

**SD**  
**HS**

Sowing  
Diversity =  
Harvesting  
Security

**ONLINE**  
**COURSE**

Online course for farmer  
fields schools on nutrition  
and local food plants



**OXFAM**

## Online Course for Farmer Field Schools on Nutrition and Local Food Plants

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**COVER PICTURE:** Women from Rushinga District, Zimbabwe, cooking *sadza* (grain porridge). Photo: Sacha de Boer/Oxfam Novib.

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## Acronyms

<b>FFS</b>	Farmer Field School
<b>SD=HS</b>	Sowing Diversity = Harvesting Security
<b>ToT</b>	Training of Trainers





This course has been organized to help potential master trainers to prepare and conduct trainings of trainers (ToT) for Farmer Field Schools (FFS) on nutrition and local food plants. FFS are the main part of the Sowing Diversity=Harvesting Security (SD=HS) program's work on nutrition. SD=HS is a global program currently implemented by Oxfam country offices and implementing partners in eight countries: the National Agricultural and Forestry Research Institute (NAFRI) and Agricultural Research Center (ARC) in Laos; Local Initiatives for Biodiversity, Research and Development (Li Bird) in Nepal; Asociación de Organizaciones de los Cuchumatanes (ASOCUCH) in Guatemala; Participatory Ecological Land Use Management (PELUM) and Eastern and Southern Africa Small Scale Farmers' Forum (ESAFF) in Uganda; Zambia Alliance for Agroecology and Biodiversity (ZAAB) in Zambia; Community Technology Development Trust (CTDT) in Zambia and Zimbabwe; Fomento de la Vida (FOVIDA) in Peru; and the Centre for Chinese Agricultural Policy (CCAP) and the Farmers' Seed Network (FSN) in China. SD=HS is coordinated by Oxfam Novib. Its work on nutrition and local food plants contributes to improving the quality and diversity of diets and reducing the length and severity of the food scarcity season.

This course explains the contents and delivery methodology elaborated in the **FFS Field Guide on Nutrition and Local Food Plants**, including concepts related to nutrition, local food plants and gender, the diagnostic stage, FFS activities that can be

implemented to improve the management of local food plants and nutrition, planning, reporting and evaluation, and special topics. The broad basket of options offered by the Field Guide is reflected in the diversity of the topics in this course. FFS should not aim to deal with all the topics – participants, supported by their facilitators, should make their own choices in accordance with their local needs and preferences.

The FFS concept is based on community empowerment and the capacity of community members to learn from each other and increase their self-confidence and self-reliance. It is important that FFS facilitators embody such an approach, helping communities to resolve their challenges themselves. While this online course aims to prepare people who will lead the ToTs, community knowledge can be generated and used only in experiments and discussions among community members, assisted by their FFS facilitators and local experts as needed.

We are grateful for funding support from the Swedish International Development Cooperation Agency (Sida).

We hope that this course will be helpful, and are open to comments and suggestions for its improvement at any time.

# LEARNING OBJECTIVES



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## Learning Objectives

The objective of the course is to help potential master trainers to prepare and conduct ToT for FFS on nutrition and local food plants. The course trainees will become ToT trainers, training the first generation of local FFS facilitators.

The course aims to build in-country capacity by familiarizing participants with the content and delivery methodology elaborated in the FFS Field Guide on Nutrition and Local Food Plants.

### At the end of this course the students will be able to:

- Understand and apply the main concepts related to nutrition, local food plants, farmer empowerment, and adult learning.
- Identify the required activities and tasks that have to be taken into account for the planning of FFS work and curriculum development.
- Learn the different exercises that are part of the diagnostic phase.
- Gain insights into the facilitation of FFS groups to improve the management of local food plants and nutrition.
- Gain knowledge on special topics that can enrich the FFS experience.
- Organize the ToT.

# TARGET AUDIENCE

## Target audience

Farm management advisors, rural extension service staff, local health and nutrition staff, farmer organizations, rural youth and women networks, and farmers.



