

## 3. PROMOTING GOOD HEALTH



### 3.1. What makes us healthy?

The promotion of good health is the basis for Positive Living. Our health depends on the food we eat and the environment in which we live. In the same way that farmers know that a healthy plant will be less susceptible to pests and diseases – a healthy body will also be protected from many diseases.

In order to remain healthy, human beings require clean air (including oxygen) to breathe, clean water to drink, sunlight to make vitamin D and provide warmth, affection from family and friends, regular exercise and plenty of nutritious food. All these inputs, with the exception of sunshine, are manipulated to some extent by human activities. Our supply of oxygen depends on the maintenance of the world's forests by governments and communities. Clean air and water is also under government control, as pure supplies depend on the absence of pollution at national as well as local levels. Other health-giving inputs are more or less under our own control although many of them depend on supportive social interactions.

#### Exercise 6: What does a healthy body need?

**Materials required:**

Flip chart paper  
Marker pens  
Masking tape or reusable adhesive

**Procedure:**

Draw a large out-line of a happy human being on the flip-chart paper and ask group members to suggest inputs that will help to keep her/him healthy. Discuss each of these essentials in turn, then arrange them around the out-lined human, see Figure 2.

Which of these inputs are under the control of;

- the government?
- the community?
- the household?
- individuals?



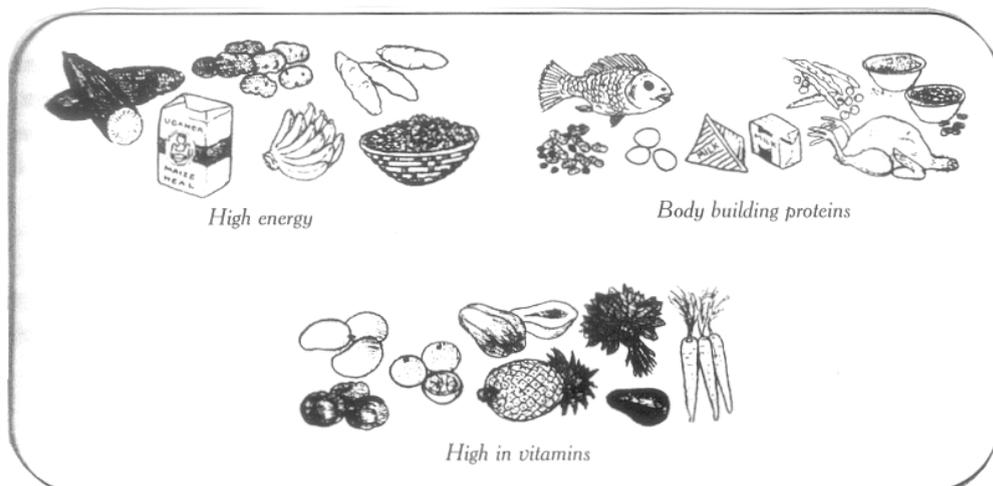
Figure 2: What does a healthy body need?



### 3.1.1 Eating nutritious food

Eating nutritious food is the most important input to human health and the first medicine for HIV/AIDS (Gari 2003). Farmers are in control of this vital resource. Nutritious food is food that contains all the necessary nutrients, including vitamins and minerals that are required to keep us healthy. For example, crops that contain carbohydrates provide the best source of energy, while those that contain protein provide the material for growth and repair of our bodies. Fruits and vegetables normally contain the vitamins and minerals that are essential for all our bodily functions.

Our nutritional needs can vary according to age, gender and state of health. However, food is often distributed within the family according to local tradition rather than nutritional need and this can lead to malnutrition amongst the least powerful members of the family. This problem can be explored in the following exercise.



© AIDS Africa: a continent in Crisis, H. Jackson, 2002. SAfAIDS, Harare

## Exercise 7: How do we share our food?

### Materials required:

Photocopies of the following pages - one for each group

Thin card

Glue

Scissors

Coloured crayons

Re-usable adhesive

Flip chart papers

Felt-tip pens

### Procedure:

Stick the photocopies onto thin card, then cut them out and colour them in appropriately. Draw 6 circles (20 cm diameter) representing "plates" on each sheet of flip-chart paper and allocate each "plate" to one of the following family members;

Father

Mother (who is pregnant)

Grandmother

Auntie (who is sick)

Daughter, aged 15 years

Son, aged 5 years

Divide the participants into the following groups;

Married/widowed men

Married/widowed women

Young unmarried adults

Children

Provide each group with the following "food";

6 chicken pieces (2 legs, 2 wings and 2 claws)

