even if they eat enough food for the rest of their lives. Thus, there could be a high number of stunted children in the population due to past food shortage, even if the current situation is fine. Likewise, if the current situation suddenly gets worse, it will take a long time before stunting is noticed.

In some cases, it may be a challenge to find out children's ages. There are some creative ways of estimating children's ages, including local events charts and age charts. More information on these tools is available from the Foodgrains Bank.

'Anthropometric' means 'measuring people.' In nutritional studies, this generally means measuring people's weight and height. Indicators include:

- stunting
- wasting
- body mass index (BMI)
- underweight
- arm circumference

children at all ages of growth (called a 'reference population'). These healthy children have been used to compare the growth and health of children around the world. When a girl or boy starts to fall far below the height or weight of other healthy girls or boys of the same age, she or he might be sick or malnourished.

The following indicators are commonly used to compare children to a healthy reference population. The indicators might be used to identify individual girls and boys that are at risk of malnutrition and to monitor their progress in a feeding program. The indicators may also be used to identify and monitor whole communities where there are many malnourished people. Food assistance may help to reduce the number of malnourished people in those communities.

1. Stunting

Children who lack food for extended periods of time grow more slowly than other children their age. This is known as stunting -- when children are shorter than expected for their age. Each child's height is compared to the median (middle value) height for healthy, well-fed children of the same age. This is known as 'height-for-age.' Children who are less than 95% of the median height for their age are considered stunted. Height-for-age less than 85% of the median indicates severe stunting.

It is important to remember that not all small children are malnourished. Some children are naturally small. The

2. Wasting

People who have lost weight as a result of food shortage are said to be wasting. Specifically, wasting is measured as a child's weight divided by his or her height. As with the stunting measures, children's weight-for-height measures are compared with a reference population. Each child's weight-for-height is described as a percentage of the median for the reference population. Wasting is a weight-for-height less than 80% of the reference. Weight-for-height less than 70% of the reference population is considered severe wasting. Typically, 5-10% of children in many African communities show signs of wasting. Wasting among 20% or more is considered high, and anything over 40% is a major crisis. Any amount of severe wasting is cause for concern.

Wasting is much more sensitive to sudden changes in the food situation. It is not long before children start to lose weight if they are not eating properly. However, for this reason it is also quite sensitive to seasonal changes in food availability. When doing comparisons of wasting measures, it is very important to consider these seasonal changes in nutritional status.

3. Body Mass Index (BMI)

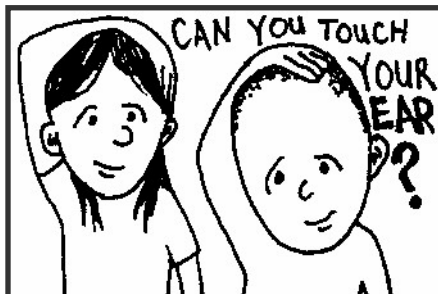
The body mass index (BMI) is another weight-for-height measure. However, BMI is calculated as $\text{weight}/\text{height}^2$. This measure is one of the only anthropometric measures used for adults. People with BMI less than $17 \text{ kg}/\text{m}^2$ may be more likely to get sick. BMI between 16 and $18\frac{1}{2} \text{ kg}/\text{m}^2$ indicates mild-to-moderate malnutrition. BMI less than $16 \text{ kg}/\text{m}^2$ indicates severe malnutrition.

Like wasting, BMI can be affected by different body types (especially noticeable in adults).

4. Underweight

While stunting is defined as a low height compared to children of the same age, underweight is a low *weight* compared to children of the same age. Children with weights less than 80% of the median for a reference population are considered mild-to-moderately malnourished. Children with weights less than 60% of the median are considered severely malnourished.

Weight-for-age reflects stunting and wasting together. If a child is stunted, he or she will weigh less than other children his or her age, even if he or she is not wasting. Thus, this measure can be confusing as it reflects both long-term or past malnutrition (the cause of stunting) as well as short-term and current malnutrition (the cause of wasting).



5. Mid-Upper Arm Circumference (MUAC)

Although children grow a lot between age one and five, the size of their upper arm changes very little. This means that, in general, changes in the size of a child's upper arm are due to changes in their nutritional status. Children who are not well-nourished will usually have thinner upper arms than well-fed children. The arm circumference is measured by wrapping a measuring tape around the child's arm, half way between the elbow and the shoulder. UNICEF recommends using a special 'insertion tape,' which has a special slot to help health workers to make accurate measurements of the arm circumference. Children with an arm circumference less than 13.5 cm are considered mild-to-moderately malnourished. Arm circumferences less than 12.5 cm indicate severe malnutrition.

MUAC is often used in emergency situations to help aid workers quickly identify children who need feeding. The measure cannot be used for children over the age of five. In areas where people are not sure of children's ages, there is a simple trick that helps identify children under five. Ask children to reach their right arm over the top of their head and touch their left ear. If they can do this, they are most likely older than five.

Getting the Data

One advantage of these indicators is that heights, weights and arm circumference are relatively easy to measure. It does not take long to train people to take these measurements, if they are appropriate to the program. In some cases, local clinics, government agencies, or NGOs may already have data from community surveys or

ongoing monitoring. As with any measure, the methods must be locally appropriate. For example, one group in Malawi ran into difficulties because the box they were using to measure the length of infants resembled local coffins!

Limitations

Each measure has strengths and limitations that are important to note before choosing which indicator(s) to use. Most anthropometric indicators are used with children. This is a limitation as sometimes the biggest effect of food shortage may be among adults, especially if the adults (mainly women) are giving up their own food to make sure that their children are able to eat enough. It is also important to

remember that not all of the energy provided by food is used for growth and development. Much of the energy is used for activities such as labour, chores, and play. One study even suggested that as little as 15% of the energy provided to a child by food distribution will actually go toward that child's growth. The rest is eaten by other people or is used in activity. Changes in activity levels may be a very important impact of food assistance. However, activity levels are more difficult to measure than heights and weights. Thus, while anthropometric indicators provide important information on growth and development, they do not tell the whole story of malnutrition in a community.

Resources

FAO (1990) Conducting small-scale nutrition surveys -- A Field Manual. *Nutrition planning, assessment and evaluation service, Food policy and nutrition division, Rome.*

FANTA. Anthropometric Indicators Measurement Guide: www.fantaproject.org/publications/anthropom.shtml

Gibson RS (1990) Principles of Nutritional Assessment. Oxford University Press.

IFAD: Practical Anthropometry 101 and 102:

www.ifad.org/gender/tools/hfs/anthropometry/ant_toc.htm

World Vision Canada, Design and Implementation of Nutrition Surveys, an excerpt from the MICAH Guide. Download a copy in Word format from: www.foodaidmanagement.org/mne3.htm

For more information on anthropometric indicators or any other planning, monitoring, and evaluation issues, contact the Canadian Foodgrains Bank at the address below, or email inquiries to cfgb@foodgrainsbank.ca

How do I Conduct a Focus Group?

As seen in TIPS sheet no 202, focus groups can be useful to examine some complex topics if done correctly. This TIPS sheet does not repeat the information in TIPS sheet no 202 and should be read together with that sheet to get a full picture of focus groups. This TIPS sheet aims to answer some of the most common questions about the best way to conduct a focus group.

in communities about their food situation. **Interviews** are one-on-one discussions whereas **focus groups** allow several people to discuss issues at the same time. This infosheet provides some basic information on conducting interviews and focus groups in food security assessments.

What kind of information can I collect?

As with most tools, focus groups are most useful to provide some types of information. But they can't do everything. Often when people think of their options for conducting an assessment of a situation in a community they think of a survey – to collect quantitative information – or a focus group – to collect qualitative information. However, focus groups are only one out of many participatory tools available to collect qualitative information. A few other participatory tools are explained in TIPS sheet 206 focus groups can provide descriptive information that explains the food security situation in more depth than quantitative data such as anthropometric measures (see **tips** 204) or market prices. Interviews and focus groups can provide background information for an initial food security assessment, including possible problems that a project might encounter. They may also provide information for evaluations, such as people's perceptions of a particular program or unexpected ways in which a program affected food security. Interviews and focus groups may suggest questions or indicators for a quantitative study, or they can involve community members in the interpretation of quantitative results.

What kind of questions should I ask?

How many group sessions do I hold?

How much time will each session take?

Who should facilitate each session?

How do I choose the people who participate in each group session?

Do I pay the participants?

