

# A MANUAL ON FOOD BASED NUTRITION FOR BACKYARD POULTRY PRODUCERS



**Improving Food Security of Women and Children by Enhancing Backyard and Small-scale Poultry Production  
in the Southern Delta Region**

**Trainers Manual on Selected Topics in Food Based Nutrition and Trainer’s Guide for Training Facilitation  
Compiled under the “Improving Food Security of Women and Children by Enhancing Backyard and Small-scale  
Poultry Production in the Southern Delta Region (GCP/BGD/048/USA)**



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## **Trainer summary guide: Backyard, Module Human Nutrition**

### **Training objectives.**

At the end of the training, participants will be able to:

- i. name three basic food groups (energy-giving, body-building and protective),
- ii. describe what food types together make a balanced diet,
- iii. state why hygiene, especially hand-washing, is important to reduce disease risk,
- iv. state when they must wash hands (after what activities),
- v. make and use a 'tippy tap' for kitchen and poultry house,
- vi. practice the six steps of good hand-washing,
- vii. state poultry products' importance in women and child diets,
- viii. cook an egg-coconut-vegetable curry as a balanced meal.

### **Key messages (to review with participants at the end of the training)**

1. No single food provides all of the nutrients needed for health and strength of our body. We need to consume a wide variety of different foods every day.
2. The three basic food groups are (1) energy-giving, (2) body-building and (3) protective.
3. Example food types[some foods most commonly used in villages are highlighted]:
  - a. Energy giving—cereals like rice, wheat like in *roti*, rice flakes (*chira*), semolina (*suji*), sugar and palm sugar (*jaggery*), roots (potatoes, beetroot, sweet potato) and fats (cooking oil, ghee) and coconut.
  - b. Bodybuilding – eggs, meat including chicken meat, legumes (dals), peanuts, milk.
  - c. Protective – fresh fruits, green and yellow vegetables, tomatoes.
4. To stay healthy, one should eat foods from each of the three food groups, and at least two different foods from each food group on a daily basis.
5. Young children catch germs that cause more than half their illnesses from dirty hands, food and water.
6. Hands must always be washed after:
  - a. handling food (especially meat and eggs), animals and birds, soil, dirty clothes,
  - b. going to toilet or cleaning baby's bottom,
  - c. cleaning surfaces contaminated with faeces such as hen house or family toilet.
7. Hand-washing is simple and easy using a tippy tap.
8. Thorough hand-washing has six steps and should last at least 20 seconds.
9. Poultry source foods are body-building foods.
10. Poultry food products are particularly important for children and women who are pregnant or breast-feeding.
11. Eggs, chicken liver and chicken heart contain many nutrients which are essential for blood building, immunity and healthy growth and development of children.

### Training aids required

- Carry out training where there is a kitchen or place suitable for cooking demonstration.
- Posters:
  - Basic food types – three food groups
  - When to wash hands
  - Six-stage hand washing
- Tippy tap (plastic bottle, candle, water, rope, net bag and soap, post to tie the tippy tap)
- Cooking demonstration kits (pots, pans, burner, ingredients, etc.)
- Cooking demo guideline for the facilitator
- Disposable plates (for participants to taste the food)
- Handout leaflets

**Total time**      Three hours

### Session content

Time	Content	Method
5 min	<p><b>Introduction</b></p> <p>Welcome the participants            Introduce trainer(s)            Introduce participants in a general way-e.g. ask who prepares the food for the family.            Acknowledge the experience in the group.            Briefly list topics to be covered in the module(see objectives)            Motivate the participant’s interest in the training-for example, state “Nutrition is important for a healthy, active and economically productive life”</p>	Talk
10 min	<p><b>What is food and nutrition</b></p> <p><b>Ask:</b> Why do individuals need to eat healthy foods?  <i>Prompt the answers from the participants</i></p> <p><b>State:</b> Consumption of healthy foods leads to a healthy, active and economically productive life. Eating a variety of foods can provide sufficient energy to be active; help in body grow and repair the injured and strengthen the immune system against diseases.</p> <p><b>State:</b> No single food provides all of the nutrients needed for health and strength of our body. We need to consume a wide variety of different foods every day.</p>	Talk Poster Puzzle game with Food cards
15 min	<p><b>Three basic food groups</b></p> <p><i>Explain to the participants that all the foods can be grouped into three food groups based on their function for the body and discuss with them the food groups as they are presented below.</i></p> <p><b>State:</b> “The three basic food groups are:            1) energy giving            2) body building            3)protective”</p>	<i>Show the poster of three food groups</i>