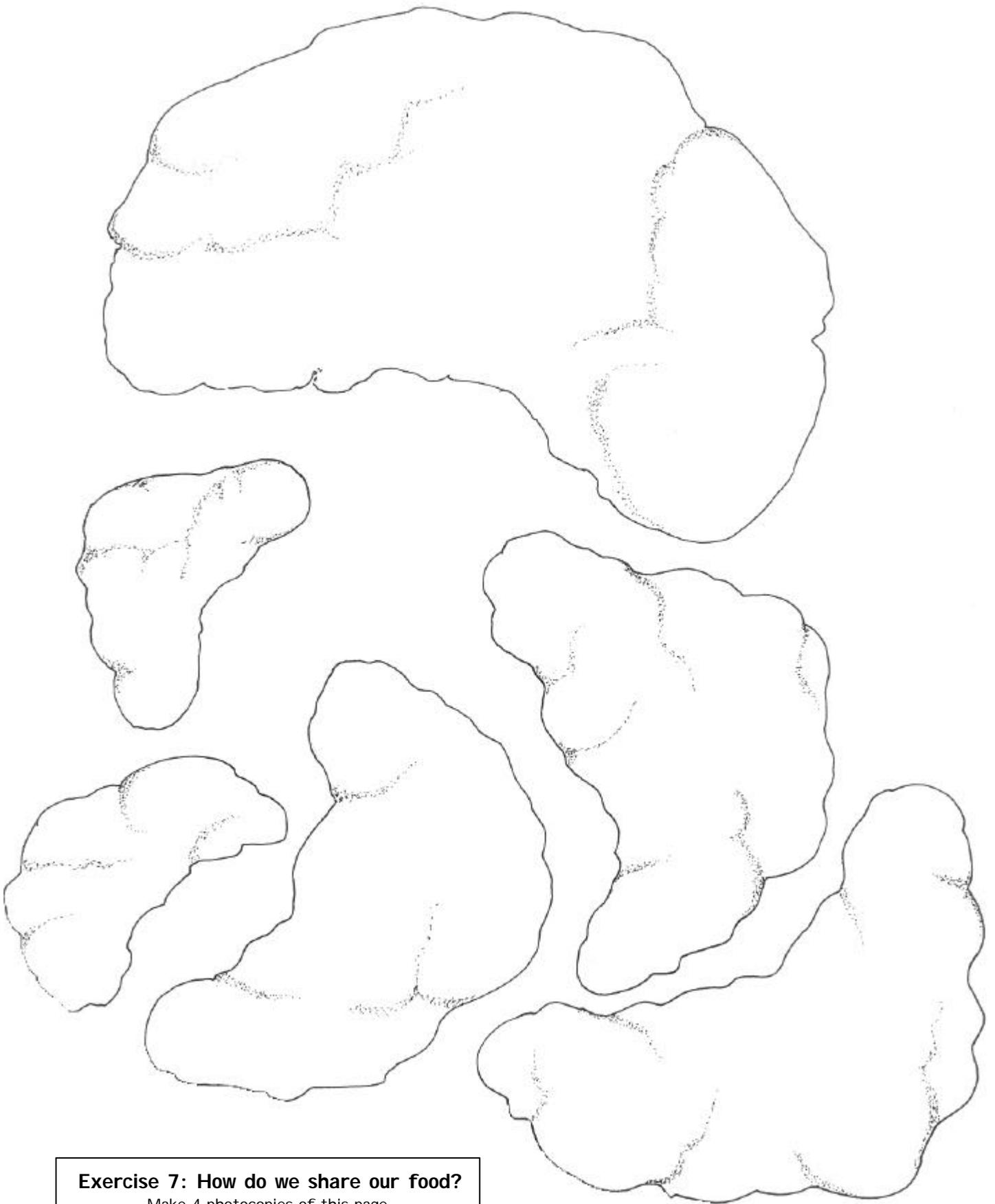
6 pieces of nsima/sadza (2 small, 3 medium and 1 large)

5 fruits (1 avocado, 1 guava, 1 mango and 2 bananas)

Ask the participants from each group to divide this "food" amongst the family members according to the way it is done at home. Ask each group to explain their actions to the rest of the participants during the plenary session.

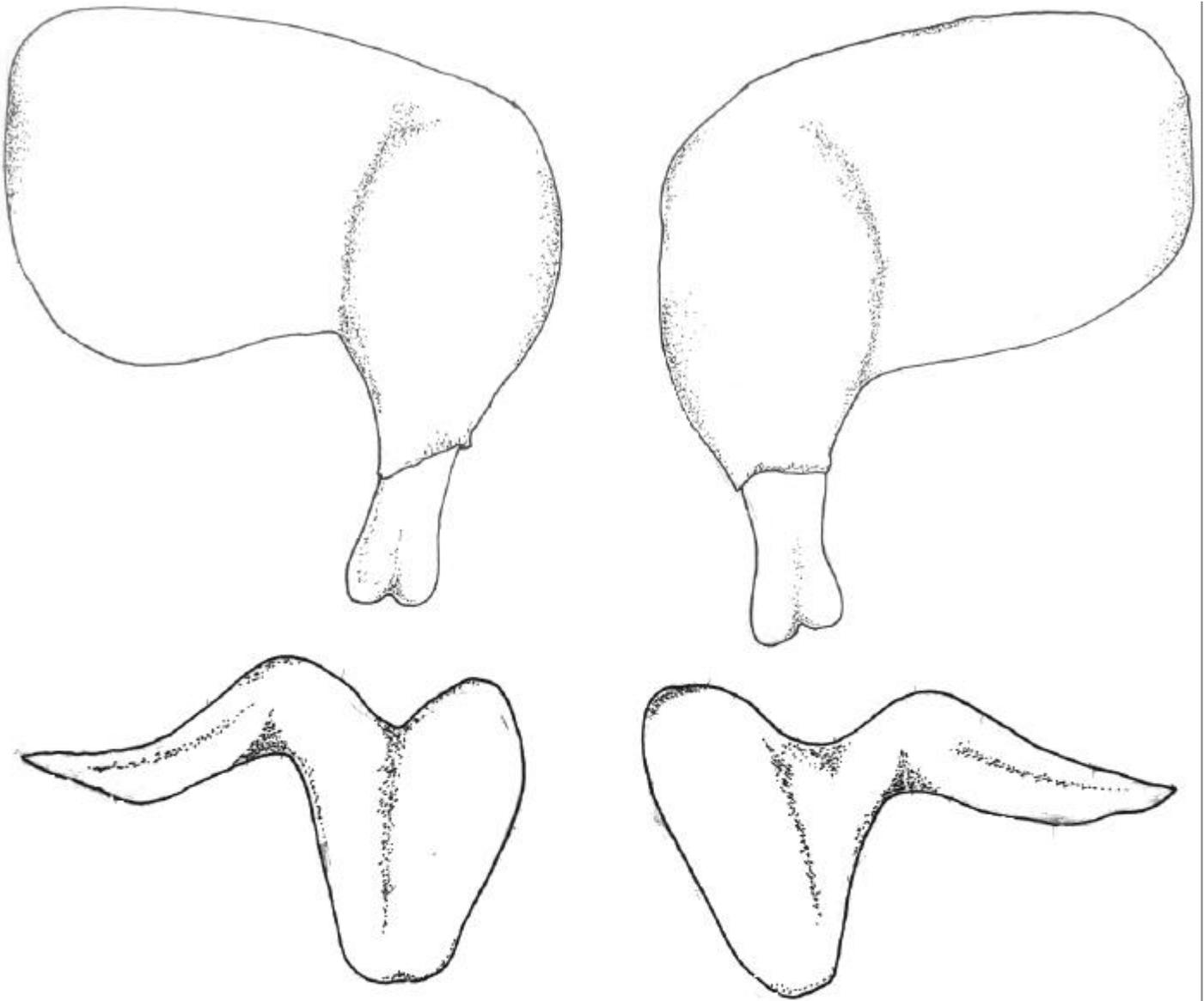
- Who got the most food?
- Who got the most nutritious food?
- Was the food shared according to nutritional requirement or according to status, gender or age?

Discuss the implications of this in terms of the important nutrients plus the recommended daily intake and sources of these nutrients for Positive Living shown in Tables 4, 5 & 6.



