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Curriculum development



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Step 4: Curriculum development

At the centre of a JFFLS is a detailed curriculum that outlines the activities to be undertaken by the JFFLS participants. This curriculum will help the facilitators to plan the different learning activities throughout the year. This chapter explains how a JFFLS curriculum is developed and what topics should be included.

4.1 What is a curriculum?

A curriculum is a set of learning activities that are undertaken by a group of students; in this case the JFFLS participants. A curriculum spells out what learning activities the children will undertake in a specific period, the learning objectives of these activities, when they will take place (i.e., the learning programme) and how each will be facilitated (i.e., the learning methods).

Ideally, a JFFLS provides two one-year learning cycles. The first year of the curriculum concentrates on transferring good agricultural and life skills to the participating children. A further goal of the first year is to empower the children to make informed choices for their future lives. In the second year of the curriculum, JFFLS graduates are assisted as far as possible in securing the livelihood they would like to pursue through youth associations and the provision of credit and saving assistance (see **Step 8: On graduation... future activities**). This chapter concentrates on the first year of the JFFLS.

4.2 JFFLS learning activities

During the first one-year cycle of a JFFLS, the integrated curriculum is built around three main pillars: 1) school site or learning field activities where children learn by doing; 2) special agricultural topics; and 3) life skills.

Learning field activities

In a JFFLS curriculum, learning field activities are all those that involve setting up and maintaining the site of the JFFLS. Depending on the crop choices of the participating children, and with the help and support of adults, the learning activities in the school site follow the agricultural cycle and range from laying out the site, preparing the land, seeding or planting, and weeding and thinning to constructing suitable storage units, storing harvests,

making compost, managing livestock, establishing a nursery and irrigating vegetables. Most of these activities can be facilitated through practising them with the children, following a short introduction and/or demonstration. To increase the learning impact of school site activities, JFFLS facilitators could stimulate the children to collect data from the school site, analyse the data and present them to the other children for discussion and deciding crop management actions. This will help JFFLS participants to make the right crop management decisions because it increases their understanding of why, if and when they should carry out different school site practices. This process is called agro-ecosystem analysis (AESAs) and is explained further in **4.4 Learning methods**.

Adults from the community should carry out all those school site activities that involve intensive manual work; the children can observe and assist with easy tasks. JFFLS are focused on learning, and are not places for child labour. It is common for children in rural areas to be engaged in some form of agricultural activities, whether seasonal to coincide with crop cycles and/or school holidays or full-time out of necessity. “Child labour” differs from this, and refers to children working in ways that harm, abuse and exploit them, or deprive them of education. JFFLS should clarify the differences between acceptable forms of work undertaken by children, which can be regarded as positive, and child labour in agriculture, which should not be encouraged and needs to be eliminated.

Acceptable forms of children’s work are non-intensive activities for short periods every day that do not prevent children from attending school. Activities could include land preparation that does not involve heavy machines that are too big for children, planting and weeding with appropriately sized cutting and sharp tools, watering that does not involve loads that are so heavy they may cause musculoskeletal disorders, harvesting, feeding animals, bringing animals to pasture, shearing, collecting eggs and sweeping.

The distinction needs to be drawn between various forms of child labour in agriculture and the *worst forms of child labour* in agriculture. The worst forms of child labour require urgent action for elimination and include tasks that are likely to harm the health of children, such as strenuous work that causes musculoskeletal disorders from repetitive bending, stooping and adopting awkward and uncomfortable postures. These lead to problems with tendons and muscles and backache. Repetitive carrying of heavy loads is debilitating. Cutting the produce from trees by climbing or stretching and using inappropriate cutting tools puts a lot of strain on the musculoskeletal system. Using knives, scythes, machetes and sickles can result in cuts and sometimes severed body parts.

Great care and safety precautions must be taken if chemical products are used in the JFFLS. Children often have problems reading safety instructions because of language problems or illiteracy, so they may not know the dangers of overexposure to pesticides, chemical fertilizers and veterinary products. Children rarely have access to gloves or protective mouth gear. Children are also at risk from spray drift, contaminated soil on their bare feet, and water that is polluted by pesticides. Some banned pesticides are available in developing countries, which can lead to children being poisoned or suffering allergic respiratory diseases.

Special agricultural topics

A JFFLS curriculum includes special agricultural topics that deal with concepts of good agricultural practice such as conservation agriculture and IPM. These topics are difficult to facilitate through practice alone, so other methods should be used to transfer knowledge to the children, such as brief presentations, discussions, field visits and experiments. The following agricultural topics are recommended for inclusion in a JFFLS curriculum.

Integrated pest management

In the IPM approach farmers consider all the available pest control techniques and select the measures that are economically justified and that reduce or minimize the risks to human health and the environment. The promotion of healthy crop growth is central to IPM, as healthy plants are more resistant to attack from pests and diseases. Through several sessions in the JFFLS curriculum, participants will gain a sound understanding of good crop management practices that contribute to healthy crops, such as selecting the right varieties, proper seed management, land preparation, correct spacing, fertilizer and soil management, water management and crop rotation. IPM also encourages natural pest control mechanisms, which use the many beneficial insects, spiders and pathogens that help farmers to defend their crops against pests. Girls and boys in the JFFLS will learn to recognize these natural enemies of pests through regular structured observation sessions and will gain understanding of their roles and the optimum field conditions that favour their development. The learning methodology used for this in JFFLS is AESA (see **4.4 Learning methods** for more details). IPM is presented to the children by an agricultural extension officer or other resource person and, through AESA, it forms an integral part of the practical learning activities that help JFFLS participants to make decisions about aspects of crop management.

Conservation agriculture

Conservation agriculture aims to improve crop yields while conserving and making more efficient use of natural resources. It is based on three main principles:

1) *Maintain as much soil cover as possible*: In conservation agriculture, it is important that the soil is covered with crop residues, mulch or nitrogen-fixing cover crops in order to limit weed growth, prevent soil erosion and contribute to healthy and fertile soils through the added organic matter.

2) *Disturb the soil as little as possible*: Farmers should plough as little as possible and plant directly into the soil, with either a hoe or more sophisticated equipment such as a jab-planter or animal-drawn seeders. Minimum or zero-tillage planting improves the soil structure and enables the soil to retain more water.

3) *Mix and rotate crops*: Instead of monocropping, farmers are encouraged to intercrop and rotate their crops in order to prevent pests and diseases and to increase soil fertility. Intercropping also contributes to a more varied diet.

These principles are not new; what is innovative about conservation agriculture is that all the principles are applied at the same time. Not only does this help to increase yields and improve soil fertility, but it can also reduce costs and labour as it eliminates ploughing and aims to control weeds more effectively than other agricultural practices. It also spreads the manual labour more evenly throughout the year. Because conservation agriculture can reduce the amount of work needed for land preparation and weeding and also contributes to a more varied diet, it may be a good agricultural practice for communities stricken by HIV/AIDS.

At different stages of the JFFLS curriculum, facilitators can introduce crop management issues that are related to conservation agriculture, such as field preparation and planting using planting basins and planting spots, different ways to plant seeds, and how much seed and fertilizer or manure are needed. Another learning objective of this topic is to help the children gain an understanding of soil health and organic matter and of how to improve and maintain healthy soil. JFFLS participants learn why the soil needs to be covered and how to do this by using cover crops or mulching. Children can also learn about and experiment with different cropping systems — such as intercropping, strip cropping and sequential cropping — the importance of crop rotation, and the best crop varieties and combinations to use. JFFLS participants can learn how to manage weeds using cover crops, when and how to weed, and which cover crops to use. The conservation agriculture topic might also include sessions on soil and water conservation in which participants learn about different erosion control measures such

as grass strips, contour ridges and terraces, as well as about various ways of conserving and harvesting water that can be used in combination with conservation agriculture methods.

Men, women, girls and boys each tend to be responsible for different crop management tasks and for cultivating different crops. Conservation agriculture may therefore affect them differently, so discussions on gender should be an integral part of the conservation agriculture topic. For example, the higher yields derived from conservation agriculture demand more time on harvesting, which women and children usually carry out. The money earned from sales of the increased harvest might go to men, who decide how to use it. Women therefore lose time that they could have spent on tasks that provide them with income about which they decide. On the other hand, reduced requirements for weeding, which is generally women's work, might make women more willing to adopt conservation agriculture. The effects of introducing a new farming practice differ from place to place, and are best discussed at a separate session within the curriculum.

The JFFLS curriculum might also include a discussion session on cultural and traditional beliefs in the community that might prevent the adoption of conservation agriculture: for example, many farmers believe that they must plough to facilitate the penetration of roots and rainwater, that they must clear the land before planting by burning stubble and weeds, and that they should only cultivate maize rather than rotating their crops.



Livestock management

Managing small livestock is another important component of a JFFLS curriculum as it exposes children to income generation and diversification of the farming system and the household diet. Small livestock also provide a comforting source of contact for orphaned children, who may benefit psychologically from caring for small animals. The type of livestock selected by the JFFLS participants should be affordable and manageable and should not provide too high a risk of failure. Depending on the local context, possible options include goats, rabbits, ducks, guinea pigs and poultry.

Through activities at the school site and related discussion sessions, children gain knowledge of technical subjects such as improved housing and shelter, livestock management, feeds and feeding management and animal health and hygiene (Box 4.1).

The psychological benefits of livestock to children

At the end of the agricultural season, the children participating in JFFLS in Mozambique were asked whether they would like to include livestock in their study fields. The main purpose of keeping small animals is to include animal husbandry topics in the JFFLS curriculum, such as management, feeding and vaccinations. The children decided to rear goats. Very soon the JFFLS facilitators realized that keeping these animals had psychological benefits by providing the girls and boys with a sense of security and comfort. The animals also triggered amusement, laughter and play. The introduction of the goats had, in a way, enhanced child empowerment.

Source: Carol Djeddah, FAO.

Avian influenza (bird flu)

Like humans, birds can get flu. Currently, there is a type (strain) of bird flu called H5N1, which can also prove deadly to humans. Both wild and domestic birds are at risk of infection. To date, only a few human cases have been attributed to transmission from birds, but the greatest looming threat with bird flu is probably socio-economic. In most of the cases where H5N1 has been found in domestic birds (chickens, ducks, etc.), the flocks have had to be slaughtered. It is good to be informed about and keep up-to-date with the status of avian flu in the country. Extension workers or Ministry of Agriculture staff can provide information about whether or not avian flu is present in their countries. Health workers or health units may also have the most current information.

