

## 5. Nutrition Tools



### 5.1 Problem Tree: Understanding Undernutrition<sup>1</sup> (Part I)

SEASON	Pre-Sowing
OBJECTIVE	To identify immediate, underlying and root causes of undernutrition. To develop an understanding about nutrition in relation to other everyday practices and decisions
TIMEFRAME	1 hour
MATERIALS NEEDED	Large sheets of flipchart paper, markers or pens
IDEAL WORKSPACE	Enough space for participants to stay in groups of 4-5

#### Background

Undernutrition is a multifaceted condition, with a variety of factors that surround agriculture, women's empowerment, and access to food. Understanding the underlying causes of undernutrition will help individuals address the presence of undernutrition. This tool can be adapted for any specific problem that arises from undernutrition as well (see examples below).

#### Steps to follow for the activity

##### PART I: But Why?

► **STEP 1.** Explain to the group that we will start with an exercise to practice determining the root causes of a problem. Divide the group into sub-groups of three or four people.

<sup>1</sup> Adapted from "Understanding Nutrition" in *Nutrition Family Community*. Helen Keller International in Bangladesh and Save the Children, USA. Pp. 51-53. ISBN 978-984-33-1706.



► **STEP 2.** Give each group a simple nutrition question, such as:

- Why do women think they do not have enough breastmilk to feed their babies?
- Why do women feel they do not have enough time to breastfeed their baby as much as is suggested by health workers (10 times per day)?
- Why are mothers responsible for the health of their children ?
- Why do fathers make the decisions about what the family eats?
- Why do some women have “low blood?”
- Why do some babies get sick easily?
- Why are their “lean” months each year?

Make sure that the same statement is given to at least two groups, and that the groups that have the same question cannot hear each other.

Tell the groups that they must determine the **real cause** of the observation by continuing to ask “But why?” until a satisfactory answer is found. It may be useful to do one example as a group before dividing into sub-groups.

► **STEP 3.** Bring the participants back to plenary and ask them to discuss their experience. Were they surprised by their findings? Did groups with the same question have similar explanations?

Explain to participants that we will now use this technique to determine the underlying causes of nutrition problems they experience in their communities.

## PART II: CREATING A PROBLEM TREE

► **STEP 1.** Have participants look around or think about a tree. Then, ask them the following questions:

- What makes trees strong?
- How do they become strong?
- Which parts of the tree do we see?
- Which are invisible?
- Why are the roots of the tree important?

Point out that the roots of the tree give it strength & nutrients, and help it grow. But if the tree has weak roots, the tree may not grow well. Explain that *this session will be about identifying and explaining the root causes of malnutrition. We will create a tree to find out the roots of undernutrition, or a more specific, contextually relevant nutrition problem, which could include anemia, low birth weight, or vitamin deficiency.*

► **STEP 2. Drawing the trees.** Divide the participants into groups of 4-5 participants and give each a piece of paper and markers. Ask the participants to complete the following tasks, allotting them a total of 20 minutes and guiding them with sub-questions:

1) Draw a tree and label the trunk of the tree “undernutrition” (or a more specific, contextually appropriate nutrition issue such as those listed above in Step 1)

2) Draw the branches and leaves (the parts we can see). Label the branches with the signs of undernutrition.



- What are the signs that a child or adult is undernourished?
- What are the results of such undernourishment?

3) Draw in the roots of the tree: Label the roots with the “Causes” of undernutrition.

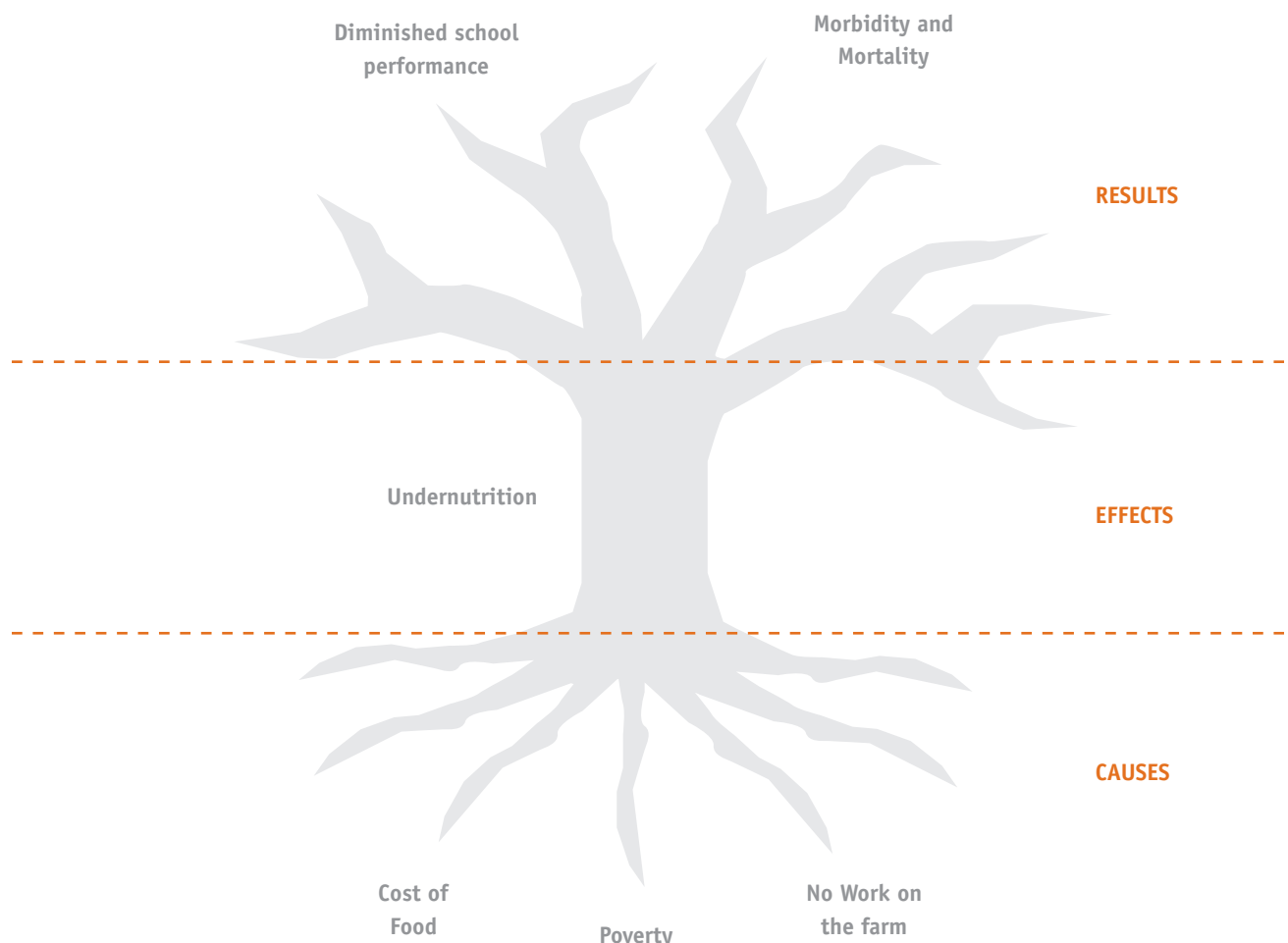
- What are the causes of undernutrition? Causes answer the question why does it happen?

4) Bring the groups together and review:

- What are the signs and signals of malnutrition that are common to all the drawings?
- What are the causes of malnutrition? (Add any details that might be missing.)

► **STEP 3. Reflection.** Summarize the key points:

- Undernutrition is complex. There are basic and root causes that we often don’t see. We can use the “But why?” technique to determine these basic and root causes.
- Undernutrition is dangerous, because a weak body cannot easily fight infections and can fall sick more easily. Once a person gets sick, she or he may become even more malnourished.
- To address undernutrition, we need to look at household level, community level, and even beyond.
  - Ask participants to see if they can pick the root causes that are present at the different levels. Which ones can they address? Which can be addressed through households? Which roots are tied to the community or could be helped through communal action?



