

## GFRAS GOOD PRACTICE NOTE FOR EXTENSION AND ADVISORY SERVICES

### NOTE 25: Integrating Nutrition-sensitive Advisory in Extension Services

Compiled by: Dr Stefan Kachelriess-Matthess, Dr Annemarie Matthess, Stancher Anna, Ben Asare, and Professor Emmanuel Ohene Afoakwa, September 2016

Extension advisory services (EAS) support smallholders to improve the productivity and efficiency of their farms and to take decisions on the outlook of their business. Extension advisory services include not only government extension services, but also services organised and funded by private companies along their supply chains – for example, a food processor or a commodity aggregator may establish an outgrower scheme and employ its own extension agents.

Both public and private EAS assist smallholders to improve production of one or a few lead crops, which are either exported (e.g. cacao, coffee, spices, cotton) or consumed as staples in local diets (e.g. rice, wheat, sorghum, potatoes). These crops generate comparatively high profit margins and enjoy significant market demand. By supporting their production and linking smallholders to markets, EAS contribute to increasing the incomes of rural populations.

However, the smallholders and households addressed by EAS are not only cash poor. They are often food insecure and suffer chronic or acute forms of malnutrition. This impacts on the physical and cognitive growth of children, and reduces productivity and the ability of household members to carry out agricultural work.

Lacking or highly variable income is one cause of food insecurity and malnutrition. But higher incomes do not automatically translate into improved nutrition. Poor eating habits, lack of knowledge about good nutrition practices, and limited access to diverse food items are other important determinants. Even when incomes are rising, households might prioritise expenditures that are not relevant to improving nutrition (e.g. communication, mobility).

This is why EAS need to identify and address the nutritional needs of rural households and to mainstream nutrition-sensitive messages in their service provision. This note reviews selected instruments that EAS can use for this purpose.

#### Philosophy and principles

To develop nutrition-sensitive extension messages and disseminate them effectively, EAS should take account of the following principles:

- **Context:** nutrition-sensitive messages should build on analyses of dietary patterns and deficits of rural households. The household dietary diversity score of FAO<sup>1</sup> and national food-based dietary guidelines, if available, are helpful to identify nutrition gaps.
- **Adaptation to literacy levels:** where smallholders' literacy levels are low, visual tools, interactive methods, and simple language should be used to enhance the understanding of extension messages.

---

<sup>1</sup> The household dietary diversity score and individual dietary diversity score provide indications of a household's or individual's consumption of a range of food groups, and can be used to understand access to food and the nutritional quality of diets.

- **Balanced/equitable participation:** women play a major role in channelling household resources to food, health services, and education. However, women are subject to the influence and decision-making authority of other family members such as male partners and the elderly. Nutrition-sensitive extension should engage both men and women, as well as household members across generations (youth and elderly), fostering more harmonious intra-household communication and decision making and more equitable power relations.
- **Business orientation:** smallholders are entrepreneurs and invest in production based on profit outlooks. Cost–benefit analysis should be used to enable smallholders to make well grounded decisions on their investments in production and consumption while taking the nutritional implications into account.
- **Scale:** the content of nutrition-related extension messages should be relevant for a large number of households. The methods of delivery need to be easy and low-cost, otherwise resource constraints will limit the outreach. Keep it simple, and focus on do-able actions.
- **Coordination:** to enhance impact, coordination with government or donor programmes that address nutrition, such as health systems, maternal care, and water supply, will be necessary.

## Implementation

Extension advisory services can support smallholders to improve their nutrition through a set of three interventions: nutrition education, diversification of production, and off-farm income generation for women<sup>2</sup>.



Figure 1.

### Nutrition education

Extension advisory services can integrate nutrition education in their advisory services using key messages that promote behaviour change. Such messages should:

<sup>2</sup> The integration of this set of measures aims to address the determinants of food security outlined in the UNICEF framework as access to food, availability, and utilisation. The UNICEF framework highlights additional determinants of food security: food assimilation, care, and stability. Extension advisory services alone have a limited mandate to intervene on these additional determinants. It is therefore advisable to seek collaboration with other initiatives or institutions.