To avoid the socio-economic shocks that could arise from having to slaughter flocks of poultry, some junior and adult FFLS are promoting other small livestock such as guinea pigs and rabbits in case avian flu reaches their areas.

Sources: BBC news at: [news.bbc.co.uk/1/hi/health/3422839.stm](https://www.bbc.com/news/health-3422839)
FAO also publishes information about avian flu at: www.fao.org.

Box 4.1: Poultry and JFFLS in Zimbabwe and Namibia

In both Zimbabwe and Namibia, indigenous poultry management plays a central role in the JFFLS curriculum. Poultry is an appropriate income-generating enterprise for JFFLS because:

- it has low labour demand, so children can do most of the work and thereby learn about the whole process;
- it has low initial investment costs, so can be replicated after donor funding ends;
- the resulting produce is marketable through rural schools, clinics and the community;
- it gives quick returns and is also a good source of nutrition.

In Zimbabwe and Namibia, the JFFLS curriculum includes poultry management sessions dealing with a wide range of technical subjects, such as breeds of chicken, housing systems, disease prevention, vaccination, disease management, nutrition and feeding, feeding and drinking equipment, brooding management and hen to cock ratios, laying nest to bird ratios, factors affecting egg production, and marketing of poultry and its products.

In Zimbabwe, the children learned about the importance of supplemental feeding through AESA. Chickens were divided into two groups, each with its own pen. The cocks in one group were supplemented with grain while those in the other were not. Both groups were free range. The children recorded the initial weights and health status of 40 percent of the pullets. At subsequent meetings, the children compared the weights of the chickens and the numbers and weights of the eggs for the two groups. They also compared the incidences of pests and diseases and the mortalities of the two groups. For both groups they registered the number of fertilized eggs, tested the hens to determine whether they were laying and recorded the survival rate of chicks.

Most of the poultry topics dealt with were new for many JFFLS participants, and they especially enjoyed the AESA sessions, candling to see the chick developing in the egg, and the technique for determining laying and non-laying chickens with their fingers. The boys and girls said that poultry gave them something to help sustain their livelihoods, which made them feel that they were valuable members of the community as opposed to dependents. Some JFFLS groups sold eggs, which allowed them to buy exercise books and pencils for group members who were attending school. Other groups planned to raise enough money from poultry to start up a school uniform making business.

Community members also showed great interest in poultry activities and helped to build poultry houses and to cut and carry thatch and thatching. Communities also provided start-up poultry for the project. Community members – especially those living close to the sites – learned a lot from the JFFLS through assisting and attending the children's demonstrations. For instance, they learned the importance of supplementary feeding: although many people already knew that poultry need to be given supplements in order to produce economically, they had not realized the extent to which supplements increase productivity.

Sources: Dave Masendeke, Zimbabwe, and Imms Namaseb, Namibia.

Horticulture

Horticulture diversifies income and also provides a major source of many of the micronutrients needed for human development and to boost the immune system.

Through learning by doing at the school site and group discussions, JFFLS participants can learn about all the management-related aspects of vegetable cultivation. These include setting up a nursery, fencing a garden, selecting and sowing seeds, transplanting seedlings, vegetative propagation, seed conservation, and IPM for vegetables. By the end of the first one-year cycle, children should know how to make compost and how and when to irrigate vegetable crops. Because many vegetables are perishable, the curriculum should also include sessions on food processing, preservation and storage techniques to ensure year-round access to vitamin- and mineral-rich vegetables.

Horticulture provides a good entry point for addressing life skills such as good nutrition and a healthy life style, and for teaching boys and girls to cook healthy recipes using products from the JFFLS vegetable garden. Medicinal plants and their uses for treating HIV-related symptoms are also usually included in the horticulture sessions of a JFFLS curriculum.

Life skills

The life skills component of the JFFLS curriculum addresses issues such as HIV/AIDS awareness and prevention, gender sensitivity, child protection, psycho-social support, nutritional education and business skills. Life skills are gender-specific and every effort should be made to ensure that the different needs of boys and girls are identified and met. Through building their life skills, children develop self-esteem and confidence and become responsible citizens with positive values and respect for gender and human rights. Many of the topics covered in the life skills training make wide use of culturally based learning methods, including theatre, drama and music, to explore sensitive issues such as sexuality, sexual health, psycho-social problems, children's rights, gender roles and HIV.

Gender equality and attitudes

Gender equality and attitudes is a cross-cutting issue in all JFFLS. Introduction of this topic helps participating boys and girls to develop the capacity to assess traditional power relations between the genders, identify the shortcomings of these relations and find ways of addressing them. Drama and dance are good mechanisms for JFFLS participants to express these relationships in verbal and non-verbal ways.

Promoting gender equity through JFFLS

Through JFFLS, girls and boys learn to question unhealthy gender norms and to participate in agriculture – and life – in a gender-equitable manner. The JFFLS curriculum in Mozambique includes exercises that address gender issues. The “Planning for the future” module introduces the daily clock exercise, focusing on how women and men, girls and boys spend their time differently. The cropping calendars exercise emphasizes the different roles of men and women concerning different crops and livestock and the use and control of resources. Girls and boys also discuss why these differences exist, and whether they have to.

Girls and boys share tasks in the JFFLS: boys as well as girls weed and water, and girls make AESA presentations alongside boys. Ultimately, transmitting gender-equitable attitudes to the boys and girls depends on a gender-equitable attitude among the facilitators. In the facilitator training course, participants presented two theatrical scenarios – a classroom with a gender-aware teacher and one with a teacher who reinforced traditional gender norms. Through humour, this session demonstrated how girls and boys are treated differently in many classrooms, leading to a discussion of customs and what the community could do to address injustices.

Source: Mundie Salm, Mozambique.

The curriculum should also include gender analysis sessions in which girls and boys gain understanding of how their culturally determined roles can lead to greater risk of contracting HIV and what they can do to protect themselves. For example, girls often lack decision-making power about how and with whom to have sexual relations, and social pressure often means that boys start having sex with different partners from an early age.

Gender equality and attitudes should not only be a special life skills topic, but should also become an integral part of the JFFLS curriculum. This means that JFFLS facilitators should encourage equal roles and responsibilities for both boys and girls in JFFLS activities, particularly in leadership positions.

Using creative methods to confront a difficult issue

One JFFLS life skills facilitator at a rural primary school in the Nhamatanda district of Mozambique finds that a combination of theatre and books helps him to facilitate the difficult topic of AIDS. The books provide facts about the disease, while the drama brings the facts across to the children in an easy way. He starts by telling a story about a man who has two wives (very common, especially in rural Mozambique) and finds out that he has contracted HIV. The facilitator tells the story with variations, starting with a version in which someone contracts HIV from a dirty needle at the traditional doctor, and later covering heavier issues such as extramarital sexual relations.

The children and facilitator discuss these stories together and make up a play based on the story and its characters. Through the characters, they can express their learning and feelings freely, which helps them to get to the heart of a difficult issue. The facilitator reports that the children are now very interested in learning about AIDS and have opened up to talk with him about their relationships.

Source: Mundie Salm, Mozambique.

AIDS

AIDS is a crucial element of the JFFLS curriculum, which aims to equip participants with the necessary knowledge and skills to make well-informed and “healthy” decisions and to avoid negative coping strategies that may put them at risk of transmission. Through peer-group discussions and other participatory methodologies at several sessions, the children learn about modes of transmission, ways to prevent transmission and risky behaviour, how to care for patients, and different strategies for mitigating the social and economic impacts of the pandemic. Because women and girls are more vulnerable to AIDS than men and boys, the JFFLS participants should also explore biological and cultural factors that increase the risk of HIV transmission. The AIDS sessions should ideally also address the stigma attached to the disease and what stigma and discrimination do to people. Cultural activities such as role plays and social theatre will help the children to discuss sensitive issues such as sexuality and sexual health, which in many cultures

are not usually discussed in mixed groups of boys and girls or between children and adults.

Like gender equality and attitudes, AIDS should not be a stand-alone topic, but as much as possible should be addressed throughout the three core activities of the JFFLS curriculum – school site activities, special agricultural topics and life skills. For example, when studying plant diseases at the school site, facilitators could link discussions on plant protection to human disease prevention, especially HIV. Similarly, when introducing the horticulture topic, discussions could include the use of medicinal plants to treat HIV-related symptoms such as cold, fever, rash, headache, stomach ache, diarrhoea and vomiting.

Group building and decision-making skills

Group building and decision-making skills are vital to the sustainability of a JFFLS. Simple participatory team building exercises, games and sport can help the children to feel part of the group and to deal with problems that arise in the group. The group needs to have a mature attitude so that the girls and boys feel confident and trusted when addressing sensitive topics

such as gender equity and AIDS. The children also require decision-making skills to be able to decide about their own lives and futures. This involves exercises to help them plan for the future through observing, experimenting, analysing and making decisions.

Nutrition and health

Nutrition education should explain how food is obtained, processed, prepared and eaten; how it is digested, absorbed and used by the body; and how it influences people's well-being. In the nutrition and health inputs of the JFFLS curriculum, children learn that food consists of different nutrients: carbohydrates, proteins, fats and micronutrients, including vitamins and minerals. Another objective of this topic is that JFFLS participants know how important a healthful and balanced diet is to their growth, functioning, development and health. This involves learning which crops at the school site are rich in energy and what key nutrients are important for good health. Because the nutrient content of food depends on the processing, preservation and preparation methods used, the JFFLS curriculum might include sessions in which boys and girls are directly involved in cooking, food processing and preservation.

By the end of the first year children should know how a good diet can help people living with HIV delay the progression of the virus, support drug treatments and prevent malnutrition. This includes introducing and exploring with the children what locally available remedies, such as herbs and spices, can be used to alleviate symptoms linked to HIV.

Discussions on health should not be restricted to HIV, but should also mention all the major health issues in the community – diarrhoea, malaria, TB, etc. The facilitator can also build a lesson on a local epidemic (e.g., a cholera outbreak) to help bring these issues alive.