## Content

The course is divided into 35 topics, which are distributed over six modules and include video presentations corresponding to the chapters of the **FFS Field Guide** with a total duration of four hours and 16 minutes. The presentations have been designed to be used directly in the ToTs, with questions to guide discussions. Studying the materials will require an investment from half a day to one full day per module. Finally, the course includes a section on questions and answers compiled from the first online course series.

## Introduction

Participants will become familiar with the FFS approach and the general principles of adult learning. They will understand how FFS can empower communities and that the ToT (and this course) should help them to become good FFS facilitators and trainers.

They will gain insights into the **main concepts related to nutrition and local food plants**, understanding that local food plant diversity can help to cope with food scarcity and improve the quality of diets. Participants will discuss how empowering women contributes to their families' food and nutrition security. They will get acquainted with the timeline and components of the **FFS curriculum** – the diagnostic phase, FFS activity implementation, and options to deal with special topics – and the need to involve public institutions and experts in the FFS. Finally, they will discuss **how to organize an FFS** – for example, the importance of good planning and work in sub-groups to help all participants to contribute.

### Module 1 – Introduction

Links to corresponding video presentations	Corresponding chapters in the FFS Field Guide
SD=HS program	
FFS empowerment approach	1.1/9.4.3
introduction on nutrition and local food plants	1.2/1.3
General overview of the FFS	2
Timeline for the FFS curriculum	3
FFS organization	4

### Additional resources



**Video:** *What is malnutrition?*  
(Canadian Foodgrains Bank)

## Diagnostic phase

Developing an FFS requires careful discussion to ensure that it addresses the needs and objectives identified by the farmers in the community. In the diagnostic phase, farmers share their traditional knowledge on and experiences with local food plants and nutrition in a joint learning process that allows for evaluation of their agricultural and household practices. Farmers' commitment to the FFS project can be ensured only if it satisfies their unique preferences, which will be rooted in their community's unique socio-cultural, economic, environmental, and political context.

In this module participants will first gain insights into how to conduct the **malnutrition problem tree** exercise to guide discussions among FFS participants on what defines adequate nutrition and the causes and consequences of malnutrition. The key notions are that malnutrition is a complex problem with multiple causes and consequences that may vary according to the local context, and that working with local food plants can tackle low dietary diversity. In the second diagnostic exercise, participants will learn how to guide FFS groups to agree on a **local food plant list** comprising 25-30 plants, based on their contribution to nutrition and diversity in local diets. In developing

the **resource flow map** exercise, participants will discuss how to capture the traditional knowledge associated with each of these plants, encouraging farmers to describe their places of growth, users, level of use, edible parts, perceived nutritional and medicinal values, presence of stigma, and stress-tolerance qualities.

In the **seasonal calendar and coping strategies** exercise, participants will acquire insights into how to assist FFS participants to describe their community's seasonal calendar, reflecting on the food scarcity period and the role of local food plants in their coping strategies. The key message is that local food plants may be an important way to diversify household diets in the community and strengthen coping strategies during the food scarcity season.

In the penultimate exercise, participants will learn how to encourage farmers to **recognize the importance of local food plants and identify the bottlenecks** that limit their consumption. Finally, participants will gain insights into how to guide FFS farmers to set the FFS research objectives, selecting the topics to address and the activities to conduct based on the information, views and experiences discussed in the previous exercises.

### Module 2 – Diagnostic phase

Links to corresponding video presentations	Corresponding chapters in the FFS Field Guide
Malnutrition problem tree	5.1
Local food plant list	5.3
Resource flow map of local food plants	5.5
Seasonal calendar and coping strategies	5.6
Importance and bottlenecks	5.8
Setting FFS research objectives	5.9

### Additional resources



**Video:** *Goromonzi District Nutrition Farmer Field School (CTDT, Zimbabwe)*



**Video:** *Traditional Crop Genetic Diversity for Mountain Food Security (Li-BIRD, Nepal)*

## Managing local food plants

This module starts with diagnostic exercises on the local food plants identified in the previous module. In the **timeline analysis focused on local food plants**, participants will gain insights into how to guide farmers to analyze changes in local food plant consumption over time and the reasons why these changes happened.

