



How agriculture can boost nutrition

That agriculture can play a crucial role in the fight against malnutrition is no new insight. But what has to be done for agriculture to adequately fulfil this vital role? Our author reports on the state of debate and presents the multiple entry points and top priorities for nutrition-sensitive agriculture.

The last five years have seen a groundswell of interest in improving nutrition through agriculture, globally and within countries. Countries and donors have committed both rhetorically and financially to nutrition-sensitive agriculture (e.g. the Nutrition for Growth commitments, the commitments of the Second International Conference on Nutrition [ICN2], and the UN Sustainable Development Goals). These commitments reflect recognition that food systems do not satisfy the nutritional needs of all, and that malnutrition cannot be solved by therapeutic interventions alone. Commitments, however, need to be followed through with action. This overview briefly presents the multiple entry points and top priorities for nutrition-sensitive agriculture.

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As the main producer of food, agriculture has a role in providing access for all to safe, nutritious sufficient food to meet dietary needs year round. Since that is the definition of food security (see box), “nutrition-sensitive agriculture” is not so much a new concept as an emphasis on a central rationale for agricultural development. Generally, nutrition-sensitive agriculture refers to agriculture which has a nutrition objective and addresses one or more of the underlying causes of malnutrition, including inadequate food access, care and feeding practices, and health and sanitation environments.

It should be noted that there have been different terms used to communicate this basic concept, such as “nutrition-directed” agriculture and “nutrition-enhancing” agriculture. While different stakeholders may prefer various terms to reflect a similar concept, the majority of discourse uses the term “nutrition-sensitive”.

Inadequate access to nutritious food results in poor diets. Given current food availability, it is theoretically possible for all people to consume enough calories; however, even if food were equally distributed it would be impossible for all people to consume recommended nutritious diets. This is a problem that manifests in all forms of malnutrition, including maternal and child undernutrition, micronutrient deficiencies, overweight and obesity and diet-related non-communicable diseases (NCDs). All countries in the world have a serious burden of malnutrition. Increasingly, low-income countries suffer from the “double burden” of both undernutrition of various forms (child stunting,

Food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for a healthy and active life.