Child protection

Child protection is central to the JFFLS curriculum. According to UNICEF, child protection involves protecting all children from violence, exploitation, abuse and neglect. Children are less vulnerable to the violation of their rights when they are aware of those rights and of services that will protect them. The JFFLS curriculum should therefore include sessions that explore such topics as early marriage, child labour, gender discrimination, sexual abuse and neglect, and should provide children with accurate

Children's property and inheritance rights: Zambia takes action

Zambia's Law and Development Association (LADA) has an initiative called the Paralegal Kids' Project, which has developed a manual to help boys and girls learn, understand and act on their rights. This training includes sessions on property and inheritance rights under Zambian law.

More information about the manual and the approach used can be obtained from LADA: lada@zamnet.zm

information about who they can contact if they feel threatened. In order to address these issues in a relatively light manner, facilitators can make use of the animated series *SARA*, developed by UNICEF. This uses a combination of books, comics and videos to provide insights into and solutions to child protection-related issues for young audiences. The JFFLS participants can also use stories such as those from *SARA* as the basis for plays about problematic situations and how to resolve them.

The JFFLS curriculum should also include sessions on children's property and inheritance rights, as these are crucial to children's protection now and in the future. These rights are often covered in national law but are not acted on at the community level. Without access to property or other resources, boys and especially girls face uncertain futures and are forced to engage in risky behaviour such as transactional sex to secure food and income.

Psycho-social support

A person's psycho-social well-being refers to his or her emotional and mental state (psycho-) and network of human relationships and connections (-social). With good psycho-social well-being a person's emotional state and social relationships are predominantly positive and healthy. When children suffer hardships, such as losing parents to HIV/AIDS, extended family relationships typically provide the most immediate means of support. Family support is vital for vulnerable children, but the premature death of family care givers often leaves children to cope on their own with trauma and loss. Living with HIV or caring for a parent sick with HIV can cause confusion and worry and can lead to children being stigmatized by their peers and/or the community at large. When children are orphaned they may lose confidence, self-esteem and their sense of belonging. In some cases, children can feel ashamed of a parent's death from AIDS because of the social stigma attached to the disease.

To help children to overcome these losses and rebuild their self-esteem they should be given opportunities to express their feelings and talk about how their lives have been affected by their changed roles and responsibilities. However, although children need opportunities to express their feelings, they should not be forced to talk before they are ready. Some children might not feel comfortable sharing their deepest feelings in a group of their peers, so the JFFLS curriculum should include sessions using various creative approaches in which children can explore and express their feelings through drama, role play, drawing, telling stories, for example. Group building exercises such as games and sports can help build the children's trust in the JFFLS facilitator and in one another, and encourage them to open up more easily in discussions. Through these activities, the JFFLS helps to integrate a child into his or her "new extended family" and community. In this context,

facilitators and volunteers act as care givers, ensure security and safety and assist children in familiar routines and tasks such as regular school attendance and interaction with other children.

Entrepreneurship

Although entrepreneurship is central to the second year of a JFFLS (see **Step 8: On graduation... future activities**), some business training skills can be included in the first year of the curriculum. The objective is to promote enterprising behaviour gradually through sessions where girls and boys begin to think about business ideas and become familiar with the concepts of profits and marketing.

Discussions could be held on how to develop a business idea (based on surplus product) and on marketing a product. Children might also be exposed to simple profit and loss concepts. They can consider the feasibility of what they are producing in the JFFLS as a source of income from sales of surpluses. The importance of forming groups to strengthen business opportunities could also be covered.

Emphasize that JFFLS participants have to select their own business ideas. These must be based on the available resources – often agriculture-related (fruits, vegetables, fish, animals, herbs, farmland, water) – the location of markets, and the skills required. Brainstorming about business ideas can be a starting point. Ask JFFLS participants to suggest ways of adding value to raw agricultural products – e.g., pickling and preserving of fruit, vegetables, meat and fish, and making environmentally sound packaging. Discussions should also focus on essential products and services that are not easily available locally, such as types of meat, milk products, clothing, materials for hairdressing and particular types of vegetables. There may also be special needs for local institutions. For example, JFFLS participants could estimate how many chickens the nearest commercial establishment requires every week, or what vegetables do not spoil quickly and can be used in large institutions where food is prepared daily, such as government office canteens.

If the JFFLS is already producing crops or

Income-generating activities in Kenya

In March 2005, an American Peace Corps volunteer facilitated a workshop on child-friendly income generation activities at the Odhuro JFFLS in Kenya. The workshop was funded by Community Aid International in Bondo. Twenty young people, mainly girls, participated in a practical exercise on making necklaces from glossy magazine paper. The children were shown how to select colourful paper, cut it into the proper size and roll it into beads. Using fishing line, the beads were strung into necklaces and completed with brass clasps.

Within two hours, every participant had completed a necklace. They wore their necklaces and showed them to the care givers and teachers, who demonstrated their appreciation with a round of applause. The children were confident that they would be able to make the necklaces by themselves. From an initial investment of less than Ksh. 100, JFFLS participants could make a profit of about Ksh. 400.

Source: Joyti Patel, Kenya.

A trip to the local market: watching business in process

A trip to the local market can be organized, so that JFFLS participants can make key observations such as:

- Which produce is produced locally?
- Which stalls sell out quickly, and why?
- Where are most people gathering to buy?
- What are the characteristics of good sellers?
- What is in demand?
- Does this relate to the season, the taste?
- Which produce looks good on display?
- Which spoils easily? How do people agree on prices?

has animals that can be sold, these can be used as examples. If poultry is kept, even if the eggs produced are not being sold, simple calculations can be based on the theoretical sale of a certain number of eggs daily, taking into account the costs of feeding poultry and the daily egg consumption of JFFLS participants.

Discussions on group formation and decision-making skills could cover issues related to working together in groups for production. The advantages of producing as a group include helping and learning from each other, economies of scale for purchasing inputs, and quality control. The

disadvantages include the possibility of some group members being careless and not working as hard as others, some being unpopular with customers for various reasons, and the tendency for a group not to give sufficient thought to customers' needs. The difference between having something valid to sell and marketing it could be highlighted, emphasizing the need for children to consider the six "marketing Ps" — product, place, people, price, promotion and plan — in their future businesses. Issues related to feasibility plans and access to finance and business development services are covered in more detail in **Step 8: On graduation... future activities.**

Entertainment

Entertainment is central in the JFFLS curriculum, and each session should devote some time to it. Playing games, engaging in sports, making art, singing songs and dancing are important activities for the children, as they create joy, build confidence and self-esteem, and develop group spirit. They also reward the hard work and learning of the girls and boys in the JFFLS. Entertainment provides fun relief from daily stress and new responsibilities, helping the children to socialize and giving them a sense of belonging. Children can sometimes learn better through fun games and exercises with hidden lessons — learning by playing. For example, a song/poem with a dance or actions can help children to remember details from the learning field, such as different plants and their nutritional or medicinal value, recipes for medicines, optimal spacing for crops, and the reasons for field activities.



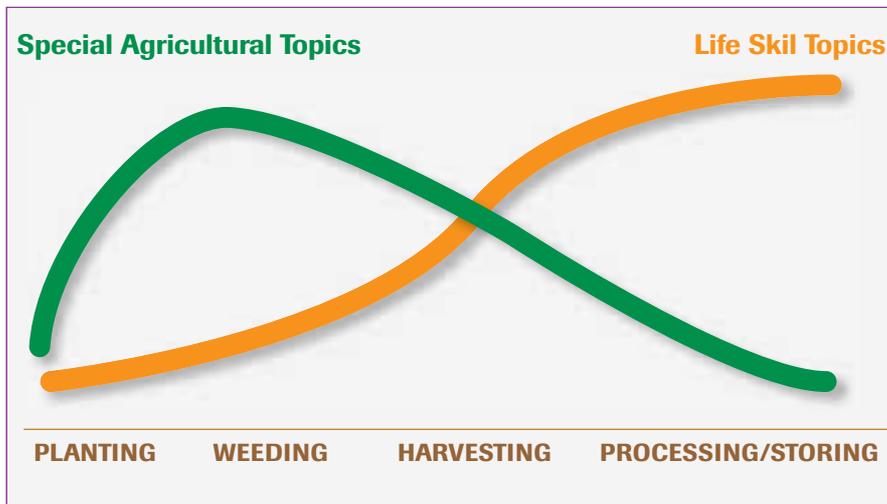
4.3 An integrated learning programme

This section describes the sequencing of the curriculum topics and activities described in the previous section – the learning programme. In general, JFFLS participants meet two or three times a week at the school site, depending on local timetables. They meet once a week in the study fields and once or twice a week for life skills and special agricultural topics. Formal JFFLS activities do not usually take place during the school holidays, but school feeding and entertainment may continue. Holidays give the children time to consolidate and internalize the learning from previous months.

The one-year JFFLS curriculum follows an entire local cropping season for the following reasons:

- Each stage of the crop cycle has its own problems and needs – water, fertilizer, mulching, weeding, etc. – so all stages of the crop and all the related crop management requirements need to be covered by JFFLS training activities.
- Some of the processes that the children will observe through AESA, such as the population dynamics of natural enemies or diseases, develop over time during the cropping season.
- The impacts of some crop management decisions made at an earlier stage of the crop can only be seen at the time of harvest, in terms of yield, quality, and cost and benefits.
- After the peak of the agricultural season, more time is available to deal with complex life issues such as losses and threats and HIV/AIDS. By this time, the group has also matured and the children are used to exploring issues together. The children feel confident enough to discuss sensitive issues that are affecting their lives (Figure 4.1).

Special agricultural topics are triggered by specific activities at different times of the crop cycle, and life skills topics are chosen to complement/link up with the agricultural topics. In this way, introducing good agricultural practices goes hand-in-hand with introducing good life practices. For example, the “Growing up healthy” theme is scheduled for periods when diseases are starting to appear in the field. This means that IPM principles as a special agricultural topic can be linked to health and nutrition as a life skills topic. The JFFLS curriculum is not static, but can be adapted to take into account seasonal changes and issues coming up in the field, such as plant disease, or to help individuals cope with issues in their personal lives, such as the loss of a family member or a health epidemic in the community.