## 5.2 Problem Tree: Understanding Undernutrition<sup>2</sup> (Part II)

<b>SEASON</b>	Pre-Sowing
<b>OBJECTIVE</b>	To identify immediate, underlying and root causes of undernutrition. To develop an understanding about nutrition in relation to other everyday practices and decisions
<b>TIMEFRAME</b>	1 hour
<b>MATERIALS NEEDED</b>	Large sheets of flipchart paper, markers or pens
<b>IDEAL WORKSPACE</b>	Enough space for participants to stay in groups of 4-5

### Background

Undernutrition is a multifaceted condition, with a variety of root causes that can be addressed through multiple levels, including the household, community and beyond. The root causes identified in Part I: Creating the Problem Tree can help communities and individuals address the presence of undernutrition.

Therefore, this exercise should be done *after* participants have completed Part I, Creating the problem tree. This exercise will help participants link the immediate causes of a nutrition problem discussed in Part I with

### Steps to follow for the activity:

► **STEP 1. Review and Adding New Material.** Show participants the last session. Remind them of the signs and causes of undernutrition (or whatever nutrition issue they chose to address) and ask them if they have any additional signs or causes to add to the tree.

► **STEP 2 & 3 Combined. Discussion.** Working with the drawings from Part I, look at each cause and ask, “But why” to help participants identify the underlying and root causes. For example:

*A child is terribly thin, her bones stick out, and she looks like an old woman. Her hair is thin, her stomach sticks out, and she is sick most of the time. Point to the drawings and indicate how the trees have sub-roots and deepest roots. Ask participants to label these levels.*

<i>Why is she undernourished?</i>	<i>She does not eat enough</i>	<i>Poor diet = Immediate cause</i>
<i><b>But why</b> does she not eat enough?</i>	<i>There is not enough food in the home</i>	<i>Food shortage = Underlying cause</i>
<i><b>But why</b> is there a shortage of food?</i>	<i>The family has not enough land</i>	<i>Insufficient land = root cause</i>

Rearrange the root labels, so that the root causes are the lowest on the drawing.

<sup>2</sup> Adapted from “Understanding Nutrition” in *Nutrition Family Community*. Helen Keller International in Bangladesh and Save the Children, USA. Pp. 51-53. ISBN 978-984-33-1706.



For example:

Cause: Aisha is undernourished because she does not eat right.

- *Why does she eat poorly?*
  - Because of limited crop diversity
- *Why is there a limited variety of crops?*
  - Because there are no seeds available
- *Why are there no seeds for other crops?*
  - Because there is no seed supplier
- *Why is there no local seed supplier?*
  - Because the community is not organized

► **STEP 4. Nutrition inputs.** Using the diagrams below, talk through the following key points.

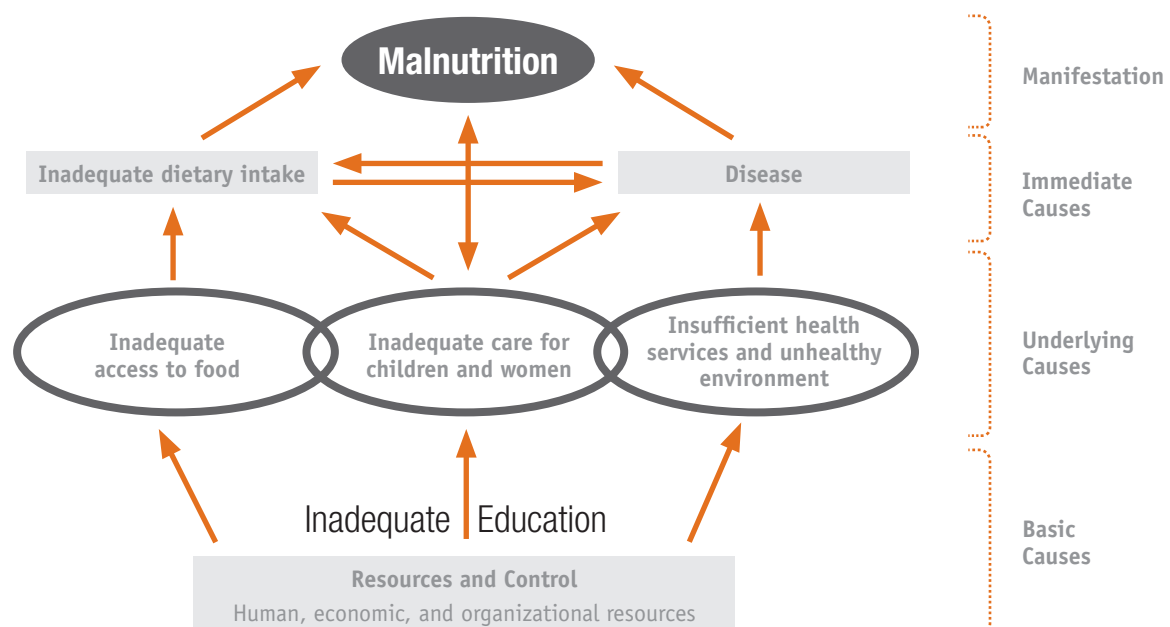
### 1. Good nutrition

Good nutrition means eating the right quantity, quality and diversity of foods and getting the care we need to keep our bodies strong and healthy and prevent us from getting sick. When a person is undernourished, there are usually numerous reasons. Often, these reasons are connected. If a child is malnourished, the father may blame the mother for not feeding the child enough. Yet the father may not be giving the mother the right variety of foods to cook. Maybe he cannot afford it, or he does not have enough land.

It is important to do a proper analysis and not blame one person. In many cases, the solution to one person's malnutrition will involve the whole community.

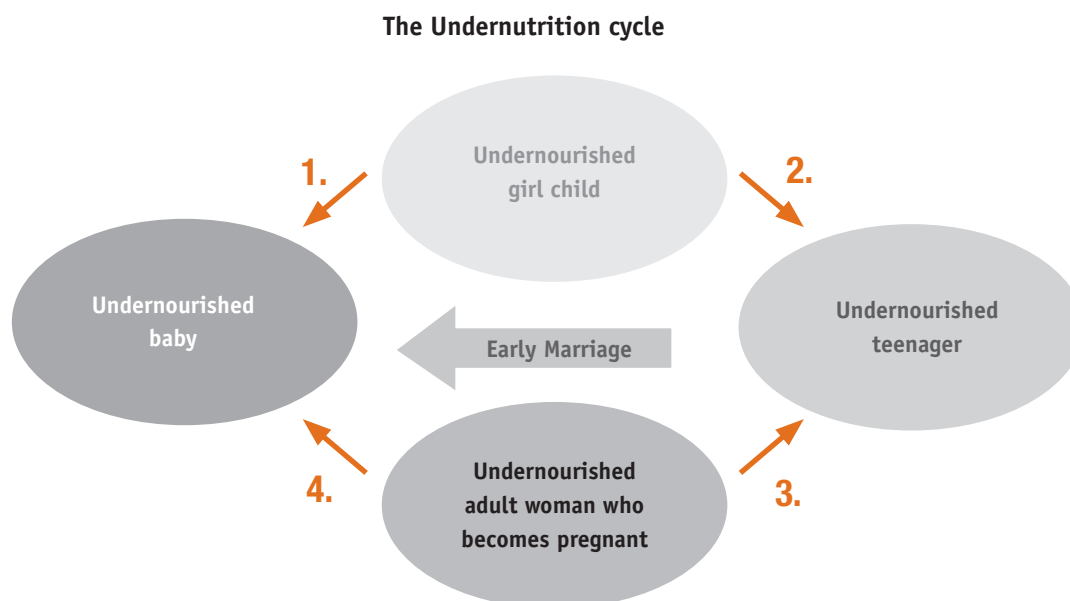
### 2. Impact of malnutrition:

Malnourished children have slow mental and physical development that affects their thinking and their physical growth. Malnutrition also weakens the body's ability to fight illness and infection. When malnourished adults are sick, they can't perform their daily work, which decreases their productivity and incomes, which can lead to less ability to buy or grow healthy foods.