### 1. Energy giving foods

**State:** Energy foods give energy to work and help children to grow. This group includes foods rich in energy like cereals, roots and tubers, sugar, oils, butter and ghee.

*Engage the participants in listing foods which belong to this group. Examples are in the table below:*

**Table 1: Local energy giving foods**

Cereals	Roots and Tubers	Fats/Sugar
Rice (Chal)	Potato (Alu)	Ghee (Ghee)
Maize / Corn (Vutta)	Sweet Potato (Mistialu)	Butter (Makhon)
Wheat (Gama)	Beetroot (Beet)	Oil (Tel)
Barley (Jab)	Turnip (Shalgam)	Sugar (Chini)
Rice Flakes (Chira)	Yam (Mateyalu)	Jaggery (Gur)
Semolina (Suji)		Coconut (Narikal)

### 2. Body building foods

**State:** This group includes foods which build our body and give us strength, help children to grow. These foods are also important for blood building to avoid anaemia and for bone building. This group includes pulses and legumes, nuts and oilseeds, milk and its products and meat and egg.

*Engage the participants in listing foods which belong to this group. Examples are in the table below:*

**Table 2: Local body building foods**

Pulses/Legumes	Nuts and oilseeds	Milk and Products	Meat and egg
Lathyrus (Khesari)	Groundnut (Badam)	Milk (any)	Chicken (Murgi)
Chick pea (But)	Sesame (Til)	Curd (Dahi/Doi)	Meat (Mangso)
Green gram (Moong)	Pumpkin seed	Cheese (Paneer)	Fish (Mas)
Lentils (Massor)	(Mistikhumrabichi)	Buttermilk (Ghol)	Egg (Dim)
Black Gram(Mashkolai dal)			

### 3. Protective foods

**State:**Protective foods are important part of the diet because they protect us from infections by giving immunity. They also help maintain body functions like building blood and keeping children's eyes healthy. These foods are: vegetables and fruits.

*Engage the participants in listing foods which belong to this group. Examples are in the table below:*

**Table 3: Local protective foods**

Vegetables	Fruits	Leafy Vegetables
Tomato (Tomato)	Mango (Aam)	Spinach (Palongshak)
Pumpkin (Misti kumra)	Pawpaw (Pape)	Fenugreek leaves (Meethi)
Carrot (Gajar)	Orange (Komala)	Red Amaranth (Lalshak)
Pointed gourd (Potol)	Pineapple (Anaras)	Cabbage(Bada kopi)
Eggplant/ Brinjal (Begun)	Banana (Kola)	Colocasia leaves (Kochushak)
Okra (Derosh)	Dates (Khejur)	Mint (Pudina)
Bottle gourd (Lau)	Jackfruit (Kathal)	Radish leaves (Mulashak)
Ridge gourd (Jinga)	Sapota (Sofeda)	Cauliflower leaves (Fulkopi data)
Ash gourd (Jalikumra)	Wood apple (Bel)	Sarisashak (Mustardl)
Snake gourd (Chichinga)	Aonla (Amloki)	Bottle gourd leaves (Lau shak)
String bean (Barbati)	Jambu (Jamrul)	Amaranth leaves (Data shak)
Cauliflower (Fulkopi)	Guava (Payera)	Drumstick leaves (Shajnashak)
Beans (Sheem)	Hog Plum (Amra)	Indian Spinach (Puishak)

5 min

5 min

10 min

*Introduce puzzle game with food cards. Distribute the food cards among participants and ask them to say which food group do the foods represented on the food card which they received belong to.*

*Check understanding of key messages 1, 2 and 3.*

**What is a balanced diet?**

**State:** To stay healthy, one should eat foods from each of the three food groups, and at least two different foods from each food group on a daily basis.

