



USAID
FROM THE AMERICAN PEOPLE

MULTI-SECTORAL NUTRITION STRATEGY 2014-2025 Technical Guidance Brief

NUTRITION-SENSITIVE AGRICULTURE: APPLYING THE INCOME PATHWAY

BACKGROUND

In order to make agricultural market development activities more nutrition-sensitive,¹ interventions must address the underlying and basic causes of malnutrition.² Agriculture investments may improve availability and access to food, while also ensuring that producer households have income to pay for caregiving resources, and health care. As illustrated by [The Primary Pathways for Improving Nutrition through Agriculture Technical Briefs](#), nutrition-sensitive agriculture interventions may ultimately contribute to improving the nutrition of women and children (SPRING 2014). The pathways include:

- [Food Production](#) – influencing the availability and affordability of nutrient-rich foods³ for household consumption;
- [Income](#) – for expenditure on food and non-food items; and
- [Women’s Empowerment](#) – including control over use of income, feeding and caregiving resources, and female energy expenditure.

This brief focuses on the application of the income pathway.

HOUSEHOLD INCOME AND NUTRITION

Over three quarters of the world’s poor live in rural areas and rely on agriculture as their primary source of income.⁴ In addition, most farming households are net buyers of food, underscoring the importance of income on the diet and nutritional status of all household members.

¹ The *USAID Multi-Sectoral Nutrition Strategy 2014-2025* defines nutrition-sensitive interventions as those that address the underlying and systemic causes of malnutrition. Nutrition-sensitive agriculture activities are therefore those within the sector that influence outcomes related to food, health, and care. They can also serve as delivery platforms for nutrition-specific interventions (such as food fortification, micronutrient supplementation, nutrition education, infant feeding and others), potentially increasing their scale, coverage, and effectiveness.

² The United Nations Children’s Fund’s (UNICEF’s) framework for malnutrition lays out the understanding of the determinants of malnutrition, including its immediate, underlying, and basic causes. Nutrient intake and health status at the level of the individual are the immediate determinants of nutritional status. Underlying these are the food, health, and care determinants which one can affect through agriculture. Finally, at a basic level, political, economic, and institutional determinants underpin all of these factors. United Nations Children’s Fund (UNICEF). 1990. *Strategy for Improved Nutrition of Children and Women in Developing Countries: A UNICEF Policy Review*. New York: UNICEF.

³ According to the *Feed the Future Indicator Handbook*, a commodity is defined as nutrient-rich if it is: bio-fortified; a legume, nut or seed; an animal-sourced food, including dairy products (milk, yogurt, cheese), eggs, organ meat, flesh foods, and other miscellaneous small animal protein (e.g. grubs, insects); a dark yellow or orange-fleshed root or tuber; or a fruit or vegetable that meets the threshold for being a “high source” of one or more micronutrients on a per 100 gram basis. The *Feed the Future Indicator Handbook* can be found at https://feedthefuture.gov/sites/default/files/resource/files/Feed_the_Future_Indicator_Handbook_25_July_2016.pdf

⁴ Seventy-eight percent of the world’s poor are rural and working in agriculture according to the World Bank. <http://www.worldbank.org/en/topic/agriculture/overview#1>

Economically vulnerable households may engage in on- and off-farm income generating activities, and/or depend on remittances, transfers, a range of coping mechanisms, and other sources of income needed for both food and non-food expenditures, such as health care, water, shelter, school fees, clothing, fuel, and transport. Evidence shows that the most nutritionally vulnerable groups are pregnant and lactating women, and children under two years of age (Ruel and Alderman 2013). Poor nutritional status among these groups may be exacerbated by economic vulnerability due to a range of factors, including limited income, poor year-round cash flow, and limited and unreliable productive assets. Moreover, seasonal shocks, power inequities related to intra-household decision-making, cultural norms, and poor knowledge related to good nutritional practices also contribute to lack of investment in food, health, and care resources, especially among the poorest (UN Systems Standing Committee on Nutrition 2014).

While Feed the Future investments aim to reduce poverty and increase incomes of farming households, research also shows that income generation is essential, but not sufficient, to improve nutrition outcomes—in fact it can have a positive, negative, or neutral effect on nutrition for beneficiaries or clients of agricultural projects (World Bank 2007). Income may affect nutrition both in how money is earned as well as in how it is spent. For example, devoting additional time to work-related activities could negatively affect breastfeeding, timely provision of complementary foods, or other child care responsibilities among women if activities do not also foster more equitable balances of care responsibilities, or promote opportunities that allow both men and women flexibility in how they earn income and invest in nutrition. Smallholder farmers must also balance decisions between how much of their land to dedicate to cash crops and how much to set aside to grow food for family consumption, as cash is needed for non-food expenditures as well as for purchasing other foods that it may not be practical to grow.