### 3. Undernutrition cycle:<sup>3</sup>

Malnutrition is a vicious cycle. Young girls who are poorly nourished are more likely to give birth to low-birth-weight babies, who are also more likely to be undernourished, stunted, or to die in infancy. Girls who are married at a young age are also more likely to have low-birthweight babies. Good nutrition—especially for girls and women--needs support in all stages of the lifecycle.



### 4. Agriculture and nutrition:

Agriculture and nutrition are very closely interrelated. Well-nourished farmers are able to be more productive. Intercropping nutrient-rich vegetables or rearing small animals can improve the variety and quality of foods that are produced and eaten at the household level, saving incomes. Using good agriculture and market practices also increases yields, which gives more income to invest in quality food.

Good agricultural production alone doesn't lead to good nutrition. Both parents need information on good nutrition to discuss the importance of investing in good food and care to nourish productive and healthy families.

► **STEP 5. Reflection.** Summarize the key points while asking participants to reflect on the session:

- Undernutrition is complex. There are basic or root causes that we often don't see.
  - Were there any root causes the group identified that are not seen every day?
- Undernutrition is dangerous, because a weak body cannot easily fight infections and can fall sick more easily. Once a person gets sick, she or he may become even more malnourished.
- To address undernutrition, we need to look at household level, community level, and even beyond.
  - What are some reasons that addressing these root causes is difficult?

Looking at the problem trees, ask the participants:

- How can we address some of the underlying causes of malnutrition?
- Where on the problem tree can we, as farmers, intervene?
- What resources do we have to address some of the problems?

<sup>3</sup> Adapted from: *Nutrition-Sensitive Agriculture. Participant Manual for Agriculture Development Agents.* (2012.) Produced by Save the Children USA, through USAID Agreement Number AID-663-A-11-00017.



## 5.3 Food Groups and Nutrition<sup>4</sup>

<b>SEASON</b>	Pre-Sowing
<b>OBJECTIVE</b>	To understand the different food groups and the importance of having a diverse diet. To understand how to put together a balanced meal
<b>TIMEFRAME</b>	1 hour (can also be divided into two 30-minute sessions)
<b>MATERIALS NEEDED</b>	Food cards (cards or pieces of paper with names or pictures of local foods) or poster with pictures of local foods Small pieces of paper, with the names of diverse foods written on them (one for every participant) A list of the foods that grow in the area and their nutrient content Flip-chart and markers A picture of a local fire or cook stove
<b>IDEAL WORKSPACE</b>	Enough space for the participants to stay in groups of five

### Background

A nutritious diet is made up of foods from each of the different food groups: carbohydrates, fats, proteins, and vitamins and minerals. In order to have healthy bodies, a family needs to have an understanding of what each of these food groups is so that they can do their best to eat appropriate amounts of each group. Each group plays a very important role in how our bodies work, so eating nutritious meals is key to improving overall health.

### Steps to follow for the activity

► **STEP 1. Introduction:** Ask the group:

- What do you like to eat best in different seasons?

Take a few examples, until people are excited about food and eating. Taste is important to enjoy what we eat, but to be healthy we also have to eat food that gives our bodies the nutrients to keep going.

- Ask: What do you need to make a fire for cooking lunch?

Take a few responses and point out that for the stove, you need kindling, a match, fuel, and air. When the fire has lots of dry wood and air, it burns well and makes coal. When it runs out of fuel, or has poor-quality fuel it burns down. Our bodies are the same: They need fuel to keep going, and if the food we eat is not enough or not right for us, we get tired and weak. The fuel for people is in the nutrients in the different foods we eat.

► **STEP 2. Input on nutrients:** Remind the group that:

4. Adapted from "Understanding Nutrition" in *Nutrition Family Community*. Helen Keller International in Bangladesh and Save the Children, USA. Pp. 51-53. ISBN 978-984-33-1706.



- Our bodies require a variety of nutrients to stay healthy, grow, and fight off sickness.
- All foods contain a mixture of nutrients. Each food has a different amount of each nutrient. To stay healthy, people must eat a variety of different foods every day so that they get some of each nutrient.
- Each type of nutrient has a different function for the body: For example, carbohydrates and fats give us energy; proteins help us build muscles, skin, blood, and bones; and vitamins protect us from infection and sickness. Show the group the drawing included in the **Annex 5A. 3** entitled “Diagram of Food Benefits on Body.”

► **STEP 3. Input on food groups:** Using food cards (names or pictures of local foods on cards or pieces of paper) or a food poster created for the local context, introduce the different food groups. Illustrate your talk by holding up/pointing out pictures and asking participants to name other examples of food belonging to that group.

- *Carbohydrates:* These are sometimes called “Go” foods. These foods give our body energy to move, work and think. We get most of our carbohydrates from grain crops such as rice, wheat, maize, millet, cassava, potatoes and sweet potatoes. We get the greatest portion of our daily meals from carbohydrates.
  - Ask: What are some of the foods you eat every day to give us energy?
- *Proteins:* Proteins can be called, “Grow foods,” or body-building foods, because they help our bodies grow, build muscle, & repair themselves. They are found in animal foods (meat, eggs, milk, fish) but they also are found in vegetables like beans, lentils, & peas.
  - Ask: What are some of the foods you eat every day to help us grow and build your bodies?
- *Vitamins and minerals:* Vitamins and minerals are also called micronutrients. They are protective foods that help our bodies “glow.” Our bodies need small amounts of these to help our bodies work properly. These fight infections and protect our skin & eyesight. We become sick if we do not get enough vitamins and minerals. Vitamins and minerals are concentrated in deep-colored vegetables and fruits (dark-green leafy vegetables, orange carrots or sweet potatoes and pumpkin), and also in egg yolks and liver. We need to eat as many diverse protective foods as we can.
  - Ask: What are all the different types of protective foods you eat every day?
- *Fats:* Fats and oils provide a lot of concentrated energy that we can store. Fats are also very important because they help the body store some of some vitamins and minerals you eat. Fats are important for the development of young children.
  - Ask: What are the foods you eat that contain fats?

► **STEP 4. Energizer game – Food Stew:**<sup>5</sup> This is a short exercise designed to help participants practice identifying which food groups certain items belong to, and creating a healthy meal using foods from each food group.

- Invite participants to stand in a circle, then distribute the food cards so that each participant has one. Tell them that they should not show anybody else their card.
- Walk around the circle and call out different food group names.
- All participants holding a card belonging to that food group should stand together inside of the circle.
- Repeat with other food groups until all categories have been called.
- When you call out “nutritious meal,” ask participants to form groups in which all of the food cards are represented. Ask one participant to explain how their group makes up a “nutritious meal.”

► **STEP 5. Discuss**

- What have you learned today?
- What foods do you eat that are most nutritious?
- What changes might you make to your diet to ensure you eat enough nutritious foods?

<sup>5</sup> Adapted from: Welbourn, Alice. *Body Language*. (1995). Stepping Stones. Pp .58.