Figure 4.1 Sequencing of life skills and special agricultural topics

source: Rogerio Mavanga

An integrated curriculum following the crop and life cycle

- FAO and WFP first piloted JFFLS in Mozambique in January 2004. In the initial experimental phase, the JFFLS curriculum was centred on good agricultural practices and life skills that reflected the children's interests and needs. As the schools gained experience, it became clear that a more detailed curriculum was needed to guide the facilitators in their daily activities. An integrated curriculum was developed that combines problems encountered in the field with problems faced in life. This new curriculum helps children to:
 - understand how to live healthily through growing healthy crops;
 - observe their fields regularly and make informed decisions on crops, perhaps using the same processes to make informed decisions about their own lives;
 - learn about crop as well as human diseases, and ways to prevent them;
 - understand agro- and human ecology so that they can become experts and feel in charge of their own lives;
 - develop problem solving and decision-making skills in dealing with AIDS-related concerns.

The curriculum JFFLS is organized according to monthly themes that link good agricultural practices and life skills. For example, when learning about cropping calendars and the life cycles of plants, children discuss the life cycles of people and planning for the future; and when dealing with pests and diseases and how to manage them through IPM, children also discuss HIV/AIDS and how to face and manage diseases and losses in life. The monthly themes follow the cropping season and include preparation, planning, growing up healthy, diversity, protection, water and granaries for life, threats and loss, and transformation and preservation. By structurally integrating agriculture and life skills according to monthly themes, the curriculum helps both the JFFLS facilitators and the children to approach life and agriculture from a holistic point of view.

Art, theatre, song and traditional dancing play a central role in encouraging self-expression and integration with peers. These cultural activities are also used when exploring sensitive issues, such as psycho-social problems, children's rights, gender roles and HIV/AIDS because they help to build trust, explore risks, solve problems and develop more gender-equal attitudes.

Source: Carol Djeddah, FAO

Figure 4.2: Example of an integrated JFFLS curriculum following the crop and life cycle in

Learning module	Learning field activities
Preparation	Field preparation <ul style="list-style-type: none"> • Selection of type of crops • Layout of learning fields • Land preparation
Planning	Seeding or planting
Growing up healthy	Maintaining a healthy crop <ul style="list-style-type: none"> • Weeding and thinning • Start of IPM • Weekly AESA exercises
Holidays	Consolidating themes of november
Diversity	Preparation: second crop season <ul style="list-style-type: none"> • AESA • Selection of type of crops • Layout of learning fields • Land preparation
Protection	Horticulture <ul style="list-style-type: none"> • AESA • Fencing the plot • Establishing a nursery
Water of life and granaries of life	Importance of water/harvesting first-season crops <ul style="list-style-type: none"> • Constructing a dryer and granary
Threats and loss	Pest and disease management <ul style="list-style-type: none"> • AESA • Drying and storing harvest
Transformation and preservation	Agroprocessing: food conservation livestock keeping <ul style="list-style-type: none"> • AESA • Compost making • Using the A-frame • Livestock management: – planning for and selecting livestock • Long-term crop harvesting
Two-week break	Evaluation and graduation Training of new facilitators

Mozambique: the 3 pillars

	Special topics – agriculture	Special topics – life skills
	<ul style="list-style-type: none"> • Cropping calendar • Life cycles of plants • Introduction to conservation agriculture • Conservation agriculture land preparation 	<ul style="list-style-type: none"> • Group building • Life cycles of people • Games, sports, art, theatre, song, dance
	<ul style="list-style-type: none"> • Agricultural planning • Testing germination of seeds • Spacing/number of seeds per hole • Introduction of AESA 	<ul style="list-style-type: none"> • Group building, continued • Planning for the future • Games, sports, art, theatre, song and dance
	<ul style="list-style-type: none"> • Conservation agriculture soil fertility management • Introduction to IPM principles 	<ul style="list-style-type: none"> • Decision-making: observing • Nutrition: food • Health: hygiene and sanitation • Games, sports, art, theatre, song and dance
	<ul style="list-style-type: none"> • Horticulture: selecting crops • Selecting secure land • Conservation agriculture intercropping/layout of field • Planning for experimentation 	<ul style="list-style-type: none"> • Decision-making: experimenting • Nutrition: variety in the diet • Girls and boys: equal opportunities • Games, sports, art, theatre, song and dance
	<ul style="list-style-type: none"> • Crop protection measures • Nursery management: Advantages Sowing density 	<ul style="list-style-type: none"> • Decision-making: analysing • Protecting children: child labour, child abuse, gender inequities, protection against HIV • Games, sports, art, theatre, song and dance
	<ul style="list-style-type: none"> • Conservation agriculture water management: Irrigation techniques Mulching Improved dryer and granary 	<ul style="list-style-type: none"> • Decision-making: making decisions • Water for life: what it means • Granary of life: reflection on what learned so far
	<ul style="list-style-type: none"> • IPM of vegetables and other crops • Managing post-harvest losses • Seed conservation • Introduction to medicinal plants • Role of natural and chemical pesticides 	<ul style="list-style-type: none"> • Facing and managing threats, diseases and losses in life • What is disease? • HIV/AIDS • Using medicinal plants to treat symptoms (e.g., cold, fever, rash, headache, stomach ache, diarrhoea, vomiting) • Art, theatre, song and dance
	<ul style="list-style-type: none"> • Drying foods, making preserves, flour, oil, etc. • Soil conservation measures, e.g., A-frame • Livestock keeping: feeding, disease (prevention and treatment), use of manures • Improved corrals • Improved (chicken) coops • Fish farming: feeding, disease (prevention and treatment) • Construction and management of a fish farming tank • Biodiversity and natural resources • Looking at local (wild) food plants to supplement diets • Problem of uncontrolled fires 	<ul style="list-style-type: none"> • Continue discussion of previous month • Cooking together (boys and girls) • Spreading risk • Marketing • Make a basic budget • Simple exercise in economic analysis and constraints • Nutrition: getting through the “hungry period” • Games, sports, art, theatre, song and dance

4.4 Learning methods

Most of the boys and girls participating in a JFFLS are orphaned because of AIDS or live in AIDS-affected households; they are therefore often deprived of attention for their physical, intellectual, emotional and spiritual needs. A top-down and authoritarian approach to supporting these children is not a suitable way of meeting their needs. Different child-centred learning methods are used in JFFLS to help children experiment, discover, analyse and make their own decisions. Because learning is most effective when it is fun, the JFFLS facilitators should use a combination of experimental learning methods, learning by doing, and culturally sensitive methods such as role play, drama and music. As much as possible, learning should be done in groups to stimulate the sense of belonging and to build confidence.

Experimental learning

Carrying out experiments

JFFLS participants are involved in simple field experiments that stimulate experimental learning and self-discovery and help them to become expert farmers. The experiments carried out during the first year of the JFFLS curriculum are generally not meant to introduce new farming techniques but rather to help children learn more about the crop that they are growing, the pests that are common to the crop and the natural enemies of those pests. The aim is to provide answers to problems that the children have identified at the school site. There are many field experiments that can help the JFFLS participants learn about good crop management. In mulching, for example, the girls and boys can compare plots with and without mulching and discuss the effect it has on the development of the crop. They can also compare monoculture with intercropping practices, and different crop varieties to discover their different resistances to pests and diseases. The JFFLS facilitators and participants should jointly select one or two appropriate field experiments. To help in this, the facilitators can consider the main farm-related problems identified by participants and key stakeholders in the community, the normal practices that farmers in the community apply to minimize these problems, and the recommendations made by extension officers.

Agro-ecosystem analysis

JFFLS use AESA to enhance children's observation and decision-making skills and to develop their critical thinking ability. AESA involves regular observation of the crop and the field situation in small sub-groups – for example the 30 JFFLS participants can be divided into three or four groups. Detailed observations are recorded and might include the growth stage of

the crop, crop height, deficiency symptoms, numbers of pests and different natural enemies, disease symptoms on leaves and stems, weeds, the weather conditions, and the humidity of the field. The children can illustrate their observations with drawings, which stimulates them to observe closely and intensively. They can also collect insects and plant parts with disease symptoms.

AESA can also stimulate children to conduct simple experiments. For example, they can use AESA to compare the plant health and pest and natural enemy populations on a plot that is managed according to IPM principles with those on a plot where pesticides are applied. At harvest time, with the help of facilitators, they can compare the yields of the two plots and calculate the differences between expenses on inputs and profits. AESA can also be used for comparing different crop varieties and assessing the use of compost.

Learning by doing

Through direct involvement in all the crop and livestock management-related activities that take place at the school site, JFFLS participants are exposed to good agricultural practices. The JFFLS facilitators can provide a brief introduction and/or demonstration before the activities are put into practice, and might ask the children critical questions about why and how these activities should be undertaken.

Another form of learning by doing is sharing the result of JFFLS activities with other community members. The value of sharing the fruits of children's participation in the JFFLS cannot be underestimated; it is a fundamental part of the learning process and builds confidence and self-esteem. Demonstrating knowledge and skills to community members reinforces the lessons the children have learned, helps to decrease stigma and isolation, and strengthens social networks, as well as increasing the community's ownership of the school. The JFFLS can organize field days in which the children demonstrate good agricultural practices to community members. By sharing their knowledge with others, the children can practise leadership skills and learn more about the importance of self-expression. JFFLS participants can also be encouraged to sell the crops produced in their communities, which helps them to learn about income generation and management. Ways of sharing the results of JFFLS include:

- field days in which JFFLS participants explain their learning field to the community, share their songs and drama, and offer what they have cooked using produce from the school site;
- posters and other artwork, including messages about HIV/AIDS, dance and theatre performances;
- dance and theatre performances in collaboration with social animators;
- crop exhibitions and seed fairs.

Cultural learning: the use of creativity

Creativity and child development are often related. Improvisation through dance or drama helps children to express themselves, to get to know themselves, to define risks and resources in a safe environment and to integrate with their peers. The creative use of local culture through drama, theatre, mask-making, art, dance, songs and poetry is a crucial part of the JFFLS learning process. These learning methods are very useful for exploring sensitive life skills issues, such as psycho-social problems, child protection, gender equity and HIV/AIDS. Drama and role play give children the confidence and encouragement to explore their feelings and thoughts, to acquire a notion of their own body and to express themselves. They can also be used to explore the risks related to HIV/AIDS while in a safe environment and to come to grips with difficult and sensitive problems identified by the JFFLS participants.

Pros and cons of using resource people

Resource people provide a JFFLS with expertise and authority on specific issues and bring the JFFLS closer to the community. Resource people often know the children and their backgrounds, and they can be contacted at any time in the village for clarification or follow-up. In turn, the children trust the messages given by resource people from their community or vicinity.