In the **management and domestication** exercise, they will learn how to help farmers to distinguish between domesticated, semi-domesticated and wild local food plants, and discuss the management practices and problems associated with each. The key messages are that management depends on the type of plant (wild or domesticated, annual or perennial, seed or vegetatively propagated) and takes place in different parts of the landscape (home gardens, agricultural fields, forests, among others).

The module next introduces five interconnected FFS activities on managing local food plants. The first, on **sowing local food plants**, evaluates different methods to improve the results of seeding. The second, on **harvesting wild food plants**, explores how to harvest them sustainably. The key messages of the third activity, on **seed**

**storage**, are that higher-quality seeds store better, and storage conditions affect seed quality (germination rate and health). The fourth activity, on **seed germination**, explores how to break seed dormancy, which involves trial and error. The final activity provides insights into asexual reproduction and **vegetative propagation** of local food plants in home gardens and fields – a useful practice for rare species or those with easy root formation or strong seed dormancy.

### Module 3 – Managing local food plants

Links to corresponding video presentations	Corresponding chapters in the FFS Field Guide
Timeline analysis (local food plants)	5.4
Management and domestication	5.7
Sowing local food plants	7.1.1
Harvesting wild food plants	7.1.2
Seed storage	7.1.3
Seed germination	7.1.4
Vegetative propagation	7.1.5

## Improving nutrition

This module starts with two diagnostic exercises for FFS groups interested in further exploring the main challenges associated with nutrition. In the **timeline analysis focused on nutrition**, course participants will gain insights into how to guide FFS participants to analyze changes in nutrition patterns and nutritional status over time and why these changes happened.

In the **intra-household food distribution** exercise, participants will learn how to reflect on who makes decisions in the household on how food is prepared, consumed, and distributed, paying attention to gender- and position-based inequalities. The key messages are that different household members have different dietary needs, and inequality within households often affects their nutrition.

The rest of the module comprises guidelines for five FFS activities. The key messages of the first activity, on **food preservation**, are that preserving food contributes to year-round dietary diversity, and improper food processing may cause nutrient loss and toxicity, and damage health. The second activity, on **food preparation and cooking demonstrations**, highlights that cooking demonstrations can increase local food plant consumption by

exploring new recipes that might improve the taste of local plants and their acceptance by children. It also addresses how cooking and preparation may alter the nutritional content of local food plants.

The third activity focuses on the role and organization of **seed fairs and food fairs**, which are an occasion for exchanging seeds and knowledge about the management and use of local food plants, and promoting diversity in food products. The fourth is on **growing local food plants in home gardens**, which provide households with an important source of diverse and nutritious foods, and offer a place for farmers to experiment with issues such as seed germination, sowing and harvesting. The fifth activity focuses on **creating school gardens**, which can complement school meals and improve children's consumption of local food plants.

**Module 4 – Mejorando la nutrición**

Links to corresponding video presentations	Corresponding chapters in the FFS Field Guide
Timeline analysis (nutrition)	5.4
Intra-household food distribution	5.2
Food preservation	7.1.6
Food preparation and cooking demonstrations	7.1.7
Seed fairs and food fairs	7.1.8
Growing local food plants in home gardens	7.1.9
Creating school gardens	7.1.10

**Additional resources**



**Video:** *Cooking together in Zambia – local nutrition groups work together to diversify family diets*  
(Bioversity International)



**Video:** *Improving dietary diversity with home gardening*  
(GIZ: NSAP Ethiopia)

## Planning and evaluation

Now that all diagnostic exercises and activities have been discussed, this module focuses on preparation of the FFS curriculum. It emphasizes that there can be no good FFS without good planning, and the curriculum will help to **prepare, organize and conduct FFS activities** successfully. It guides course participants to identify which **collaborations and expert advice** should be sought to support the implementation of FFS activities – for example, with nutritionists, staff members of extension services and health clinics.