As explained in the infosheet on choosing a sample (**tips** 201), participants should be chosen to represent the larger group being studied. Although random selection is

sometimes used, non-random selection based on particular characteristics is often appropriate for interviews and focus groups. For interviews, it is often useful to interview key people in the community such as leaders, health workers, and representatives of co-operatives or women's groups. Remember that people's perspectives may be influenced by their social position, level of responsibility and education. Thus, it is important to hear a range of voices in the community. Similarly, focus groups should include a variety of people. Sometimes, having a variety of people in one group can increase the learning as people challenge each other and discuss the issues. However, a diverse focus group might also silence some voices, as people tend to offer socially acceptable opinions. For example, a mixed group of men and women may have very different dynamics than two separate groups of men and women. The number of people in a single focus group is also an important consideration. In general, focus groups include 6-12 people. Smaller groups are best where individuals have more to share, while larger groups are better when a broader cross-section of opinion is desired.

Asking the questions

open-ended questions tend to ask 'why.' Questions for focus groups should generally be open-ended to promote good discussion among the participants.

In general, broader questions should be asked first, leading to more specific questions later in the discussion. Also, more important questions should be asked closer to the beginning of a discussion, to ensure that there is enough time and energy to discuss the issues.

Keep control of the discussion:

- know what you want to find out
- ask questions that focus on the information you need
- give appropriate verbal and non-verbal feedback

Who asks the questions?

The person asking the questions may also influence the interview or focus groups. Beware of situations where participants may be intimidated by the interviewer, or feel the need to please the interviewer by giving positive rather than accurate information. For example, if an interviewer

clearly represents the organization providing food or funds for a project, he or she is likely to hear lots of good things about the project! Local interviewers are less likely to encounter this problem, and will have a better understanding of local language and cultural context. It is often worth the extra time required to train local interviewers and make sure they understand the goals of the evaluation. Translators can be used when the interviewer does not speak the local language, but beware of 'editorializing,' where translators insert some of their own beliefs and perceptions into the 'answers.'

To increase confidence in the reporting, information from an interview or focus group can be compared with information from other interviews or focus groups, and with information from other sources such as physical measurements, clinic records or market prices.

Recording the Information

The information may be stored as notes taken during the interview, as actual transcripts of conversation, or as collective records such as notes made on chart paper or overheads. Ideally, an assistant should take notes to avoid disrupting the interview or discussion. Where it is appropriate, a tape recorder can provide useful information such as exact quotes from the discussion. Creating written transcripts based on taped interviews can be very time consuming and costly, but the transcripts can be very useful in more formal analyses. Quotations – whether recorded by hand or on tape – can illustrate particular points of view in the participants' own words.

Reporting the Information

As in all reports, information from interviews and focus groups should be presented with a clear description of the context and the methods used. It is important that the reader know where the information is coming from and how it was collected.

With some careful planning, sensitive questioning and clear reporting, interviews and focus groups can provide valuable information for food security assessments and project evaluations.

Resources

Stewart DW, Shamdasani PN (1990) Focus groups: Theory and Practice. London:Sage

Goshen University provides a good range of links to participatory methods, including semi-structured interviews and focus groups:

www.goshen.edu/soan/soan96p.htm

You can order or download Catholic Relief Services' Rapid Rural Appraisal and Participatory Rural Appraisal Manual at:

www.catholicrelief.org/what/overseas/rra_manual.cfm

Also, check out the Food Aid Management website:

www.foodaidmanagement.org (click on Monitoring and Evaluation)

For more information on interviews and focus groups or any other planning, monitoring or evaluation issues, contact the Canadian Foodgrains Bank at the address below, or email inquiries to cfgb@foodgrainsbank.ca

Participatory Tools

Qualitative information is often overlooked when we work in a results-based framework. Yet there is a lot of important information that cannot be summed up in terms of numbers and percentages. This infosheet does not pretend to provide a complete list of the other participatory tools. Interviews and focus groups provides some basic information on conducting interviews and focus groups in food security assessments.

Why use a participatory tool?

Participants in our food aid and food security projects and programs have often been victims of a natural disaster, a conflict, social exclusion and/or chronic poverty. These experiences are often accompanied by a sense of powerlessness and hopelessness. Becoming a recipient of food aid can reinforce these negative feelings. This can occur at both an individual and community level. Communities that require food aid are often communities that have been disempowered – either by the initial shock of the problem they are facing or by the damaging coping strategies they have been forced to adopt in order to survive. Communities are not always consulted about how they would like to see relief introduced in their communities. Even when communities are consulted, their views are often solicited in a way that excludes the marginalized voices in their society (eg. talking to villages chiefs). Participatory tools can provide a means of soliciting true participation in the communities in which we work. Meaningful participation in relief and development projects can empower and restore hope in devastated communities.

Participatory tools, when used to solicit information on the situation in the community, on social relations and on the effectiveness of an intervention, often yield amazingly useful, accurate and relevant information to be used for project planning, implementation and evaluation purposes. After all, who knows a community better than its average citizens? Many times this information from the community is known but organizations have no way of documenting, recording and reporting the information to others. Often communities can explain what would otherwise be hard to understand. Often their input will change what a project does or how it does it – often making the project more effective. Yet how do you justify this change if you don't have the information and analysis to prove that the change needed to happen? Participatory tools provide a means not only of collecting information, but of analyzing and recording that information so that it can be useful for the implementing organization as well as for reporting purposes.

There is such a diversity of participatory tools available to use that there is always a tool to be found to fit every circumstance. The two most well-known participatory tools are the interview and the focus group discussion.

Because these two tools are already the subject of a TIPS sheet (202), we will not be discussing them further here.

There are lots of other participatory tools that are less well known but very useful. can provide descriptive information that explains the food security situation in more depth than quantitative data such as anthropometric measures (see tips 204) or market prices. Interviews and focus groups can provide background information for an initial food security assessment, including possible problems that a project might encounter. They may also provide information for evaluations, such as people's perceptions of a particular program or unexpected ways in which a program affected food security. Interviews and focus groups may suggest questions or indicators for a quantitative study, or they can involve community members in the interpretation of quantitative results.

Which tool should I use?

Of course, which tool you choose to use is going to depend on what kind of information you are looking to collect, who you want to ask and how long you have to collect the information. Here are some tools to consider as well as some examples of when they may be useful.

Community mapping consists of asking community **Transect Walks** are designed to collect observations about **Time Lines** are useful for thinking through when things **Sequencing Diagramming** is a useful way to get people to express **Card Sorting Ranking and Scoring Matrixes**

As explained in the infosheet on choosing a sample (tips 201), participants should be chosen to represent the larger group being studied. Although random selection is sometimes used, non-random selection based on particular characteristics is often appropriate for interviews and focus groups. For interviews, it is often useful to interview key people in the community such as leaders, health workers, and representatives of co-operatives or women's groups. Remember that people's perspectives may be influenced by their social position, level of responsibility and education. Thus, it is important to hear a range of voices in the community. Similarly, focus groups should include a variety of people. Sometimes, having a variety of people in one group can increase the learning as people challenge each other and discuss the issues. However, a diverse focus group might also silence some voices, as people tend to offer socially acceptable opinions. For example, a mixed group of men and women may have very different dynamics than two separate groups of men and women. The number of people in a single focus group is also an important consideration. In general, focus groups include 6-12 people. Smaller groups are best where individuals have more to share, while larger groups are better when a broader cross-section of opinion is desired.

Analyzing qualitative information

Regardless of the tool chosen, once the information is collected, you will need to analyze this information in order to be able to draw conclusions from it. Many of the tools described above contain some element of community-level analysis. The focus, then, of the final analysis then

In general, broader questions should be asked first, leading to more specific questions later in the interview or discussion. Also, more important questions should be asked closer to the beginning of an interview or discussion, to ensure that there is enough time and energy to discuss the issues.

Who asks the questions?

The person asking the questions may also influence the interview or focus groups. Beware of situations where participants may be intimidated by the interviewer, or feel the need to please the interviewer by giving positive rather than accurate information. For example, if an interviewer clearly represents the organization providing food or funds for a project, he or she is likely to hear lots of good things about the project! Local interviewers are less likely to encounter this problem, and will have a better understanding of local language and cultural context. It is often worth the extra time required to train local interviewers and make sure they understand the goals of the evaluation. Translators can be used when the interviewer does not speak the local language, but beware of 'editorializing,' where translators insert some of their own beliefs and perceptions into the 'answers.'

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www.catholicrelief.org/what/overseas/rra_manual.cfm

Also, check out the Food Aid Management website:

www.foodaidmanagement.org (click on Monitoring and Evaluation)

<http://pcs.aed.org/empowering.htm>

For more information on participatory tools or any other planning, monitoring or evaluation issues, contact the Canadian Foodgrains Bank at the address below, or email inquiries to cfgb@foodgrainsbank.ca

How Many Should I Ask?: Determining a Sample Size

There are many different factors that come into play when deciding how many people need to be asked a question or administered a survey. The first, and perhaps most obvious question being: Do I want to be able to measure statistically significant change? Other issues to examine include the type of sampling being used, the form in which the resulting data will be presented, the precision with which one wants to measure change, and the level of error one is willing to except.

ways to decide who will take part in an evaluation. Sometimes, everyone is included in an evaluation. This is called a *census*. However, a census can be very costly and time-consuming, especially when the population is large. Often, evaluations are based on a smaller group within the population: a *sample*. It is not easy to decide how large a sample should be or who should be in it.

