



Food and Agriculture
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Integrating Agriculture and Nutrition Education for Improved Young Child Nutrition Programme Lessons



Integrating Agriculture and Nutrition Education for Improved Young Child Nutrition

Programme Lessons

Contact information:

Nutrition Education and Consumer Awareness Group

Nutrition and Food Systems Division¹

Food and Agriculture Organization of the United Nations

Viale delle Terme di Caracalla, 00153 Rome, Italy

Email: Nutrition-Education@fao.org

Homepage: Linking agriculture to nutrition education to improve infant and young child feeding

www.fao.org/nutrition/education/infant-and-young-child-feeding/en/

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¹ In January 2016, the FAO Nutrition Division (ESN) was renamed Nutrition and Food Systems Division (ESN). In the main body of the report, the old designation 'Nutrition Division' has been used as this was the operational term at the time of the technical meeting.

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These Programme Lessons have been formulated following an extensive consultation process involving the Food and Agriculture Organization of the United Nations (FAO) staff and consultants, representatives of UN agencies, Non-Governmental Organizations (NGOs) and research institutions, who participated in a Technical meeting organized to build on experiences and lessons learned, and identify a way forward for “Linking agriculture and nutrition education to improve young child feeding”.

The Technical meeting was jointly convened by FAO and the Justus Liebig University (JLU) Giessen, Germany and held at the FAO headquarters in Rome, Italy on 6–8 July 2015. A draft version of the Programme Lessons was one of the main outputs from this Technical meeting. Subsequently, the Programme Lessons were developed to include all salient points from the Technical meeting. These were revised through an iterative process with a subgroup of meeting participants and reflect the experience of practitioners and researchers in a range of contexts.

This document should be considered as a “living document”, which can evolve through future updates, and be revised and expanded based on future learning. Our wish is to encourage continued collaboration and dialogue within the network of practitioners.

FAO wishes to acknowledge the following experts for their active engagement in the process of preparing and refining the Programme Lessons:

Lalita Bhattacharjee (FAO Bangladesh), Ruth Butao Ayoade (FAO Mozambique), Esther Evang (FAO, Nutrition and Food Systems Division), Paige Harrigan (Save the Children, UK), Theresa Jeremias (Care Deutschland-Luxemburg, formerly FAO, Nutrition and Food Systems Division), Irmgard Jordan (JLU, Giessen), Gina Kennedy (Bioversity International), Edye Kuyper (University of California, Davis), Judiann McNulty (independent Nutrition Consultant), Ellen Muehlhoff (FAO, Nutrition and Food Systems Division), Jennifer Nielsen (Helen Keller International), Stacia Nordin (Never Ending Food, Malawi, formerly FAO Malawi), Jane Sherman (formerly FAO, Nutrition and Food Systems Division), Elizabeth Westaway (formerly FAO, Nutrition and Food Systems Division), and Ramani Wijesinha-Bettoni (FAO, Nutrition and Food Systems Division).

As a companion to the Technical Meeting report, FAO has developed this set of Programme Lessons. These were formulated by FAO based on recommendations drafted prior to the meeting. They were reviewed during the Technical Meeting and subsequently revised and finalised following an extensive consultation process involving FAO staff and consultants, representatives of UN agencies, NGOs, and research institutions. The Programme Lessons build on previous guidance, including the *Key recommendations for improving nutrition through agriculture and food systems* (FAO, 2015a), and incorporate the experiences and lessons learned from relevant field programmes and research initiatives, reflecting the cumulative experiences of diverse experts. The Programme Lessons cover six topics:

- I. programme planning and design
- II. capacity development
- III. implementation
- IV. supervision
- V. monitoring, evaluation and impact assessment
- IV. sustainability and scaling up.

They are aimed at programme planners and managers working to ensure that agricultural production will have a positive impact on young child nutrition, particularly in low-income countries.

Improving nutrition is a major goal of agricultural¹ programmes and policies, and substantial evidence confirms that increases in agricultural production alone and/or increased income do not necessarily translate into improved diets and nutrition without concurrent and well-designed nutrition education and behaviour change approaches, women's empowerment and intersectoral collaboration.

Following the establishment of the Scaling Up Nutrition (SUN) Movement and the United Nations Secretary General's Zero Hunger Challenge, development partners and civil society have intensified efforts in designing and supporting innovative strategies and more extensive and targeted programmes that aim to achieve better diets and nutrition outcomes through agriculture, particularly with regard to vulnerable groups, including women of reproductive age, infants and young children.

Governments and implementing organizations have been assisted to promote food and dietary diversification through integrated farming systems, including crops, orchards, livestock and fisheries. It is now well accepted, that in order to make agriculture work for nutrition, agricultural production and markets must improve access to diversified nutrient-dense foods from all the food groups, i.e. vegetables, fruits, animal-source foods, legumes, nuts, oilseeds and fats to balance and complement staples. In addition, women's empowerment and nutrition education are essential to enhance the capacities of families and communities to better feed themselves.

