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**SPRING**  
Strengthening Partnerships, Results,  
and Innovations in Nutrition Globally

# India Nutrition-Sensitive Agriculture Training Handouts



September 2017



# India Nutrition-Sensitive Agriculture Training Handouts

## ABOUT SPRING

The Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project is a seven-year USAID-funded cooperative agreement to strengthen global and country efforts to scale up high-impact nutrition practices and policies and improve maternal and child nutrition outcomes. The project is managed by JSI Research & Training Institute, Inc., with partners Helen Keller International, The Manoff Group, Save the Children, and the International Food Policy Research Institute.

## RECOMMENDED CITATION

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## DISCLAIMER

This report is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the terms of the Cooperative Agreement AID-OAA-A-11-00031, (SPRING), managed by JSI Research & Training Institute, Inc. (JSI). The contents are the responsibility of JSI, and do not necessarily reflect the views of USAID or the U.S. Government.

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## SPRING

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**COVER PHOTOS:** Illustration by SPRING

UPAVAN: UPSCALING PARTICIPATORY ACTION AND VIDEOS FOR AGRICULTURE AND NUTRITION	
PARTNERS	FUNDERS
     <p>Together, building healthier communities</p>   <p>Strengthening Partnerships, Results, and Innovations in Nutrition Globally</p> 	  <p>from the British people</p>  <p>FROM THE AMERICAN PEOPLE</p>

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# Acknowledgments

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Although these materials were created specifically for the SPRING nutrition-sensitive agriculture training in Odisha, India, any part of this package may be printed, copied, or adapted for related projects to meet local needs with the express written permission of SPRING. Please direct any requests to reproduce or adapt these materials to [info@spring-nutrition.org](mailto:info@spring-nutrition.org), with the understanding that the source of the materials will be fully acknowledged and the materials will be distributed at no cost.



# Session 4: Daily Activity Chart Icon Key

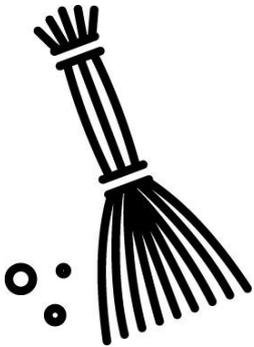
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Care giving



Farming



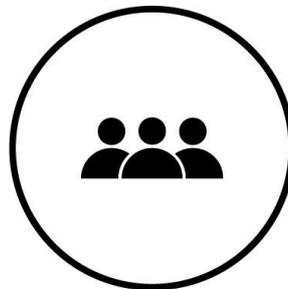
Cleaning home



Gathering wild foods



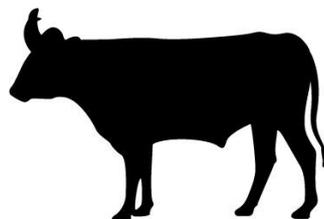
Drinking tea



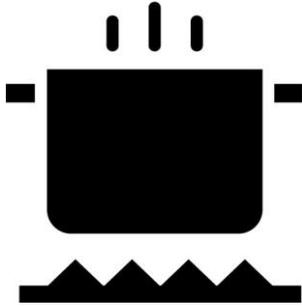
Group meeting



Eating



Managing livestock



Preparing food



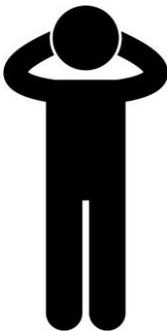
Sleeping



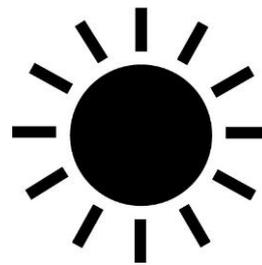
Religious activity



Clothes



Resting



Waking up



Selling products at the market

# Session 4: Pictorial Daily Activity Schedule for Family Members

## Mothers

The pictorial daily activity schedule for Mothers is organized into six columns, each representing a time of day. The columns are marked with sun icons (representing daytime) and a moon icon (representing nighttime). The activities shown are:

- Column 1 (Morning):** Waking up (sun icon), washing face (person with water), and cooking (stove).
- Column 2 (Morning):** Washing clothes (person with laundry), drinking tea (cup), eating (person with food), and cleaning (broom).
- Column 3 (Midday):** Cooking (stove), eating (person with food), and cleaning (broom).
- Column 4 (Afternoon):** Washing clothes (person with laundry), eating (person with food), and cooking (stove).
- Column 5 (Evening):** Eating (person with food) and cooking (stove).
- Column 6 (Night):** Eating (person with food) and sewing (sewing machine).

## Fathers

The pictorial daily activity schedule for Fathers is organized into six columns, each representing a time of day. The columns are marked with sun icons (representing daytime) and a moon icon (representing nighttime). The activities shown are:

- Column 1 (Morning):** Waking up (sun icon), drinking tea (cup), and washing (person with water).
- Column 2 (Morning):** Washing (person with water) and farming (person with shovel and cow).
- Column 3 (Midday):** Farming (person with shovel and cow) and eating (person with food).
- Column 4 (Afternoon):** Farming (person with shovel and cow) and eating (person with food).
- Column 5 (Evening):** Eating (person with food) and sewing (sewing machine).
- Column 6 (Night):** Sewing (sewing machine).

## Grandmothers

The pictorial daily activity schedule for Grandmothers is organized into six columns, each representing a time of day. The columns are marked with sun icons (representing daytime) and a moon icon (representing nighttime). The activities shown are:

- Column 1 (Morning):** Waking up (sun icon), washing (person with water), and eating (person with food).
- Column 2 (Morning):** Washing (person with water), eating (person with food), and farming (person with cow).
- Column 3 (Midday):** Farming (person with cow) and eating (person with food).
- Column 4 (Afternoon):** Farming (person with cow) and eating (person with food).
- Column 5 (Evening):** Eating (person with food) and sewing (sewing machine).
- Column 6 (Night):** Sewing (sewing machine).



## Session 6: Scenario A

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### Resource 6.1: Case Study 1, Scenario A, Family Spending Plan

You are a female, 16 years old, and completing your final year of high school. You have two sisters, age 9 and 10, who are also in school. You all live with your mother in a one-room home. Your father left the family a year ago to look for work in the city after a severe drought and flooding made farming too difficult. The family has not heard from him and he has not sent money home. Recently, your mother fell ill with stomach ulcers and needs medication to ease her pain. Your mother supports the family by selling odds and ends at the local market. She has already told you that you must leave school and find work to bring in some extra monthly income. Your dream is to attend college in the city to study accounting. In a good month, your mother brings in, on average, Rs.2,500.

#### To budget:

- |   |          |
|---|----------|
| a. Basic food stuffs (rice, dal, vegetables, cooking oil, salt, sugar, spices, turmeric, weekly meat, fish, eggs, and snacks) | Rs.1,000 |
| b. Cosmetics and hygiene (soap, face cream, etc.)   | Rs.50    |
| c. Rent for a stall in the market   | Rs.300   |
| d. Mother's medication  | Rs.500   |

### Resource 6.1: Case Study 2, Scenario A, Family Spending Plan

Your name is Shibnand and you live in Keonjhar. You are the father of five children: two sons and three daughters. You support your family, but are struggling to make ends meet. You work hard to grow paddy and some vegetables to help feed your family. You also have a small plot of sunflowers and you sell the seeds for a little extra money.

With purchasing new seeds and tools for farming, you also hope to put a new tin sheet roof on your home. Water leaks into your home in the rainy season, because the tile roof you have now is not waterproof. You just sold your harvest of sunflower seeds at the market and made Rs.30,000.