- be adapted to the characteristics of agro-ecologies and established dietary patterns
- focus on diversification of diets (not only staples, but also food containing proteins and vitamins) and on hygienic practices of food preparation and consumption
- promote the consumption of food crops and animal products that are available at farm level to ensure they are used not only as sources of cash but also as food sources.

### ***Diversification of production***

Households that specialise in the production of only one or few cash crops suffer significant losses in the event of crop failure or falling market prices. They are also reliant on local markets to purchase food items to feed the family. If such markets are not well developed, access to diversified and nutritious food is a challenge.

Extension advisory services can promote diversification of production to increase the range of food available at household level through the cultivation of nutrient-rich food crops (e.g. leafy vegetables, biofortified crops) and through animal-rearing practices (e.g. poultry, snails, small livestock).

### **What principles drive diversification?**

- Promote the production of food that meets the dietary deficits of households.
- Do not lose sight of the marketability of food products. Collect and disseminate information on markets and quality requirements.
- Consider the opportunity to grow food products in the off-season of the lead crops. The additional income from selling food crops has an income-smoothing effect, especially in regions where rainfed agriculture predominates.

### **What challenges are linked to production diversification?**

Diversification requires investments of land, water, inputs, and working time. Smallholders can face a dilemma in terms of resource allocation for plant- or animal-based food production versus cash crop production or selling animal-sourced foods. The following approaches help to tackle these challenges in a targeted manner:

- Compare gross margins of food crops and cash crops and help smallholders take an informed decision.
- Check that the planting and harvesting seasons of different crops do not overlap. Rural households might face labour shortages.
- If the burden of additional farming activities – including animal husbandry and linked to diversification – is put on women, time available for care-giving will be reduced (e.g. cooking, breastfeeding, care of the sick and elderly). It is important to make communities and households aware of this risk and encourage more equitable division of labour among household members.

### ***Off-farm income generation for women***

In many regions of the world, commercial agriculture is a male-dominated activity. Women frequently lack the assets needed to engage in commercial farming, or are employed as unpaid labour force on their household fields. Cultural and traditional patterns holding back the economic empowerment of women take time to break.

At the same time, women invest a lot of their resources to improve the food security and nutrition of their families. While cash crop production might not be possible for women, opportunities for income generation can be found in off-farm activities. Women often purchase, process, and trade in local food products. However, they may operate outdated technologies, resulting in high labour intensity, low profits, poor quality, and low marketability of their produce.

To improve women's incomes, EAS can identify additional income sources and promote technical and technology improvements that decrease costs and workloads while increasing revenues.

Technical advice is one part of this; another part relates to the business models within which women operate. Women may be entangled in exploitative business relations or lack negotiation power on price setting. Extension advisory services can use cost-profit calculations to identify profits and losses, and determinants of cost and revenues. Once understood, such issues can be addressed by promoting innovative business models or introducing quality improvements that give women an edge on the market.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) promotes nutrition-sensitive EAS with delivery methods tailored to the local context. In rice-farming systems, GIZ partners with rice millers and their extension agents to improve the production and incomes of farmers in outgrower schemes. In addition, GIZ mainstreams family nutrition education and technical advice on crop diversification (sesame, soybean, vegetables) in the EAS. To economically empower women, GIZ disseminates improved rice-parboiling techniques, and links women processors to off-takers. In cacao-producing systems, GIZ combines EAS on cacao production with extension messages related to diversification with nutritious crops and animal-sourced products. All partner extension agents are trained in business skills and nutrition education.

### Capacities required

Core expertise in EAS rests in the production of traditional export crops and staples that are in the spotlight of government promotion policies. Technical know-how on good practices for the production of nutrient-rich crops may need mainstreaming, especially for crops that are new to a region (e.g. orange-fleshed sweet potatoes) or where advisory services are underdeveloped (e.g. animal husbandry and fisheries).

To address smallholders and their households not only as producers but also as consumers, EAS need to be aware of factors that influence food consumption, such as culturally and agro-ecologically determined eating preferences, cooking and hygienic practices, and inter-household decision-making processes.