KEY POINTS TO PROMOTE INCOME'S POSITIVE INFLUENCE ON NUTRITION

The points listed in Box 1 are critical to ensuring that household income has the greatest potential effect on nutrition, especially among the most vulnerable. While it may not be appropriate for every Feed the Future activity with a key objective of increasing household income to promote nutrition-sensitive agriculture practices and interventions, the issues described below provide guidance for agricultural market development activity design in order to make a positive contribution to planned nutrition outcomes.

Point 1: Increase and diversify income sources.

Increasing and, where relevant, diversifying on- and off-farm income throughout the year is essential to improving food and livelihood security and meeting nutritional needs. Many vulnerable rural households face daily decisions that impact nutrition outcomes due to competing priorities for the use of limited cash resources. The seasonality of agricultural income and irregular cash flow also increase risk for these households, which in turn, reduces their ability and likelihood to spend on quality food and more expensive animal source foods for their own consumption. Increasing income through livelihoods diversification can increase the regularity and reliability of payments, mitigate shocks and stresses, and thus reduce risk. Resource-constrained households might be best assisted to support nutrition

Box 1. Key Points to Promote the Positive Influence of Income on Nutrition

1. Increase and diversify income sources.
2. Promote the use of income for nutrition-related needs.
3. Support gender-equitable roles and responsibilities in agricultural market systems.
4. Promote innovative financial products and services.
5. Strengthen institutional frameworks and government policies to make key nutritious foods more affordable.

investments by increasing farm and business management capacities and/or by strengthening other livelihood streams such as wage labor, and other value chain functions. Increasing the diversity of income sources within the household can also contribute to improved year-round cash flow.

Point 2: Promote the use of income for nutrition-related needs.

Increased income should be accompanied by social and behavior change communication (SBCC) activities to promote contextually-appropriate nutrition-sensitive services and practices. At household and farm levels, SBCC, gender equity, and empowerment strategies are needed to build capacity and awareness within households so that decisions related to how income is used may contribute to nutrition. For example:

- Investing in production, processing, and sale of nutrient-rich and animal source foods provides a ready source of diverse, healthy foods for consumption while increasing availability of the same in local and regional markets.
- Using income and/or savings to cover the costs of health care, food, or child care can make the difference between seasonal illness or weight loss for women and children and year round health for all.
- Spending income to purchase, prepare, and consume diverse nutrient-rich foods will also contribute to nutrition outcomes. Box 2 describes an intervention that leads to the purchase of a more nutrient-rich product.

Building demand for diverse, nutrient-rich foods must also be linked to increasing the availability and affordability of these foods; increasing demand without adequate supply results in increased prices, keeping nutrient-rich foods inaccessible to many populations. Feed the Future is investing in increasing production of nutrient-rich foods per the U.S. Agency for International Development's (USAID's) *Multi-Sectoral Nutrition Strategy Technical Brief: Nutrition Sensitive Agriculture: Nutrient-rich Value Chains* (USAID 2015). Conversely, if supply of nutrient-rich commodities increases without sufficient demand, it will not be profitable for producers and other value chain actors, and availability will be short-lived. Therefore, Feed the Future projects should conduct context assessments,⁵ formative research, and/or market studies that can inform nutrition-sensitive agriculture design and implementation strategies. These studies can include, for example, household economic analyses that define target populations' priorities

Box 2. Increasing Expenditure on Iron-rich Beans

HarvestPlus develops bio-fortified, nutrient-rich seeds to increase important micronutrients in diets of millions of people worldwide. They also build demand for the seeds to encourage their purchase in local markets. They have developed products such as vitamin A-rich orange fleshed sweet potatoes, cassava, and maize; zinc-rich rice and wheat; and iron-rich beans and pearl millet. In Rwanda, HarvestPlus has released two varieties of iron-rich beans, red (RIB) and white (WIB), as Rwandans have the highest per capita bean consumption in the world (CIAT 2004) and thirty eight percent of children under 5 years of age and 17 percent of women of childbearing age suffer from anemia (for which iron deficiency is one of the main causes) (DHS 2010). Randomized control studies found that in the absence of targeted campaigns, consumers are willing to pay a premium price of approximately 7 percent for RIB, and a discount price of approximately 11 percent for WIB relative to the available local variety of beans. By including social marketing campaigns promoting the nutritional benefits of the iron-rich varieties, the price that consumers are willing to pay significantly increases the premium for the RIB variety and significantly lowers the discount for the WIB variety.