Sampling methods depend on the type of data we need (qualitative or quantitative), the method of evaluation (focus groups, household survey, clinical measurement), and characteristics of the population involved. Since sample observations are used to tell us things about the whole group of people we are interested in, samples should be **representative**. That is, the characteristics of the sample should be similar to the population as a whole.

Defining the Population

First, it is important to clearly define the population that the sample group will represent. The population may be all children under five, women, the elderly, or an entire refugee camp. The list of all members of this population is often called a **sampling frame**. The individual members of this sampling frame, be they children, women, refugees or households, are often called **sampling units**, because they are eligible to be selected into the sample group.

Each sampling method described below is simply a way of choosing a smaller number (sample) of individuals or households from the larger, defined population.

Convenience Sampling

The only reason people are selected for a convenience sample is because they are easily available. Asking about the income of the first 10 households on the road in a village is an example of a convenience sample. There is no way we can be sure that their answers represent the community. It could be that the wealthiest people live in that area, or the poorest. This method is low cost, but scientifically weak.

A sample is a smaller group of individuals (*children, women, refugees, households etc*) **that represents a larger population with similar characteristics.**

Choosing a sample can save time and money.

Purposive Sampling

Purposive sampling involves choosing individuals from a population based on certain characteristics. For example, an evaluation team may choose to interview two mothers from low-income households, two mothers from higher-income households, a street vendor, a health worker and an elder because they will each have specific insights into the food security of a community. This method is low-medium cost. It is best suited to subjective-qualitative measurement (focus groups, interviews) where we are interested in the perspectives and experience of particular groups or individuals.

Random Sampling

Random sampling uses statistical probabilities to select a sample. Evaluators can decide how many people will be in the sample but the selection of each individual is left to random chance. Random sampling methods are most commonly used with quantitative data collection. Because sampling units are chosen at random, there is less chance of *bias* – incorrect results due to the exclusion of certain groups or types of people (e.g. surveying only people who live close to the centre of town, those who are in hospital, or those with children in school will not give results that reflect the wider community). There are several types of random sampling.

Simple Random Sampling gives each person the same chance of being chosen. Imagine a bag that contains one bean for each person in a village. Some beans are red and some beans are white. Each person picks a bean. Only those who pick a red bean are included in the sample. Each person has the same chance of being selected (equal to the number of red beans divided by the number of white beans). Other examples of simple random sampling include selecting households on a walk through the village, skipping a certain number of homes each time; writing names on pieces of paper and pulling them from a bag; or using a computer to generate random numbers that identify participants.

Cluster Sampling uses simple random sampling in more than one stage. Clusters may be households, villages, counties, hospitals or any other sub-group of individual sampling units. In the first round, a sample of clusters is chosen. For example: a subset of villages chosen from all the villages in a particular region. Once the clusters have been chosen, we can evaluate all individuals within the cluster or choose a random sample within each cluster. Cluster sampling is often used in large or remote populations.

Sound sampling methods reduce the risk of drawing mistaken conclusions from any survey. You will find more information on sample size calculation and selection methods in the resources listed below.

Resources

FANTA Project Sampling Guide. Title II Indicator Guides, 1999.

World Vision Canada, Design and Implementation of Nutrition Surveys, an excerpt from the MICAH Guide.

Both are available at: www.foodaidmanagement.org/mne3.htm

For more information on sampling or any other planning, monitoring or evaluation issues, contact the Canadian Foodgrains Bank or email: cfgb@foodgrainsbank.ca

Household Economy Analysis

Household Economy Analysis is used by Save the Children Fund - UK to inform and evaluate its food programs. This process is a useful way of learning about the food security situation in an area.

The basic goal of a household economy analysis is to describe how rich, poor, and 'medium' households access food in good, bad, and 'typical' years. Understanding the local characteristics of good and bad years can improve early warning systems. Knowing more about how communities commonly try to cope with food insecurity can be very useful in planning and evaluating the impact of food programs. The basic steps are given below:

1. Clearly define the area for the analysis

Is it truly one economy, or are there sub-groups with their own economies? A food economy is a system of production, exchange, and consumption of food items.

2. Describe sources of food income

This is food consumed directly by the household. To keep things simple, focus on calorie intake, using the main energy giving foods. Sources of food income include: crop production, livestock production, fishing, hunting, collection of wild foodstuffs, gifts, relief food, purchase or exchange.

3. Describe sources of non-food income

This includes exchanged goods, gained through economic and social activity. Sources of non-food income include: sale of crops, sale of livestock or livestock products, sale of own labour, sale of fish, sale of wild foods, sale of other products manufactured in the household, trade, gift, relief food

The purpose in defining both sources of income is to determine where the vulnerabilities lie. For example, crop failure will result in much higher vulnerability for families which depend on the production and sale of crops for both food and non-food income. Non-food income may be used to purchase food and so plays an important role in food security.

4. Describe good, bad and 'typical' years

A 'typical' year is the type of year that occurs most often. It does not imply that the situation is stable or acceptable. For example, in southern Sudan, a typical year involves conflict.

Asking what happens to food access strategies in good and bad years will help to describe the current situation in relation to previously experienced levels of stress. Discovering the coping strategies and indicators of a bad

year suggests ways in which a program may make a difference. For example, if a common coping strategy within a community during bad years is to sell off livestock at low prices, one impact of a successful program may be reduced livestock sales.

5. Describe rich, poor and 'medium' groups

It is important to discover the criteria that differentiate the poor from the rich (e.g. livestock, land, family size etc.). Often, coping strategies are quite different among these groups. Thus, defining the groups will be useful in discovering who are the most vulnerable, and where we may expect programs to have an impact. 'Medium' refers to the most frequently occurring type of household. The

typical household may be more toward the poor end of the scale, or more toward the rich end, depending on the local social structure. While three categories are given here, some areas may have more detailed classifications which could be useful in understanding the picture of vulnerability in the community. Local definitions should be used. In SCF's experience, key informants will usually agree on what defines the categories.

6. Describe 'exchange links'

These are the connections that exist between a local food economy and other

economies outside the area. Finding out about these links will tell us more about ways in which local vulnerabilities may be affected by changes in other regions.

Gathering information

Information can be gathered through a variety of primary and secondary sources. Groups such as WFP, the Ministry of Agriculture, the Ministry of Health, and other NGOs may have data or contacts that can provide information on the household food economy situation in a particular area. Also, 'key informants' (individuals within a community who can provide information on the local situation) can be interviewed individually or in groups. Certain techniques such as ranking, proportional piling and seasonal calendars can also be used with local people to provide a more complete picture of the food economy.

Resources

Seaman J, Clarke P, Boudreau T, Holt J. The Household Economy Approach: A resource manual for practitioners. *Save the Children: London, 2000.*

For more information on Household Food Economy Analysis, or other issues related to planning, monitoring, and evaluation, contact the Canadian Foodgrains Bank (crgb@foodgrainsbank.ca).

"The task of a food economy analysis is to obtain a clear and internally consistent picture for a defined group of people or geographical area of typical households' sources of food and non-food income in a normal year, describing poor, medium and rich households separately, paying attention to market and other exchange links which connect this food economy to others, and to the seasonal factors of economic life." -- SCF-UK

Food Security Assessment: FEWS Categories

Hunger is not a simple problem. While feeding a starving child may be, quite simply, 'the right thing to do,' understanding why the child is hungry is much more complicated. However, food assistance must be appropriate to this 'big picture' in order to have a positive impact. This is what the Canadian Foodgrains Bank means by its slogan "Food aid with a food security orientation." While food aid is often seen as a way of simply providing people with the food they need, food security recognizes the dignity and empowerment that comes when people are able to feed themselves. Programs based on an understanding of the local food security situation will better meet people's needs in the short term and strengthen their ability to feed themselves in the future.

This infosheet provides some information on assessing the food security of households and communities. See **tips 301** for information on the Household Economy Approach to food security assessment.

To help organizations plan food programs that are appropriate to the local food security situation, the USAID Famine Early Warning System (FEWS) has produced a 'matrix of vulnerability' -- a chart that provides information on signs of food insecurity. This chart is a helpful tool for beginning a food security assessment.

As food insecurity increases and people are under more stress, they will often begin to change what they do with their assets (resources or wealth) and how they produce food or income. The food security assessment focuses on how people are 'coping' or adjusting to stress in these two key areas. Based on this information, groups are identified in one of five categories: 'slightly vulnerable,' 'moderately vulnerable,' 'highly vulnerable,' 'extremely vulnerable,' or 'famine.' Different types of programs are appropriate for groups in each category.