Participants will reflect on how to put in place an efficient **reporting and documentation** system for: (1) monitoring and evaluating which FFS activities were successful or not, and how they can be improved; (2) evaluating the indicators set in the outcome framework, which are aligned to the program’s objectives; (3) documenting and sharing traditional knowledge within and across FFS communities; and (4) preparing technical or policy briefs for broader stakeholder involvement and advocacy at national and global level. The module will encourage participants to learn how to conduct a proper **FFS evaluation** for feedback and to understand impact.

Finally, it will guide participants in **ToT planning** in their own country. The ToT can be enriched by reflecting on the results of the **baseline**, which indicate the main food and nutrition security problems that families face in the communities and the main local food plants that can help to improve the quality of diets.

### Module 5 - Planning and evaluation

Links to corresponding video presentations	Corresponding chapters in the FFS Field Guide
Curriculum preparation	6
Collaborations and expert advice	9.3
Reporting and documentation	9.5.1
FFS evaluation	8.8
ToT planning	9.4
Gender and youth	9.4.2

### Additional resources



**Excel file:** *templates for reporting the results of the diagnostic exercises*



**Excel file:** *templates for monitoring and evaluating FFS activities*

## Special topics

Special topics provide complementary information and training options to address any additional issues and concerns that emerged during the diagnostic phase. Special topics should ideally be identified for inclusion when the local FFS curriculum is agreed. As with other topics, activities on special topics have to be prepared in advance, and in coordination with technical experts where needed. Some might not be strictly related to specific stages in the implementation of selected FFS activities, but nevertheless judged to be essential to cover knowledge gaps identified among the FFS participants during the diagnostic phase.

Special topics could be of an organizational, technical or social nature. This module focuses on five, though others are included in the FFS Guide and more could be added. The first addresses the **nutrition and food diagram**, providing insights into how to use local food plants to reach a balanced diet that includes sufficient items from each food group. The second looks at **maternal and child nutrition** – how to understand the special needs of pregnant women, mothers and (young) children, assess shortcomings in their diets, and discuss ways to improve them.

The third special topic deals with the importance of **water, sanitation, and hygiene (WASH)**, helping to identify current shortcomings and opportunities for improvement at the household and community level. The fourth discusses the potentially important role of **community seed banks** in safeguarding local food crops and varieties through safe seed storage, for the purposes of agrobiodiversity conservation as well as food and nutrition security. The final topic explores options for a **local food celebration day** as a culminating activity for an FFS, where its participants can report back to the community on the lessons they have learned and the progress they made in the FFS.

### Module 6 - Special topics

Links to corresponding video presentations	Corresponding chapters in the FFS Field Guide
Nutrition and food diagram exercise	8.1
Maternal and child nutrition	8.2
Hygiene, sanitation, and water (WASH)	8.3
Community Seed Banks	8.4
Local food celebration day	8.5

### Additional resources

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**Video:** *Nepali farmers fight to save indigenous seeds*  
 (published by SciDev.Net, based on the project  
 “Integrating Traditional Crop Genetic Diversity for  
 Mountain Food Security” implemented by Bioversity  
 International, NARC, DoA and LI-BIRD)

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# QUESTIONS AND ANSWERS





# QUESTIONS AND ANSWERS

A compilation of questions and answers from meetings held during the first course series, organized for Asia and Africa as part of the Sowing Diversity = Harvesting Security (SD=HS) program, can be found [here](#).

Participants in the first course series included staff from the National Agricultural and Forestry Research Institute (NAFRI) in Laos; Local Initiatives for Biodiversity, Research and Development (Li Bird), and Oxfam Nepal in Nepal; the Farmers' Seed Network (FSN) in China; Eastern and Southern Africa Small Scale Farmers' Forum (ESAFF), Participatory Ecological Land Use Management (PELUM), Community Integrated Development Initiatives (CIDI), International Institute for Rural Reconstruction (IIRR), Community Empowerment for Rural Development (CEFORD), and Oxfam Uganda in Uganda; Community Technology Development Trust (CTDT) in Zambia and Zimbabwe; and district nutritionists from the Ministry of Health and Child Care in Zimbabwe.

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