The benefits of resource people can only be realized if the JFFLS manages them carefully. Because their knowledge is so specific, resource people's teaching may sometimes conflict with the JFFLS curriculum. Resource people may also lack the necessary facilitation skills or experience of working with children. JFFLS coordinators should also keep in mind the saying, "a prophet is not honoured in his backyard". The children may not take resource people from their own community so seriously, and interpersonal conflicts in the community may be transferred to the JFFLS. Practical problems such as requests for payment and transport to the JFFLS site also have to be resolved.

Source: Edwin Adenya, Kenya.

Cultural learning activities used in the JFFLS should be relevant to the life skills topics in the curriculum. Activities should not be conducted in a top-down manner, but should encourage the boys and girls in the JFFLS to propose new types of cultural activity. It is also important that the content of the songs and theatre used in JFFLS does not create stigma or contradict good agricultural and life practices.

4.5 Training materials and resource people

It is impossible for JFFLS facilitators to know about all the special topics addressed in the curriculum; these range from IPM to nutrition and health and from livestock management to gender analysis and HIV/AIDS. JFFLS facilitators therefore make use of knowledgeable resource people who work near the school and can facilitate one or more sessions in which they are specialized. For example, a community health worker or a member of a local anti-AIDS organization can help with the HIV/AIDS sessions; extension officers or NGO personnel can help with conservation agriculture or IPM sessions. It is important to identify the resource people in time and to check their facilitation skills and experience of working with children. Some resource people might need short training assistance on facilitation and the use of training exercises that are tailored to the needs and interest of children.

JFFLS do not work with a standard set of training tools, because the exact content of a JFFLS curriculum might change, depending on the interests and needs of the participants and the context in which the JFFLS has been established. However, many topics introduced in JFFLS are not new, and so there is a wealth of existing training tools and exercises that can be used or adapted to the children's situation.



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4.6 References

FAO. 2001. *Improving nutrition through home gardening: a training package for preparing field workers in Africa.* Rome.

FAO. 2002. *Living well with HIV/AIDS: a manual on nutritional care and support for people living with HIV/AIDS.* Rome.

FAO. 2004. *Small-scale poultry production: technical guide. FAO Animal Production and Health Manual.* Rome.

FAO/WFP. 2005. *JFFLS, empowering orphans and vulnerable children living in a world with HIV/AIDS: concept paper.* Rome.

IIRR/ACT. 2005. *Conservation agriculture: a manual for farmers and extension workers in Africa.* Nairobi, International Institute of Rural Reconstruction (IIRR); Harare, African Conservation Tillage Network (ACT).

International HIV/AIDS Alliance. 2003. *Psychosocial support. Building blocks: Africa-wide briefing notes.* Brighton, UK.

IPM Danida. 2005. *Farmer field schools and IPM; refresh your memory.* Bangkok, IPM Danida Project. Available at: www.ipmthailand.org

ILO. 2005. *Training resource pack on the elimination of hazardous child labour in agriculture. International Programme on the Elimination of Child Labour (IPEC).* Geneva, International Labour Organization (ILO).



4.7 Annex 4.1

References for JFFLS curriculum: background materials

Integrated pest management (IPM)

FAO, 1996. *Field guide on gender and IPM*.

www.communityipm.org/docs/gender.pdf

FAO, 1997. *A training of trainers course for IPM farmer trainers*.

www.communityipm.org/docs/TOT-Farmers.doc

FAO, 1999. *A manual to facilitate participatory planning activities for community IPM*.

www.communityipm.org/docs/Manual-PPA.doc

FAO, 2000. *Guidelines and reference material on integrated soil and nutrient management and conservation for Farmer Field Schools*.

www.fao.org/ag/agl/agll/farmspi/docs.stm

FAO/UNDP, 2002. *The empowerment of Farmer Life Schools*.

www.communityipm.org/docs/Farmer_Life_Schools.doc

FAO/UNDP/World Education. 2004. *Farmer Life School Manual*.

hiv-development.org

Web site: *Community integrated pest management*.

www.communityipm.org

Conservation agriculture

Bishop-Sambrook, C. 2003. *Labour-saving technologies and practices for farming and household activities in Eastern and Southern Africa*. Rome, FAO/IFAD.

www.fao.org/ag/ags/subjects/en/farmpower/pdf/labour.pdf

Bishop-Sambrook, C. et al. 2004. *Conservation agriculture as a labour-saving practice for vulnerable households*. Rome, FAO/IFAD.

www.fao.org/ag/ags/programmes/en/enhance/FAO_IFAD_CA_Tanzania.pdf

FAO, 2000. *Manual on integrated soil management and conservation practices*. FAO Land and Water Bulletin No. 8.

<ftp://ftp.fao.org/agl/agll/docs/lw8e.pdf>

FAO, 2000. *Guidelines and reference material on integrated soil and nutrient management and conservation for Farmer Field Schools*.

www.fao.org/ag/agl/agll/farmspi/docs.stm

FAO. 2003. *Optimizing soil moisture for plant production, the significance of soil porosity*. FAO Soils Bulletin No. 79. Includes companion CD-ROM.

<ftp://ftp.fao.org/agl/agll/docs/sb79.pdf>

FAO & International Institute of Tropical Agriculture. 2004. *Manual on integrated soil management and conservation practices*.

www.fao.org/ag/AGS/AGSE/agse_e/7mo/furt1h.htm

Mulenga, N. et al. *Conservation tillage technologies in Africa*. Rome, FAO.

www.fao.org/ag/AGS/AGSE/agse_e/3ero/cases1d.htm

Web site: *FAO Conservation Agriculture*.

www.fao.org/ag/ca/

Horticulture/water management/forestry

FAO. 2001. *Participatory training in farmers' water management*. Training manuals.

www.fao.org/ag/agl/aglw/farmerwatertraining/suppmat.htm

FAO. 2001. *Future forests book and Teacher's guide*.

www.fao.org/docrep/006/y1475e/y1475e00.htm

International Potato Center. 1999. *Farmer Field School for Integrated Crop Management of Sweetpotato*.

www.eseap.cipotato.org/MF-ESEAP/Abstract/FFS-ICM-SP-Ind.htm

Web site: *Info Agrar*.

www.infoagrar.ch/index.htm

Livestock management/aquaculture

FAO. 1997. *The rabbit: husbandry health and production*.

www.fao.org/docrep/t1690e/t1690e00.htm

FAO. 2000. *Small ponds make a big difference, integrating fish with crop and livestock farming*.

<ftp://ftp.fao.org/docrep/fao/003/x7156e/x7156e00.pdf>

FAO. 2003. *HIV/AIDS and the livestock sector*. (fact sheet)

<ftp://ftp.fao.org/docrep/fao/007/ae502e/ae502e07.pdf>

FAO. 2004. *Small-scale poultry production technical guide*.

<ftp://ftp.fao.org/docrep/fao/008/y5169e/y5169e00.pdf>

Gender equality and attitudes

FAO. 2001. *SEAGA field-level handbook*.

www.fao.org/sd/seaga/downloads/En/FieldEn.pdf

FAO. 2004. *SEAGA guide for extension workers*.

www.fao.org/sd/seaga/downloads/En/RHREn.pdf

FAO LinKS Project. 2005. *Building on gender, agrobiodiversity and local knowledge: a training manual*.

www.fao.org/sd/LINKS/documents_download/Manual.pdf

Web site: *SEAGA* www.fao.org/sd/seaga/4_en.htm

HIV/AIDS

Children's Institute, University of Cape Town. 2004. *Helping children in the time of HIV and AIDS*.

www.sarpn.org.za/documents/d0001579/HelpingChildren.pdf

Family Health International. 2005. *Youth participation guide: assessment, planning, and implementation*.

www.fhi.org/en/Youth/YouthNet/rhtrainmat/ypguide.htm

FAO. 2003. *HIV/AIDS extension fact sheets*.

www.fao.org/docrep/007/ae502e/ae502e00.htm

FAO. 2004. *Addressing HIV/AIDS through agriculture and natural resource sectors: a guide for extension workers*.

www.fao.org/sd/dim_pe1/docs/pe1_050103d1_en.pdf

Save the Children & Uganda Ministry of Health. 2003. *Care for children infected and those affected by HIV/AIDS: a handbook for community health workers*.

synkronweb.aidsalliance.org/graphics/OVC/documents/0000527e.pdf

UNFPA & Margaret Sanger Center. 2004. *Programme planning resources and training materials: a compendium*.

http://www.unfpa.org/upload/lib_pub_file/367_filename_compendium.pdf

World Bank. 2003. *Education and HIV/AIDS: a sourcebook of HIV/AIDS prevention programmes*.

www.schoolsandhealth.org/Sourcebook/sourcebook-complete.pdf

Web site: *UNESCO Database on HIV/AIDS Preventative Education*.

www.dakar.unesco.org/bsida/index_en.shtml/

Web site: *HIV/AIDS Impact on Education Clearinghouse*.

hivaidsclearinghouse.unesco.org/ev_en.php

Group building and decision-making

World Vision International. 2004. *ADP toolkit for HIV/AIDS programming*.

www.worldvision.org/help/aids-lib.nsf/FILE/ADPToolkitforHIVAIDSProgramming207-04.pdf

Web site: *Feeding Minds Fighting Hunger*.

www.feedingminds.org

Web site: *Education for Rural People toolkit*.

www.fao.org/sd/erp/erptktoolkit_en.htm

WFP.2000. *WFP Guide to Participatory Techniques and Tools*.

Nutrition and health

FAO. 2004. *Family nutrition guide*.

<ftp://ftp.fao.org/docrep/fao/007/y5740e/y5740e00.pdf>

UNICEF & Department of Health South Africa. 2001. *South African National Guidelines for People Living with TB, HIV/AIDS, and other Chronic Debilitating Conditions*.

<synkronweb.aidsalliance.org/graphics/OVC/documents/0000526e.pdf>

Web site: *Inter-Agency School Health portal*.

www.schoolsandhealth.org

WFP (2006), *Programme Guidance Manual*

home.wfp.org/manuals/pgm/ACTIVITIES/SCHOOL_FEEDING_FFE/school_feeding_FFE_TOC.htm

WFP, UNESCO, WHO (1999), *School Feeding Handbook*.