For more details:

http://www.harvestplus.org/sites/default/files/HarvestPlus_WorkingPaper18.pdf

⁵ For background on conducting context assessments and related tools, see SPRING's Agriculture and Nutrition Context Assessment Tool Locator and accompanying User Guide: <https://www.spring-nutrition.org/publications/series/context-assessment-linking-agriculture-and-nutrition>

including the use of household earnings, and where improved diets fit in the household list of priorities. This information can help inform strategies to increase demand for nutrient-rich foods and supporting services.

Point 3: Support gender-equitable roles and responsibilities in agricultural market systems.

Gender disparities are a barrier to how income is earned, saved, invested, and ultimately used. Studies have found that women's discretionary income has a greater impact on child nutrition and food security than men's, and therefore Feed the Future promotes investment in women's economic empowerment, including promoting women's earnings and control over income (Smith et al. 2003; UNICEF 2011). However, high levels of illiteracy among women and men, and lack of experience with money management, budgeting, and negotiation are key constraints to sustained year-round cash flows among smallholder farm households (Shenggen et al. 2013). These constraints can and should be addressed through cooperatives, livelihood groups, savings groups, and even mother's groups in order to help men and women not only earn more income but also support each other toward more equitable roles in decision making in farm management and use of resources for nutrition-related expenditures.

Increasing women's leadership roles in agriculture offers tangible opportunities for their empowerment and income. However, such roles may also present nutritional risks by overburdening women with increased workload and limiting the time they have to care and feed themselves and their children. This does not imply that women should not have the opportunity for even greater roles in agriculture, rather that agricultural interventions should work to improve labor efficiency and ensure flexibility. To fully address these issues in activity design, gender assessments should examine specific roles and responsibilities for all household and livelihood activities and then determine opportunities for making time, labor, and income control components more equitable among men and women.⁶ Promotion of time and labor-saving technologies, especially for use by women, should also be considered.

Box 3. A Network for Sustaining Nutrition-Sensitive Agriculture Products and Services

In Senegal, the Feed the Future activity USAID | Yaajeende, led by the National Cooperative Business Association CLUSA International, uses a network of community-based agents and volunteers to sell and promote agricultural and nutrition products, services, and training. The Community-Based Solution Providers (CBSPs) are selected by community members to provide agriculture services and products, such as seeds for staple, tree, and nutrient-rich crops. They provide and facilitate access to training, products and services, and credit at the community level through linkages with larger input suppliers and financial institutions. Examples of items sold include horticulture and cereal crop seeds, fertilizers, iodized salt, bio-fortified and enriched flours, fresh vegetables, and animal feed. The CBSP network allows members to buy in bulk, yet offers products in small quantities in an effort to reach those with limited purchasing power.

An initial evaluation of the CBSP networks and individual members shows that CBSP micro-enterprises are profitable, and there is growing demand for nutrition-sensitive agriculture products and services. CBSPs have now formed regional networks and leaders, which will assume the leadership, management, and quality assurance roles, sustainability, and continued growth of the CBSP network.

<http://www.usaid.gov/news-information/videos/yaajeende-community-based-solution-providers>

⁶ The Intervention Guide for the WEAI provides strategies and examples for promoting women's control over income, time allocation, access to and control over resources, and leadership and decision-making in agriculture.

<https://agrilinks.org/library/intervention-guide-womens-empowerment-agriculture-index-weai-practitioners-guide-selecting>

Point 4: Promote innovative financial products and services.

Financial inclusion is important for increasing livelihoods resilience, strengthening value chains, adopting appropriate technologies, and taking agriculture livelihoods interventions to scale. Financial products and services designed to promote nutrient-rich value chains, and related technologies can also provide incentives for investing income in nutrition-sensitive products and services. Activities such as savings and lending models or self-help groups generate small funds for groups with limited or no access to formal banking options, especially for women. As women tend to control these funds, these approaches can enable them to use earnings to purchase nutrient-rich foods and inputs that support improvements to household health and nutrition.⁷ These interventions also contribute to increasing the consistency of income and consumption throughout the year and can help improve the quality of foods consumed. Financial institutions also require strengthening so they understand and offer financial products that respond to business opportunities within nutrition-sensitive agriculture. Projects can play a key role in leveraging resources to forge sustainable business partnerships between financial institutions, farmers, and a range of private sector service providers. Box 3 describes a Feed the Future activity that is a model for building and sustaining nutrition-sensitive agriculture products and services.

Point 5: Strengthen institutional frameworks and government policies to make nutritious foods more affordable.