Reviews of nutrition-related outcomes of agricultural development projects consistently underline that impact on dietary adequacy and child growth depends on whether nutrition education is included in the intervention (Ruel, 2001; Berti et al., 2003; Girard et al., 2012). Several recent review papers have also concluded that interventions which promote good complementary feeding practices have a high potential to improve the nutritional status of children in developing countries and should focus on improved access to complementary foods that are nutrient-dense and affordable, particularly in food insecure countries, to enable improved child feeding (Lassi et al., 2013; Piwoz et al., 2013). Nutrition education is thus becoming increasingly accepted as a powerful intervention strategy.

Given that the emphasis on enhancing agriculture's impact on nutrition is relatively new, some key knowledge gaps exist on the relative mix of components and the extent of their integration that make implementation most effective. The institutional aspects of programme delivery, technical capacities and intersectoral collaboration required are also not well understood. Questions remain regarding the design and implementation of nutrition education for behaviour change and what makes such interventions work, how they can be sustained and scaled up, and at what cost? Much work remains to be done to know exactly what to do and how to do it, and to determine where the greatest opportunities are. In other words, it is important to know which type of programmes deliver the greatest benefit to target beneficiaries and are likely to have the greatest impact.

What are the Programme Lessons? Who are they for?

It is hoped that the Programme Lessons in this document contribute to filling this gap by providing practical guidance and examples of good practices based on empirical research and programmatic experiences from the field.

The Programme Lessons provide advice for programme planners and managers working to ensure that agricultural production and raised incomes have a greater chance of being translated into improved nutrition outcomes for families in low-income countries, with a specific focus on improving the nutrition of children aged 6–23 months, i.e. the complementary feeding period (PAHO, 2003).

¹ Agricultural programmes include: aquaculture, beekeeping, fisheries, forestry, horticulture and livestock.

The Programme Lessons build on previous guidance, including the *Key recommendations for improving nutrition through agriculture and food systems (FAO, 2015a)*. They aim to share relevant experiences from projects supported by FAO and other partners implementing integrated agriculture-nutrition education programmes.²

Another recent FAO publication, *Designing nutrition-sensitive agriculture investments: Checklist and guidance for programme formulation (FAO, 2015b)* gives detailed guidance for programme planners and managers on the first phases of the programming cycle, including situation appraisal, and programme design and review of integrated agriculture- nutrition programmes.

Those who are new to the concept of agriculture and nutrition may first want to review these two brief documents before reading the *Programme Lessons: Integrating Nutrition Education and Agriculture for Improved Young Child Nutrition*.

Terminology

- Nutrition education is defined as “any combination of educational strategies designed to facilitate voluntary adaption of food choices and other food- and nutrition-related behaviours conducive to health and well-being. Nutrition education is delivered through multiple venues and involves activities at the individual, community and policy levels.” (Contento, 2011, p. 15)
- “Social and Behaviour Change Communication (SBCC) for health is a research-based, consultative process that uses communication to promote and facilitate behaviour change and support the requisite social change for the purpose of improving health outcomes.” (The Manoff Group, 2012, p. 4)

There is considerable overlap among the objectives and strategies used in nutrition education and Social Behaviour Change Communication. For the purposes of these Programme Lessons, the term “nutrition education” is used because its definition reflects the framework espoused by the FAO team that convened the process to develop and disseminate these lessons.

² This guidance checklist is complemented by two new FAO publications (in press): (1) *The Compendium of food and agriculture actions for nutrition*, and (2) *The Compendium of indicators for nutrition-sensitive agriculture*.

1. Bring multiple stakeholders together at the programme³ design stage to contribute to programme implementation, intersectoral cooperation and sustained ownership.

Good practices

- +** Undertake a **participatory situation analysis/ needs assessment** at the outset of the programme to understand the socio-cultural context, gender roles and relations, identify needs, problems and find solutions.
- +** **Confirm the need for and interest in a nutrition programme** at the outset. Make the case for wise investment in nutrition and how agriculture has become overlooked in improving nutrition, but ensure that the main drivers of undernutrition are being focused on in the programme.
- +** **Work with multiple stakeholders** to define the overall purpose, priorities and strategy of the programme, including input from government, value chain, non-profit, programme and community actors.
- +** **Define a theory of change** to guide the design of the programme (i.e. programme impact pathways: food production, income, women's empowerment).
- +** **Co-locate multisectoral projects**, e.g. education, agriculture, water, etc. share an office to increase geographic coverage and synergy among activities.
- +** **Coordinating platforms**, such as national, provincial, district and community development committees can provide a good entry point to facilitate coordination among the sectors and other partners.
- +** **Design multisectoral projects**, which provide integrated training for agriculture, health and community development staff at all levels.