Protection

OHCHR & UNAIDS. 2002. *HIV/AIDS and human rights: international guidelines*.

hivaidsclearinghouse.unesco.org/ev_en.php

Save the Children Federation. 2001. *The rights of children and youth infected and affected by HIV/AIDS: a trainer's handbook: module 2 health*.

synkronweb.aidsalliance.org/graphics/OVC/documents/0000213e02.pdf

UNICEF. 2004. *Framework for protection care and support for orphans and vulnerable children living with HIV and AIDS*.

www.unicef.org/aids/files/Framework_English.pdf

Web site: *Focusing Resources on Effective School Health: a FRESH Start to Improving the Quality and Equity of Education*.

www.schoolsandhealth.org/FRESH.htm

Psycho-social well-being

Gibbs, S., Mann, G. & Mathers, N. 2002. *Child-to-child: a practical guide, empowering children as active citizens*.

www.child-to-child.org/guide/guide.pdf

International HIV/AIDS Alliance. 2003. *Building blocks: Africa-wide briefing notes: psychosocial support*.

synkronweb.aidsalliance.org/graphics/OVC/documents/0000039e00.pdf

Peace Corps. 2000. *Life skills manual*.

www.peacecorps.gov/library/pdf/M0063_lifeskillscomplete.pdf

Entrepreneurship

FAO. 2002. *SEAGA guide to gender-sensitive microfinance*.
www.fao.org/sd/seaga/downloads/En/Microfinanceen.pdf

FAO. 2003. *Community-based tree and forest product enterprises: market analysis and development*. User's guide to the field manual.
www.fao.org/docrep/005/x7451e/x7451e00.htm

Web site: *Rural Finance Learning Centre*.
www.ruralfinance.org

Monitoring and evaluation (M&E)

FAO. 2002. *Measuring impacts of HIV/AIDS on rural livelihoods and food security*.
[ftp://ftp.fao.org/sd/SDW/SDWP/Shannon's paper080103.doc](ftp://ftp.fao.org/sd/SDW/SDWP/Shannon's%20paper080103.doc)

FAO. 2003. *Incorporating HIV/AIDS considerations into food security and livelihood projects*.
www.fao.org/docrep/004/y5128e/y5128e00.htm

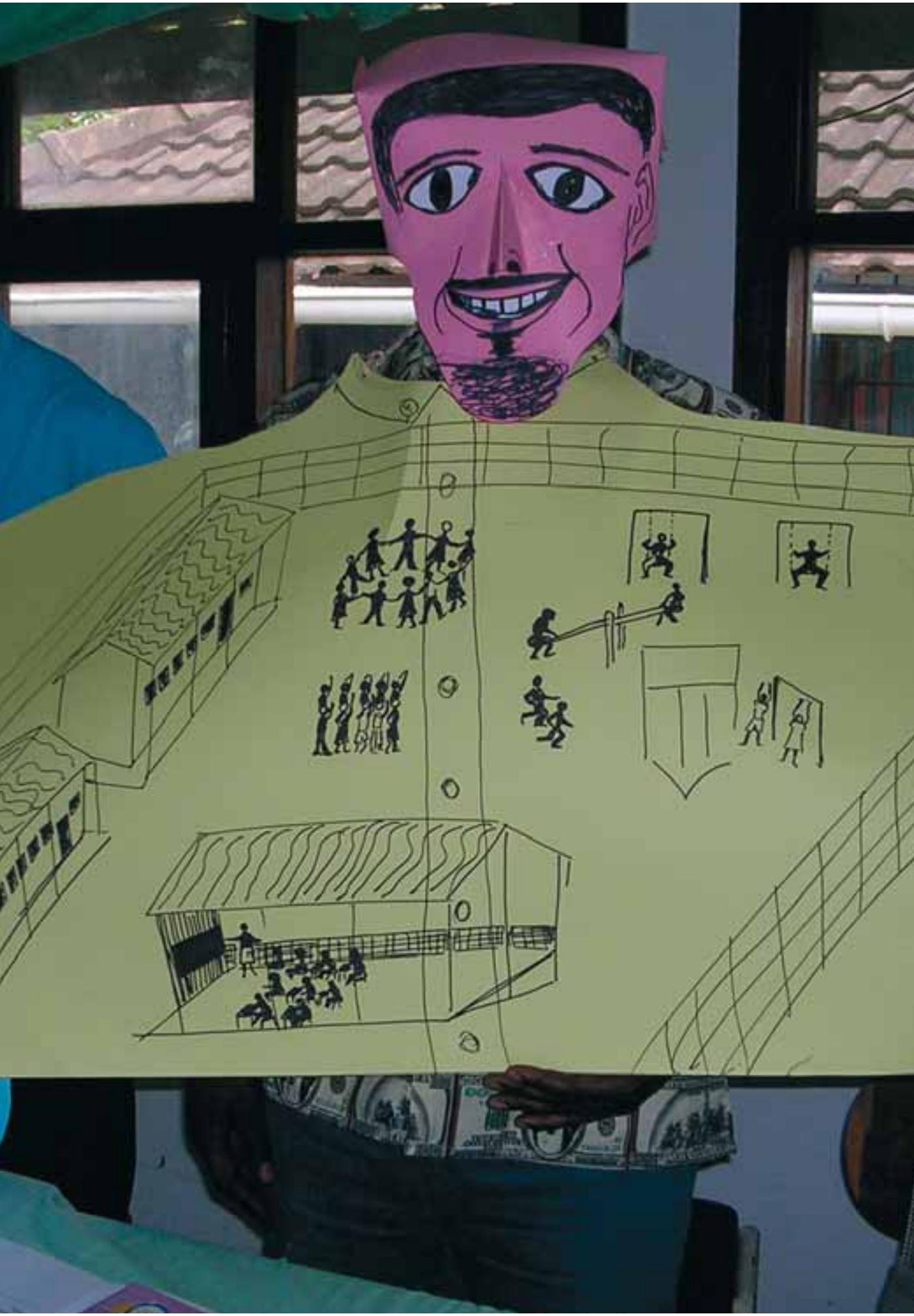
UNAIDS. 2005. *Guide to monitoring and evaluation of the national response for children orphaned and made vulnerable by HIV/AIDS*.
www.synergyaids.com/documents/OVC_MEGuide2005.pdf

United Nations. 2003. *Indicators for monitoring the Millennium Development Goals*.
www.mdgender.net/upload/tools/Indicators_for_Monitoring_the_MDGs.pdf

Webb, D. & Elliott, L. 2002. *Learning to live: monitoring and evaluating HIV/AIDS programmes for young people*. London, Save the Children UK.
http://www.savethechildren.org.uk/scuk_cache/scuk/cache/cmsattach/211_Learning2livecond.pdf

WFP, UNESCO, WHO (1999), *School Feeding Handbook*

WFP (2001) *Monitoring and Evaluation Guidelines* (2001).



5



How to train JFFLS facilitators



5



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Step 5: Training JFFLS facilitators

Facilitators will need training to ensure that they all understand the JFFLS approach and what it means to be a JFFLS facilitator. The facilitator's role is crucial as he or she has the task of organizing the school, facilitating agricultural and life skills activities and dealing with basic administrative issues. Together with JFFLS managers, facilitators must also network with local government, NGOs and other agencies to ensure their full support and availability. The ethics of working with children also need to be taken into account, as the first duty of a facilitator is to protect the children she or he is working with.⁸

This chapter describes how to assess facilitators' training needs, how to design the training programme, what approach to use, and how to evaluate the training, with a view to offering facilitators refresher and skills building opportunities in the future.

5.1 Assessing training needs

The design of a JFFLS training of facilitators should be based on a training needs assessment. This means finding out what kind of training each facilitator has had in the past, identifying gaps between what they already know and what they need to know, and based on this designing a training programme that meets everybody's needs. Because of the different backgrounds of facilitators, which include teachers and extension workers, and possibly social animators and food security facilitators, a single training of facilitators will have to meet different sets of needs.

Box 5.1 Training of facilitators model for Mozambique and Swaziland

A two-week intensive programme at the beginning of the season to share facilitation skills with participants and the basics of how to set up and run a JFFLS.

Monthly three-day training sessions to top up knowledge on specific topics and provide advice on who to network with locally.

If necessary and affordable, a further two-week intensive training session half-way through the season at which the new facilitators can refresh their focus for the second half of the curriculum and monitor their own progress.

Source: Mundie Salm, Mozambique.

⁸ For details please see: *Building Blocks in Practice*, International HIV/AIDS Alliance, 2004

Examples of knowledge and skill gaps among facilitators in a Kenyan JFFLS		
Facilitator	Background and skills	Knowledge and skill gaps
Teacher	Formally trained in the Kenyan primary education system. Implements curricula and acts as link between parents and the Ministry of Education. Some teachers have additional training on children's rights, HIV/AIDS and basic counselling.	<ul style="list-style-type: none"> • The JFFLS approach • Facilitation skills • Farming skills • Project administration
Extension worker	Government-based extension worker, especially in a division. Holds diplomas/B.Sc. in agriculture or livestock production. Skilled in community mobilization, participatory rural appraisal, working with adults and demonstrations	<ul style="list-style-type: none"> • The JFFLS approach • Facilitation skills • Working with children
Social animator	Community social workers employed by the government (social services) or local CBO/ NGO. Skilled in dissemination techniques, community mobilization and awareness programmes. Works with the local authorities and the provincial administration.	<ul style="list-style-type: none"> • The JFFLS approach • Linking agriculture and life skills • Working with children
Food security facilitators	Volunteer farmer educators who facilitate adult FFS. Have basic training in agriculture. Serve as community interpreters and village extension agents	<ul style="list-style-type: none"> • The JFFLS approach • Working with children • Modern farming technologies
<i>Source: Edwin Adenya, Kenya.</i>		

Most facilitators will arrive at the training of facilitators with some, but not all, of the capacities required to run a successful school. An agricultural extension worker may have knowledge about crop and animal husbandry, but lack knowledge of life skills. A teacher may be used to dealing with children in classroom settings, but not be accustomed to participatory learning approaches. The capacities and gaps of every facilitator to be trained need to be assessed. This will determine what to cover in the training of facilitators workshop.