## 5.4 The Healthy Plate<sup>6</sup>

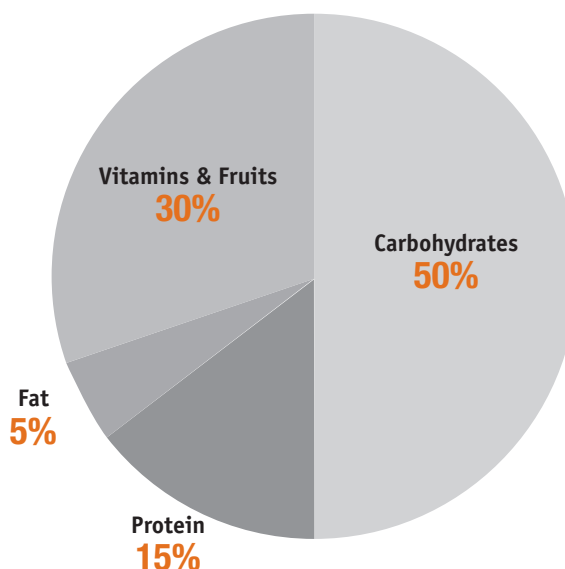
<b>SEASON</b>	Pre-Sowing
<b>OBJECTIVE</b>	To understand the different food groups and the importance of having a diverse diet. To understand how to put together a balanced meal
<b>TIMEFRAME</b>	1 hour (can also be divided into two 30-minute sessions)
<b>MATERIALS NEEDED</b>	Food cards (cards or pieces of paper with names or pictures of local foods) or poster with pictures of local foods If you don't have food cards, use small pieces of paper, with the names of diverse foods written on them (one for every participant) A list of the foods that grow in the area and their nutrient content Flip-chart and markers
<b>IDEAL WORKSPACE</b>	Enough space for the participants to stay in groups of five

### Steps to follow for the activity

► **STEP 1. Introduction:** Review key messages from the previous session. Tell participants that our bodies and families need many different types of nutrients, which are found in different quantities in the foods we grow and cook with. The way we group, harvest, and prepare foods also affects the amount of nutrients we get from the foods we eat.

► **STEP 2. Making a balanced meal:** Explain that the amount we need to eat depends on our age and time of life. In general, a healthy meal should be about half “go foods” (carbohydrates), about 15% protein, a little fat, and all the rest of the plate should be different vitamins and fruits. (Draw a circle like the one below to illustrate the proportions.)

Divide the participants into smaller groups of 4-5 participants. Using the food-cards or pieces of paper from the previous exercises, have the participants draw the plate illustrated below on a flip-chart. In groups, have them sort the cards they are holding into the appropriate segments on the plate, until they have created a balanced meal. If they do not have enough cards, they can create their own cards or swap with other groups.



6. From, *Healthy Harvest, A training manual for community workers in growing, preparing, and processing healthy food*. Produced by Food and Nutrition Council of Zimbabwe, the Food and Agriculture Organization (FAO) and the United Nations Children's Fund (UNICEF). ISBN: 0-7974-3209-4.



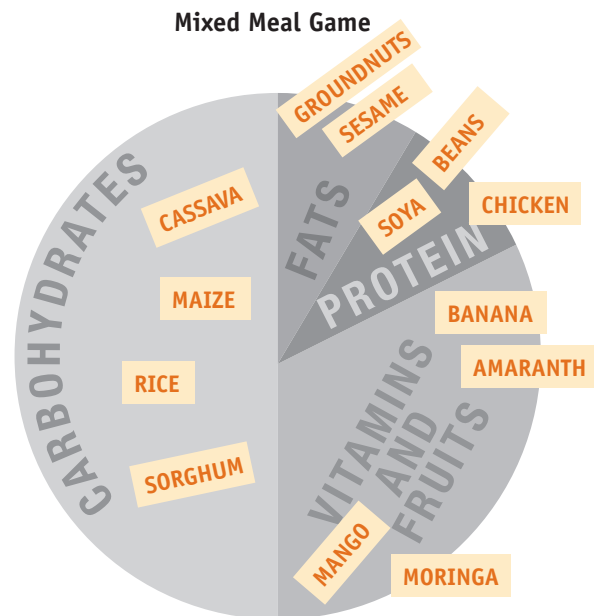
Bring the groups together to discuss:

- Was everyone able to create a balanced, tasty meal?
- How many meals did we create?
- Were they meals that you would like to eat?
- Were they meals that you eat every day?

Explain that it is not necessary to eat all nutrients in one meal, but if we eat a variety of foods in on day, we can get the nutrients that the body needs.

► **STEP 3. Discuss the local availability of foods.**

- Why do some families eat the same type of food every day?
- Which of these foods (in our balanced plates) do you grow? In which season?
- Which of these foods do you eat, but not cultivate?
- What problems arise if we do not have different types of ingredients in our meals?
- How can we encourage families to get a more varied diet to get more of these nutrients?
- What can we grow to be able to prepare a more diverse diet?
- What food habit can we change to get a more nutritious meal?



Repeat the key points:

- Good health starts with eating properly, which means getting enough of the right kinds of foods. What we eat and drink every day makes up our food habits. We learn most of our habits from our families.
- Different foods contain different nutrients that our bodies need to stay healthy.
- Nutritious foods in a healthy diet are important because
  - They protect against diseases
  - They keep us full
  - They help us grow well
  - They give us energy and thinking power

► **STEP 4. Homework:** Ask participants to think up a nutritious recipe to share and bring in for the next session.



## 5.5 Growing Nutritious Food: Planning a Home Garden<sup>7,8</sup>

<b>SEASON</b>	Sowing/Weeding
<b>OBJECTIVE</b>	To understand the benefits of growing a home garden; to identify nutritious crops and when they can be planted; to design, plan, and implement sustainable gardens
<b>TIMEFRAME</b>	1 hour per session
<b>MATERIALS NEEDED</b>	Flipchart and markers. A contextualized list of the nutrients in local crops. If possible illustrations of intercropping and various home gardens
<b>IDEAL WORKSPACE</b>	Enough space to form circles & for participants to stay in groups of 4-5

### Background

As participants have learned, eating a variety of food groups is key to having a healthy body and carrying out all bodily functions. In order to have access to these foods, a family or community may specifically plant a variety of foods in a garden to be able to grow and eat them. In order to plan this garden, it is important to understand the benefits of such a home garden, as well as understand how sustainable gardens work.

### Steps to follow for the activity

► **STEP 1. Introduction.** Spend a few minutes reviewing the previous session. Remind participants that there are foods that make us “go,” others that make our bodies “grow,” and some that protect our bodies, making them “glow.” Ask participants if they remember examples of which foods fall into which category.

► **STEP 2. Explain.** Tell the participants that today we will be learning about how to set up a nutrition garden to be able to grow and consume more nutritious family meals.

Growing our own healthy food can help us to make sure that our families have healthy, balanced diets for optimum health and growth. Having our own nutrition garden can help us save money and generate an income from selling surplus produce.

Ask the group:

- What are some of the factors you have to consider for planning a garden?

Collect answers from the participants and summarize some of these, below:

7. From *Healthy Harvest, A training manual for community workers in growing, preparing, and processing healthy food*. Produced by Food and Nutrition Council of Zimbabwe, the Food and Agriculture Organization (FAO) and the United Nations Children’s Fund (UNICEF). ISBN: 0-7974-3209-4  
8. From CRS (2008), *Homestead Gardening: A Manual for Program Managers, Implementers, and Practitioners*. Baltimore: CRS, 2008.



**Space.** The amount of space around a house will determine what techniques can be used and how many vegetables can be produced. Even houses with small plots can build homestead gardens. With careful planning, you can make good use of the space available by alternating rows of vegetables that need a lot of space with crops that do not. Additionally, you can use old tires cut open and flipped inside out. Fill them with nutrient rich soil to grow certain crops.

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**Shade versus full sun.** All plants need sunlight to grow, but too much sun and heat can dry out the soil and burn plants. Some crops like shade, while others prefer full sun. Knowing how much sun and shade your plot has can help you select the right seeds for your land conditions.

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**Access to water.** Water is still a vital ingredient of any garden. Plants need to be watered regularly, especially in dry areas. Therefore, access to water must be considered when planning a homestead garden.