**Exercise 7: How do we share our food?**

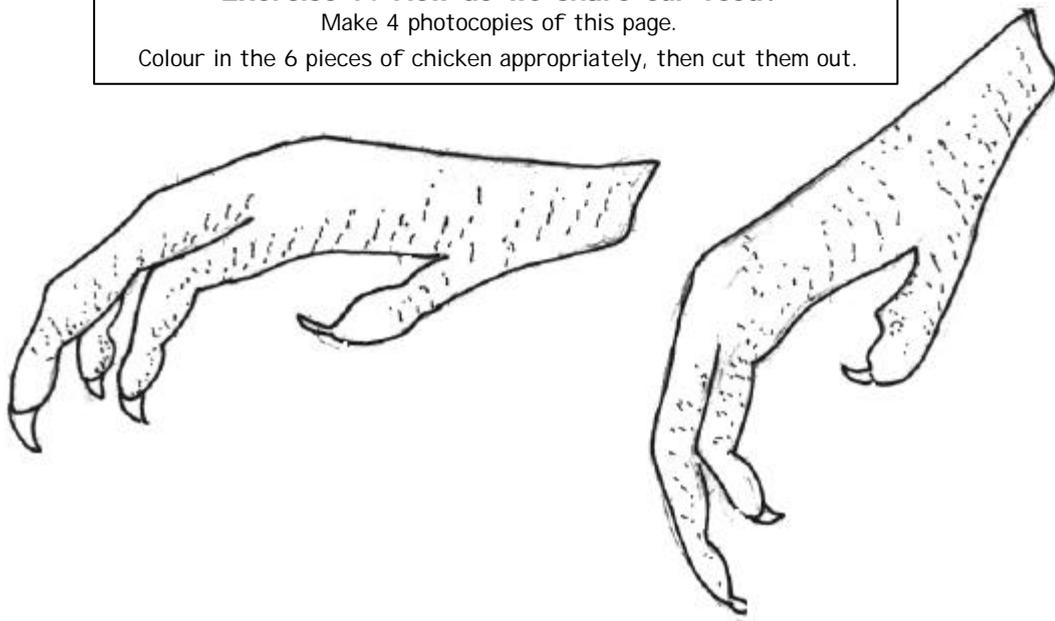
Make 4 photocopies of this page.  
Cut out the 6 pieces of sadza/nsima.

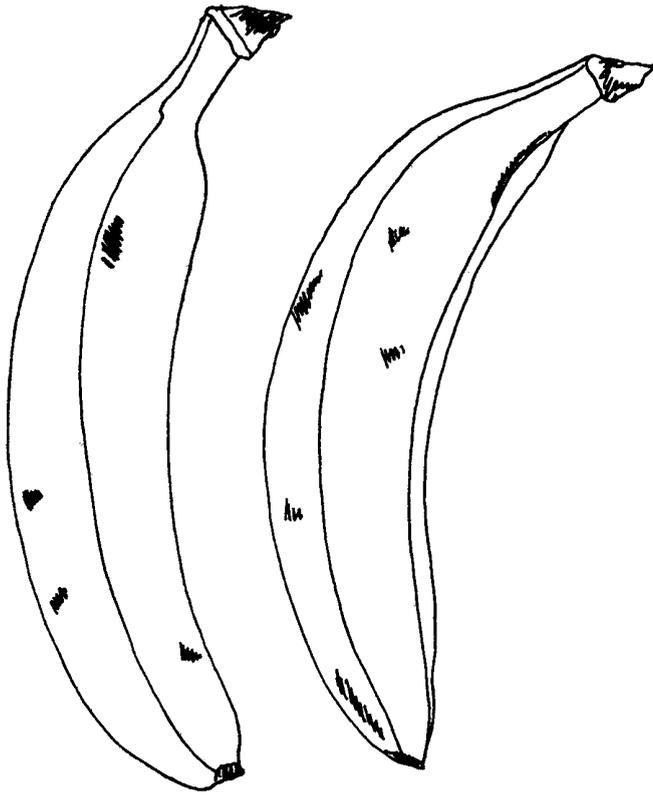


**Exercise 7: How do we share our food?**

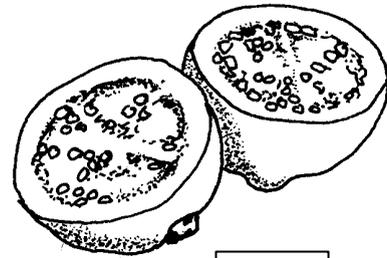
Make 4 photocopies of this page.

Colour in the 6 pieces of chicken appropriately, then cut them out.





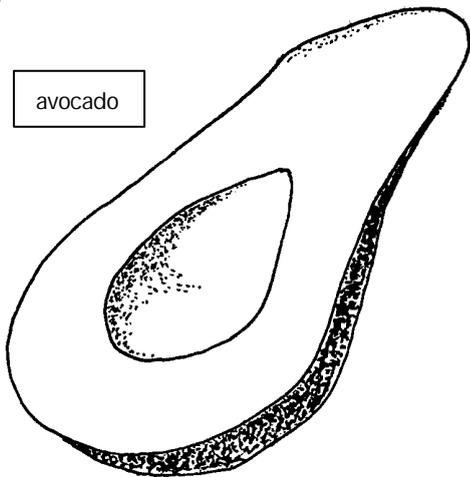
bananas



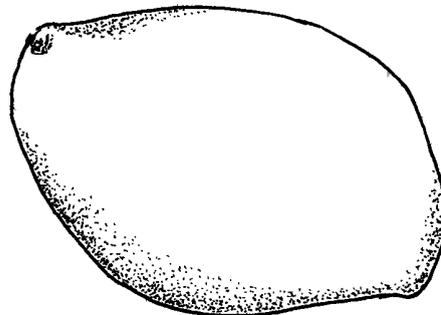
guava

**Exercise 7: How do we share our food?**  
Make 4 photocopies of this page.  
Colour in the 6 fruits appropriately, then cut them out.

avocado



mango





### 3.1.2 Making sure we eat the right nutrients for Positive Living

Table 4 lists the important nutrients that we should eat every day to ensure Positive Living. These are calories, protein, calcium, iron, selenium, zinc and vitamins A, B C and E. Nutrients, such as selenium, zinc, vitamins A, C and E help to protect us from disease by increasing our immunity.