Issues to consider

- !** **Participation means that poor people must be involved in examining their own situation and finding solutions to the problems they face.**
- !** **Intersectoral communication can be challenging:** each sector has its own expertise and may not understand the others' terminology and strategies.
- !** **Objectives like “nutrition-sensitivity” and “gender-responsiveness”** should be clearly defined with measurable indicators to ensure that they are translated into action.
- !** **Timing can be challenging within integrated projects.** Access to inputs and training should coincide with the food production season. Participatory cooking sessions are likely to attract greater participation during the post-harvest season, when access to diverse foods is better and agricultural workloads are reduced (Wijesinha-Bettoni et al., 2013).



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³ In this document, “programme” refers to a comprehensive integrated agriculture-nutrition effort, which may comprise several interventions, e.g. nutrition, water, sanitation, etc. and a combination of actions, activities, projects, interventions, initiatives or plans.

2. Conduct participatory formative research to inform the design of both the nutrition education and agricultural programme components to ensure that they meet the needs of local communities, are culturally-appropriate and recommended practices are feasible and acceptable.

Good practices

- +** Carry out formative research or a needs assessment during the early design stage of a programme or even while a programme is being conducted. Include it in the budget at the programme design stage, clearly defining its purpose and objective, then plan and implement using the programming cycle.
- +** Use gender-sensitive, participatory approaches throughout, where both facilitators and community members are involved in identifying the problems and solutions relative to intrahousehold decision-making, power relations and seasonal workloads, to better inform programmes.
- +** If budgets are limited, start at a minimum by identifying existing, locally relevant studies, even if carrying out comprehensive formative research is not possible.

 - **Maximize sharing of results, address gaps** and avoid repeating what has been done before, to minimize costs without sacrificing quality.
 - **Use a mix of methods** in the formative research (i.e. focus group discussions, household and key informant interviews, small surveys, observations), and test new behaviours and recommendations before widely rolling out.
 - **Confirm and reassess the main determinants of undernutrition.** If high disease burden is the major constraint to undernutrition, then an agriculture-only response is unlikely to have a significant impact on family and children's diets and nutrition outcomes (Girard et al., 2012; Ahmed et al., 2014; Ngure et al., 2014). In most contexts, there are several contributing factors to undernutrition, therefore analysis is needed to identify the main drivers and address them in programme design and implementation.
- +** Apply the Trials of Improved Practices (TIPs) method (Dickin et al., 1997; FAO, 2014) to assess family food security, food availability by season, infant and young child feeding (IYCF) and family nutrition practices, paying particular attention to barriers and motivators, e.g. socio-cultural beliefs, environmental and economic constraints, and workload of caregivers.

 - **TIPs enables testing of new or modified practices and assessing their feasibility and acceptability within a real-life home environment,** yielding important information for nutrition education and agriculture programme design.





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Good practices (continued)

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The TIPs process and results can help to:

- **Identify doable/feasible actions**,⁴ so that nutrition recommendations match the existing food culture for improved uptake of recommendations and sustained behaviour change.
- **Consider opportunity costs and financial implications** for households applying recommended nutrition practices and behaviours. Identify what motivates caregivers to adopt improved practices and what is easy to do.
- **Develop seasonal food availability calendars** with community members to help diversify and maximize use of all local foods, including indigenous ones. In food insecure areas, address any food gaps in the lean/hungry season.
- **Inform agricultural production.** Fill nutrient gaps by promoting small livestock, fish and horticultural products. Grow vegetables and fast-growing fruit trees (e.g. papaya) that can make a difference to families' and children's diets within a relatively short timeframe, in addition to slow-maturing fruit trees and perennials, especially indigenous species, to ensure dietary diversity throughout the year.
- **Develop improved recipes and try them during participatory cooking sessions.** This is especially important where families are not routinely using locally available and affordable nutritious foods in home cooking. New recipes can help improve the nutrient content of diets and ensure that children and their families enjoy more nutritious meals.

- +
- **Publish formative research** and present details in order that others doing similar work will benefit.

Issues to consider

- ! **Formative research can be time consuming and expensive** and may, therefore, not be instantly accepted by donors who wish to see quick results.
- ! **Advocacy may be needed** to help donors understand the importance of formative research.
- ! **Project design can unintentionally cause harm. Commit to "Do no harm":**
 - **Advocate for the protection of breastfeeding**, adequate rest for pregnant and lactating women, and perinatal care.
 - **Consider gender implications** of recommended activities, including impact on mother's/caregiver's time allocation and energy expenditure.
 - **Ensure environmental impacts are neutral or positive**, e.g. do not contribute to soil degradation or contamination.
 - **Make efforts to ensure that the most vulnerable farmers are not inadvertently harmed** by potentially high-risk market and production investment.
 - **Ensure that influential extended family/community members do not undermine health-supporting activities** that mothers/caregivers wish to adopt. Involve them in the programme from the start.
 - Learn about, respect and **enhance positive cultural practices** and local resources.

⁴ Doable actions have been defined as "specific, feasible incremental change with high potential public health impact" by the Alive & Thrive Initiative (2014, p.3).

3. Include specific agriculture-nutrition targeting criteria, which can ensure that families with infants and young children, in particular women farmers, benefit from both agriculture and nutrition education programmes. Nutrition education and agricultural projects usually do not target the same community members.