1. Slightly Vulnerable

Groups in this category are either increasing their assets, or maintaining them at a reasonably stable level. They may sell a few things to maintain their food supply during the lean season, but no more than in a 'normal' year.

Slightly vulnerable groups are able to carry on their usual method of producing food or income. Any changes in their productive activities are due to their own choice.

Developmental programs which seek to build community assets and provide opportunities (education, self-employment etc.) are the most appropriate for groups in this category.

2. Moderately Vulnerable

Groups in this category are starting to sell off less important assets and altering their lifestyle somewhat. They may be reducing their household expenses, reducing their food stores, changing the type of food they eat, or even reducing the amount they eat to cope with unseasonal stress.

Moderately vulnerable groups continue their normal production of food or income with only small changes. They may change the way they grow food, begin collecting more wild foods, or borrow more from other people.

Appropriate programs in this category are aimed at protecting people's assets. Community grain banks, adjusting local food prices, or selling food at affordable prices are some examples.

3. Highly Vulnerable

Groups in this category are selling important assets in order to get the food they need. These assets may be bicycles, cattle, jewellery etc.

Highly vulnerable groups are interrupting their normal production of food or income to do other activities. These activities may disrupt their lifestyle and may damage their environment. Examples include selling firewood, burning charcoal, migrating in search of employment, borrowing at high interest rates etc.

Programs that support people's income and assets are appropriate for groups in this category. Food-for-work and cash-for-work programs are two examples. Programs should protect people so that they can more quickly return to their preferred lifestyle in the future.

FEWS Categories of Vulnerability

| Vulnerability | Activity | Programs |
|---------------|---|--|
| Slight | Maintaining assets & production | Development programs |
| Moderate | Some sale of assets, minor change in production | Development, asset support |
| High | Selling important assets, disrupt normal production | Support assets and income |
| Extreme | Selling production assets, migration etc. | Relief, support assets, income and nutrition |
| Famine | No major assets or production left | Emergency relief |

4. Extremely Vulnerable

Source: Maxwell & Frankenberger 1995

FEWS calls these people 'at risk.' They are selling productive assets (farm tools, oxen, land, seed etc.), which will seriously affect their ability to feed themselves in the future.

Extremely vulnerable groups have abandoned their usual production activities and are looking for non-traditional employment, which prevents them from continuing their normal lifestyle. Whole families may be migrating to other areas.

At this point, people are in need of programs that support their income, assets and basic nutrition. Straight food relief and seed packs are two examples.

5. Famine

Groups experiencing famine have used up their resources. They basically have no means of producing food or income. They face starvation, disease and death.

Appropriate responses to famine include the provision of food, shelter and medicine. Programs are aimed at providing for basic human needs.

Hopefully, by recognizing food insecurity in earlier stages and acting appropriately, communities can avoid severe forms of vulnerability. These categories can also be a guide for programs that are trying to help communities move from a more vulnerable to a less vulnerable state.

Indicators for Food Security Assessment

Many different indicators may be used to find out what people are doing with their assets and their way of producing food or income. The following are some examples that have been used in the past:

| Activity | Indicator | Source |
|-----------------------------|--|---|
| Change of food source | # Households using reserves | Agricultural workers |
| Search for other employment | Unusual movement of adult males, wage changes | Chiefs, administrators, extension workers |
| Increase in prices | Crop/livestock prices at local market | Market surveys |
| Sale of productive assets | Unusual amounts of personal productive goods at market | Local market observation, household survey |
| Migration | Number of whole families moving out of area | Household surveys, government records, NGOs |
| Decreased food intake | # Meals/day, types of food eaten | Household surveys, 24-hour recall |

The appropriateness of the indicator, and the usefulness of the source depend on the local economy and culture. Indicators should be chosen by people who understand the local situation (see tips 105 for more on choosing indicators).

The FEWS categories do not explain all situations. However they are a useful guide for organizations and communities that are interested in learning more about food security in their area.

Resources

Maxwell S & Frankenberger T (1995) *Household Food Security: Concepts, Indicators, Measurements, A Technical Review*. UNICEF

FEWS website: www.fews.net

For more information on the project cycle, or other issues related to planning, monitoring, and evaluation, contact the Canadian Foodgrains Bank (cfgb@foodgrainsbank.ca).

Roles of Food Aid

The Canadian Foodgrains Bank's motto is "A Christian response to hunger." What is a Christian response to hunger? Why do we provide food aid?

Food has a unique role to play in relief and development programs. When planning a food aid project, it is important to understand why and how food aid is to be used. This infosheet describes some of the key roles of food aid identified by members of the Canadian Foodgrains Bank.

Underlying Motivation

As a coalition of Christian organizations, the Foodgrains Bank has identified two basic motivations for food aid projects: Biblical obedience and relationship & solidarity.

Biblical Obedience: Both the Old Testament (Isaiah 58:7) and the words of Jesus (Matt 25:35) call us to share our food with the hungry. For a Christian, sharing is not optional. Related to this is the witness that Christians may provide to non-Christians by the sharing of food, although this depends on the context.

Relationship & Solidarity: Food aid from the Foodgrains Bank provides opportunities to link Canadian communities and churches with communities and churches in areas where the food is used. By providing a symbolic and concrete demonstration of solidarity with those suffering hunger and food insecurity, food aid can act as a witness to God's love and compassion.

Strategic Roles of Food Aid

While these underlying motivations view food aid as a *faithful* response, there are also some key roles of food aid that reflect a *strategic* response to hunger and food insecurity. These strategic roles are associated with measurable outcomes that the food aid is intended to achieve. The Foodgrains Bank has identified four key roles for food aid projects: health and nutrition, food security, community building, and peace and justice.

Health and Nutrition

One of the more obvious roles of food aid is in improving health and nutrition. It is often assumed that providing food will improve the nutritional status of the people that receive it, and this may occur. However, food aid does not automatically mean that people are eating more or better food. While this may be the case, food may also be sold or it may simply replace other food that the household or

individuals would otherwise have purchased. Differences in the way food is distributed within the household (e.g. more food given to boys than to girls etc.) may mean that some people do not eat more as a result of food distribution. It may be necessary to assess whether people are actually eating more or if they are eating better (improvements in the nutritional quality of the diet, micronutrients etc.).

Even if people are eating more, or better, they may not have better nutrition. Diseases (especially diarrhea in children) affect people's ability to eat, and the body's ability to absorb nutrients from the food. In order to assess whether nutritional status has improved, it may be necessary to evaluate outcomes like body size (see tips 204 for information on height and weight indicators) or activity levels (when people are well nourished, they are better able to work, play and engage in community activities).

Improved nutrition may also lead to reductions in illness. Assessments may focus on reductions in clinical malnutrition (cases of kwashiorkor or marasmus), fewer cases of micronutrient deficiencies (vitamin A

night blindness, goitre, anemia etc.), decreases in rates of infectious disease, such as diarrhea and respiratory ailments, or fewer malnutrition-associated deaths.

Food aid may help to slow the deterioration of health and nutrition in an emergency such as a drought, conflict, or natural disaster. It may also reduce seasonal malnutrition in areas where a "lean season" is common. Or, it may contribute to sustainable improvements in nutritional status in areas of chronic malnutrition. Food aid may also be used to treat seriously malnourished individuals in therapeutic feeding programs. Treating a malnourished child may have effects on growth and development that last a lifetime.

While improving health and nutrition is an important role for food aid, it is only part of the picture. Food aid may have important effects that go beyond improvements in health and nutrition.

Food Security

Food aid can reduce or relieve the pressure that people experience during times of food shortage. This role is mainly economic; hunger can affect what people do with their assets and how they produce or acquire food (see tips 302 on assessing vulnerability). Food aid can improve food security by protecting and building livelihoods.

The Foodgrains Bank has identified two underlying motivations for food aid:

- **Biblical Obedience**
- **Relationship & Solidarity**

and four strategic roles:

- **Health and Nutrition**
- **Food Security**
- **Community Building**
- **Peace Building & Justice**

Protecting Livelihoods: When faced with food shortage, people often do things to get food in the short term that actually harm their ability to feed themselves in the long term. For instance, people desperate to get food may sell off their livestock, sell their farming equipment, eat their seed, or leave their lands and communities in search of temporary employment or food. Providing food to people at such times can help them to feed themselves without harming their long-term food security.

Building Livelihoods: In addition to protecting livelihoods, food aid may also support the creation of assets that help people to cope with seasonal fluctuations and unexpected events. Assets may include land improvement, roads, water supply, or housing improvements (often through food-for-work). Improvements in soil structure, forestry, and biodiversity may all lead to improved food security. Food may also be used to promote training or educational programs focused on agricultural and economic development (e.g. sustainable agriculture techniques or marketing skills).

Protecting and building livelihoods can help to make communities less *sensitive* to food shortages and more *resilient* – better able to recover after periods of food insecurity.