#### To budget:

- |   |           |
|---|-----------|
| a. Food   | Rs.3,600  |
| b. Upgrading your tools and farming irrigation system | Rs.8,000  |
| c. Medical care at the doctor                         | Rs.3,600  |
| d. New tin roof for your home                         | Rs.10,000 |



## Session 6: Scenario B

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### Resource 6.1: Case Study 1, Scenario B, Rising Food Costs

Food costs are 40% higher and transportation costs are 30% higher. People are buying less at the market; your mother's monthly earnings has decreased to Rs1,800.

**To budget:**

- |   |          |
|---|----------|
| a. Basic food stuffs (rice, dal, vegetables, cooking oil, salt, sugar, spices, turmeric, weekly meat, fish, eggs, and snacks) | Rs.1,000 |
| b. Cosmetics (soap, face cream, etc.)   | Rs.50    |
| c. Rent for a stall in the market   | Rs.300   |
| d. Mother's medication  | Rs.500   |

### Resource 6.1: Case Study 2, Scenario B, Poor Harvest

You had a bad harvest after a drought, followed by flooding. Food prices have increased by 50% and goods and services are more expensive. Your harvest of sunflowers brought you only Rs.22,000.

**To budget:**

- |   |          |
|---|----------|
| a. Food   | Rs.3,600 |
| b. Upgrading your tools and farming irrigation system | Rs.8,000 |
| c. Medical care at the doctor                         | Rs3,600  |
| d. New tin roof for your home                         | Rs10,000 |



## Session 9: How Families Can Get More Good Food by Growing and Raising; Harvesting, Processing, and Storing; and Selling and Buying

Resource 9.2: How Families Can Get More Good Food by Growing and Raising; Harvesting, Processing, and Storing; and Selling and Buying		
	If families can...	Then...
<b>Grow and Raise</b>	Grow or raise more food	the quantity of food available for the family to eat (and sell) will increase.
	Grow or raise a larger variety of crops (rice, vegetables, pulses, fruits) and animals (chickens for eggs and meat, cows for milk)	The variety of foods and food products available for the family to eat (and sell) will increase.
	Discuss together the best practices for what and how to produce a variety of crops and animals	Contributions from all family members to these decisions are more likely to improve the quantity, quality, and variety of foods to eat (and sell).
<b>Harvest, Process, and Store</b>	Harvest, process, and/or store their crops and animal products using good practices	The quality of foods and food products available for the family to eat (and sell) will increase.
	Process or add value to crops or animal products food that is more appealing	These products may be more appealing, affordable, and valuable on the market, thereby increasing family income enabling them to buy a greater variety of foods or save money for food during the hunger season.
	Process foods for storage using good practices (e.g., drying maize, millet, pulses, and groundnuts to the appropriate moisture level)	The availability of foods will be extended for more months throughout the year.
	Discuss together the best practices for how to harvest, process, and store the food they have produced	Food losses and risk of illness from contamination will be less and prices for products sold may increase.
<b>Sell and Buy</b>	Sell some food they produce that does not need to be kept for consumption	Income for buying other foods or inputs needed to grow or raise food could increase.
	Discuss together the best options for what foods and inputs to purchase	The family's overall diet could improve.



# Session 10: Grow and Raise Group work Discussion Guide

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## *Grow and raise—Growing and raising more and more diverse foods*

What are some good practices in this stage of the cycle?

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Who usually decides (what to grow, how to grow it)?

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What helps?

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- 

What gets in the way?

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- 

How can the family work together to adopt this practice?

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# Session 10: Harvest, Process, and Store Group work Discussion Guide

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## *Harvest, Process, Store—Harvest, process, and store to avoid losses*

What are some good practices in this stage of the cycle?

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- 



Who usually decides (how to harvest and process)?

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- 
- 

What helps?

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What gets in the way?

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How can the family work together to adopt this practice?

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# Session 10: Sell and Buy Group work Discussion Guide

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## **Sell and Buy—Selling some production for income and buying nutritious foods**

What are some good practices in this stage of the cycle?