Good practices

- +** **Ensure community sensitization and mobilization** as nutrition and agriculture are matters that involve families and communities. Stress the role of agriculture for an improved diverse and safe diet as a key part of improving nutrition.
- +** **Involve whole families**, i.e. mothers, fathers, grandmothers, older children and any other key decision-makers that influence food acquisition, preparation, processing and distribution as well as workload allocation in the family.
- +** **Ideally, nutrition education should be continuous, throughout the entire lifecycle**, with particular attention to critical life stages. Clearly identify the programme's starting point for nutrition education: with new parents pre-pregnancy, during pregnancy and/or at the start of complementary feeding.
- +** **Explore diverse, appropriate entry points for nutrition education**, including extension services (i.e. agriculture, health, social protection), farmer field schools, agricultural fairs, cooperatives, savings and credit groups, schools and health centres, to reach youths and adolescent girls, newly-married couples and families with young children.
- +** **Empower women**, including women of reproductive age, by improving their access to land, agricultural services and inputs, and encouraging cooperative membership in order to enhance decision-making power and management of household resources.
- +** **Provide young families with access to agricultural assets and income**, so that they can produce or purchase affordable, diverse, nutrient-dense foods, which must be available and accessible in order that families apply their nutrition knowledge and skills.

Issues to consider

- !** **Agricultural programmes often overlook young families and young women.** Yet they are often the key targets of nutrition education and health efforts focusing on the first 1 000 days of life that would improve the diet during pregnancy, for the breastfeeding mother and the household during complementary feeding.
- !** **Women's roles are rapidly changing** and there is an increasing burden on women to manage the household and participate in a mobile work force, sometimes distant from the home.
- !** **Vulnerable groups can be more difficult to engage** in agricultural programmes, while limited resources and project scope may cause inclusion criteria to be excessively narrow, e.g. only pregnant women, caregivers of children under 2 years of age, etc. For enhanced nutrition and agricultural outcomes, the family and community should also be engaged.
- !** **Older siblings are often overlooked in both agricultural and nutrition education interventions**, yet they are often responsible for looking after young children. Assess whether they can be targeted within schools, e.g. through school health and nutrition, school gardens, junior farmer field and life schools and other non-formal education, leadership and advocacy programmes.
- !** **Community Leaders may misunderstand the importance of criteria for targeting** in the absence of clear guidance, e.g. selection of volunteers and beneficiaries, and are unaware of the potential need for increased social protection for households with young children and the need to target them for agricultural support, e.g. vouchers providing free agricultural inputs or starter packs including diverse seed and training.

4. Match agricultural objectives with food recommendations, such as national food-based dietary guidelines and national paediatric guidelines, which can promote food and dietary diversification and help to close nutrient gaps.

Good practices

- +** **Raise awareness of dietary recommendations** among food system value chain actors, e.g. input suppliers, producers, farmers' cooperatives, traders, manufacturers, retailers, policy makers, educators, etc. and advocate for diversifying agricultural production, processing and marketing in-line with nationally endorsed dietary guidelines.

 - **Policy makers and agriculture staff from national to local levels should be sensitized** to understand food and dietary recommendations, so that they consider nutrient content of cultivars, together with production yield and marketability, especially for smallholder farmers.
 - **Ensure that dietary promotion practices have been tested as feasible and doable**, and are relevant to both the agriculture calendar and food availability (home and/or market), and in-line with nutritional needs. Be particularly attentive to household meals, as complementary foods often come from the family pot.
- +** **Promote integrated, diverse food production**, e.g. cultivate, process and market livestock, fish and annual and perennial plants, and sustainably collect wild foods for increased household dietary diversity.

 - **Place more emphasis on horticulture, livestock, dairy, fisheries and aquaculture** as foodstuffs from these sources are typically nutrient-dense and under-represented in the diets of food insecure and malnourished people.
- +** **Improve home food processing, storage and preservation techniques** to retain nutritional value and food safety, and reduce seasonal food insecurity and post-harvest losses.
- +** **Introduce fuel-efficient stoves where traditional open fires are used**, to protect women's and children's health, reduce women's time for collecting firewood, improve cooking efficiency, and save critical natural resources (Eshetu, 2014).
- +** **Balance agricultural production for the market** with food production for family consumption.

 - **Increase access to diverse agricultural inputs and technologies for those with low access** and link farmers, including young female farmers, with markets to generate income and improve their livelihoods.
 - **Concurrently increase supply of and demand for diverse, market-tested, nutrient-dense foods (for own consumption and sale)**, and expand market access for poor families and women, e.g. foods from all food groups, fortified foods or premixes of multiple food groups for young child feeding in small, affordable quantities, which do not require refrigeration.
 - **Strengthen regulations and enforcement of standards** for commercially produced complementary foods on composition, food safety, quality and nutrient levels, and ensure they are in-line with Codex Alimentarius Standards (FAO/WHO, 2010).
 - **Advocate for careful, well monitored investments for diversified production** that link smallholder farmers to markets, such as innovative, proven financing mechanisms appropriate for small farmers; crop insurance; use of mobile phones for cash transfers; and access to post-harvest and processing/transformation facilities and technologies.