The scope of EAS needs to be broadened from technical to business advisory. Business skills such as cost-revenue calculations need to be embedded in EAS and/or newly developed, particularly for activities undertaken by women.

Facilitation / community animation and participatory methodologies of EAS should be preserved and strengthened as they are more effective adult learning methods than top-down training and technology transfer.

Coordination and supervisory skills are critical to achieve delivery at large scale. Coordination efforts will be required at managerial level to ensure the systematic inclusion

of nutrition-sensitive messages in the work of EAS and to guarantee that extension delivery is timed according to relevant cropping seasons (e.g. for nutrition-rich crops) and the availability of male and female household members.

**Costs**

The integration of a nutrition-sensitive approach in agricultural value chains entails the following costs:

- Investment in expertise to develop advisory messages related to nutrition education, business skills, and production techniques.
- Equipping extension agents with quality training materials (posters, guidelines, visual aids) to optimise learning by the target population.
- Management support to encourage supervision and coaching.
- Resources to ensure manpower, transportation, and allowances for extension agents.
- Seed funds for demonstration plots or for demonstrating improved technologies for off-farm activities.

**Strengths and weaknesses**

The major strengths and weaknesses of integrating nutrition-sensitive advisory services in extension are shown in Table 2.

**Table 2. Strengths and weaknesses**

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• Crop diversification through rotation, intercropping, and off-season production is a recognised strategy to preserve soil fertility and reduce pest incidence in cash crop production. It does not conflict with the mandate of EAS.</li> <li>• Nutrition-sensitive extension messages are available and can be adopted and adapted to context with relatively low investments.</li> <li>• The approach fills a systemic weakness of agricultural extension services through building the capacity of extension agents to integrate business and nutritional skills in their services</li> </ul>	<ul style="list-style-type: none"> <li>• The approach does not address causes of malnutrition outside the household level (e.g. high incidence of illness, or lack of infrastructure to access clean water) nor does it inherently focus on better nutrition during the important first 1,000 days of a child’s life.</li> <li>• EAS services are highly relevant for emerging farmers and smallholders with the potential to produce at commercial level. Their services are not sufficient to address the needs of resource-poor (e.g. landless) households or subsistence producers, who are often the most affected by food insecurity.</li> </ul>

**Best-fit considerations**

The extent to which public- and private sector-led EAS can integrate nutrition-sensitive measures in their work depends on their mandate; the motivation to change what services

are provided (what reason does the EAS have to provide nutrition-sensitive advice?); and the means (operational funds, staff and management capabilities, training, job aids).

Type of extension advisory services	Opportunity	Challenge
Public	<ul style="list-style-type: none"> <li>• Large presence in rural areas</li> <li>• Existing relations to smallholders and broad outreach</li> <li>• Often a mandate to improve nutrition and women’s empowerment</li> </ul>	<ul style="list-style-type: none"> <li>• Resource constraints</li> <li>• Management inefficiencies</li> </ul>
Private	<ul style="list-style-type: none"> <li>• More resources available</li> <li>• Access to information, communication and other technologies</li> </ul>	<ul style="list-style-type: none"> <li>• Companies need to be convinced of return on investment</li> <li>• Intervention limited to outgrowers and focused on specific crops</li> <li>• Didactic shortcomings</li> </ul>

In any case, EAS must consider that integrating of nutrition-sensitive measures in their services will put additional strain on staff time and resources. Conflicts in staff deployment between technical advisory and nutrition-sensitive measures are to be avoided.

The Farmer Business School (FBS) of GIZ (see References) is an example of a cost-effective, nutrition-sensitive EAS. FBS covers the production practices of a cash crop and at least two options for diversification with crops or animal products that have economic and nutritional value. FBS includes sensitisation on food needs (such as the importance of a child’s first 1,000 days), financial management, identification of nutritious foods in markets, and better postharvest methods. Over 334,000 cocoa smallholders (27% of whom are women) have graduated from FBS in five African countries. Over 38,000 rice producers (of whom 40% are women) have been reached in four African countries. In the experience of GIZ, the cost of delivering FBS ranges from €8–10 per beneficiary. The majority of trained smallholders report that they have improved nutrition and could reduce expenditure for healthcare.