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- 



Who usually decides (what to sell and buy)?

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- 
- 

What helps?

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- 
- 

What gets in the way?

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- 
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How can the family work together to adopt this practice?

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## Session 13: Steps for Safer Composting

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### **Step 1: Site**

Clear a corner of yard by the fence or near the edge of the farm, **not too close to the home or other buildings, in case pests or snakes are attracted to the pile.** It should be close to a water source and **easy to reach** when you throw in household waste, but out of the main traffic flow and **away from areas where small children play.** It should also be out of direct sunlight; a great location is under trees that provide shade and **may benefit from the nutrients generated by the pile.**



## **Step 2: Dig**

**It is best if this work is not done by pregnant or breastfeeding mothers, who should not do heavy work.**

Dig the pit(s) 1 meter in height, 1 meter in width, and 1 meter in length, or a bit larger. Anything larger than 1.5 meters will make it difficult to manage/turn and will not provide adequate air circulation. Making more than one pit will **make it easier to turn the compost.**



### **Step 3: Base**

Make a 30 centimeter high base of coarse plant material—such as twigs, sticks, or straw—to ensure good air circulation and drainage.



#### **Step 4: Brown**

Add a 10 centimeter layer of dry *brown organic matter* that does not easily compose—for example, maize stalks; fallen leaves, bark, twigs, and branches; sawdust; wood chips; and materials like shredded cardboard and paper. This brown matter doesn't usually have a smell and it may help manage smells. Always put a little on top of any "green" food scraps. **Do not use plants treated with pesticides, diseased plants, or plants with seeds (e.g., weeds), which will grow in the pile.**



### **Step 5: Green**

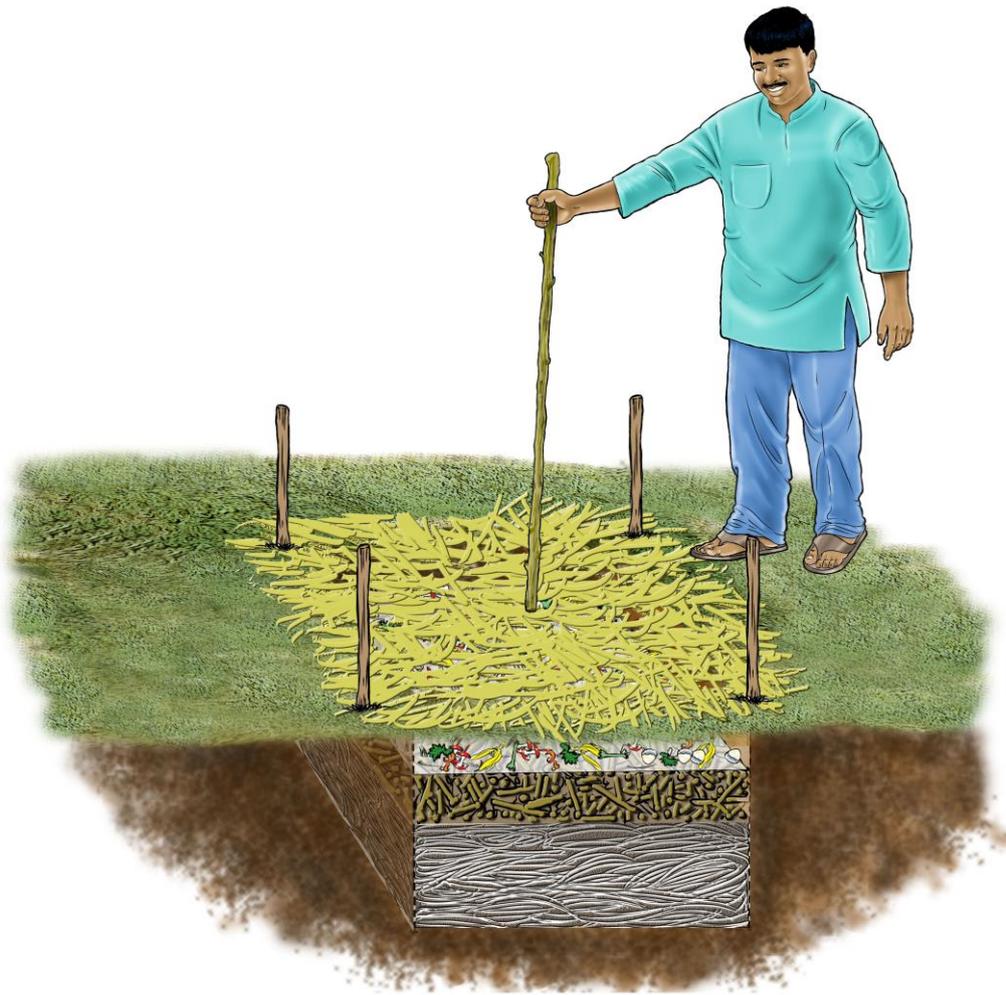
Add a 10 centimeter layer of fresh, moist *green organic matter* that decomposes—for example, small pieces of grass, vegetable scraps, coffee grounds, eggshells, fruits, and kitchen waste. This adds nitrogen, which gives off protein and heats the pile. Generally, these materials can cause a bad smell, especially if not managed properly. Add a small layer of brown to the top to help manage smells, but usually add no more than one layer of brown, then add green at once. ***Do not discard meat and dairy products in the compost, including meat and fish bones, carnivorous animal manure, or oils and grease; they may attract animals, rodents, and other pests.***