**Table 4: Important Nutrients for Positive Living**

<b>Nutrient</b>	<b>What is it used for in the body?</b>
Calories	Energy
Protein	Growth and repair of tissues
Calcium	Strong bones and teeth
Iron	Blood formation
Selenium	Increases immunity
Zinc	Increases immunity
Vitamin A	Healthy skin and eyes, increases immunity
Vitamin B1	Brain function and digestion
Vitamin B2	Produces energy
Vitamin B3	Brain function, reduces depression
Vitamin C	Increases immunity and fights infection
Vitamin E	Assists selenium to increase immunity

Table 5 shows the recommended minimum daily requirement for these nutrients, depending on age, gender and health status. Men and pregnant and breast-feeding women require the most calories. Pregnant or breast-feeding women and people who are sick, particularly if they are HIV positive, require increased calories as well as large amounts of vitamins and minerals. Children, especially adolescents, need high levels of calcium and iron, plus

almost as much protein as adults to ensure healthy growth. This means that food should be distributed within the household according to the differing nutritional needs of family members, rather than their gender or status.



The following exercise focuses attention on the nutritional value of each participant's normal diet:

### **Exercise 8: What did you eat yesterday?**

**Materials required:**

A4 size plain paper – 1 sheet per participant  
Black felt-tip pen  
Coloured crayons

**Procedure:**

Using a felt-tip pen, draw a plate-sized circle on each sheet of paper. Ask each participant to draw a picture of the last meal that they ate at home on this "plate". They should be encouraged to use the coloured crayons to make the picture as realistic as possible.

Display all the pictures and invite the participants to discuss them in terms of their nutritional content, see Tables 4, 5 & 6.

- Which meals contained the most nutrients for Positive Living?
- Which meals contained the least nutrients?
- Which important nutrients are most commonly lacking in these meals?
- How could these meals be made more nutritious?

**Table 5: Recommended daily intake of nutrients for Positive Living<sup>3</sup>**

Person type	Calories	Protein (g)	Minerals				Vitamins					
			Calcium (g)	Iron (mg)	Selenium (µg)	Zinc (mg)	A (µg)	B1 (mg)	B2 (mg)	B5 (mg)	C (mg)	E (mg)
Man	2,500	30	0.5	9	100	15	750	1.0	1.5	16.7	30	15
Woman	2,000	25	0.5	28	100	15	750	0.9	1.3	12.4	30	15
Pregnant/breast-feeding woman	2,500	40	1.0	28	100	20	1,000	1.0	1.5	15.0	50	15
Adolescent	2,000	30	0.7	10-18	50	7	725	1.0	1.0	16.0	30	15
Child under 10	1,500	20-25	0.5	10	50	7	350	0.7	0.7	12.0	20	15
HIV+ woman	2,300	38	0.5	28	200	50	2,000	100	100	100	4,000	100
HIV+ man	2,875	45	0.5	9	200	50	2,000	100	100	100	4,000	100

<sup>3</sup> FAO, 1974, Piwoz & Preble, 2000, .



### 3.1.3 Growing the right crops for Positive Living

Table 6 shows the crops that are the sources of the most important nutrients for Positive Living in southern Africa.

There are four main types of nutrients that are required by humans. These are calories, protein, vitamins and minerals. Calories can be obtained from crops that contain carbohydrates, fats and oils. Grain crops contain more than 70% carbohydrate, while sweet potato, Irish potato, cassava, taro and banana contain between 20 and 35% carbohydrate. Fat is present in some red meat, while avocado and groundnuts contain more than 20% of energy-rich oil. Protein is found in meat, eggs, fish, insects and beans.

Traditional food crops often provide the best natural sources of vitamins and minerals. For example, bambara and groundnut are rich in B vitamins; bulrush millet and cowpea leaves are rich in iron; cowpea and finger millet are rich in calcium; pumpkin, paw-paw, cowpea leaves and mango are rich in vitamin A and guava is one of the richest sources of vitamin C - at least 6 times more than that contained in oranges. However, the West Indian cherry, *Malpighia glabra*, which is native to North America, contains 40 times more vitamin C than oranges and may be found in some African countries.

#### **Exercise 9: Sourcing planting material for marginalised crops**

In some parts of Africa root and tuber crops such as cassava, taro and sweet potato, as well as some small grain crops such as sorghum and millet have been marginalised by widespread monocropping of maize.

- How can farmers obtain the planting material for these crops?
- Put these suggestions into your action plan.

**Table 6: Sources of nutrients for Positive Living in Africa**

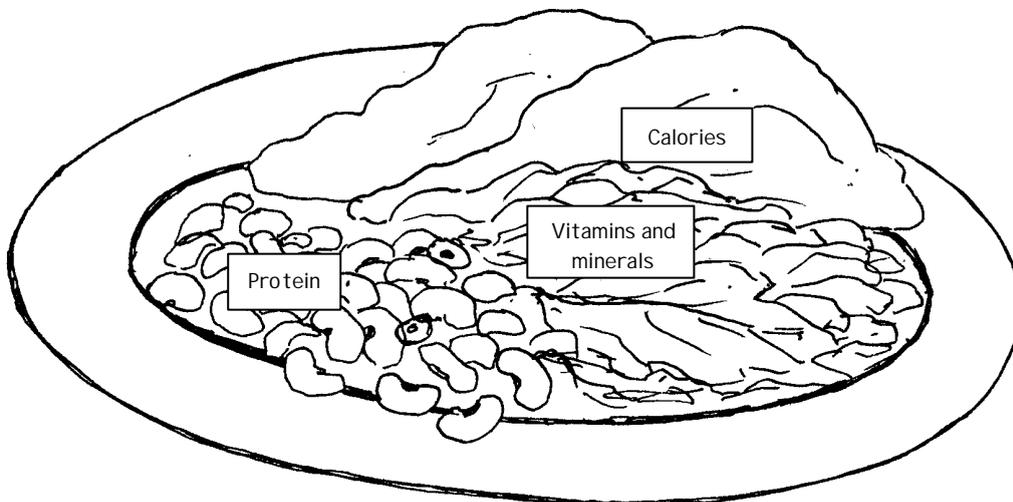
<b>Food source</b>	<b>Nutrient content (richest source*)</b>
Avocado	Oil*, calcium, iron, vitamins A, B3 and C
Baobab fruit and leaves	Vitamin C*
Bambara	Calcium, protein, iron, vitamin A and B vitamins
Banana	Carbohydrate, iron, vitamins A, B3
Bulrush millet	Carbohydrate, calcium, iron*, vitamins B and E
Cassava	Carbohydrate, calcium, iron, vitamins A and C
Citrus	Vitamins A and C
Cowpea	Protein, calcium*, iron, vitamins A and B3
Cowpea leaves	Calcium, iron*, vitamins A*, B, C and E
Eggs	Protein, vitamin A and B2*
Finger millet	Carbohydrate, calcium*, iron*, vitamin B
Fish	Protein, vitamin B3
Groundnut	Protein, oil, calcium, iron, vitamin B*
Guava	Calcium, vitamins A and C*
Insects	Protein, B vitamins
Maize, refined	Carbohydrate, calcium, iron,
Maize, whole grain	Carbohydrate, calcium, iron, vitamins A, B and E
Mango	Calcium, vitamins A* and C
Milk, yoghurt, cheese	Fat, calcium, vitamins B
Meat	Protein, fat, iron
Paw-paw	Calcium, vitamins A* and C
Pumpkin	Vitamin A*
Pumpkin leaves	Calcium, vitamin A*, C and E
Rice	Carbohydrate, B vitamins
Sorghum	Carbohydrate, calcium, iron, vitamins A and B
Sweet potato	Carbohydrate, calcium, iron, vitamins A and C