Community Building

Food aid projects may also help to encourage community participation and strengthen community groups. Involving marginalized people in the planning and implementation of food aid projects can provide opportunities for empowerment and participation. Some of the outcomes may include increased participation in local co-operative groups, increased involvement of community members in decision-making processes, or increased opportunities for women. While these may be a consequence of any participatory development project, the process of organizing a food aid project is concrete and easily understood by most people. Thus, such projects are particularly effective ways to build community capacity.

Food aid may also be used to increase the local sense of ownership of a development project. An organization in India has observed that some communities view food as an *incentive* to help them complete projects for themselves, rather than a *wage* to do work for the donor agency's benefit.

Providing adequate food in a culturally appropriate and participatory way can reverse the degrading psychological effects of hunger and poverty. Food aid can play an important role in promoting the dignity and humanity of beneficiaries.

Peace & Justice

A Liberian proverb says, “a hungry man is an angry man.” Hunger can cause conflict, just as conflict is a major source of hunger. In conflict situations, people's livelihoods are destroyed and they are often forced to flee; sometimes enemies deliberately withhold food.

Providing valuable resources in resource-poor areas can create or feed tension and conflict. Food aid is no exception. Food aid programs should carefully consider the effects on local tensions and should seek to “do no harm” (see tips 402 on the risks of food aid).

However, just as food may be used as a weapon of war, it can also be a tool for peace. Food can be used as a weapon only where there is hunger. By providing food to the vulnerable, food aid can reduce the power of food as a military or economic weapon. When used in ways that promote justice and equity, food aid can reduce the threat of violence. Food aid can also respond to victims of conflict – especially refugees and displaced people. When offered to all in need without taking sides, food aid may open doors for mediation between warring people. Food aid can also be used to rebuild and rehabilitate communities following conflict, and to strengthen reconciliation and demobilization efforts.

In addition, food aid can be used to demonstrate a “culture of peace.” Food is a powerful symbol – as demonstrated around the world in the importance of sharing meals and, in the Christian tradition, the sacrament of communion. By sharing food with traditional enemies and oppressed groups, and opposing the use of food as a political weapon (in sanctions or blockades), food aid can promote peace building and justice. This always requires creativity and sensitivity to the local context.

Once it is clear what roles food plays in a given food program, it is possible to ask whether food actually fulfills those roles, and how it may be used more effectively. This is the starting point for evaluation.

Resources

For more information on the roles of food aid or any other planning, monitoring, and evaluation issues, contact the Canadian Foodgrains Bank at the address below, or email inquiries to cfgb@foodgrainsbank.ca

Risks of Food Aid

While food aid projects can play important roles in building food security, there are also risks – ways in which food aid may actually contribute to food *insecurity*. It is important to be aware of these risks when planning a food aid project. Major risks include dependency, discouraging local production, changing local tastes, misdirecting food, and ineffectiveness.

Dependency

There are many examples of food aid programs that began as short-term relief distributions, but became long-term operations, with no end in sight. In these examples, the community has often become *dependent* on food aid; food aid has become an integral part of the local food economy. This kind of dependency stunts the growth and development of communities. When people rely on outside aid, they no longer look to their own resources, abilities and creativity to sustain them.

Of course, this is a danger with any resource-transfer program (cash programs, infrastructure programs etc.). It is especially a danger for food programs that are carried out without a clear “exit strategy.” An exit strategy focuses on two questions: *When will this program end?* and *How will this program help people feed themselves in the future?* In other words, the most effective food programs do not only deal with immediate hunger. They also build food security, and have a clearly defined end-point (an understanding of when the community will no longer require food aid).

Consider the various roles of food aid (see *tips* 401). Programs that only focus on the immediate needs such as health and nutrition may be in danger of creating dependency. Programs that also play a role in protecting and building livelihoods (food security), build community and/or promote peace and justice will contribute to the ability of communities to regain their self-sufficiency.

A relief and development organization in Ethiopia carried out a long-term feeding program that started with emergency feeding and then used food-for-work to promote food security. When comparing two of the project communities, the organization noted that one of the communities had developed a dependency on the food aid. People in that community expected and relied on the regular food distributions. Based on this study, the organization identified five danger signs of dependency:

- *high importance of food aid in the local economy*
- *community is not sharing in program costs*
- *community lacks sense of ownership*

- *lack of independent self-help initiatives*
- *community develops psychological dependency*

Some of these signs may not be problems in a short-term emergency operation, but raise more serious concerns in medium or long-term rehabilitation or development projects.

Discouraging Local Production

One of the more common criticisms of food aid is that it floods the local market, depressing prices and discouraging local production. The timing of food aid is very important. If food aid is provided when local farmers are harvesting and bringing their crops to market, it is likely that the food aid will compete directly with the local commodities and harm the local farmers. Thus, it is important to know which commodities the food aid will compete with in the market and when those commodities are harvested.

Depending on the timing, lowering market prices can also be positive. When prices are high, because of limited supply in the off-season, or because traders are hoarding food stocks, vulnerable people often cannot afford to buy enough food. In these situations, food aid may help to bring prices down, making food more accessible to those who are hungry.

Major risks of food aid include:

- **Dependency**
- **Discouraging local production**
- **Changing local tastes**
- **Misdirecting food**
- **Ineffectiveness**

In Haiti, farmers often sell all their beans at harvest time, in order to pay off debts. Because they lack storage capacity and cannot hold back some beans for seed, these farmers must go to market to buy back beans at planting time when the prices are high. To do this, they need to take out more loans at high interest rates, again forcing them to sell off their entire crop at harvest to pay their creditors. By providing beans at planting time, thus lowering the prices, food aid may help to break cycles of debt for these marginal farmers.

Changing Local Tastes

The food that is distributed through a food aid project is often different from the food that is normally eaten locally. This is often the case for food that is shipped from overseas. The most common examples are wheat distributions in rice or maize eating areas (e.g. West Africa and Central America) and canola oil distribution in place of other local oils.

When the food provided through food aid is different from local foods, there is a danger that people will begin to prefer foods that are not available locally – increasing their

dependency on outside sources and harming local production. This may be through changing tastes (e.g. preferring the taste of imported wheat) or differences in cooking quality (e.g. superior performance of canola oil over local varieties). It is best to discourage reliance on non-local commodities or highly processed products (e.g. milk powder, high-energy biscuits etc.). Ideally, food aid projects should encourage a return to locally appropriate patterns of production and consumption as quickly as possible.

In some cases, it has been argued that using unfamiliar or less desired commodities for food aid makes for better targeting (only the most vulnerable would want the undesirable food). However, there is little evidence to support this claim. In general, it is wise to select commodities that people like and know how to prepare. Of course, when the food aid commodity is similar to local commodities, it is important to avoid discouraging local production (see previous section).

When using different varieties of a similar commodity (e.g. Canadian pinto beans as opposed to local varieties) **it is very important that people not use the food aid for seed**. Some projects have resulted in large crop failures when local farmers thought they could plant the imported beans.

Misdirecting Food

There is always a danger that some of the food will end up in the wrong hands. This is true for any resource (cash, clothing, etc.) provided to a resource-poor area. Soldiers, handlers, officials, and local leaders may dip their hands into the bag and take food for themselves. Each cup of grain taken in this way is one less meal for a hungry person.

Misdirection of food cannot always be avoided, especially in certain circumstances such as conflict situations. However, food aid does have some advantages over

resources like cash as it is very visible to all in the community. People will often notice when someone is skimming off a portion of food for personal use. It is difficult to run off with a tonne of wheat in your back pocket!

Clearly identifying the correct beneficiaries (tips 403) and carefully planning the logistics will help to minimize losses due to misdirected food.

Ineffectiveness

Even when a food aid project avoids these negative outcomes, it may not meet its objectives or play an effective role in responding to hunger. It is important to monitor the project in order to assess whether a project is being effective and, if not, to revise the planning. If a project appears ineffective, it may be helpful to ask the following questions:

- *what is the role of this project?*
- *are the goals and objectives realistic?*
- *is the food reaching the intended beneficiaries?*
- *are the activities, timeframe, etc. meeting the needs of the local community?*
- *is there input from the community?*
- *what could be changed to make this project effective?*

Clear planning, ongoing monitoring, and careful reflection can help reduce the risks of food aid, and increase its effectiveness in meeting the needs of hungry people.

Resources

For more information on the risks of food aid or any other planning, monitoring or evaluation issues, contact the Canadian Foodgrains Bank at the address below, or email inquiries to cfgb@foodgrainsbank.ca

Selecting Beneficiaries for Food Aid

Deciding who will receive food assistance and who will not is a difficult task. This process is often called “beneficiary selection” or “targeting.” It often involves hard choices and always requires wisdom. As people called to generosity and compassion, Christians may wonder why it is necessary to determine who will get the food. Why can’t we just give something to everyone?