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**Household labor capacity.** Building and maintaining a homestead garden requires additional work. For busy women farmers, it is important that family members understand the importance of the garden and provide support. Developing an action plan can make it clear what support is needed and how other family members can best contribute.

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► **STEP 3. Mapping the space (20 minutes).** Explain: Planning is an important step for a successful garden. Drawing a map is one easy way to visualize the potential of our land resources and the types of crops and techniques that will be appropriate.

Show a sample of a garden map, such as the one below. Explain that the maps are not works of art, but they should use symbols to show all of the existing resources around the house, including:

- Water sources, trees
- Existing crops or cropping space
- Fences
- Slopes
- Animals
- Sunny and shady areas

Divide the participants into small groups of 4-5. If the group is planning to make a community-based demonstration farm, some can work on a map of the collective space. Other groups can do individual maps, using one of their group member's homes as the example.

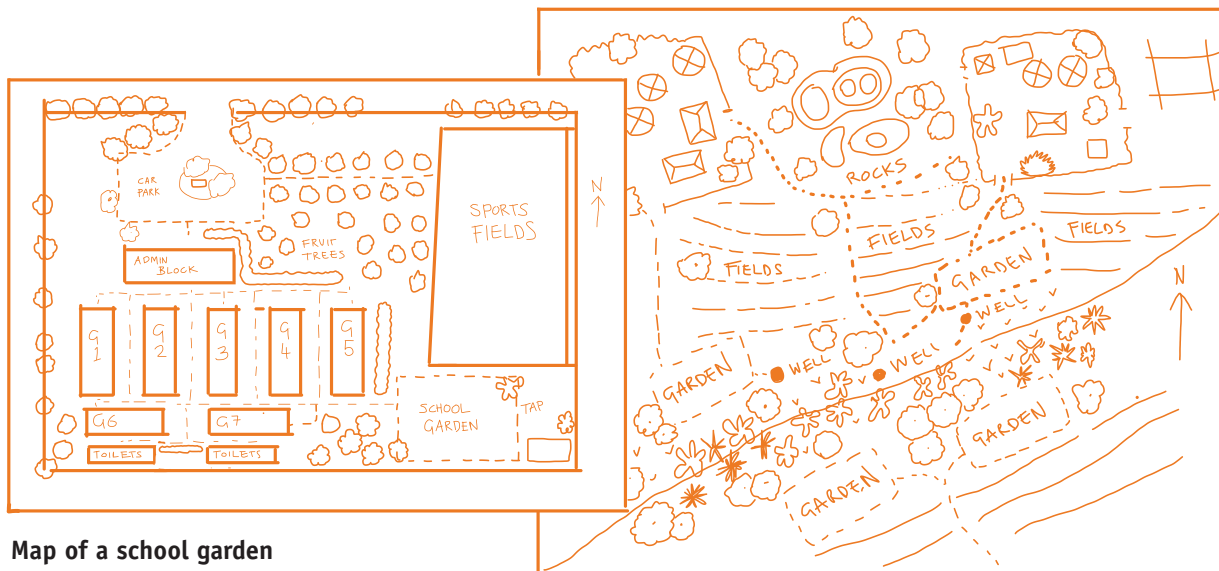
Provide each group with markers and flip-chart paper and allow 20 minutes for the mapping. Example maps are below:

► **STEP 4. Summarizing goals, resources, and constraints (30 minutes).** At the end of the mapping, ask each group to explain the specific goals for their garden, and write them on the map, (if possible).

Examples of production goals:

- To improve my family's nutrition
- To protect soil and water resources through good growing
- To generate income from selling surplus
- To have food all year round and in the lean season, by drying and preserving





Map of a school garden

Have each group present the maps, and help each group to summarize the *resources* and *constraints* that their particular land has, thinking about:

- Space—how much land is available to garden? Is it available all year round?
- Water access—where would water come from? Is it available all year round?
- Soil type and quality—what grows best here?
- Shade and sun—how much sun/shade does the space get?
- Ridges, slopes, fencing
- Family support – Who is likely to support with the garden?
- Pests or animals – is the space protected from chickens, animals, children? Is fencing needed?

► **STEP 5. Input: Different techniques for making the most of your land.**

Explain to the participants that every garden will be different, depending on the particular goals, the quality of the land and resources, the time you have, and the nutrients that you want to incorporate into the diet.

The next time we meet, we will work on planning what to plant to make the best use of your space and to grow the most nutrient-rich diet possible.

CONSTRAINTS	RESOURCES/OPPORTUNITIES



## 5.6 Cooking Demonstrations: How to Cook Nutritious Food for Your Family<sup>9</sup>

<b>SEASON</b>	Vegetative Stage
<b>OBJECTIVE</b>	To gain skill in cooking nutritious foods; To incorporate lessons learned in how to cook a meal with diverse food groups; To develop recipe options for complementary feeding for children 6 – 24 months
<b>TIMEFRAME</b>	1 hour
<b>MATERIALS NEEDED</b>	Recipes (see sample recipe 5A.1), Cooking utensils, Ingredients for demo recipe, List of diverse foods by group, food cards to explain different food groups you are using in the recipe
<b>IDEAL WORKSPACE</b>	Enough space for both standing and sitting

### Background

Cooking demonstrations are practical sessions where community members, particularly mothers and fathers, learn how to prepare a diversified diet.

### Steps to follow for the activity

► **STEP 1. Instructions for Facilitator.** When cooking demos are planned consider the following:

- Conduct the demo where farmers can convene (Farmer Field School, mothers groups, production groups, etc.)
- Invite and encourage men to attend the demo and tell female group members to bring their husbands. Have key messages in mind that are specific to fathers and husbands that relate to their responsibility for helping their children be healthy and strong.
- With male participants, encourage their participation by giving them a job during the demonstration: place the spoon in their hand to add ingredients or stir, ask them what they do and do not like eating, or have them bring an ingredient
- To encourage community members for this practice, ask participants to share how they prepare a certain dish (name the dish based on local foods)
- Encourage participants to ask questions during the practice
- When the food is cooked, encourage everyone to try it and feed it to their accompanied young children.

► **STEP 2. Input:** While babies should be exclusively breastfed up to 6 months, children 6 up to 24 months need to slowly adjust to the incorporation of family foods into their diet, known as complementary feeding. When introducing babies to food, the frequency, amount, texture, and variety needs to be appropriate for the child's age and needs. All other children and adults need to eat a healthy, diversified diet each and every day. Always remember that hygiene, including hand washing at important times, allows us to prepare healthy meals that will not make our family sick.

9. Adapted from: Healthy Harvest: A training manual for community workers in growing, preparing, and processing healthy food. FAO and UNICEF. ISBN: 0-7974-3209-4. Available from <http://motherchildnutrition.org/healthy-nutrition/pdf/mcn-healthy-harvest.pdf>



Ask the participants:

- *What types of food can you feed young children?* Mention the recipe below for porridge as a complementary food to breast milk.
- *What types of food should you feed your family daily?* [Discuss the different food groups again here, referring to session 5.4 The Healthy Plate]
  - Ask male participants which of these foods they like and do not like

Conduct cooking demonstration mentioning the different food groups as you prepare and why they are important. You can use the food cards from the previous sessions to highlight how many different food groups you are using. Follow the sample recipe below or create your own using local foods. Make sure to emphasize:

- Use different food groups in one meal.
- Wash your hands and all foods before preparation.
- Cooking foods can kill bacteria, but cook vegetables for less than 8 minutes to preserve vitamins.
- Eat plenty of fruit (uncooked) each day.
- Drink 8 + glasses of water (boiled or filtered) each day. Avoid soda and sugary drinks.
- Avoid eating too much salt or sugar.