### 3.1.4 The need for nutrient supplements

The best way to obtain sufficient nutrients for Positive Living is to eat a traditional diet – that is, to eat the same food as your grandmother did when she was young! For example a diet consisting of *sadza/nsima* made from traditional small grain crops, such as finger millet or sorghum, steamed cowpea leaves and boiled bambara will provide all the extra nutrients that are needed by pregnant and breast-feeding mothers, see Figure 3.

Figure 3: This is what a plate of nutritious food should look like



However, people who are sick, particularly those who are HIV positive will be unable to obtain all the nutrients they need for Positive Living, even if they eat the most nutritious food that is available locally. For example, a person who is HIV positive would need to eat half a kilogram of dark green leafy vegetables and a whole kilogram of guavas in order to obtain sufficient

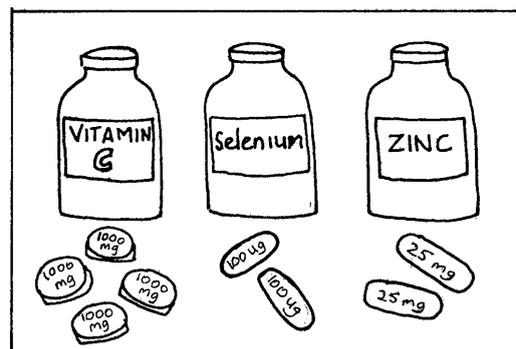


Figure 4: Recommended doses of vitamin C, selenium and zinc for people living with HIV

vitamins E and C. Furthermore, it is impossible to obtain the recommended quantities of selenium and zinc from local foods because these minerals only occur in extremely low levels in most African soils and thus will be in even lower levels in the crops that grow in

them. It is therefore, very important that nutrient supplements, in the form of pills containing selenium and zinc plus vitamins C and E, are provided for these people. Normally nutrient supplements have to be bought from a pharmacy. It is unlikely that poor people will be able to afford these supplements, therefore the community should seek ways of raising funds so that they can be provided free of charge to the most vulnerable groups, see Exercise 10. It should be noted that vitamins and minerals must always be taken with nutritious food, as part of a balanced diet.

### **Exercise 10: Who needs nutrient supplements?**

Ask participants to think about the people who are most vulnerable to HIV/AIDS in their communities. These are the people who would benefit most from taking nutrient supplements on a daily basis in order to keep them healthy.

The list should include;

- Orphans
- Widows, widowers
- People who are nursing sick relatives
- Anyone who is chronically sick
- Grandmothers caring for orphans
- Patients with TB or shingles
- Anyone who suspects that they are HIV positive
- Anyone who is HIV positive

Ask participants to consider the following questions;

- How can we get these nutrition supplements?

Possible sources:

Pharmacies, local clinics and hospitals, religious organisations, local/international NGOs, WHO.

- How can we raise funds to pay for nutrient supplements?

Possibilities:

Through the implementation of community-based income generating projects.

By writing proposals to request support from local/international donors in the setting up of revolving funds.

- Write down the ideas that come out of this discussion for action planning.

It is extremely important for people who are suffering from opportunistic infections to continue eating nutritious food throughout their illness, ways of doing this are shown in Table 7.

**Table 7: Ways of increasing food intake during and following common HIV/AIDS-related infections**

Symptoms	Treatment
Fever and loss of appetite	Drink high-protein liquids and fruit juice Eat small portions of soft, preferred foods throughout the day Eat nutritious snacks whenever possible Drink liquids often
Sore mouth and throat	Avoid citrus fruits, tomato and spicy foods Avoid very sweet foods Drink high-energy, high-protein liquids with a straw Eat foods at room temperature or cooler Eat thick, smooth foods, such as porridge, mashed cassava, mashed carrots, mashed avocado, banana or other non-acidic vegetables and fruits
Nausea and vomiting	Eat small snacks throughout the day and avoid large meals Eat crackers, toast and other plain dry foods Avoid foods that have a strong smell Drink diluted fruit juices, boiled/sterilised water and soup Eat simple boiled foods, such as porridge, cassava, beans
Loose bowels	Eat bananas, mashed fruits, soft rice, porridge Eat smaller meals, more often Eliminate dairy foods to see if they are the cause Decrease high fat foods Don't eat foods with insoluble fibre ("roughage") Drink liquids often
Fat malabsorption/ Indigestion	Eliminate oils, butter, margarine and foods that contain or are prepared with them Eat only lean meats Eat fruit and vegetables and other low-fat foods
Severe diarrhoea	Drink liquids frequently Drink oral rehydration solution (see Exercise 28) Drink diluted juices Eat bananas, mashed fruits, soft rice, porridge
Fatigue, lethargy	Have someone pre-cook foods to avoid energy and time spent in preparation (avoid re-heating food) Eat fresh fruits, especially avocado, that don't require preparation Eat snack foods often throughout the day Drink high-energy, high-protein liquids Set aside time each day for eating

Piwow & Preble, 2000, search for PN-ACK-673 at [www.dec.org](http://www.dec.org)



### 3.1.5 Avoiding unhealthy Foods

Not all foods will make us healthy, in fact those that contain sugar, caffeine, excessive amounts of salt or alcohol can actually undermine health by increasing susceptibility to disease. Foods that contain sugar and/or caffeine should be avoided by people who are HIV positive, see Table 8.

**Table 8: Unhealthy foods**

Sugar, caffeine, excessive amounts of salt and alcohol are not recommended for Positive Living.