Why Target Food?

The truth is that, sometimes, it *is* appropriate for everyone in a particular area to receive food. However, it can also be harmful to simply distribute food to everyone. In order to avoid this harm, it is important that organizations using food aid reflect on the situation and decide who should receive food. There are two main benefits to effective targeting: avoiding negative effects of food aid, and good stewardship of God’s gifts.

Avoiding negative effects: Providing food aid where it is not needed can harm local production, cause conflicts and promote dependency on aid (see *tips* 402 for more on risks). Poorly targeted food projects have often turned into prolonged feeding programs that do not promote dignity or creativity. Food projects with weak targeting and monitoring systems are more likely to encourage pilfering or manipulation by people who take advantage of difficult situations and the poor. Good targeting, on the other hand, is an important part of effective food aid.

Good stewardship: Food aid is a limited resource, and the needs are great. In order to use this God-given resource wisely, it is important to make sure that it goes to those in greatest need. This will involve hard choices in areas where the needs are many, and should not be done without the participation of local people.

Researching Beneficiary Selection

The first step that is often overlooked during the beneficiary selection process is gathering information about past and current beneficiary selection activities by your agency and/or other agencies working in the region or adjacent regions you have targeted. This important piece of research will improve your targeting and coordination with other organizations. It will also reduce the potential for conflict between communities that may feel they are being treated differently. The key questions that should be asked for both past and current food aid interventions include the following:

1. How many people were targeted? What percentage of the population does this represent? Were they individuals, households or entire communities?
2. What were the criteria used in the targeting?
3. Who selected the beneficiaries using the criteria? Examples include community relief committee, external agency, village heads or the community.
4. Were surveys conducted? If so, try to find a copy of the surveys.
5. While meeting with other organizations, learn about the type, quality, quantity and duration of the food rations.

This information, if available, will assist you during your beneficiary selection process.

Who to Target?

Once a region has been chosen and your agency understands previous and current beneficiary selection strategies by other organizations, beneficiaries may be selected at three main levels: individual, household and community. The most appropriate level of targeting depends on the food situation, local culture and what is being done by other organizations.

Individual: Sometimes, it is possible to identify specific types of individuals who require food assistance. Only individuals that meet these criteria are eligible to receive food. For example, a food project might target undernourished children less than 10 years of age. Only children who are under 10 and who meet certain criteria of malnutrition (low arm circumference, appearance, nutritional disease, one or less meals/day, etc.) will receive food. Common examples of individual target groups are: orphans, school children, severely malnourished individuals, pregnant women. In this case, others will not receive food, even if they are from the same household or community. This level of targeting is often used in school feeding, therapeutic feeding, and vulnerable group feeding. It is important to recognize that individual-level targeting may cause tensions with those that are ineligible for food. Also, if the food is distributed as dry rations, it is very likely that the targeted individual will share (or be forced to share!) with others. It is also possible that individuals in wet feeding programs will receive less food at home.

Household: Food is commonly distributed to entire households that are considered vulnerable. Vulnerability may be assessed on the basis of household food

Effective targeting has two main benefits:

Avoiding the negative effects of food aid and Good stewardship of God’s gifts

Food Aid projects may target

Individuals, Households, or Entire communities

production, income, or composition (e.g. widow-headed households). This type of targeting recognizes that hunger is often shared among the household. If there are food shortages, parents may go without in order to feed their children. However, be aware that food is not always distributed fairly within the household. For example, men and boys may eat before women or girls. These dynamics will vary according to culture.

Community: In certain situations, it makes sense for everyone in a community to receive food aid. Often, if entire communities have been displaced or destroyed by conflict or disaster, all members of the community will be in need of food.

Identifying Targeting Criteria

At each of the levels described above (individual, household and community), selection criteria must be identified to use during the targeting process. There are two distinct methods to identify the criteria. One way is identifying suitable criteria based on consultations with community and regional authorities. The second way is to allow the community to establish criteria as they develop vulnerability categories. Out of these two criteria identifying processes, several criteria are usually identified. Some criteria are more useful than others, and your agency must determine which criteria and how many criteria should be used. The criteria often fall into one of the three following categories:

1. **Health criteria** describe the status of a person's health and may include nutritional measures, disease, and physical ability. All of these can impair a person's ability to acquire food and to function normally.
2. **Asset criteria** may include a beneficiary's current income, crop loss, land base, housing availability, or tools. At a community level, damage to roads and infrastructure, and market prices may provide useful information on the current state of affairs. Again, these factors all affect people's ability to acquire food and to function normally.
3. **Coping strategy criteria** refer to what people are doing to survive at the present time. Observing the coping strategies being used can be a good indicator of vulnerability. As well, certain coping strategies – such as selling off tools or livestock at low prices – can impair people's ability to acquire food in the future. As described in tips 302, the FEWS matrix provides categories of vulnerability based on coping strategies. The two key components are *what people are doing with their assets* (resources or wealth) and *how they are producing food or income*. Using a framework like the FEWS can provide useful information on the current level of vulnerability – of communities, households or individuals.

Whatever the level of targeting, the criteria should be clear, culturally appropriate, and ensure that those seeking personal gain do not manipulate the process. As well, the criteria must not be too general. A common oversight is including general categories like “elderly household” as a criteria for a beneficiary household. Since it is possible

that some of the elderly are well taken care of by their children or have a well established land base, more specific criteria must be developed to select the most vulnerable people from the group of “elderly households”.

Targeting Method

Once the targeting criteria have been determined, a targeting method needs to be established to identify eligible individuals, households or communities. Some possibilities include:

Implementing agency: The organization that is running the program may directly select the beneficiaries. This allows the agency to retain control over the food it is providing, and gives it the assurance that the food is reaching the right people. Implementing agencies often use surveys, measurements (such as arm circumference), or interviews with focus groups or key informants (see tips 202) to select eligible recipients. This type of targeting requires a good knowledge of the local community. It is usually strengthened by the use of participatory methods, such as community mapping, ranking, and piling exercises.

Local leaders: Sometimes, local leaders (e.g. chiefs, pastors, government officials) guide the targeting process. The success of this method depends on how well these leaders know who is truly vulnerable and on their strength of character. If the local leaders are not trustworthy, they cannot be relied upon to guide the selection of beneficiaries.

Community groups: Many projects involve the formation of food committees to oversee the distribution of food. These committees are made up of community members who are trusted to identify vulnerable people and ensure that they actually receive the food. Such community groups can be a very effective method of targeting. As with any method of targeting, the effectiveness of these groups will depend on the wisdom and character of those involved.

The choice of method should take into account cultural factors and the level of targeting. For example, a study in Ethiopia suggested that the best approach in that context was for the implementing agency to select the communities, and for community groups to select the individuals or households within those communities. In certain countries, as in Ethiopia, there are also government approvals and regulations to be observed when selecting beneficiaries for a food program.

No method is foolproof. Thus, it is wise to collect information on those who receive the food as a check on the accuracy and reliability of the targeting process. The Canadian Foodgrains Bank proposal and end-of-project report forms contain space to report information on the vulnerability of those who received food.

Best Time to Target

Selecting beneficiaries should take place well before the food arrives. There should be sufficient time for the following activities:

- Targeting decisions

Criteria should be based on:
Health status
Assets
Coping strategies

- Appeal by individual beneficiaries against targeting decisions
- Re-targeting and revision of beneficiary list
- Finalizing beneficiary list
- Forwarding list to relevant authorities

During the targeting process, beneficiaries should be informed of the:

- Ration commodities and size
- Type of food distribution – free food distribution, school feeding, food for work, etc.
- Distribution schedule

Major Targeting Errors

When a targeting mechanism fails to identify and reach the intended beneficiaries, we say targeting errors have occurred. The most commonly observed targeting errors are:

- Excluding needy household from food assistance
- Including households that do not need food aid

The above errors relate to who gets food. Your agency also needs to be concerned with how much food a household gets and for how long, which may lead to the following errors:

- Giving a household more food than it needs
- Giving a household less food than it needs

Avoiding or Minimizing Targeting Errors

To avoid or minimize targeting errors, your agency will need to identify the sources of the errors. Some common examples include the following:

- Lack of accurate, timely and reliable baseline data

- Lack of knowledge/skills to differentiate between the rich and poor (e.g.: wealth ranking and other tools)
- Lack of coordination among various agencies
- Movement of people
- Lack of communication
- Absence of community participation in targeting
- Attitude that everyone is entitled to food and everyone is equally poor
- Lack of clear criteria
- Absence of regularly updating beneficiary list when households leave, the situation improves or deteriorates or there is a death
- Lack of awareness about the importance of including women in the decision making process
- Linking food aid to personal or political objectives
- Favouritism of relatives or clan members
- Overlooking the registration of vulnerable or marginalized people (female headed households, elderly, disabled, children)

Since the situation is constantly changing, your agency must use a monitoring system to keep the beneficiary list up to date. In a sense, the selection of beneficiaries is an ongoing process, although the majority of the work takes places at the beginning of the program.