*Discuss with the participants that a balanced diet is important because it:*

- Provides energy to work and learn;
- Is essential for pregnant and lactating mothers to have healthy children;
- is essential for children to grow; protects the body against illness (keep healthy).

5 min

*Check understanding of key message 4.*

**State:** We should have 3 meals per day and 1 to 2 snacks per day.

**Say:**Eating good food, especially with family, is one of the pleasures of life. People who eat healthy, balanced diets are likely to have:

- plenty of energy to work and enjoy themselves;
- adequate growth;
- fewer infections and other illnesses.

**State:** Children who eat well grow well. Women who eat well are likely to have healthy babies.

20min	<p><b>Hygiene and safe food</b></p> <p><b>State:</b> Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases. For example hand washing, cleaning, water and sanitation and safe disposal of household waste.</p> <p><b>Ask:</b> What makes us sick?</p> <p><i>Prompt answers from the participants.</i></p> <p><b>Then state:</b>Germs and dirt make us sick</p> <p><b>State:</b>Germs are small organisms which grow on dirt, especially if the dirt contains food leftovers, animal or human faeces. Germs grow also on human body, especially in the nose, mouth, nails and on animals. Whenever we touch something we leave our germs on it and germs from its surface stay on our hands.</p> <p><b>State:</b> A clean house and living areas required to let us be healthy.</p> <p><b>Ask:</b> What happens when germs get into our food?</p> <p><b>State:</b>Some germs when we eat them cause food poisoning: we get stomach ache, fever, feel weak, don't have appetite, often we get diarrhoea and we vomit.</p> <p><b>Ask:</b> what happens when a child or an adult get diarrhea and vomit?</p> <p><b>State:</b> They lose nutrients and water from our organism and we cannot replace them because we can't eat.</p> <p><b>Ask:</b> What happens next?</p> <p><i>Facilitate the answers below:</i></p> <ul style="list-style-type: none"> <li>• Children become undernourished and they stop growing</li> <li>• Adults are tired and can't work</li> <li>• Children can't go to school and learn</li> <li>• Small children require more attention can't sleep and cry</li> </ul> <p><b>Ask:</b>“why are clean hands important when handling food?”</p> <p><b>State:</b> Dirty hands are the most common source of food contamination. Washing hands often will eradicate the frequency of suffering from food poisoning by all family members.</p> <p><b>Ask:</b> Which are the activities after which we should always wash our hands with soap? When do our hands get dirty?</p> <p><i>Let the participants give their guesses. Ask leading questions to help them guess the activities listed below:</i></p> <p><b>Wash hands with clean water and soap or ash especially after:</b></p> <ul style="list-style-type: none"> <li>• Going to the toilet or cleaning a baby's bottom;</li> <li>• Washing dirty bed linen or surfaces contaminated with feces;</li> <li>• Handling animals;</li> <li>• Before and after preparing food and eating;</li> <li>• Before feeding a child or sick person.</li> </ul> <p><b>State:</b> Washing hands with soap should last for minimum 20 seconds</p> <p><b>Say:</b> To wash hands effectively, meaning to remove all the dirt and dangerous germs, we</p>	<p>Talk Participatory discussion</p> <p>Show poster-</p>
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have to apply water and soap on our hands and we should follow the six steps as follows:

*Read the points demonstrating them as on the pictures below. Encourage participants to follow your moves and repeat each of the steps of hand washing.*

1. scrub palms,
2. back of hands,
3. between fingers,
4. finger tips,
5. thumbs and
6. wrists and fingernails

Step - 1



Step - 2



Step - 3



Step - 4



Step - 5



Step - 6



20 min

#### **Making a tippy tap:**

**Sate:** Installing a tippy tap is a simple and cheap way of ensuring that you can easily wash hands in critical places: **near the latrine, eating area, food preparation area and poultry and livestock sheds.**