A high sugar diet causes tooth decay, can increase susceptibility to thrush and in the long-term could lead to diabetes.

Sources of sugar:

Sugar cane

Sweetened tea and coffee beverages

Sweets

Chocolate

Fizzy drinks

Tinned food

Beer

Caffeine suppresses T-cell activity in the immune system (see Section 3) reduces the up-take of some vitamins, especially B vitamins and also prevents sleep.

Sources of caffeine:

Coffee

Tea

Cola drinks

Chocolate

Some medications used for treating headache

A high salt diet leads to high blood pressure/hypertension and can cause stroke.

Sources of excess salt:

Crisps

Popcorn

Cheese

Dried fish

Tinned food

Alcohol, present in beer, wine and spirits, reduces T-cell activity, prevents the uptake of vitamins and minerals, increases depression and can lead to careless, aggressive or other antisocial behaviour thus increasing vulnerability to HIV.



## 3.2 Action planning for promoting good health

### 3.2.1 Growing the right food crops for Positive Living:

#### Growing food crops that contain calories

- Planning self-sufficiency in grain crops

Self-sufficiency in grain crops depends on the amount of land available and the expected yield.

By consulting Table 9 and doing Exercise 11 it will be possible for farmers to calculate the minimum amount of grain that is needed to provide sufficient energy on a daily basis for everyone in their household over a period of one year.

Table 9 indicates that a household consisting of a father, a mother who is pregnant, a grandmother, an auntie who is HIV positive, a daughter of 15 and a son of five years would need at least 1,280kg of grain (or 25.6 x 50kg bags of grain) to provide them with sufficient calories to last for one year.



**Table 9: Minimum annual grain requirement for a 6-person household**

Person	Minimum no. of calories needed per day	Grain weight needed per year (kg)	Minimum no. of 50kg bags of grain per year
Father	2,500	250	5
Mother (pregnant)	2,500	250	5
Auntie (HIV+)	2,300	230	4.6
Grandmother	2,000	200	4
Daughter (15 yrs)	2,000	200	4
Son (5 years)	1,500	150	3
Total required	12,800	1,280	25.6



## Exercise 12: Calculating the area of land that must be planted with grain crops to ensure household self-sufficiency in grain for one year

**Materials required:**

Completed self-sufficiency tables from Exercise 11.  
One copy of the table shown below for each participant.

**Procedure:**

Ask the participants to use the information from their own farms to fill in this table to show the area of land under grain crops and the weight of grain that they harvested last season. They should then use the total grain weight that is required by their household, as calculated in the previous exercise, to determine the area of land that should be planted with grain crops in order to be self-sufficient in grain this coming season. This area can be calculated in acres or hectares.

Area of land under grain crops last season (acres/ha)	Weight of grain harvested last season (kg)	Yield per acre/ha (weight of grain divided by area of land)	Minimum area of land to be planted with grain crops*

\*The total weight of grain required, divided by yield per acre/ha

Remember that this is only the *minimum* area of land that should be planted to grain crops. In order to guarantee self-sufficiency for one year, either the area planted or the yield should be increased to allow for the possibility of a poor harvest, see Information Box 4 below.

### Information Box 4: Ways of increasing grain yields without spending money

1. Use open-pollinated varieties with good storage qualities.
2. Plant early to avoid Maize Streak Virus.
3. Rotate the crop with sunnhemp, velvet bean or some other legume, to increase soil fertility.
4. Add 2 handfuls of well-rotted compost to each planting hole, instead of fertiliser.
5. Use diluted cow urine, as top dressing.
6. Intercrop with cowpea or some other legumes to add nitrogen and reduce weeds.
7. Plant *Acacia albida* within the field to provide nitrogen and leaf litter.
8. Control stem borers by putting sand into each maize funnel to suffocate these pests.
9. Control other pests with sprays made of neem, *Tephrosia* etc.
10. Save seed from the most productive plants.
11. Protect the stored grain with wood ash.



Pouring sand into a maize funnel

- Planning self-sufficiency in root and tuber crops

Root and tuber crops, such as cassava, sweet potato and taro are good sources of carbohydrate for people who have limited access to labour and inputs. However, it should be remembered that, weight for weight, fresh cassava, sweet potato and taro contain only half as much carbohydrate as grain crops. By doing the exercise below participants will be able to calculate the area of land needed for root and tuber crops.

**Exercise 13: Calculating the area of land needed for root and tuber crops**

**Materials required:**

One copy of the table shown below for each participant.

Ask the participants to calculate the amount of land that should be planted to root and tuber crops for self-sufficiency in these crops;

Crop	Yield per acre/ha	Amount required	Area of land to be planted*
Cassava			
Sweet potato			
Taro			

\* Amount required, divided by yield per acre/ha

- What is the total number of calories that will be provided by these crops? (total weight of root and tuber crops divided by 50%)

**Growing food crops that contain vitamins and minerals**

- Intercropping with nutritious food crops

Intercropping with legumes and other spreading plants can improve soil fertility, reduce weed problems, conserve moisture and enhance food and nutrition security, see Table 10.

**Table 10: Nutritious Intercrops for Positive Living**

Crop		Nutrients
English name	Latin name	
Bambara	<i>Voandzeia subterranea</i>	Protein, iron, vitamin B1
Cowpea	<i>Vigna unguiculata</i>	Protein, calcium, vitamin B3
Pigeon pea	<i>Cajanus cajan</i>	Protein, vitamin B1
Pumpkin	<i>Cucurbita maxima</i>	Vitamin A
Okra	<i>Hibiscus esculenta</i>	B vitamins

- Planning a nutrition orchard

A nutrition orchard provides the best long-term source of nutrition for households affected by HIV/AIDS as, once it is established, it has minimal labour requirements. Fast-maturing trees are the most appropriate, although the time taken for some slower-growing trees to reach maturity can be reduced through the planting of truncheons and grafting improved varieties onto established rootstock, see Table 11 and Figure 5. Participants can begin planning their own nutrition orchards by doing Exercise 14.