► **STEP 3. Discussion:** Ask:

- Can you prepare this kind of food at home?
- Can you tell me the importance of consuming this kind of food for children and adults?
- What are the difficulties/barriers to preparing nutritious meals?

**Preparing healthy meals with a budget.** Ask:

- What are some of the most expensive foods to buy? (meat, milk, dairy products, fruit)
- How can you save money but eat healthily?
- What are the cheapest sources of protein? (beans, groundnuts, soya, kapenta, caterpillars, etc)

Discuss the following:

- Eating staple foods only may be cheaper, but you may end up spending more money on medicine for sick children later; if children don't get enough diverse nutrients, they are more prone to illness.
- Avoid trying to save money by buying food that is old or smells bad or that is processed.
- Grow as much as you can in a home garden or produce protein with your own livestock.
- Do you have any other questions to ask?

► **STEP 4. Reflection:** How can you plan meals for tomorrow? What do you need to think about?

- What food is ripe in the garden?
- What ingredients do you have? Can you trade with neighbors?
- How much money do you have to buy extra ingredients?
- Is there water, fuel or electricity to cook the food?

► **STEP 5 Summarize the key points:**

- Babies, young children 6 – 24 months, and older children/adults need to eat different foods.
- 6-24 month old children need a diverse diet in differing amounts, frequency, and consistency over this period. Their diets should also include complementary foods such as porridge.
- All other family members need to a diverse diet of foods.
- Budgeting for healthy meals can be done: grow your own, have livestock, trade with neighbors, save money for meat



## 5.7 Exclusive Breastfeeding and Workload Challenge<sup>10</sup>

<b>SEASON</b>	Harvest
<b>OBJECTIVE</b>	<p>To make visible women's many responsibilities working in the field, caring for their families, and trying to keep their babies healthy by exclusively breastfeeding for the first 6 months.</p> <p>To explore how responsibilities within a household may be shared amongst household members.</p>
<b>TIMEFRAME</b>	1 hour
<b>MATERIALS NEEDED</b>	<ul style="list-style-type: none"> <li>• Prepared flip chart paper divided into blocks or columns with headings of duties such as 'household maintenance,' 'child care,' 'food production and preparation,' 'farming'</li> <li>• The case study or your own story</li> <li>• Small pieces of paper or post-its</li> <li>• Markers/crayons</li> <li>• Handout: 5A.2 Benefits of exclusive breastfeeding</li> </ul>

### Background

Women have many daily activities to carry out to keep their household functioning. However, women often have to forego many important activities in order to achieve prioritized activities, such as fetching water or preparing food. One of these often foregone activities is exclusive breastfeeding, which is extremely important for the life-long health of a child. If families can work together to share the household workload, women will have more time to accomplish all of their household tasks, including exclusive breastfeeding and raising healthy babies. Realizing the importance of exclusive breastfeeding should encourage a dialogue between families to better equalize the household workloads and prioritize exclusive breastfeeding.

### Steps to follow for the activity:

► **STEP 1. Introduction.** Discuss workloads of family members. If participants have completed the Pile Sort activity (found in the Gender section of this handbook), remind them of the different workloads that each family member has. Ask participants:

- Please describe the activities of a female farmer.
- What roles and responsibilities does she have daily? [Examples: farming, home-gardening, taking care of family members, making healthy meals, laundry, etc.]

Tell participants: this activity will look at women's many roles and responsibilities and explore how household members can share them.

10. Adapted from "Exclusive Breastfeeding" in *Nutrition Family Community*. Helen Keller International in Bangladesh and Save the Children, USA. Pp. 73-75. ISBN 978-984-33-1706.





► **STEP 2. A Story with Gaps.** Tell a story that describes a woman's day with all her roles and responsibilities. You can either create this story, or read the stories included in this guide.

Make the storytelling interesting and entertaining by acting out some of the actions and by changing your voice when the characters in the story speak. You may also want to substitute character names and locations for local names and places. At times, stop and ask participants a question. In this way they become part of the storytelling.

**The story of [female name from country – Arafa in this example]. Use appropriate country names.**

*Arafa woke up when the baby cried again. When she heard the birds singing she knew the night was over. The baby had woken a lot during the night and she was tired.. As she fed the baby, she was thinking: baby Jamil was 3 months old and growing, maybe he needed more than breast milk? Later when the counselor came, she would have to ask her about this.*

Ask the group:

- How long should you exclusively breastfeed a baby?

Use this opportunity to discuss the benefits of exclusive breastfeeding of infants up to 6 months of age. Use the “Benefits of Breastfeeding” guide found in the **Annex 5A.2** to help participants understand the benefits to the baby, the mother, and the family. For groups of women-only participants, go over the key messages for mothers. For men-only groups, discuss the messages for fathers.

For both groups, reinforce the messages about exclusive breastfeeding:

- Breast milk fortifies babies against sickness
- Babies need **ONLY** breast milk for the first 6 months. For a baby to get water, the mother should drink plenty of water. The baby will get what it needs through breastmilk.
- Babies need complementary food such as porridge from 6 months onward
- Mothers should breastfeed whenever their baby wants to feed (at least 10 times a day) during the day and night

Continue the story of Arafa.

*“Next to her, Arafa could feel her daughter Damisi stirring. If she got up quietly now she could get a start on the day before everyone made demands on her. At least the rain had stopped so maybe the kindling was dry. As Jamil drifted off to sleep again she put him next to his father and slipped out.”*

Ask the group:

- What activities do you think Arafa did while everyone was still asleep?

Collect suggestions. Ensure the list includes the many ‘invisible tasks’ that women perform and that are not recognized by others as ‘work.’ (For example, fetching water, attending to the household garden, lighting the fire, preparing take-away lunches.)

Continue the story of Arafa.



*“Arafa just had the fire going and was busy preparing the morning meal for the children when the baby woke up again and cried. He needed to be cleaned and changed. Just then Damisi arrived and wailed that she could not find her clothes for school. Arafa gave her [local food meal] and promised to help find her school clothes as soon as she had cleaned up Jamil. She realized that there was little water left and she would have to go fetch some as soon as possible. But before she could go her husband wanted his breakfast as well...”*

She barely had time to take a bath herself before the counselor came to visit. Arafa told her about Jamil and how hungry he seemed. The counselor told her she must feed him at least 10 times a day. Arafa tried to listen carefully but her mind began to wander. She had to bring water to the fields and complete the weeding. She had to cook lunch for her daughter and herself. How was she going to find the time to breastfeed Jamil more often? In her mind she thought of all the things she still had to do until the day was done.”

Ask the group:

- What are all the activities that Arafa still had to do during the rest of the day?

Ask each of the participants to name one activity.

- Some examples might include: seasonal agricultural tasks, breastfeeding, preparing nutritious food for the family, feeding small children or the sick/elderly, caring for other children, dealing with markets, home gardening, rearing poultry, collecting water, personal hygiene, cleaning the house, washing clothes, washing dishes.

► **STEP 3. Drawing Activity.** Distribute pieces of paper or post-its and crayons or markers and give the following instruction:

- Draw a picture of one (or more) of the activities women like Arafa engage in every day.

Assist participants as necessary and be sure they have a variety of pictures.

► **STEP 4. Sorting and Reviewing Activities.** Collect the drawings and ask participants to help you sort them into categories on the flipchart. Ask questions such as:

- Which activities have to do with food growing and preparation?
- Which activities have to do with agriculture- related work?
- Which activities have to do with childcare?

Review the lists and ask:

- Which activities are the most energy and time consuming? How/why?
- Which activities are ‘invisible’ – no one acknowledges them?
- Which activities are often difficult to fit in and sometimes are left out?

Look at the lists and ask:

- Which activities could someone else in the home do?

Collect those pictures that display activities that someone else could do and lay them out in a row.

► **STEP 5. Story Telling.** Resume the story of Arafa.