Questionnaires can be used to assess facilitators' capacities relevant to the JFFLS and the skill gaps that need to be addressed in the training. Face-to-face interviews can be used to supplement the findings from questionnaires. If questionnaires and interviews are not possible, a short needs assessment can be carried out on the first morning of the training workshop to identify what changes can be made to the training schedule so it better meets the needs of those to be trained.

5.2 Developing the training programme

According to feedback from facilitators in JFFLS that were set up over the past two years, the greatest need for training is not in technical issues such as conservation agriculture, but rather in how to facilitate and create opportunities for learning.

Extension workers and teachers may have difficulty adjusting to JFFLS learning approaches, and they need time to practise participatory facilitation skills during the training of facilitators workshop. The training workshop should introduce facilitators to the JFFLS Facilitator's Manual and help them practise adapting the activities therein to the local context. The schedule for the workshop should also include training on agricultural innovations that facilitators may be expected to share with the children, such as IPM and conservation agriculture.

The following planning questions should be kept in mind when planning a JFFLS training of facilitators:

- Which training needs should be addressed first? Which can be addressed later in the season/year?

The value of facilitation in Mozambique

During JFFLS sessions, children learn to think for themselves by observing and analysing problems. Instead of providing all the answers, JFFLS facilitators must learn to facilitate children's learning processes by encouraging them to ask questions and by stimulating participation and discussion. Training of facilitators is therefore a crucial component in the JFFLS programme. In recent evaluations of their JFFLS training course, new JFFLS facilitators stated that they learned the most about facilitation skills and methods, and in particular how to facilitate life skills. This is the most difficult component of JFFLS and needs great attention and discussion – not only among the school participants, but also among the facilitators during their training. The evaluations also showed that the facilitators found the integration of gender equality into the sessions interesting. JFFLS training courses are an opportunity for facilitators to think about and improve their own attitudes. Attitudes cannot change overnight, however, so JFFLS training remains just one step of a long process of teacher development.

Source: Mundie Salm, Mozambique.

- Will the facilitation team have only one training opportunity, and how long will it last? Will facilitators need refresher courses at various intervals?
- How many people should be trained? This depends on the number of schools that are planned, but in participatory processes it is customary to limit the number of participants in a training workshop to 20 to 25.
- What equipment and materials are needed? What is realistically available and appropriate to local conditions?

The type of training provided depends on the available budget and on whether or not the facilitators can attend long training sessions while continuing their full-time employment. Box 5.1 recommends one model that has proven successful, but this is not the only viable option. No matter what model is used, the following issues should be covered during a training of facilitators workshop:

- The JFFLS methodology and its development from the FFS and FLS approaches.
- The links between vulnerability, HIV/AIDS, agriculture and food security.
- Facilitators' roles, responsibilities, code of conduct and ethics.
- Developing a JFFLS curriculum.
- Participatory and gender-sensitive facilitation skills.
- Life skills, technical agricultural issues and business skills development.
- Using dance, song, theatre and other creative techniques.
- Preparation of the learning field.
- Working with resource people.
- Organizing and managing a JFFLS.
- Collaborating with government, NGO, and other partners.
- Ensuring ownership of the JFFLS by the community and participants.
- Dealing with gender-based violence, child abuse and child labour issues.

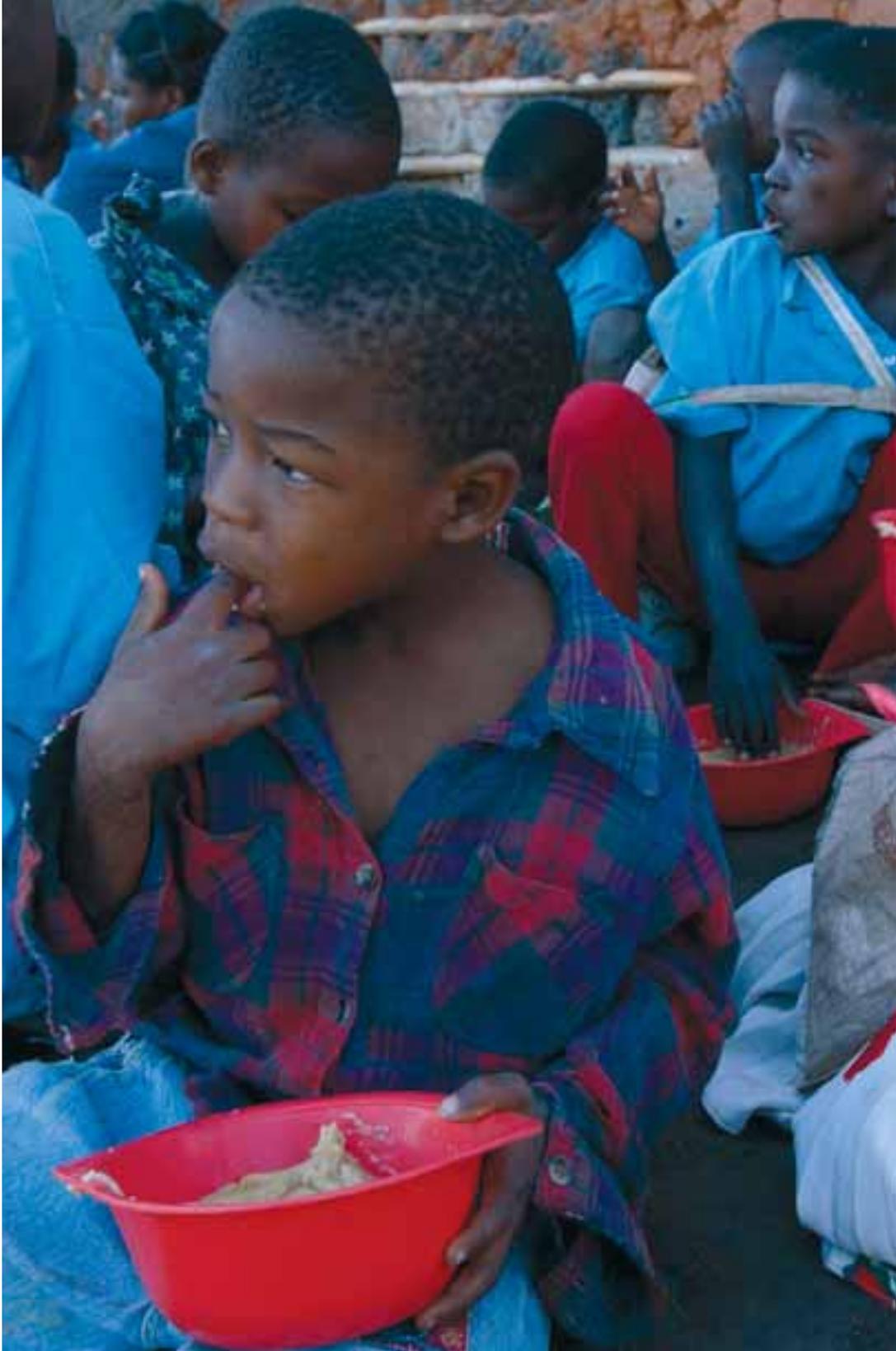
5.3 Transportation

During facilitator training it is important to establish practices that will be replicated during the school year. This includes locating training workshops close to the villages where the JFFLS will be established. Ideally, facilitators should live near or in the village where the JFFLS is going to be established; their training should also take place near the communities to give them easy access for practicals.

5.4 Evaluation of JFFLS facilitator training

Progress needs to be monitored throughout the facilitator training workshop and a final evaluation made at its conclusion. The frequency of monitoring during the training depends on the length of the training programme, but it is a good idea to monitor at least once a week. The final evaluation will identify areas for future follow-up with participants, as well as ways to improve the training approach and materials and make them more context specific and culturally sensitive.







5.5 References

International HIV/AIDS Alliance. *Building blocks in practice.* Available at: www.aidsalliance.org

Pretty, J.N., Guijt, I., Scoones, I & Thompson, J. 1995. *A trainer's guide for participatory learning and action.* Stevenage, UK, IIED.

Wilde, V. *SEAGA Field Guide.* Rome, FAO, Socio-Economic and Gender Analysis (SEAGA) Programme. Available at: www.fao.org/sd/seaga



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Step 6: Arranging for food support

An integral part of JFFLS is the provision of food to participating girls and boys. It is recommended that when JFFLS activities are in session, the children should be provided with one nutritious meal a day and/or take-home rations. This will help improve the enrolment and attendance of children in the JFFLS, alleviate short-term hunger and increase energy and capacity to concentrate and be active. Provision of fortified food reduces micronutrient deficiencies. Take-home rations help to keep orphans and other vulnerable children within family settings, which is important for their socialization processes.

To the extent possible, JFFLS should be linked to WFP's regular school feeding programme, where it exists. This makes it possible to use existing facilities, such as storage facilities and kitchens, leading to considerable cost reductions and the timely commencement of activities. In Mozambique, for example, the regular school feeding programme has been a springboard for the nourishment of JFFLS participants. In some countries, however, regular school feeding programmes may not be in the same areas as JFFLS. For such cases, the experiences of WFP country offices are still useful in setting up the food part of JFFLS.

Food management procedures in Mozambique

The first food rations for children participating in JFFLS were delivered to the schools in December 2004 in a joint effort between the Ministry of Education at the provincial level and WFP. The delivery of food and other materials coincided with the start of the agricultural season to ensure support from the start, even though this was during formal school holidays. During the initial phase, warehouses were constructed and JFFLS participants fed through cooperation among school teachers, community members and JFFLS facilitators. Facilitators were trained in food management during their overall training. Although warehouse management was mainly the responsibility of the school, community members ensured that fuelwood and water were available, and were responsible for preparing food.

Close cooperation between WFP and the Ministry of Education in implementing the activity ensured that good quality control was sustained. For the Ministry, school feeding improved progress towards Education-for-All objectives. There was a clear commitment, from the central ministerial authorities, to ensure best possible implementation of school feeding, through the provincial office of the Ministry's school feeding coordinators to the responsible school directors and teachers who were nominated as warehouse managers. An agreement was made with WFP to provide meals to JFFLS based at CBOs and FBOs, which goes beyond the normal WFP school feeding mandate.

In many rural areas, the daily feeding activity provided the first really cooperative link between teachers and members of the community. Community volunteers helped construct the buildings and cook the food for the children, so school feeding provided a fruitful contact between the community that needed education and the government institution offering it. Adding JFFLS to the school feeding programme enabled good control of the activity via the Ministry of Education and ensured co-ownership between the government and the community.