Resources

For more information on selecting beneficiaries or any other planning, monitoring or evaluation issues, contact the Canadian Foodgrains Bank at the address below, or email inquiries to cfgb@foodgrainsbank.ca

School Feeding Programs

School feeding programs (SFPs) can be an effective tool to improve the food security of primary school-age children. The timing of the SFP should coincide when children are vulnerable, often during droughts, conflicts or floods. When the situation normalizes and the food security situation improves, the need for a SFP diminishes. However, in regions of chronic food insecurity, a longer-term SFP is usually necessary.

Many organizations implement SFPs to improve education. For this reason, they are commonly referred to as “Food Assisted Education” or “Food for Education” programs. Programs supported by Canadian Foodgrains Bank are unique in that the focus is improving food security rather than strictly achieving education outcomes. Therefore, the SFP must have a strong link to improving food security of the primary school children enrolled in the program.

1. Understanding the situation

The first step towards determining the suitability of a SFP is analyzing and understanding the problem of food insecurity among the primary school-age children in the region. What caused the food insecurity that is affecting the children? Are children not going to school because of the food insecurity? Is a SFP the most effective response to improve the food needs of children?

Assessing the nutrition of the children using anthropometric measurements is a rapid method to understand the level of food insecurity. Depending on the situation, regional food security reports may provide a strong enough justification for implementing a SFP.

Equally important is learning how well the schools are functioning. If enrollment is low, what are the main reasons? Is there a difference in female and male enrollment and attendance? What is the level of instruction? If the school is not operational, the impact of a SFP is severely limited.

2. Targeting

Schools in a given country or region should be targeted to maximize improvements in food security and education. There are a number of targeting approaches used by SFPs which are explained below.

Geographical targeting is most commonly used in SFPs. Programming is restricted to specific regions where food security and educational opportunities are limited, often because of poverty. Ideally, the program will serve all the schools in a region to avoid conflict. When only some schools are targeted in an area, a shift in attendance towards schools with SFPs is often observed. Blanket targeting (targeting all schools) is usually limited by the availability of inputs and/or capacity of the implementing organization. At a minimum, schools should have policies

in place that guide enrollment when the targeted school is close to non-targeted schools.

Nutrition targeting is often linked to geographic targeting. A survey on stunting (height and age) of first grade children can quickly and easily identify geographic areas at risk for malnutrition.

Gender targeting has recently become a focus whereby programs are concentrated in areas with low female enrollment and continuation in both primary and secondary school.

Age targeting focuses on providing food to children in the preschool and primary school years as this is the ideal window to address malnutrition and under-nutrition issues.

3. Objectives

School feeding programs supported by Canadian Foodgrains Bank must be focused on meeting immediate consumption needs of a student by combating protein-energy malnutrition, short-term hunger and micronutrient deficiencies.

Protein-energy malnutrition occurs when children are not receiving sufficient protein and calories through their diet. This period often coincides with the cyclical lean seasons before harvests when households are forced to cut back on their consumption by reducing both the number and size of meals and by relying on lower quality foods. Over the course of these critical weeks or months, a SFP helps to meet the immediate consumption needs of the child, provides additional calories and serves as an important source of protein and other nutrients that are deficient in the household diet.

Short-term hunger happens when access to food is limited or dietary habits are such that families don't eat until later in the day. As a result, many children arrive at school after walking long distances and not eating since the previous night. Consequences of short-term hunger include impaired cognitive function, reduced attention and a diminished interest in learning.

Reducing micronutrient deficiencies can be an added benefit of SFPs. These deficiencies are not only a common consequence of food insecurity, but they are also a cause of food insecurity because they increase morbidity and hamper utilization of food. Considering the high prevalence of vitamin A, iron and iodine deficiencies in developing countries, the cost-effectiveness of micronutrient interventions and the ease of using SFPs to provide micronutrients, this objective should be included whenever micronutrient symptoms are evident.

Other objectives which are commonly associated with SFP include increased enrollment and attendance and increased community involvement.

4. Improving sustainability

Sustainability questions are at the forefront of all SFP. Experience shows that when food assistance stops, there is a gradual dissipation of education outcomes as the situation reverts back to how it was before the program began. To maintain some of the gains in the program, it is advisable that SFP be implemented in conjunction with other interventions. Parallel interventions include parent outreach campaigns, teacher support, school infrastructure improvements, and education on health, hygiene and nutrition.

5. Available Resources

Resource availability influences the design and cost of the SFP. Common resources to consider include storage and preparation facilities, fuel availability, safe water (quality and quantity), and personnel (parents and teachers) to run the program.

In order for the SFP to achieve the desired outcomes, especially related to education through increased food security, there must be educational resources and school infrastructure in place. Without learning materials such as textbooks and teacher guides, the children will not capitalize on the learning opportunity. Teachers who are not adequately trained or are not being paid will likely not deliver a quality education program, a prerequisite for learning to happen.

6. Rations

The type of ration used in SFPs depends on the objectives and food inputs available. A school snack or meal usually provides from one-third to one-half of the recommended daily allowance for energy and protein. Table 1 provides nutritional information for different school types.

Table 1: Recommended Nutritive Value of Rations for Primary Schools (WFP Data)

| School Type | Acceptable range of rations nutritive value (children 6-12 years) | | |
|-----------------|---|-------------------|-------------|
| | Energy (Kcal) | Protein (grams) | Fat (grams) |
| Half-Day School | 600-900 (30-45%) | 16-24 (40-60%) | 7-11 |
| Day School | 1200-1500 (60-75%) | 28-36 (70-90%) | 14-17 |

Based on the required nutritive value of the ration, the available food quantities per ration must be calculated. Table 2 provides the necessary information for this calculation.

Table 2: Nutritive Values of a Few Common Foods

| Serving Size | Food | Energy (Kcal) | Protein (g) | Fat(g) | Vitamin A (I.U.) | Iron (mg) |
|--------------|-----------------|---------------|-------------|--------|------------------|-----------|
| 100 g | Maize Meal | 360 | 9.0 | 3.5 | - | 2.5 |
| 100g | Sorghum | 335 | 11.0 | 3.0 | - | 4.5 |
| 100 g | Corn Soya Blend | 375 | 17 | 6.9 | 2,600 | 17.5 |
| 100 g | Rice | 360 | 7.0 | 0.5 | - | 1.2 |
| 100 g | Bulgur Wheat | 350 | 11.0 | 1.5 | - | 7.8 |
| 20 g | Beans | 67 | 4.0 | 0.2 | - | 1.6 |
| 20 g | Peas | 67 | 4.4 | 4.8 | - | 0.5 |

Rations may also be fortified with micronutrients. The key micronutrients identified in the literature are vitamin A, iron and iodine. Table 3 summarizes the recommended mean daily intakes. Fortified rations must be prepared knowing the micronutrient deficiencies of the beneficiaries.

Table 3: Recommended Daily Intakes for Vitamin A, Iron and Iodine

| Age Group | Vitamin A (mg retinol) | Iron (mg) | Iodine* (mg) |
|---|------------------------|-----------|--------------|
| Pre-Primary (3-5 yrs WFP) (1-6 yrs WHO) | 400 | 9-10 | 90 |
| Primary (6-12 yrs WFP) | 400 | 10-16 | 120 |

*3-6 grams of iodized salt per day should be included in the ration where salt iodization is not in place and the prevalence of goiter amongst the children is above 5%.

Ration timing is related to the objectives and school schedule. Often breakfast or mid-morning snacks are preferred to improve cognition, short-term memory and concentration early in the day to combat short-term hunger. Practical considerations such as preparation time, cultural acceptance, and standard meal times should be considered.

7. Monitoring and Evaluation

The purpose of **program monitoring** is to monitor the output of the SFP. The primary output of the program is to assure that the targeted children consume the meals that are prepared. See the output column of the logical framework in Table 4.

Evaluation activities focus on measuring the impact of the SFP on the protein-energy malnutrition, micronutrient deficiencies, short-term hunger and community involvement. Evaluation is a key component to provide feed-back into planning. Based on continued evaluations, the program should change and adapt to more effectively meet the objectives.

Table 4 lists several desired outcomes and corresponding indicators for a SFP. Anthropometric measurements are not included because the research literature on SFPs indicates a weak link between nutritional changes and SFPs. The main reason for this disconnect is because the child's diet is only partly provided through the SFP. School does not run every day and the child is usually consuming other meals at home. As well, a substitution affect also happens if meals at school replace a normal meal at home. For these reasons, the impact of a nutritional change, either positive or negative, cannot be directly linked to the SFP. Therefore a SFP with a food security focus relies more on qualitative analysis and focus group discussions to determine impact.