**One “green” you can use is manure, if you manage it safely.** Sometimes we think we should skip a step and let animals or humans defecate in the fields. But, if handled properly, feces from grass, grain, and hay eaters—cows, rabbits, and chickens, etc.—provide an excellent source of nitrogen to the compost pile. Dry all feces before handling, if possible. When collecting or managing manure, household members should **use a shovel or other tool, not touch it with their hands, and then wash up carefully, to prevent bringing these materials into the home. To avoid being exposed to pathogens, pregnant or breastfeeding mothers should not do this work.**



### **Step 6: Moisten**

You can add a sprinkling of finished compost, healthy topsoil, or ash on the top of your pile. Then, moisten the pile with a bit of urine and some water to aid in composition. Cover the pile with grass or straw to keep it moist, but protected.



## **Step 7: Decompose**

Wait for the pile to settle. After about 10 days, put a large pointed stick into the middle of the pile. After a few days, if the stick is—

- a) **Too hot to touch:** Turn the pile (a very hot pile—the inside of the pile could be over 70 degrees Celsius—may kill the good small organisms, so you need to turn it, which lets air in; you can add a small amount of water to cool it).  
To turn the pile—
  - take a shovel or hoe and move the materials
  - then rebuild, with a bottom layer first, adding the existing pile back on top
  - be sure to move items from the outside to the center so they can decompose, and let in air.
- b) **Warm:** Keep the pile as is, as it may be starting to decompose.
- c) **Cool:** You can still see whole pieces of original materials or if the pile is not smaller, **it needs to decompose more to become safe compost.** To help it decompose more, add water, turn the pile, and add more fresh, moist, green organic matter. Check again in several days.

Until the compost is ready, check the temperature every 10–15 days. When you check the temperature, also turn/rebuild the pile, as above. You will turn/rebuild the pile at least 2 or 3 times before it is ready. Layering and regularly turning the material may make the compost ready in one to two months, otherwise it can take up to four months. **Remember: pregnant or breastfeeding mothers should not turn the pile, which is heavy work.**



### **Step 8: Use safely when ready**

Compost is ready to use when it has an earthlike brown substance; is crumbly, clean-smelling, and cool; and is about half its original size. Only use the middle of the pile. Add the part of the pile to the bottom of your next pile. **Pregnant or breastfeeding mothers should do not do this heavy work or carry compost.**



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