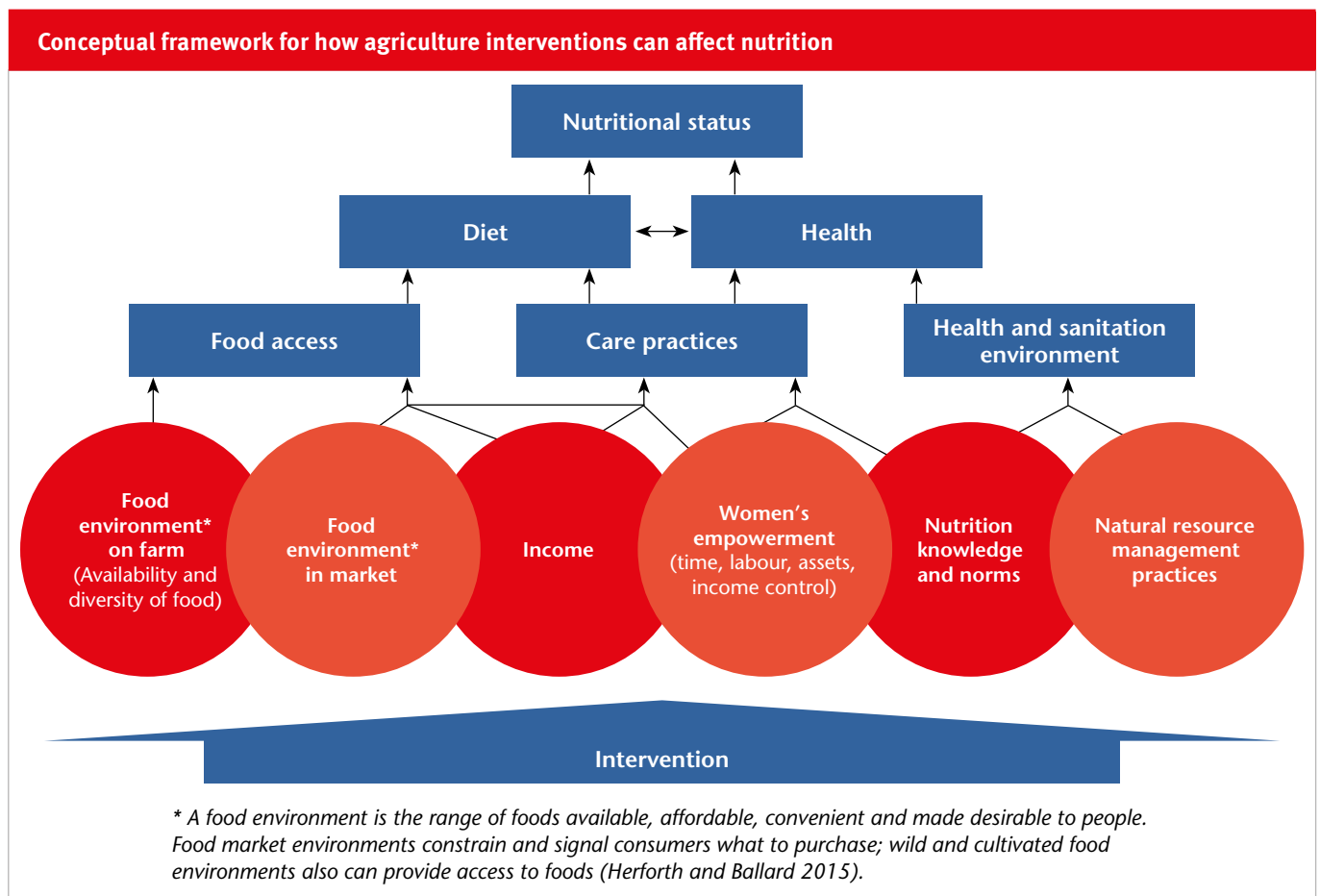
FAO/UN definition 1996

maternal underweight, vitamin and mineral deficiencies) and increasing prevalence of overweight, obesity and diabetes. Sub-Saharan Africa and South Asia – the regions with the highest burden of child undernutrition – are also projected to have the biggest increases in diabetes by 2030. Dietary risks are the number one risk factor for deaths and disability-adjusted life-years (DALYs) lost globally. Among the top contributors to dietary risks are low fruit and vegetables, high sodium, low nuts and seeds, low whole grains, low omega-3 fatty acids, low fibre, and high processed meat. These dietary risks mirror food availability and affordability.

How, then, can agriculture investments, projects and policies be more nutrition-sensitive? One primary way is to increase availability and access to the micronutrient-rich, diverse, and often perishable foods that are missing or inadequate in diets of most people: vegetables, fruits, legumes, and some animal-

source foods. Public, non-profit and private investments have a role in making these foods more available and affordable, as well as less risky and more lucrative for farmers to grow. In many places demand for diverse diets including these foods is increasing, but several factors prevent an efficient supply response; one factor is continued policy and investment emphasis on a small number of staple grains, relative to crop-neutral research and development (R&D) and policies. This calls for a shift in direction from what has been the main focus of R&D and investment since the Green Revolution – growing more calories through staple grains – towards investment in more diverse foods; also described as a shift in focus from a *food shortage* paradigm towards a *nutritious food shortage* paradigm (World Bank 2014). Nutritious diets are less available and affordable than unhealthy diets; if the situation were reversed, market signals would support, rather than thwart, consumption of healthy diets.

A second overarching way that agriculture can become more nutrition-sensitive is by improved measurement of its impact, to enable better targets, feedback and design. Rather than stopping at increased production and income and assuming positive nutrition impact, much more information could be gained by measuring impacts on factors more closely related to nutrition. Indicators of dietary quality and access to nutritious foods are often appropriate to many nutrition-sensitive agriculture interventions. The most appropriate indicators will vary by the scope and nature of the investment, and should match the pathways the investment will affect. These can be selected from numerous existing indicators, including those that have been well-researched and validated to measure specific constructs, such as the Minimum Dietary Diversity for Women (MDD-W) and the Food Insecurity Experience Scale (FIES). Where standard indicators have not been developed, many indicators are being used, and further research



and creativity is needed – particularly to measure the food environment, the health and sanitation environment, and women’s empowerment.