Issues to consider

- !** **Agricultural policies and input subsidy programmes may prioritize agricultural products based on yield and markets**, instead of considering household food security and population dietary needs.



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1. Where they exist, government extension services provide a sustainable platform for supporting the integration of nutrition within agriculture, health, education, gender, social protection and other public services.

Good practices

- + **Support existing government and community structures** to enable the delivery of integrated agricultural and nutrition services.
- + **Advocate for sustained government investment in agricultural research and extension** to build evidence and adoption of improved farming practices, and facilitate better access to the necessary inputs that support the production of diverse nutrient-dense foods.
- + **Create links with government health and other community development services** to ensure a comprehensive support package for families at community level.
- + **Consider adding/restoring nutrition extension positions** (if they do not exist) to strengthen the team of extension staff and ensure that more families are reached with quality agricultural and nutrition advice.

Issues to consider

- ! **Where extension systems are underfunded and/or overstretched**, additional resources and technical capacities are required to integrate nutrition into agricultural and other extension services to improve service delivery and enable scaling up.

2. Integrated programmes require staff trained to be proficient in more than one discipline.

Good practices

- + **Provide relevant training to multisectoral staff**, i.e. agriculture, health, education, gender, social protection at all levels, (i.e. national, provincial, district, community), that supports their respective contributions to nutrition and agriculture as well as for accurate record keeping, monitoring, supervision and reporting.
- + **Include trainees from a variety of different sectors** (when possible) to help break down sectoral “silos” that usually exist.
- + **Building skills is critical for quality interpersonal communication on core nutrition behaviours.** Offer training that provides the knowledge and skills necessary to facilitate effective nutrition education sessions, e.g. limited “teacher talking time”, that encourages parent/caregiver learning after or between contact sessions and follows up on what has happened between sessions.
- + **Practice “learning by doing”** through hands-on approaches, e.g. participatory agriculture activities, cooking sessions, eating healthy meals and snacks together, role plays, and use adult learning techniques.
- + **Develop a system of pre-and in-service trainings** as well as refresher courses, including project management, for all staff from different sectors implemented on a continuous basis.
- + **Ensure that all cadres of staff know the core components and competencies** for effective job performance on which they will be evaluated.

Issues to consider

- ! **Joint trainings of different staff levels**, e.g. community volunteers and extension staff may inhibit understanding, learning and proactive expression of participants.
- ! **Trainees should learn to focus on what mothers/caregivers do in nutrition education sessions**, e.g. they need to listen, ask questions and encourage mothers/caregivers to speak and observe, as much as they need to speak themselves.
- ! **Sustainable behaviour change cannot be expected to happen as a result of a limited number of nutrition education sessions.** More emphasis is needed on follow-up contact with mothers/caregivers and other important family members at home. Community volunteers and peer educators also need to give support between sessions when mothers/caregivers try to put learning into practice.
- ! **Agricultural training institutions often need support** to embed practical nutrition education into training curricula at all levels for pre- and in- service training (as opposed to ad hoc short trainings).



3. Quality training materials containing harmonized messages are especially important for improving staff familiarity with interdisciplinary content.

Good practices

- + **Start with an assessment of national dietary guidelines and available nutrition education and training materials**, and when possible tailor existing materials to the local context or specific project objectives.
- + **Develop and/or strengthen existing training materials to meet the needs of all trainers and participants involved** (i.e. parents/caregivers/grandparents/community leaders), with particular consideration of varying literacy levels and learning styles.
- + **Reflect on the diverse factors, i.e. barriers and motivators** that affect behaviour change of families and mothers/caregivers.
- + **Ensure that the materials are pretested** before rolling out. The materials used should be culturally relevant and tested via formative research (see section 1.2).

Issues to consider

- ! **Mixed messages:** nutrition education materials produced by development partners are often not harmonized with government messages and can cause confusion.
- ! **Limited resources:** optimal nutrition materials should be aimed for, rather than determined by available budget. Reducing quantities of materials is better than reducing quality.



1. Community sensitization, mobilization and buy-in are essential to create a supportive environment for achieving dietary change.

Good practices

- +** **Clearly explain the programme's purpose at the outset** to district and provincial government staff, so that they can champion it with all levels of government staff and traditional authorities, in order to create and share realistic expectations and benefits.
- +** **Identify influential community members** to promote participation, community buy-in and empowerment.
- +** **Foster community ownership, with a strong community mobilization component** that includes women, men, young and old, and recognizes adverse effects of poor nutrition, better recognition of key nutrition practices and ways to improve healthy eating.
- +** **Ensure key community leaders are included in training sessions**, so that they can participate in monitoring and performance evaluation of community volunteers and appreciate the importance of accurate record keeping.