6.1 Food support

Food support can be provided through meals at the school site and/or take-home rations. Dry take-home rations are distributed to JFFLS participants when the problem analysis shows serious food insecurity at the household level. The decision to provide take-home rations or on-site feeding depends on local conditions, including the availability of resources. The choice of commodities is determined by the food's acceptability to the children, local dietary habits and preferences, and the cost involved. Food from WFP may include cereals (wheat flour, bulgur wheat, sorghum or rice), pulses (beans, lentils or peas), canned fish or meat, sugar, and fortified blended foods such as biscuits. Fresh vegetables and fruits may be provided locally to ensure palatability and diversity of meals. JFFLS produce can be used for this purpose.

For example, in Mozambique, a typical ration consists of 150 g of cereals, 50 g of pulses, 25 g of canned fish, 10 millilitres of vitamin A-enriched vegetable oil and 3 g of iodized salt. This food basket provides approximately 50 percent of the daily energy, protein and fat requirements (800 kcal, 36g of protein and 15 g of fat) recommended for the development of primary school-aged children. Part of the daily vitamin A and iron requirements for children are

Summary of Guiding Principles on ration Size and Composition.

- Determine the age range of the target group.
- Determine the number and duration of JFFLS sessions.
- Ascertain the school's budget for local food purchases.
- Check dietary patterns.
- Check available data on the prevalence of micronutrient deficiencies.
- Check the school's access to micronutrient-rich local foods.
- Consider that the weight and volume of dry food items increase on cooking.
- Choose easy-to-prepare commodities, especially for breakfast/early meals.
- Determine fuel and water availability.
- Ensure involvement of PTAs and the community in menu planning and food preparation.
- Keep the number of commodities to an acceptable minimum.
- Compute the cost of the ration/child/per day and per JFFLS cycle.

Source: WFP/UNESCO/WHO, 1999.

provided by vitamin A-enriched vegetable oil and canned fish; half of daily iodine requirements are also covered. Rations are well balanced and adapted to the particular situation of countries characterized by protein and micronutrient deficiencies, especially in rural areas. Further, rations can be designed to take into consideration the unique needs of JFFLS participants' households. For example, in Kenya, corn-soya blend was provided to disabled people, pregnant women and children under five in the households of JFFLS participants.

When deciding the ration size and composition for both on-site feeding and take-home rations, several factors should be taken into consideration. First, the size and composition of the ration must be aligned with the purpose and role of food assistance in JFFLS activities. These depend on an overall assessment of food insecurity among the households involved in the JFFLS

as well as logistical capacity. Second, the age of the children and the fact that they are involved in physical activity means that larger rations may be required. Third, take-home family rations should be based on the average household size and on other existing food assistance programmes to avoid duplication. The duration of food support should be based on the life cycle of the JFFLS.

6.2 Food management, storage and safety

Food commodities for JFFLS need to be stored in a secure, clean place not far from the field and kitchen facilities. When storage facilities are not available, warehouses may be constructed by PTAs, JFFLS staff, community members and/or cooperating partners. Sometimes, formal schools linked to a JFFLS may be used to store food commodities. In Mozambique, the food for JFFLS is stored in schools, with school directors responsible for managing warehouses and ensuring security. Teachers are nominated as warehouse managers and other staff members help with additional duties. Where there is no school feeding programme, cooperating partners may be approached to carry out transport, storage, distribution and monitoring activities. A contract is usually drawn up between WFP and cooperating partners, outlining the obligations of each.

Key points in storage and commodity management

The store should be clean and organized. Damaged commodities should be removed. In cases of infestation, fumigation should be carried out, with professional advice. Stacking should be systematic to prevent warehouse losses. Similar commodities should be stored together. Records should be kept to ensure accountability (ledger, stack cards, reconstitution distribution, and losses report). Stock records should be balanced at the end of every month. Waybills and delivery notes should be used to control stocks in and out of the store. Losses should be documented and accounted for. The warehouse should be securely locked, and the key left with a trusted worker.

Storage should be discussed with men and women in the community. Storage, such as improved granaries, has often been developed without input from women, who need to reach the food to prepare it. Storage should be built with easy access for those preparing the food. Food is a valuable commodity, so it should be stored at a neutral and secure site to avoid accusations of misuse and mismanagement. If storage facilities are not available within the school, temporary facilities such as containers may be used.

Adequate care is needed to prevent food and water from becoming contaminated by sources that include polluted water, flies, pests, domestic animals, unclean utensils and pots, unclean food handlers, dust and dirt.

Box 6.1: WHO Five Strategies for Food Safety

- Keep hands and cooking surfaces clean.
- Separate raw from cooked food.
- Cook food thoroughly.
- Keep food stored at safe temperatures.
- Use safe water and raw ingredients.

Source: www.FAO.org

Raw foods may be a source of contamination in themselves. During preparation and storage, there are increased risks of cross-contamination and the multiplication of pathogenic bacteria. It is therefore important to ensure that those who handle food are trained in food safety practices according to the Five Strategies for Food Safety (Box 6.1). Food safety and hygiene should be incorporated in the general training for

JFFLS facilitators, teachers (when food is stored at schools) and the staff of cooperating partners. A module on food safety and monitoring of the feeding component should be included in regular JFFLS training. Such training sessions can also be a channel for improving food safety in homes and entire communities. JFFLS monitoring should include the monitoring of food storage, distribution and utilization.

6.3 Food preparation

The community is responsible for providing water and fuel wood. A safe water supply should be available on the school premises at all times. Water can be obtained from local municipal sources and from groundwater sources that have been disinfected. Sanitation should be a high priority. The children

can be asked to bring fuel wood if there is none near the school. Kitchen materials, including cooking and serving utensils, may be provided by the community or school committees, and sometimes by cooperating partners or WFP.

When allocating tasks for food preparation, care should be taken to ensure that women are not overburdened. JFFLS cooking duties should take into consideration the other tasks that women have to do, and every effort should be made to ensure that men participate in whatever ways possible.

Involving the community in food support and procurement

The JFFLS programme in Kenya provides food support to participants through food sub-committees. Each JFFLS has a food sub-committee of five members, mostly women. The food sub-committee is the primary source of information about food distribution, keeps records and ensures that food reaches absent care givers. Food is provided as school lunches and as take-home rations for household support.

Food distribution has been successful in terms of both nutrition and community involvement. The community is satisfied with the quantities of maize and beans provided and found the quality of oil and sugar provided to be higher than that available on the market. Community members also found the corn-soya blend porridge very palatable. Community involvement has increased the project's transparency and accountability, and community members are happy with their level of involvement in food distribution. There is now shared responsibility within the community to address issues relating to orphans and vulnerable children. The community appreciates these children more and, in turn, the children's self-esteem has increased.

Source: WFP/Kenya.

6.4 Exit strategy and sustainability for food assistance

Experience shows that successful exit strategies for school-based feeding programmes are developed in coordination with cooperating partners, communities and relevant government authorities. Sustainability and exit strategy should be considered on the following three interlinked levels.

Communities

The involvement of communities from the initial JFFLS problem identification and assessment stage through to implementation helps to give them a sense of ownership, which is a key ingredient of sustainability. Decisions about the needs of the JFFLS, including addressing hunger among its participants, should be made through existing community structures such as chiefs' offices, PTAs or local HIV/AIDS or orphans and vulnerable children committees. Once communities are mobilized they can contribute labour and construction materials, such as wood, stones, bricks and sand, for warehouse and kitchen facilities. Community members should also be involved in selecting who should benefit from school feeding, and monitoring and evaluation (M&E) of all aspects of JFFLS feeding.

It is important to build on existing traditional structures that cater for the welfare of the less fortunate members of society. For example, in Swaziland, Indlunkhulu – the provision of food from the chief's fields to members of the community who are unable to support themselves – can be a good foundation for JFFLS. Under Swazi law and custom, chiefs are responsible for the welfare of the orphans within their areas. This provides a basis on which to build a sustainable mechanism for the delivery of food to orphans and vulnerable children.

National governments

It is very important that the national government participates in the JFFLS feeding programme alongside communities and partners. Increased awareness of the plight of orphans and vulnerable children makes it essential that governments include a livelihood element in national policy frameworks, strategies and funding mechanisms. This demonstrates their commitment to integrating and mainstreaming JFFLS into the response to HIV/AIDS. Incorporating the JFFLS feeding component into social protection or social welfare ministries and strategies ensures sustainability through consistent government funding. To achieve this, all the national bodies concerned – including the ministries of agriculture, health, education, social welfare and community development, the national AIDS commission and other bodies dealing with orphans and vulnerable children – should be actively involved from the outset. Another important vehicle is the rapid assessment, analysis

and action planning (RAAAP) exercises supported by UNICEF, UNAIDS, WFP and USAID to cost the needs of orphans and vulnerable children and ensure that they are included in national plans of action in several countries in East and Southern Africa.

Partners

Many NGOs are involved in a wide range of activities that address the plight of orphans and vulnerable children and the families and communities affected by HIV/AIDS. To get the required inputs for JFFLS, avoid duplication and make maximum use of the resources available, it is very important to involve partners right from the outset. Cooperating partners can be particularly helpful in providing complementary inputs that are important to the sustainability of JFFLS activities. Key among these is ensuring that JFFLS activities are embedded in broad community mobilization efforts.



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6.5 References

WFP. 2006. *Programme guidance manual*. Rome

WRP/UNESCO/WHO. 1999. *School feeding handbook*. Rome, WFP.





AESA - Analise do sistema agroecológico - Ecológico

AESA Nº-6 DATA: 05-09-008

Cultura de Tomate

Dados agronômicos

- Altura da planta - 200cm

- Número de frutos por planta - 1

- Número de frutos por planta - 2

- Tamanho do fruto - 250g

VFA

Compasso - 70cm

Inclinação de cobertura - 20-30%

Tempo com tempo e quente

Altura 110cm

Inimigos naturais

Sapo (Dijeric)

Observações

- Existência de Osmia

- Falta de umidade

- Fez observações por

- Pegadas de cobrinhos e excrementos

Plagas e doenças

- Golanhete, cabrito

- Podridão de frutos

Recomendações

- Surtos no dia 09-09

- Manter e pH baixo

- 09-09

- Fazer observações

- Fazer observações