There are several other entry points for nutrition-sensitive agriculture including, and beyond, food. The Figure on page 7 shows many of the ways agriculture can affect nutrition – which is useful for both planning interventions and measuring their impact. Investments may affect:

- The foods available and affordable in markets, as well as the diversity of foods available on farm. Access to adequate nutritious food occurs when *both* food environments and individual factors (such as income) allow people to obtain sufficient, safe, nutritious food to meet dietary needs.
- Women’s time, labour, income, and other aspects of empowerment. These affect not only women’s own nutrition, but that of their whole families including young children, given women’s role as nutritional gatekeepers.
- Natural resource management practices can affect health risks, such as through water availability or contamination, disease vectors, and hygiene regarding proximity with animals.
- Nutrition knowledge and norms, which can modify care practices and health risks. Well-targeted nutrition education and promotion could be delivered through the agriculture sector itself or in partnership with other sectors such as health and education.

These multiple entry points are encapsulated in the “Key Recommendations for Improving Nutrition through Agriculture and Food Systems” (see Box). These were formulated by the Ag2Nut Community of Practice and adopted by the UN Food and Agriculture Organization (FAO), following an extensive review of available guidance on agriculture programming for nutrition and through consultation with a

broad range of partners (CSOs, NGOs, government staff, donors, UN agencies). These recommendations reflect the remarkable consistency within the development community on the main principles for what can be done to improve nutrition through agriculture, and are adopted and used by many

organisations. Given their brevity, FAO has also recently released a checklist and guidance for programme formulation, which contains more detailed guidance on how these principles can be incorporated into projects.

For references, see: > www.rural21.com

Key Recommendations for Improving Nutrition through Agriculture and Food Systems

Agricultural programmes and investments can strengthen their impact on nutrition if they ...

- 1) **Incorporate explicit nutrition objectives and indicators into their design**, and track and mitigate potential harms, while seeking synergies with economic, social and environmental objectives.
- 2) **Assess the context at the local level, to design appropriate activities to address the types and causes of malnutrition**, including chronic or acute undernutrition, vitamin and mineral deficiencies, and obesity and chronic disease. Context assessment can include potential food resources, agro-ecology, seasonality of production and income, access to productive resources such as land, market opportunities and infrastructure, gender dynamics and roles, opportunities for collaboration with other sectors or programmes, and local priorities.
- 3) **Target the vulnerable and improve equity** through participation, access to resources and decent employment. Vulnerable groups include smallholders, women, youth, the landless, urban dwellers and the unemployed.
- 4) **Collaborate and coordinate with other sectors** (health, environment, social protection, labour, water and sanitation, education, energy) and programmes, through joint strategies with common goals, to address concurrently the multiple underlying causes of malnutrition.
- 5) **Maintain or improve the natural resource base** (water, soil, air, climate, biodiversity) critical to the livelihoods and resilience of vulnerable farmers and to sustainable food and nutrition security for all. Manage water resources, in particular to reduce vector-borne illness and to ensure sustainable, safe household water sources.
- 6) **Empower women** by ensuring access to productive resources, income opportunities, extension services and information, credit, labour and time-saving technologies (including energy and water services) and supporting their voice in household and farming decisions. Equitable opportunities to earn and learn should be compatible with safe pregnancy and young child feeding.
- 7) **Facilitate production diversification, and increase production of nutrient-dense crops and small-scale livestock** (for example, horticultural products, legumes, livestock and fish at a small scale, underutilised crops, and biofortified crops). Diversified production systems are important to vulnerable producers to enable resilience to climate and price shocks, more diverse food consumption, reduction of seasonal food and income fluctuations, and greater and more gender-equitable income generation.
- 8) **Improve processing, storage and preservation** to retain nutritional value, shelf-life, and food safety, to reduce seasonality of food insecurity and post-harvest losses, and to make healthy foods convenient to prepare.
- 9) **Expand markets and market access for vulnerable groups, particularly for marketing nutritious foods** or products vulnerable groups have a comparative advantage in producing. This can include innovative promotion (such as marketing based on nutrient content), value additions, access to price information, and farmer associations.
- 10) **Incorporate nutrition promotion and education** around food and sustainable food systems that builds on existing local knowledge, attitudes and practices. Nutrition knowledge can enhance the impact of production and income in rural households, especially important for women and young children, and can increase demand for nutritious foods in the general population.

Source: FAO 2015