**Evidence of impacts, sustainability, and scalability**

*Impacts*

Integrating a nutrition-sensitive approach within agricultural extension is quite a recent endeavour, but given the high priority that the global development agenda places on a multisector strategy to improve nutrition, it is on the rise. Preliminary evidence indicates that the largest impact of nutrition-sensitive EAS is in improving agricultural productivity, food production, and income generation from agriculture. This is only partially contributing

to improving the nutrition of rural households. Progress towards this goal depends on the extent to which attention to gender and nutrition education are integrated into EAS.

### **Sustainability**

Sustainability of nutrition-sensitive messages in public-sector EAS requires a clear institutional mandate and sustained availability of resources. Despite some progress, this is not always a given. Private-sector EAS are dependent on the business decision of the company to which they are affiliated. Changes in commercial strategy that alter the mandate of an EAS to provide nutrition messages cannot be excluded.

### **Scalability**

Once the initial investment in capacity building and know-how accumulation has been made, the scalability of such nutrition-sensitive approaches is high, as relevant messages can be mainstreamed in the daily work of the EAS.

### **Further reading**

de Brauw, A., Gelli, A. and Allen, S. 2015. *Identifying opportunities for nutrition-sensitive value-chain interventions*. IFPRI Research Brief 21. Washington, DC: International Food Policy Research Institute. Available at: [www.ifpri.org/publication/identifying-opportunities-nutrition-sensitive-value-chain-interventions](http://www.ifpri.org/publication/identifying-opportunities-nutrition-sensitive-value-chain-interventions)

GIZ. 2015. *Experiences with the Farmer Business School (FBS) approach in Africa*. Sector Network Rural Development Africa. Eschborn, Germany: Working Group Agribusiness and Food Security, Deutsche Gesellschaft für Internationale Zusammenarbeit. Available at: [http://ssab.caadp.net/en/materials/docs/GIZ\\_Studie%20SNRD\\_EN\\_Webversion\\_150914.pdf](http://ssab.caadp.net/en/materials/docs/GIZ_Studie%20SNRD_EN_Webversion_150914.pdf)

Kurz, K. 2013. *Nutrition-sensitive interventions and agriculture value chains: Preliminary lessons from Feed the Future implementation in four countries*. Background paper for the FAO–WHO Second International Nutrition Conference (ICN-2). Available at: [www.fao.org/fileadmin/user\\_upload/agn/pdf/Kurz-DAI\\_\\_FAO\\_nutrition-sensitive\\_Nov2013\\_REVISED.pdf](http://www.fao.org/fileadmin/user_upload/agn/pdf/Kurz-DAI__FAO_nutrition-sensitive_Nov2013_REVISED.pdf)

### **Training materials**

FAO Zimbabwe. 2015. *Healthy harvest. A training manual for community workers in growing, preparing and processing nutritious food*. Food and Nutrition Council of Zimbabwe, Food and Agriculture Organization (FAO) and the United Nations Children's Fund (UNICEF). Available at: <http://motherchildnutrition.org/healthy-nutrition/pdf/mcn-healthy-harvest.pdf>

GIZ Farmer Business School (FBS): <http://ssab.caadp.net/en/materials>

GIZ Family nutrition training module and GIZ Parboiling training module: <http://cari-project.org/downloads/reportstraining-material>

Ministry of Agriculture, Animal Industry and Fisheries, Uganda, 2015. *Food and nutrition handbook for extension workers* (not yet available online).

Ministry of Agriculture, Irrigation and Water Development, Malawi. 2015. *Nutrition handbook for farmer field schools*. Lilongwe: Department of Agricultural Extension Services, Nutrition Unit. Available at:

[www.fao.org/fileadmin/user\\_upload/nutrition/docs/education/resources/by\\_country/Malawi/FFS\\_Nutrition\\_Handbook.pdf](http://www.fao.org/fileadmin/user_upload/nutrition/docs/education/resources/by_country/Malawi/FFS_Nutrition_Handbook.pdf)