Issues to consider

- !** **Gender and generational conflicts can make it difficult** for mothers/caregivers to change practices. Community support and other social support networks are essential for sustainable behaviour change.
- !** **The lack of toilet facilities in the field may prevent women's participation in community-based programmes** and should be addressed, as they also ensure improved environmental hygiene and sanitation.

2. Participatory nutrition education can empower parents and other caregivers to improve diets.

Good practices

- +** **As facilitators for participatory nutrition education sessions**, encourage well-respected people from the community who are known to their community (and who meet selection criteria).
- +** **Use active and culturally-appropriate learning approaches**, including hands-on practice and visual stimuli in every session, with a focus on skill building and active sharing of good practices, dialogue, experiences and problem-solving among caregivers and other household members.
- +** **Emphasize model cooking locations**: select a greener site that is sheltered from wind and dust, and close to a safe source of drinking water, use fuel-efficient stoves and composting to recycle organic waste.
- +** **Empower caregivers and communities to solve their own problems** by creating opportunities for discussion and posing questions, which help increase their capacity to define, analyse and resolve problems.
- +** **Engage significant others within the extended family**, so that they use their influence to reinforce messages.

Good practices (continued)

- +** **Encourage ongoing enquiry and sharing of information**, ideas and questions across social networks to create a ripple effect that extends the reach of information, empowers parents, mothers and caregivers, and continues to take place after the intervention period.
- +** **Give greatest priority to high quality interpersonal communication**, community platforms and home visits, and complement this with other communication channels to reinforce and sustain key messages, e.g. community radio, mobile phones, group discussions, support groups.
- +** **Increase demand for diversified, nutrient-dense foods by conducting nutrition education sessions and social marketing campaigns among actors along the value chain**. Messages should be tailored to varied interests, e.g. demand, profit, nutrition.

Issues to consider

- !** **Teaching styles are often “top down”** rote memorization and dictating actions. This can be changed.
- !** **The most unlikely people are often the best facilitators** and vice versa. Keep an open mind.

3. The duration of the nutrition education intervention and number of educational contacts required for adopting and sustaining behaviour change is context-specific and varies depending on quality, available resources and barriers encountered.

Good practices

- +** **Determine the number and duration of quality contacts/sessions** required based on contextual factors, including social capital and gender equity as well as participants’ existing knowledge, skills and confidence.
- +** **In general, repeated contacts and more frequent contacts have a better outcome**; however, cost-effectiveness needs to be considered (Olander, 2007).
- +** **The community facilitator’s capacity to positively engage with parents/caregivers** is a key determinant of the quality of exposure in programmes that depend on face-to-face contact.

Issues to consider

- !** **When programme studies/results are reported, implementation details are often missing**. To determine the effectiveness of nutrition education, a range of factors need to be considered and reported to measure the intervention effects on feeding practices or other behaviours that impact nutrition and growth, including number of contacts, length of exposure, duration, communication channels, instruction methods, detailed session contents, materials used, cost of the intervention, etc. (Olander, 2007; Fabrizio et al., 2014).
- !** **It is also important to discuss and report successes and challenges of parents/caregivers trying out different practices at home**.



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4. External incentives for participation should be used with careful thought, discussion and harmonization.

Good practices

- + **Ensure consistent policies, common ground and practices** between development partners and government in providing incentive packages to community workers and volunteers.
- + **Avoid non-sustainable financial stipends or financial incentives to participation.** Instead, look to create positive community norms around participation and generate value around improved agricultural and nutrition practices for the family.
- + **Consider sustainable options to encourage volunteering,** retention of community volunteers and replacement systems over the medium-term, i.e. from two to five years, such as:
 - **Communities establish a platform for recognition** and being valued.
 - **Provide regular backstopping support** with adequate training opportunities.
 - **Publicize** improvements in food security and nutrition, and acknowledge responsible volunteers and communities.
 - **Provide official certificates** of completion to participants and facilitators in community-led graduation ceremonies involving communities and staff from the support structure, i.e. government/NGO.

- + **Address barriers to participation** of staff, volunteers, mothers, grandmothers, fathers. Make sessions child-friendly, provide child care and access to inputs or services, e.g. loans, vaccinations.

Issues to consider

- ! **Adequate support and turnover** of community volunteers is an ongoing challenge in many countries.
- ! **Major events and busy agricultural periods:** schedule trainings, sessions and events to avoid time conflicts.
- ! **Barriers to caregiver participation:** in many rural contexts, migration for work of men and women is common, either to other rural parts of the country, the capital city or another country, and grandmothers care for young children. Often, men are simply not physically around to participate.
- ! **Sufficient budget is required** to support community volunteers, e.g. for national and district leaders to attend some nutrition education sessions and award certificates at graduation ceremonies.

5. Coordination and collaboration of government and development partners should be strengthened.

Good practices

- + **Support intersectoral coordination as all sectors are important.** At a minimum, the sectors of agriculture, health, education, gender and social protection are all key for nutrition.
 - **Promote exchange of ideas and knowledge** to enhance intersectoral collaboration among different groups of staff.
 - **Encourage government, NGOs, traditional leaders and communities** to consider nutrition as a multisectoral issue.
 - **Work in partnership with public sector** representatives of agriculture, health, education, gender, social protection and commerce as well as community development, transportation and other less obvious entities, as appropriate.
 - **Involve value chain actors**, including input suppliers and retailers to share skills and tools that would reinforce and benefit agricultural and nutrition objectives.