Government ministries, research institutions, and civil society actors across sectors play a critical role in promoting and adopting nutrition-sensitive agriculture practices and policies. Within governmental ministries responsible for agriculture, health, water, finance, and social development, greater capacity and investment of resources is needed to identify and prioritize nutrition-sensitive agriculture initiatives and practices that support use of income to affect nutrition. For example, governments can support initiatives for fortifying crops and increase access to these products by strengthening market systems and subsidies for vulnerable populations. Governments can also support cooperatives and marketing groups, and encourage trade of more nutritious food commodities. They also need to facilitate gender-sensitive policies that enable equitable access to, and control of assets, such as inheritance of land by women and girls, and access to financing. Governments also have a role to play to incentivize value addition and the expanded production of nutritious foods. Feed the Future activities can also work with governments on specific safety net programs for the vulnerable so that these populations are better able to afford a diverse, nutrient-rich diet year round.

Local government offices are critical to incorporating nutrition-sensitive and nutrition-specific objectives into food security plans, and supporting the resources and actions to carry these through. Governments can also lead and participate in efforts such as the Scaling Up Nutrition (SUN) movement, and implement multi-sectoral coordination activities at the national and sub-national levels. Feed the Future activities with nutrition-sensitive objectives should assess the local policy and institutional environment and design activities that directly engage relevant policy actors and initiatives, address gaps, or link project stakeholders into ongoing initiatives.

⁷ Women need to be able to use income for nutrition-related expenses and investments especially during the **1,000 day window of opportunity**. This time period is defined as the 1,000 days from pregnancy to a child's second birthday and is the most critical time for positive impact on a child's cognitive, intellectual, and physical development. Good nutrition in the first 1,000 days lays the foundation for health, development, and even prosperity for the next generation. USAID. 2014. "Multi-Sectoral Nutrition Strategy Technical Brief: Nutrition-Sensitive Agriculture: Nutrient-Rich Value Chains." USAID website. <https://www.usaid.gov/what-we-do/global-health/nutrition/nutrition-sensitive-agriculture-nutrient-rich-value-chains>.

CONCLUSION

While the relationship between poverty and malnutrition is evident in a wide range of contexts, decades of development experience shows that even when incomes rise, households do not necessarily prioritize the purchase and consumption of diverse, nutrient-rich diets. Therefore, agricultural investments aimed at increasing income can maximize their contribution to nutrition by considering the five key points described herein. It is not enough for USAID investments to only increase income and knowledge about good nutrition practices. Rather, increased knowledge needs to be accompanied by appropriate resources and an enabling environment that improve opportunities for income to be used toward increasing the production, purchase, and consumption of nutrient-rich foods, and improving access to caregiving resources, and healthcare.

REFERENCES

- Ruel, Marie T., and Harold Alderman. 2013. "Nutrition-Sensitive Interventions and Programmes: How Can They Help to Accelerate Progress in Improving Maternal and Child Nutrition?" *The Lancet* 382:536–551. doi:10.1016/S0140-6736(13)60843-0.
- Shenggen Fan et al. 2013. "From Subsistence to Profit: Transforming Smallholder Farms." *Food Policy Report*. International Food Policy Research Institute. Washington, DC: IFPRI.
- Smith, Lisa C., et al. 2003. "The Importance of Women's Status for Child Nutrition in Developing Countries." *International Food Policy Research Institute Research Report 131*. Washington, DC: IFPRI.
- SPRING. 2014. *Understanding the Agricultural Income Pathway. Brief #3. Improving Nutrition through Agriculture Technical Brief Series*. Arlington, VA: Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project.
- The United Nations Systems Standing Committee on Nutrition. 2014. *Nutrition and the Post 2015 Sustainable Development Goals, A Technical Note*. UNSCN website. http://www.unscn.org/files/Publications/Briefs_on_Nutrition/Final_Nutrition%20and_the_SDGs.pdf. (This technical note cites multiple sources and summarizes key relationships between each of the SDGs and nutrition, including livelihoods vulnerability and women's empowerment.)
- United Nations Children's Fund (UNICEF). 2011. *Gender Influences on Child Survival, Health and Nutrition: A Narrative Review*. New York: UNICEF; Liverpool, United Kingdom: Liverpool School of Tropical Medicine.
- USAID. 2015. *Multi-Sectoral Nutrition Strategy Technical Brief: Nutrition Sensitive Agriculture: Nutrient-rich Value Chains*. USAID website. <https://www.usaid.gov/sites/default/files/documents/1864/nutrition-sensitive-agriculture-508.pdf>
- World Bank. 2007. *From Agriculture to Nutrition: Pathways, Synergies and Outcomes*. World Bank website. siteresources.worldbank.org/INTARD/825826-1111134598204/21608903/January2008Final.pdf

This Technical Brief will be periodically updated. Comments from readers are welcome, especially comments to help clarify the information provided or where additional information may be useful