*"Arafa was feeling very tired. When baby Jamil smiled at her, she smiled back, feeling guilty; she needed to talk to him more and play with him. But when she got sick she was exhausted and took care of him without joy. She wondered if she should even breastfeed him when she was sick. She also remembered that yesterday, when Damisi wanted to help her do the washing, she had chased her out of the way, even shouted at her. It was not the children's fault that she was so tired. If only someone would help her with the many tasks!"*

Make a dramatic pause and act out what happened:

*"At that moment there was a great flash of light and a big wind blew into her face forcing her to close her eyes – when she opened them again..."*

Pause (if necessary, tell participants to suspend reality for a moment and dream...) then say:

*"...the magic wind had blown away the old and in the new, and all the people living in her home shared her responsibilities. "*

► **STEP 6. Discussion.** One by one, pick up the pictures laid out in the row and hold them up.

Ask the group:

- Who in the household took over this activity?

► **STEP 7. Reflection.** Ask the group:

- How could you begin to ask members of your family for help?
- With which activities could you ask your husband to start helping?
- What could your other children help with?

**Summarize the key points:**

- Exclusively breast feeding your infant is necessary for his/her health for the first 6 months. This means you ONLY give breastmilk and as often as your baby wants it.
- Women have many activities to do daily and do not always have time to breastfeed 10 times a day. Families can work together to share the workload so that women have the time to accomplish all tasks and raise healthy babies.



## 5A.1 Cooking Demonstrations

### Sample Recipes

(These samples can be changed depending on the staple food in the area)

#### SNOW BALLS

INGREDIENTS	METHOD
1 cup soya flour	1. Mix 3 cups of mashed bananas, 1 cup mgaiwa and 1 cup of Soya flour in a bowl.
3 cups mashed ripe bananas	The mixture should form a thick batter. If the mixture is too stiff add water.
1 cup mgaiwa	2. Heat cooking oil in a frying pan and drop batter by table spoon into the oil.
Pinch of salt	3. Fry until both sides are golden brown.
Cooking oil	4. Remove from oil.
	5. Serve with tea or give it to school children as a packed meal.

#### SOYA MILK

INGREDIENTS	METHOD
Soya beans 2 cups	1. Inspect soya beans thoroughly, discard bad ones and remove foreign matter.
Water 6 cups	2. Wash at least 4 times or until the water is clean.
	3. Boil enough water to cover the beans for 20-25 minutes.
	4. Drain the hot water and cold water, then remove from water and dehull.
	5. Put beans into a blender immediately grind using part of the drinking water.
	6. Mix paste with remaining water, put in clean white cloth bag and fold.
	7. Squeeze out as much filtrate as possible, leaving a lump cake in the cloth.
	8. Cook filtrate milk for 15-20 minutes and add salt and sugar.
	9. Remove from fire and use.



## How to get a diversified diet

All food groups below are important and should be eaten in combination in order for them to complement each other in increasing dietary intake and utilization of various nutrients by the body.

One should eat a variety of foods at every meal for a diversified diet. You should eat at least 4 food groups every day to stay healthy. For example:

STAPLES +	LEGUMES & NUTS +	VEGETABLES +	ANIMAL FOODS +	FATS +	FRUITS
Rice	Lentils	Kale	Egg	Sesame seeds	Mango
Millet	Peas	Spinach	Fish	Groundnuts	Banana
Sorghum	Ground beans	Cabbage	Meat (beef, lamb, poultry)	Cooking oil	Papaya
Maize	Chick peas	Lettuce	Milk and dairy products	Butter	Guava
Barley	Broad beans	Mushroom		Sunflower seeds	Pineapple
Wheat		Pumpkin		Pumpkin seeds	Orange
Cassava		Eggplant			Lemon
Yam		Broccoli			Avocado
		Sweet potato			
		Carrot			
		Moringa			



## 5A.2 Benefits of Exclusive Breastfeeding

Saves infants' lives

### FOR BABY

When baby is put to breast immediately after birth, it gets the yellowish milk (colostrum) that helps protect baby from many diseases.

Is everything baby needs for first 6 months of life

Protects baby against illness and disease

Is always clean and does not need to be prepared

### FOR MOTHERS

Helps mother recover after delivery. When baby is put immediately to breast after birth, it helps to expel the placenta and reduces bleeding.

Frequent suckling prevents engorgement

Is economical

Reduces the mother's workload (does not need to prepare)

Healthy for mother

### FOR FAMILY

No expenses for buying formula

Mothers and children are healthier so fewer medical expenses

Time is saved

Births are spaced thanks to the contraceptive effect

### SAMPLE COUNSELING MESSAGES FOR MOTHERS

1. Mothers, please give breastmilk as soon as the baby is born to make it healthy and not cry too much. Make sure to give **ONLY** breastmilk to stop baby from getting sick.
2. Mothers, give the baby only breastmilk for the first 6 months, **NOTHING** else to drink (not even water) or eat, for it to grow strong, healthy, and smart.
3. Mothers, please give breastmilk to your baby anytime the child wants it (at least 10 times each day) to produce enough milk and provide your baby enough food to grow healthy and strong. Please empty one breast before offering the other one for the baby to be satisfied and grow big and strong.

### SAMPLE COUNSELING MESSAGES FOR FATHERS AND FAMILY MEMBERS

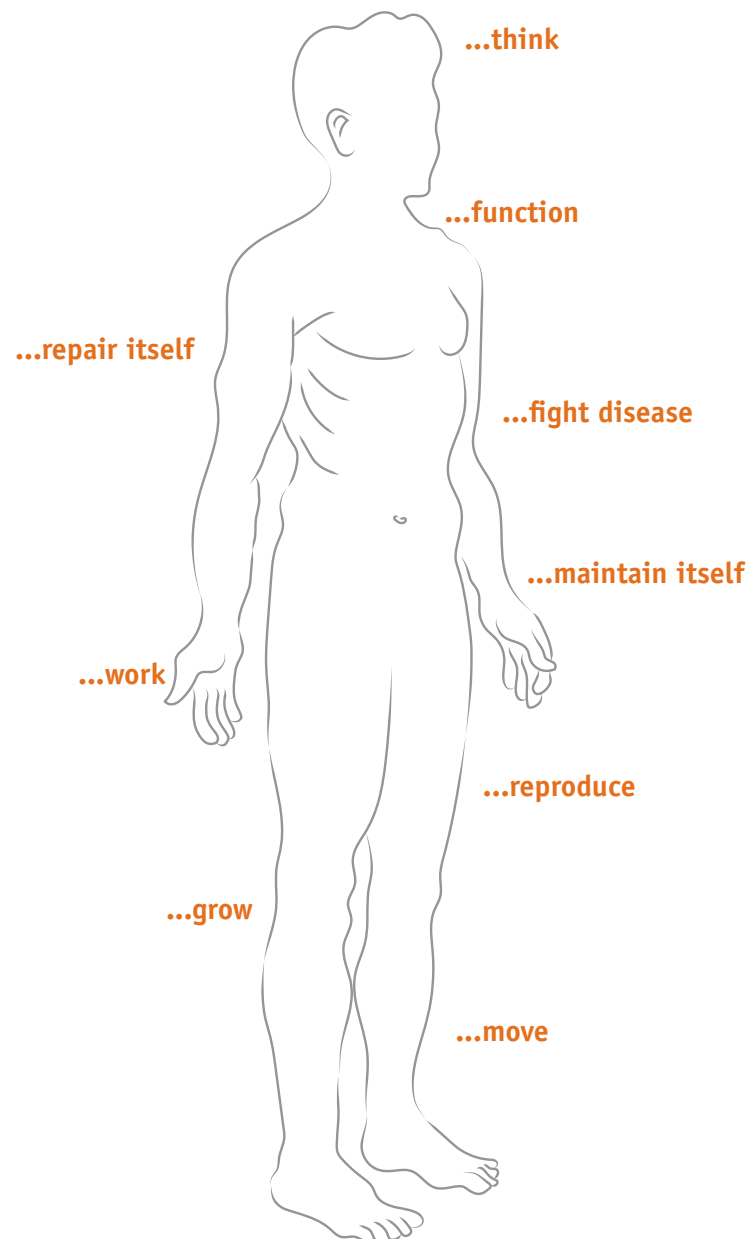
1. Father, encourage your wife to put the baby on breast immediately after birth to stimulate her milk production. Ensure that your wife gives the yellowish milk to the baby, as it is God's gift of butter to the new born.
2. Father, ensure that your wife who is breastfeeding has one or two additional meals every day to maintain her health and the health of the baby.
3. Father, encourage your wife to breastfeed on demand, day and night, so she can produce enough milk.
4. Father, give your wife enough time to breastfeed, don't rush her, so that the baby can get all the milk s/he needs.