Table 4: Logical Framework for a SFP

| INPUTS | ACTIVITIES | OUTPUTS | | OUTCOMES | |
|--|--|--|----------------|--|---|
| | | Description | Indicators | Description | Indicators |
| Food Firewood Pots and plates | Situation Assessment | X meals consumed by students per day | Meals consumed | Protein-energy nutrition | |
| | Mobilization and organization of communities and schools | | | Parents indicate that their children are receiving an extra meal each day as a result of the SFP (Focus Group Discussions) | Number of meals primary school-age children eat per day |
| | | | | Short-term hunger | |
| | Food Procurement | | | Teachers indicate that children are able to concentrate more in class (Focus Group Discussions) | Attention span of primary school-age children |
| | | | | Less than X% of students faint in class | School health records |
| | Baseline survey | | | Enrollment increases by X% | Enrollment records |
| | | | | Micronutrient deficiency | |
| | Regular deworming of students | | | Less than X% of students are diagnosed with Bitot's spots caused by Vitamin A deficiency | Bitot's spots frequency |
| | | | | Community involvement | |
| | Monitoring of health standards in food preparation | | | X% of parents provide X inputs (e.g.: fuel, cooking implements, condiments, etc.) for running the program | Input provision by parents |
| X% of parents assist in food preparation | | Parent involvement in food preparation | | | |

Resources

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Conservation Farming - Farming God's Way

Conservation Farming (CF) is a novel agricultural production system that is known by a variety of names, depending on location and organization. The initial concept was developed by Brian Oldrieve in Zimbabwe in the late 1980's who coined the practice as "Farming God's Way". The reason for this unique title was in part to bring faith back into agriculture. According to Oldrieve, this spiritual link contributes significantly to its widespread adoption among small-holder farmers in Southern Africa.

Today, the practices associated with Farming God's Way (FGW) are varied, more secular and widely adopted by national and international organizations. The main terminology to describe FGW includes Conservation Agriculture, Basin Tillage and Conservation Farming. For the purposes of this document, we will refer to the practice as Conservation Farming.

What is Conservation Farming?

CF is a farming system that **minimizes soil disturbance**. In fact, cultivating the soil with draft power (animals) is eliminated, and replaced by the systematic digging of small planting basins using a hoe. The recommended dimension of each basin is 15 cm (length) x 15 cm (width) x 15 cm (depth). Basins are usually spaced at 90 cm x 60 cm, depending on the crop grown. Available soil fertility amendments (manure and/or inorganic fertilizers) are added to each basin which is then lightly covered with soil in September/October. Early season rainfall collects in the basins in October/November. Planting begins in November/December when a significant moisture reserve is in the basins.

Given the strong tradition of cultivating land with oxen, adopting a farming system which does not involve tilling the soil is perhaps the greatest mental hurdle facing small farmers. When farmers learn about a zero tillage system, the concept is often met with much skepticism.

Part of the skepticism is overcome using Oldrieve's explanation that asks farmers to observe creation in its untouched state. These ecosystems are all characterized by a mulch covering over the soil which Oldrieve terms "God's Protective Blanket". There is much wisdom in this blanket as the covering protects soil, conserves water and recycles nutrients. Maintaining such a mulch layer on a field is only possible by limiting soil disturbance to where the seed is planted – the basin.

Mulching is an essential part of the CF system, and is a time-consuming task. When a plot is managed properly under CF, farmers will cut grass and gather leaves to cover the soil between the planting stations before the rain. Given this labour intense activity, starting CF on a smaller plot is recommended.

Laying down a thick mulch layer that provides 100% cover leads to a significant increase in yield. More work is needed in finding simple ways to maintain and increase mulches. In time, the mulch layer may be sustained with the decaying crop residue.

Maintaining and improving soil fertility is also a key component in CF. Harvested crops use up nutrients from the soil, and these nutrients must be continually replaced to sustain crop production. Unfortunately, this stewardship practice has been overlooked for many years given the declining soil fertility in many soils around the world. How soil fertility is replenished in CF systems varies depending on the region. Ideally, farmers add well composted manure (1-2 handfuls) or other organic nutrient sources to their planting stations. When these are not obtainable, fertilizers are used if available and affordable.

Planting, weed control, thinning and harvesting are typical activities that CF shares with other farming systems. More details on these practices can be found via the links noted in the "Resource" box at the end of this tips sheet.

A **diversified rotation** is key in every cropping system including CF. Often CF is applied to mono-culture maize production systems. The importance of rotating legume and cereal crops should be emphasized at training sessions. A proper crop rotation will reduce pests and improve soil structure and fertility. Ideally, one-third of the land area should be in rotation with a different crop other than the staple. Table 1 provides some basic cropping guidelines that should be considered for different crops grown using a CF system.

Table 1: Crop Management Guidelines for CF Production

| | | Maize | Groundnuts | Sunflower | Cotton | Sorghum | Soybeans | Cowpeas |
|--------------|------------|-------|------------|-----------|--------|---------|----------|---------|
| Seed Rate | Kg/ha | 30 | 80 | 6 | 25 | 10 | 80 | 80 |
| Spacing | Rows | 75 | 37.5 | 75 | 75 | 75 | 75 | 75 |
| | In-row | 60 | 4 | 60 | 60 | 10 | 10 | 10 |
| Plant Depth | cm | 5 | 3 | 2 | 2 | 2 | 2 | 2 |
| Plant | Seeds/hole | 3 | 1 | 3 | 4-6 | 1 | 1 | 1 |
| Thin to | Seeds/hole | 2 | 1 | 2 | 1-2 | 1 | 1 | 1 |
| Target yield | Tons/ha | 5-7 | 1.5-2 | 2-2.5 | 2-2.5 | 2-2.5 | 1.5-2 | 1.5-2 |

Four Principles of CF

There are four simple principles that farmers learn at training workshops on CF.

On Time: Timing in agriculture is critical, especially with respect to planting date in low rainfall areas. In Zimbabwe, evidence shows that planting on or before November 25 is ideal to maximize yields. By preparing land during the dry season, farmers are ready for planting when the rains begin.

At Standard: Following specific proven standards or recommended practices inherent to the CF system help to reach the potential yield of a crop. Examples include weed free stands and correct population density, plant spacing and seeding depth.

Minimal Wastage: Many resources are used to produce a crop. Good stewardship of these resources means protecting them for the crop which ultimately will become food for a family. Water, manure and seed must be conserved and used wisely.

Conserving time is also part of CF. Many farmers feel that there is a lot of work that goes into making the planting stations, and rightly so. However, per ton of harvest, CF requires less hand labour, fuel and/or animal power than conventional agriculture, though the labour input per hectare is higher.

With Joy: According to the founder, small-scale farmers must follow all the practices to capture the benefits provided by CF. It is best to start on a small plot with intensive management, applying the principles of high standards, doing things on time and without wastage. If these steps are followed, the farmer comes to the realization that he can produce more food. A feeling of hope results which subsequently turns to joy. The joy then gives added energy for the tasks at hand.

Advantages of CF

1. **Draft power not needed:** Many smallholder farmers have no access to animal traction for cultivating their fields when the rains begin. Those with access to animal traction resources often have to wait until their animals have strength to cultivate the land, or their neighbours have finished with the animals. These delays result in a late planting which consistently reduces yields. By relying on a hoe and completing land preparation in the dry winter months, CF farmers are consistently positioned to increase yields.
2. **Robust farming system:** Studies on the uptake and success of CF indicate that almost all the farmers applying this technology increased their yields. Most

technologies like CF only benefit a subset of better-than-average farmers. Clearly, CF is a robust farming system which lends to its quick uptake by farmers throughout Southern Africa.

3. **Reduced workload on established systems:** Although making the basins requires time and effort, once prepared, the same planting position can be used repeatedly. With each successive season, preparing the basins and weeding should become easier.
4. **Adapted to low rainfall regions:** CF is well-suited to areas with low rainfall given its moisture conservation attributes. These regions are often areas with the greatest food insecurity that suffer chronic food insecurity. CF is therefore an excellent method to improve food security in drought prone areas, especially if these regions will experience reduced and more sporadic rainfall with climate change.

Personal Testimonies

"Conservation Farming allows me to begin my land preparation as soon as I harvest. This allows me to do early planting at the onset of the rainy season, and hence my labour is spread over months." – Mrs. Lupane, a widow caring for her three orphaned grandchildren.

"Tilling the land the conventional way causes many risks, namely compaction of the soil and exposure of the soil to water and wind erosion by removing the earth's blanket." – Mr. Chipunza, Farmer Field School facilitator.

Resources

Farming God's Way website:

<http://www.farming-gods-way.org/>

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For more information on Conservation Farming, contact the Canadian Foodgrains Bank at the address below, or email inquiries to cfgb@foodgrainsbank.ca