- + **Develop and strengthen multisectoral nutrition policies** with the stakeholders for each sector and ensure that all stakeholders know, understand and follow the policies consistently.

- + **Good cooperation and regular communication** is needed at all levels, i.e. community, district, provincial and national, between government, NGOs and volunteers to prevent overlap and encourage collaboration.
 - **Strengthen linkages within sectors**, e.g. livestock and crops, clinical and public health.
 - **Set up, strengthen and empower government subnational nutrition coordination committees**, i.e. encourage capacities at community, district and provincial levels to manage agriculture-nutrition education programmes.
 - **Coordinate donor contributions** toward common aims by building on existing mechanisms or developing new ones.

Issues to consider

- ! **Nutrition is still considered a health issue**, rather than an issue for agriculture and other sectors. However, a preventive food-based approach that focuses on improving access to and consumption of good quality diets calls for partnerships among diverse sectors.

- ! **Vacant positions and turnover** in government, NGOs and volunteer groups make coordination challenging and require effective monitoring and data management.

- ! **Government and development partners, i.e. UN, donors, NGOs, civil society working independently of each other** is common in some places, causing confusion and frustration at all levels of the system.

- ! **Different motivations of for-profit and not-for-profit partners** may stem from different values and goals, which need to be expressed and bridged to allow for collaboration.



1. Ongoing, regular supervision and support, by all sectors, is essential to sustain the quality of nutrition education sessions and encourage community-level staff and volunteers.

Good practices

- +** **Clearly set out a supervision plan** in the M&E system during design stage and agree on different cadres' supervision responsibilities, in-line with government and community structures.
- +** **Include a session on supervision** during separate trainings of supervisors, trainers and community volunteers, so that realistic expectations of supervision are agreed upon.
- +** **Supervisors need to be empowered to effectively sensitize** extension staff and community leaders on the agriculture-nutrition programme, including community volunteer selection criteria for start-up and replacement.
- +** **Supervisors should be provided with appropriate tools** or checklists for performance monitoring and trained on how to use them.
- +** **Funding must be sufficient to cover essential logistics**, i.e. transport, fuel, forms and clothing, so that supervisors are able to conduct field visits, collect monitoring data and submit reports.
- +** **Harmonization of workloads is essential** to ensure that staff and communities effectively manage the support from different partners' projects, which need to improve work quality and impacts, not just adding to it.
- +** **Supervisors should periodically observe the nutrition education sessions** conducted by trainers/community volunteers, identify and share challenges, and provide constructive feedback.
- +** **Supervisors should periodically attend home visits** with extension staff and community volunteers to assess participant engagement of both women and men, and provide constructive feedback.

- +** **Refresher trainings** of supervisors, trainers and community volunteers improve supervision, increase motivation and enhance implementation.

Issues to consider

- !** **Supervision of staff from a different sector**, e.g. agriculture supervising health **can be challenging** as there is no official line of authority and technical capacities are often sector-specific.
- !** **Rainy season supervision can be challenging:** access can be problematical due to flooding or poor roads. People may prioritize cultivation of their land prior to and during the rains, and be unavailable for consultation during periods of high workload.



V. MONITORING, EVALUATION AND IMPACT ASSESSMENT

1. Establish an agriculture-nutrition education M&E system during the design phase that is appropriate to the scale, purpose, resources and duration of the programme in order to generate high quality evidence that will help strengthen impact, and answer process and output questions to enhance programme management.

Good practices

- **Emphasize timely, accurate and useful monitoring data** collection, analysis, reporting and dissemination to provide “information for action”.
 - **Select indicators** that are appropriate to the situation, considering the intervention duration and expected number of beneficiaries.
 - **Monitor targeting of beneficiaries to ensure optimal synergies from agricultural and nutrition education programme components** (see section I.3).
 - **Develop simple, standardized monitoring tools and reporting templates to ensure consistency** in monitoring and reporting of process, output and impact indicators.
 - **Design and set up a user-friendly database** and train data entry personnel, so that relevant monitoring data can be regularly entered, analysed and reported.
 - **The monitoring plan should include reviews**, i.e. quarterly, six-monthly or annual depending on need, and mid-term evaluations to identify and guide corrections, such as the need for refresher trainings.
 - **Disseminate M&E results** within the coordination structures and communities from which they were collected. Strengthen collaboration and support opportunities for building on success, and make adjustments to address weaknesses.
 - **Publicize results** adequately and appropriately through the media, to community leadership and the general public.
- **Monitor potential unintended negative effects**, especially those that may diminish the impact of the programme on nutrition, including women’s workload or exposure to pathogens or toxins, e.g. animal manure or mycotoxins.
- **Small-scale projects⁵ and communities need an M&E system** that provides conclusions about acceptability and feasibility. At a minimum:
 - **Select intermediate indicators** for evaluating progress and impact, such as Minimum Dietary Diversity (MDD), Minimum Meal Frequency (MMF) and consumption of iron-rich or iron-fortified foods, which are relatively easy to assess and interpret.
 - **Monitor programme participation** (exposure) and discuss low attendance rates with project staff and the community to address any issues.
 - **Collect relevant quantitative and qualitative data aligned with the theory of change** using tools, such as Knowledge, Attitudes and Practices (KAP) surveys to have insights into progress being made in the community’s behaviour change.
- **Larger projects⁶ can support more robust findings** (plausibility) if they incorporate the above and:
 - **Include impact indicators** on nutritional status, i.e. anthropometric data if programme lasts for at least two years.
 - **Identify a “control” group to monitor socio-economic development without the programme.** If the programme proves to be effective, target the “control group” with it in the final year.
 - **Conduct a process evaluation** (mainly qualitative data) to understand what did and did not work well for different project parameters.
 - **Collect qualitative data** on intrahousehold decision-making and women’s time for barrier and most significant change analysis.