**Say:** To build a tippy tap we need:



1. **A clean plastic bottle**
2. **A rope or string**
3. **A small knife or a nail**
4. **A candle**
5. **Matches**
6. **A soap**
7. **If possible a net bag**

*Show the participants the tools which are needed to build a tippy tap, gather them around you (preferably go outdoors for this demonstration) and show them how to build a tippy tap following the steps below:*

#### **The procedure:**

1. Heat up the knife or nail over the candle and use it to make a hole in the side plastic bottle, low and close to its bottom.
2. Fill the bottle with water and close the cap tight and tie the bottle to the pole with strings. Place tippy taps near to the critical areas: Latrine, food preparation and eating areas.
3. Hang soap in a net next to each bottle.

when to wash hands  
Demonstration

<p>5 min</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p><b>Fig. Installing a tippy tap on a tree</b> Source: SPRING promotion materials – How to Build Your own Tippy Tap</p> </div> <div style="text-align: center;"> <p>4. Open the cap water will come out hole.</p> <p>5. Wash your water and soap</p> </div> <div style="text-align: center;">  <p><b>Fig. Girl using a tippy tap</b> Source: SPRING promotion materials – How to Build Your own Tippy Tap</p> </div> </div> <p style="text-align: right;">slightly and the through the  hands with</p> <p><i>Show how to use the tippy tap.</i> <i>If there is a time let them practice 6 steps of hand washing with the tippy tap.</i> <i>Check understanding of key messages 5,6,7 and 8.</i></p>	
<p>20min</p>	<p><b>The role of poultry in nutrition</b></p> <p><b>Ask:</b>“What kind of important food do we get from our hens?” <i>Prompt the answers from the participants.</i></p> <p><b>Then say:</b> “these are eggs and meat”.</p> <p><b>Ask:</b>“What food group are these?” <i>Let the participants answer. Remind them about the three foodgroups: body building, energy giving and protective.</i></p> <p><b>Answer:</b> “eggs and meat are body-building foods”</p> <p><b>State:</b> poultry food products are particularly important for children and women who are pregnant or breast-feeding.</p> <p><b>State:</b> “eggs, chicken liver and chicken heart contain many nutrients which are essential for blood building, immunity and healthy growth and development of children”</p> <p><i>Discuss with the participants about introducing eggs and meat in the complementary foods after the 6<sup>th</sup> month of life:</i></p> <p><b>It is important to include the poultry meat and eggs in the complementary diet of children:</b></p> <ul style="list-style-type: none"> <li>• Soft boiled egg yolk from the 6<sup>th</sup> month of life</li> <li>• Whole egg from the 8<sup>th</sup> month of life</li> <li>• Well-cooked meat from the 12<sup>th</sup> month of life</li> </ul> <p><b>State:</b> “Micronutrient content of eggs, as well as chicken meat, can be improved by ensuring adequate diet of a chicken. The folic acid concentration in eggs can be increased</p>	<p>Talk Discussion Q &amp; A</p>

5 min	<p>substantially by feeding hens a folic acid enriched diet. One of the methods is feeding to the chicken raw kitchen leftovers of dark leafy vegetables like spinach, mustard (sorishashak), cauliflower, carrots, beets etc. This can be done through practicing “Cafeteria System” for poultry, where chickens receive twice a day three types of food: mineral rich food, vitamin rich food and grains”.</p> <p><i>Check the understanding of messages 9, 10 and 11.</i></p>	
1 hour	<p><b>Cooking demonstration</b></p> <p><b>Coconut Egg vegetable curry</b></p> <p><b>State:</b>”Egg-coconut-vegetable curry is a balanced meal that contains the three food groups. It is suitable for everybody, and especially lactating women and children”.</p> <p><b><i>Before the cooking demo starts arrange a hand washing station with clean water and soap and make all the participants wash their hands with soap following 6 steps of hand washing.</i></b></p>	Participatory cooking demonstration (Look into the cooking demo guideline)