**Table 11: Tree Crops for Positive Living**

Tree/vine		Important nutrient	No. of years to first fruits
English name	Latin name		
Banana	<i>Musa spp.</i>	Vitamin B	1
Mulberry	<i>Morus nigra</i>	Vitamin C	1
Oyster nut/fluted pumpkin	<i>Telfairia occidentalis</i>	Protein	1
Paw-paw	<i>Carica papaya</i>	Vitamin A	1
Pigeon pea	<i>Cajanus cajan</i>	Protein, iron	1
Tree tomato	<i>Cymphomandra betacea</i>	Vitamin C	2
West Indian cherry	<i>Malpighia biflora</i>	Vitamin C	2
Guava	<i>Psidium guajava</i>	Vitamin C	2 - 3
Citrus	<i>Citrus spp.</i>	Vitamin C	4 - 6
Mango	<i>Mangifera indica</i>	Vitamin A	5 - 7
Avocado	<i>Persea americana</i>	Vitamin A, oil	7 - 10

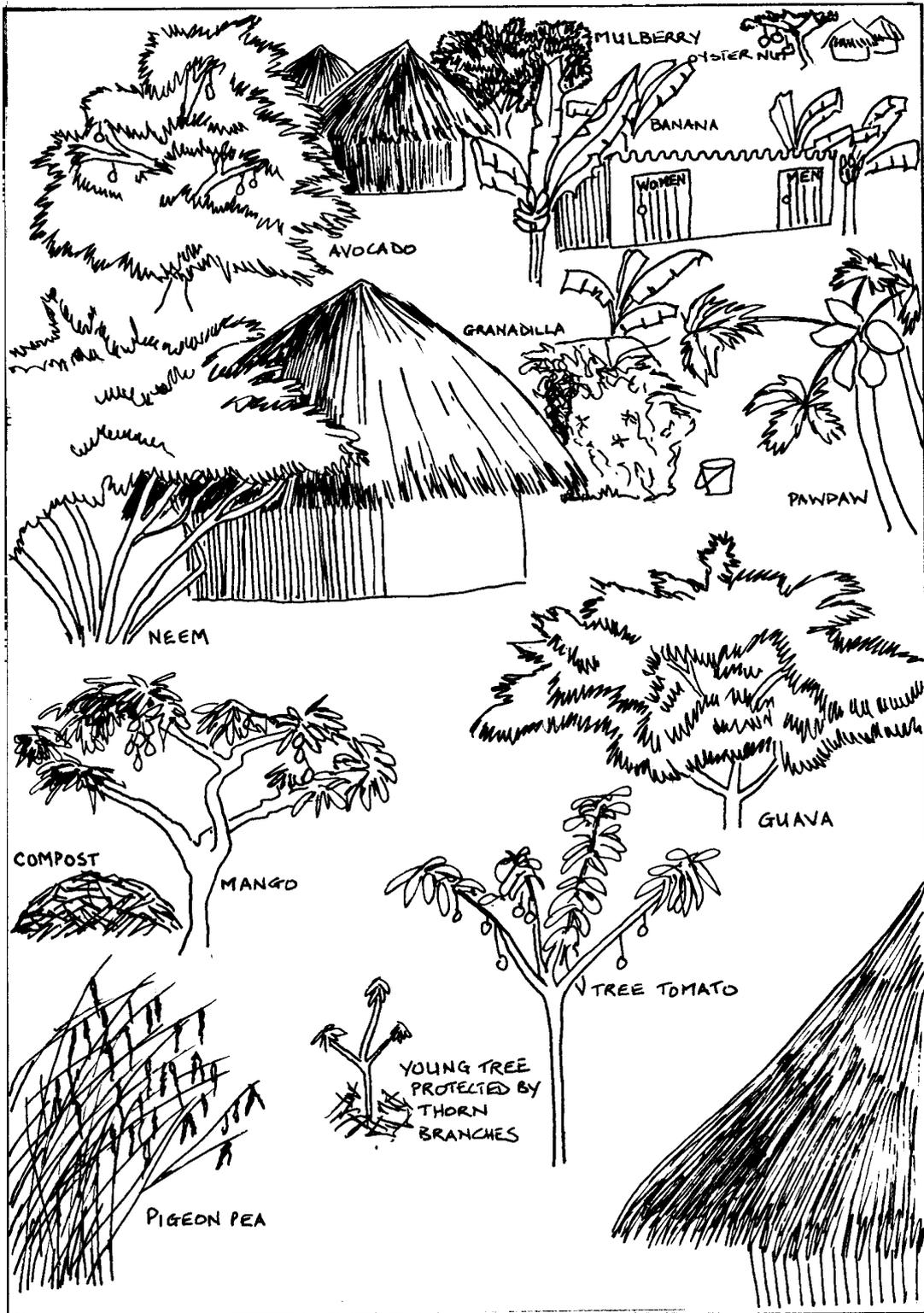


Figure 5: Planning a nutrition orchard

### **Exercise 14: Planning a nutrition orchard**

Materials required:

Flip chart papers

Coloured felt-tip pens

Procedure:

Ask each participant to draw a plan of her/his homestead on the flip chart paper and mark the areas where trees could be planted. They should also consider the following questions;

- Which tree types will provide all the vitamins needed for Positive Living?
- How many of each tree type will be needed to provide sufficient vitamins for everyone in the household throughout the year?
- When is the best time to plant these trees?
- Where will you get the trees from?
- Where will the compost come from?
- How will the young trees be protected from pests such as termites and goats?

### • Planning a nutrition garden

Nutrition gardening can be done individually or collectively to provide nutrition for orphans and other people affected by HIV/AIDS. By following Exercise 15, participants can begin the process of planning a sustainable nutrition garden.

### **Exercise 15: Planning a nutrition garden**

Materials required:

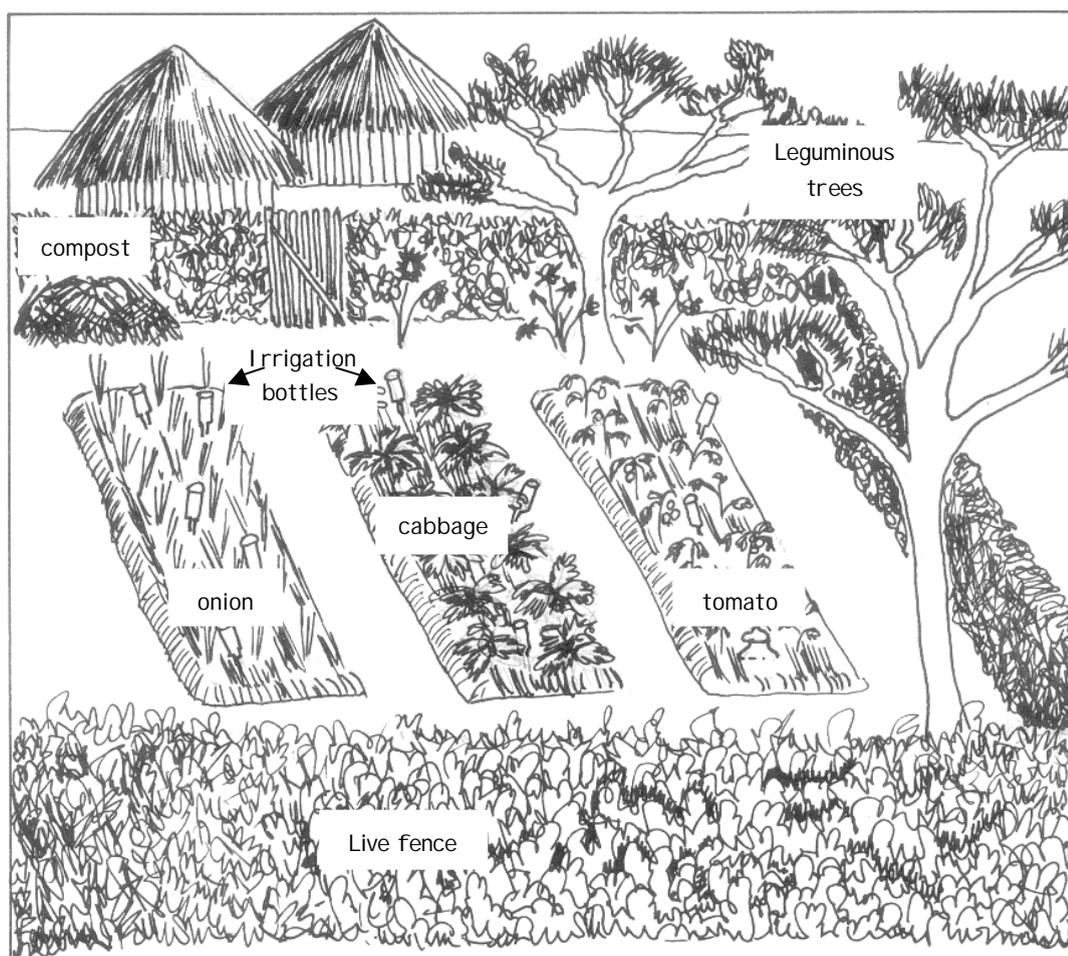
Flip chart paper

Coloured felt-tip pens

Procedure:

Ask each participant to draw a plan of her/his garden on flip-chart paper. They should also refer to Information Box 5 and consider the following issues:

- Daily requirements of vitamins and minerals for everyone in their household (see Tables 5 & 6)
- Seed sources for nutritious vegetable crops
- Live fencing material to keep out goats and other livestock
- Water source
- Compost source
- Green manure crops
- Crop rotation
- Natural pest management



**Figure 6: Planning a nutrition garden**

**Information Box 5: Ways of improving productivity in a nutrition garden without spending money**

1. Choose a site close to a water source.
2. Plant a live fence of *Jatropha*, etc. to exclude goats and other livestock.
3. Raise seedlings in soil that has previously been dried in the sun to kill off pests.
4. Increase soil fertility by using composted household waste, leaf litter, manure (especially chicken manure) cattle urine and green manure crops such as sunhemp.
5. Choose indigenous crops, especially dark green leafy vegetables to avoid pest problems.
6. Conserve moisture by mulching with grass and leaves.
7. Provide moisture through water-filled, bottles inverted directly into the soil and by sinking covered, water-filled, clay pots into the ground.
8. Encourage predatory wasps by planting yellow flowering plants, e.g. mustard
9. Control leaf pests by spot spraying with *Tephrosia*, neem, chilli, garlic, etc.
10. Control soil pests, such as nematodes by rotating nematode-tolerant, green leafy brassicas (e.g. cabbage) with onions or other nematode-resistant monocotyledonous crops, followed by other nematode-susceptible dicotyledonous crops (e.g. tomatoes, carrots or beans).

Small-scale livestock will not only provide a useful source of protein for food and nutrition security, but can also be used to improve the productivity of the farming system. For example, chickens and guinea fowl can be used to clear weeds and insect pests from nutrition gardens and orchards, while at the same time providing nitrogen-rich manure. The excrement from ducks will improve the nutrient content of pond-water, leading to improved aquatic plant and fish growth. Raised shelters for pigeons and rabbits will prevent them from being eaten by predators and allow for easy harvesting of their manure. While bees will improve the pollination of many fruit trees and guard against intruders, see Table 12.

**Table 12:  
Benefits of integrating small-scale livestock into low risk farming**

<b>Creatures</b>	<b>Product</b>	<b>Other benefits</b>
Bees	Honey, wax	Pollination, security
Chickens	Eggs, meat	Weed and insect pest control, manure
Ducks	Eggs, meat, feathers	Improved pond-water fertility, snail control
Guinea fowl	Eggs, meat, feathers	Weed and insect pest control, manure
Pigeons	Eggs, meat	Manure
Rabbits	Meat, fur	Manure

### **3.2.2 Finding out how many vulnerable people live in your community**

Before you can begin providing vital interventions such as food aid, youth training, home-based care and nutrient supplements for the most vulnerable people in your community it will be necessary to collect base-line data. The form shown in Exercise 16 can be used for this activity. Once all the forms have been completed for each village the total numbers for each vulnerable group can be calculated. This type of survey may take several weeks to complete so it should be included in your action plan.

**Exercise 16: Conducting a base-line survey to determine the number of households affected by HIV/AIDS in your area.**

**Materials required:**

One photocopy of the data sheet below for each village, plus one extra copy for the combined, overall totals.

**Procedure:**

Ask the participants to conduct a survey of all the households in each village in their area, using the photocopied data sheets. When they are complete, add up the combined totals for each line of information and write these totals on the extra data sheet. Use this information to help raise funds for the vulnerable people in your community.

Date of data collection \_\_\_\_\_

Project name \_\_\_\_\_

Name of data collector \_\_\_\_\_

District \_\_\_\_\_ Village \_\_\_\_\_

Distance from nearest clinic \_\_\_\_\_ km

Total no. of households	
No. of households containing orphans	
No. of orphans under 5 years	
No. of orphans between 5 and 10 years	
No. of orphans between 11 and 16 years	
Total no. of orphans	
No. of widows caring for orphans	
No. of widowers caring for orphans	
No. of grandmothers caring for orphans	
No. of child-headed households	
No. of orphans in primary school	
No. of orphans in secondary school	
No. of households with someone who has been sick for 6 months or more	
No. of registered TB cases	
Total no. of deaths of people below 50 years of age in the past year	