## 5A.3 Food Groups & Nutrition

### Diagram of Nutritional Benefits on Body<sup>1</sup>

Nutritious food gives our body the energy and substances to. . .



1. Reproduced from **Healthy Harvest: A training manual for community workers in good nutrition, and the growing, processing, and preparing of healthy food**. Produced by FAO, UNICEF, and Nutrition Council of Zimbabwe ISBN: 0-7974-3209-4.

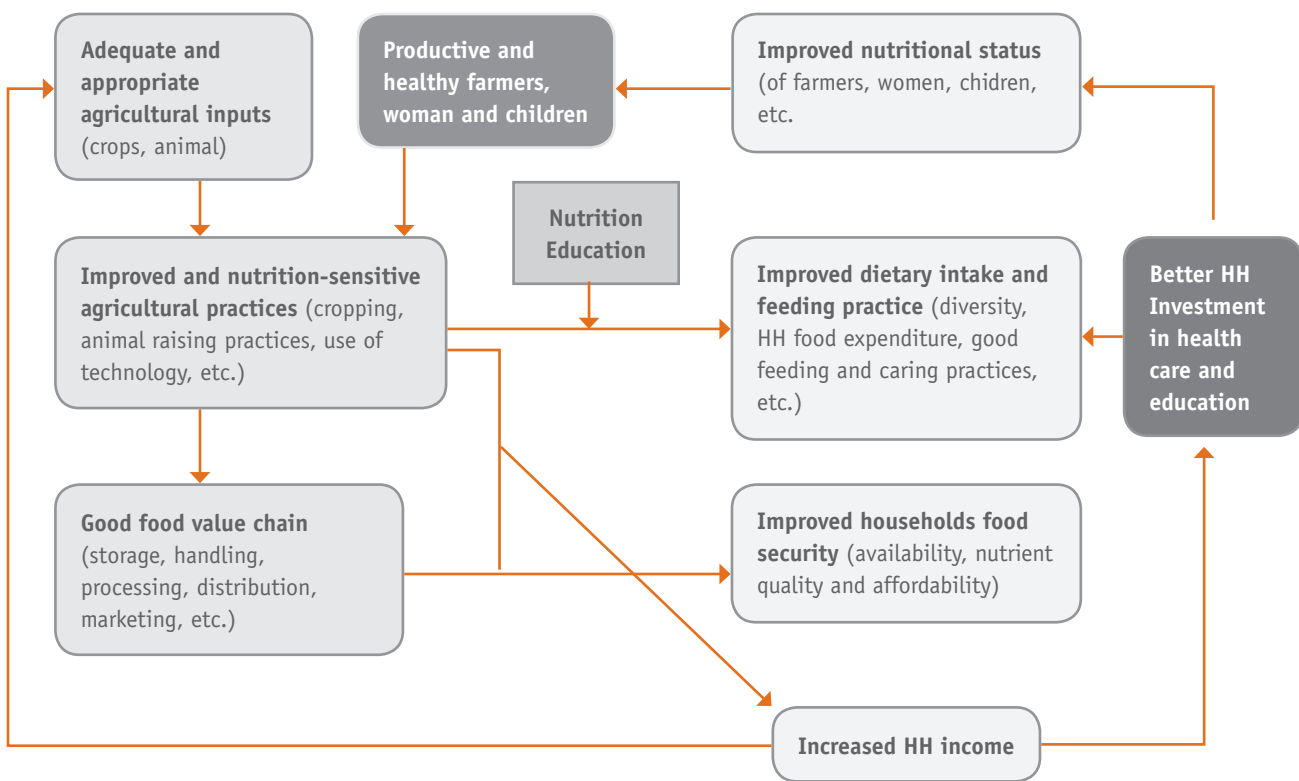


## 5A.4 Problem Tree: Understanding Nutrition<sup>1</sup>

### 2. Relationship between agriculture and nutrition

Agriculture and nutrition are interrelated. For consumption of adequate and diversified foods, the process starts with agricultural inputs. Adequate and appropriate agricultural inputs are necessary to apply improved agricultural practices which increase agricultural productivity and ensure household food security. Increased production of foods, both in amount and quality, eventually improves nutritional status of households. On the other hand, improved nutrition practices and consumption of diversified foods is necessary to maintain healthy and productive citizens who can produce adequate amounts of nutritious foods. The figure below illustrates how nutrition and agriculture are interrelated. The explanation of each piece is described in the table that follows the figure.

**Fig.1. One possible option that shows the relationship between agriculture and nutrition**



1. Reproduced from Nutrition-Sensitive Agriculture Trainer Manual for Department of Agriculture Agents. Published by Save the Children, 2012 under USAID Agreement Number AID-663-A-11-00017.





**Table: Explanation of the ten pieces of the relationship between agriculture and nutrition**

<b>1</b>	<b>Adequate and appropriate agricultural inputs</b> (crops, animal)	Producing adequate and diversified food starts with agricultural inputs. Agricultural inputs include crops, animals, fertilizer and other technology.
<b>2</b>	<b>Improved and nutrition-sensitive agricultural practices</b> (cropping, animal raising practices, use of technology, etc.)	Having adequate and appropriate agricultural inputs improves agricultural practices. Cropping and farming systems that produce a variety of foods helps to improve the consumption of diversified foods at the HH level.
<b>3</b>	<b>Good food value chain</b> (storage, handling, processing, distribution, marketing, etc.)	Good agricultural practices result in better production, but only with improved harvesting, storage and proper marketing. Proper processing and storage is necessary to maintain the nutrient content of the food. The better the food value chain, the better the availability and quality of food.
<b>4</b>	<b>Increased HH food security and income</b>	Increased production and yield will increase HH income through selling surplus products which improves food consumption.
<b>5</b>	<b>Better HH Investment in health care and education</b>	When households have better income, they have the capacity for investments in health care and education for their children and other family members.
<b>6</b>	<b>Good access to food</b> (availability, nutrient quality and affordability)	For consumption of adequate and diversified foods there should be good access to food (both amount and quality). Better access is determined by good value chain practices .
<b>7</b>	<b>Improved dietary intake and feeding practice</b> (diversity, HH food expenditure, good feeding and caring practices, etc.)	When households have good access to adequate and diversified foods, the consumption of such foods will be improved. Note that good agricultural practices that yield good production are also important for improved consumption. Increased investments in health care and education will also improve the feeding practices.
<b>8</b>	<b>Improved nutritional status</b> (of farmers, women, children, etc.	Better consumption and feeding practices will result in improved nutritional status. The investment in health care and education will also contribute to improved nutritional status.
<b>9</b>	<b>Productive and healthy farmers, woman and children</b>	The final outcome of improved nutritional status is productive and healthy farmers. This is an important input for establishing improved agricultural practices.
<b>10</b>	<b>Nutrition Education</b>	Good agricultural practices alone may not result in improved consumption and feeding practices. HHs should also have access to nutrition information.