⁵ Small-scale projects: nutrition component lasts one to two years, covers few households or does not have sufficient funding for research.

⁶ Larger projects are characterized by a duration of three to four years and a limited set of agriculture activities reaching at least 1 000 beneficiaries.

Good practices (continued)

- + **Very large “flagship” projects⁷ combined with a research component** can support conclusions related to causality, efficacy and/or effectiveness by considering all of the above points and:
 - **Apply rigorous analytical techniques** that account for clustering if the intervention is administered at the community level, i.e. community allocation as opposed to individual allocation to the intervention with a randomized controlled trial (RCT) and/or longitudinal research design.
 - **Collect more detailed food intake data**, if this is expected to provide useful data and considered a worthwhile endeavour.



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Issues to consider

- ! **Lack of resources**, e.g. suitable transport, fuel and staff can be a barrier to regular monitoring activities.
- ! **Each sector has its own M&E system and procedures.** Collecting multisectoral data can be challenging.
- ! **Anthropometric measures of nutritional status** are more likely to be an appropriate impact indicator if there are other programme elements that address health, water, sanitation and other non-food risk factors for malnutrition. If included into the M&E system, ensure that measurements are conducted according to World Health Organization (WHO) guidelines⁸ with appropriate equipment and well-trained staff, as minimal measurement bias can lead to false conclusions.
- ! **Quantitative food intake is challenging to measure.** The analysis is difficult and requires well-trained staff as well as up-to-date and country-specific food composition tables (Gibson, 2005).
- ! **Monitoring of actual, regular practices** is important for implementers to undertake in order to generate evidence of activities that work in everyday life instead of what mothers/caregivers do when knowingly being observed.
- ! **Lack of integrated record keeping** for agricultural input distribution and nutrition education impairs identification of beneficiaries that received both services.

⁷ Flagship projects are characterized by a duration of five or more years and a diverse set of agricultural and nutrition activities.

⁸ The WHO Child Growth Standards www.who.int/childgrowth/en/

1. Planning for scale can be accomplished by supporting the government from the start, identifying and supporting national coordinating mechanisms and using innovative methods for scaling up.

Good practices

- +** Encourage government, donors, NGOs and communities to move beyond a project focus and adopt longer-term strategies for integrating nutrition education into agriculture, including commitment to prioritization of adequate longer-term funding.
- +** Identify and celebrate champions at all levels, and empower them with opportunities for increased responsibility.
- +** Support and strengthen coordinating bodies at national and subnational levels for agriculture, health and nutrition, and tap into national movements, e.g. SUN.

Issues to consider

- !** Government staff may perceive IYCF nutrition education activities to be project-based and, therefore, not recognize the need for **taking over responsibility of supervision, monitoring and reporting activities.**
- !** Development partners often lead projects as they need progress at a faster pace than the typical pace of government and community, and then “handover” with “exit strategies”, but this is often ineffective.
- !** Government funds are often not in place for **integrated agriculture-nutrition education** programmes and should be advocated for.
- !** Policies and strategies are often not implemented at provincial, district and community levels, and should be supported for widespread understanding and implementation.

2. Institutionalize the integration of agriculture and nutrition education.

Good practices

- +** Ensure that whatever is done at field level is sanctioned from above, via policy, briefings, revised terms of reference for staff, etc.
- +** Incorporate food-based nutrition into national education curricula, including health and agriculture higher education as well as pre-, in-service and refresher trainings.
- +** Include relevant nutrition education activities into the job duties of health, community development and agricultural extension staff.

Issues to consider

- !** High staff turnover is common and undermines sustainability. Sufficient funding is necessary to continually recruit and train staff and volunteers, e.g. pre-, in-service and refresher trainings.
- !** Project-based trainings are not sustainable in the long run but, if well supported, can assist the system in continuing in the short-term until longer-term systems are in place.

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