

ISSUES IN THE DESIGN & DELIVERY OF INTERVENTIONS TO IMPROVE RURAL DIETS IN LOW- AND LOWER-MIDDLE-INCOME COUNTRIES

ISSUE III: ROLE OF MARKETS



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All photographs included in this document have been taken with consent for use in publications.

SUMMARY

The Global Alliance for Improved Nutrition (GAIN) and Wellspring Development designed and hosted a series of in-person and online consultations with partners of the Dutch Ministry of Foreign Affairs to examine challenges in improving the quality of diets of population groups living in rural areas of Low and Lower-Middle Income countries. These groups still largely consume nutrient-inadequate, even unhealthy, diets and face heavy burdens of malnutrition. This third paper out of six, looks specifically at the role of markets in improving nutrition at scale. The aim of the discussions was to gather examples of projects that have delivered success at scale, to understand the challenges involved and to identify important points of convergence in conceptualisation and action in future work.

The bulk of the discussion reflected in this paper is from an online meeting held on 21st October 2024, with the participation of Bopinc, CARE Netherlands, East-West Seeds, GIZ, the Netherlands Food Partnership, One Acre Fund, SNV, and the Wageningen Centre for Development Innovation.

KEY MESSAGES

- The food system is driven by three main markets – input markets for the resources needed for food production; output markets for selling of production; and retail markets for consumers to buy finished products.
- The discussions emphasised the need to take a holistic approach to markets to understand how the market system works so as to be able to intervene in an accurate and timely manner.
- Collaboration with partners, limiting the role of government to addressing market failures, and concentrating on profitable business models in the long-term were key themes for success.

BACKGROUND AND OBJECTIVE

The challenge of improving the diets of rural populations in Low- and Lower-Middle-Income Countries

Despite decades of rapid urbanisation, it is still the case that 42% of the world's population—3.4 billion people—live in rural areas (1). In lower-middle-income countries, this proportion is somewhat higher (56%), and in low-income countries, nearly two-thirds of the total population live in rural areas. There are 2.4 billion people living in rural areas in these two groups of countries.

Healthy diets are the foundation of all nutrition outcomes—from undernutrition and micronutrient deficiencies to obesity. Many rural households struggle to access a nutritious diet, even though they live close to the land. Globally, and in almost all regions, rural households are more likely than urban households to report severe or moderate food insecurity (2). In Sub-Saharan Africa, the average prevalence of severe/moderate food insecurity is 60% in rural areas (2) and the cost of a healthy diet is no cheaper (or barely cheaper) in rural compared to urban areas (3). Throughout Sub-Saharan Africa, the value of food consumed from own production never exceeds 50% for rural households (4). As a result, African rural households are vulnerable to high food prices, perhaps counter to common perceptions. And in the 85 countries around the world for which the Global Diet Quality Project has collected data on dietary patterns (5), the average percentage of rural dwellers consuming all five major food groups on a given day is just 30%. Indicators of malnutrition in children are consistently worse in rural than in urban areas (6).

Over the last few decades, there has been a renewed focus on the critical role of agriculture and rural development in supporting adequate nutrition by way of promoting healthier diets. In the wake of the food price crisis in the early 2000's (7), 'community development' and 'integrated rural development' agendas both mobilised significant funding over many years. 'Food and nutrition security' has been an important theme and 'nutrition-sensitive agriculture' (8) has become a recognised priority for development. At the same time, many governments have developed national multi-sectoral nutrition plans, policies, and strategies that include or prioritise rural populations, and numerous international development partners have supported project and programme implementation in these areas.

Today we have a better understanding of what works for improving rural diets (9). However, while these approaches have achieved notable nutrition outcomes, evidence of large-scale, sustainable improvements in rural diets remains limited. Looking ahead, large-scale development projects may benefit from placing greater emphasis on dietary outcomes, rather than focusing solely on downstream health metrics for specific target populations.

CONVENING SERIES WITH PARTNERS OF THE DUTCH MINISTRY OF FOREIGN AFFAIRS

The Global Alliance for Improved Nutrition (GAIN), supported by Wellspring Consulting, designed and hosted a series of in-person and virtual meetings with a range of partners of the Dutch Ministry of Foreign Affairs, including: Bopinc, CARE Netherlands, East-West Seeds, the Netherlands Food Partnership, One Acre Fund, and Wageningen University &

Research. The aim of these meetings was to share experiences and insights on the most pressing issues that complicate the design and implementation of initiatives to improve rural diets and thereby to guide more impactful and sustainable project design and implementation in the future. The in-person meeting was held in May 2024 in Utrecht. The list of topics to be explored was developed by GAIN and Wellspring based on a preliminary non-systematic literature review and the initial in-person meeting; topics for which the evidence is weak or non-existent were prioritised for exploration. The selected topics, all of them referring to rural populations in low- and lower-middle-income countries, were:

1. **Dietary quality.** What does improving quality of diets mean in practice; specifically, what constitutes a meaningful increment in dietary quality in this context?
2. **Segmentation.** How can we define and understand the needs of different segments / groups of rural populations?
3. **Markets.** What are the different types of markets and their role in improving incomes, supply of nutritious foods, and quality of diets?
4. **Scale.** What does large-scale mean, and what is the role of financial viability / sustainability in such large-scale efforts?
5. **Orchestration.** Why is coordination (or orchestration) of different programme components and multiple partners so critical? How can it be done better?
6. **Trade-offs.** What are the synergies and trade-offs involved in combining different programme components? How can these be managed?

At least one detailed case study was presented in each meeting, and participants were invited to share other case studies and references. There was no attempt to force consensus around pre-determined or emerging conclusions. To produce the resulting convening papers, the transcripts of the discussions were synthesised and analysed using Artificial Intelligence (Claude 3.5), with output subsequently checked and editorialised by the paper's authors, who take responsibility for the final content.

TOPIC III: THE ROLE OF MARKETS

Markets are fundamental to the food system, balancing demand and supply while serving as an exchange mechanism between buyers and sellers. Markets are essential for improving nutrition at scale by enhancing the availability, accessibility, and affordability of safe, nutritious foods.

The discussions in the workshop held in Utrecht in May 2024 identified three types of relevant markets: for inputs (for production), for outputs (from the production stage) and retail markets (where consumers buy their food from).

Input Markets:

Challenges: Farmers, especially smallholder farmers, often cannot access or afford quality inputs needed for increasing yields and production and even if they can, the availability is not consistent with shortages of key inputs at key times. There are often issues such as fake or low-quality products, with farmers not able to differentiate between them (10). Farmers often do not have a good understanding of how and when to use these inputs. Companies that supply inputs as part of offtake agreements worry about side-selling issues and failure to repay. These markets can often be distorted by government subsidy schemes.

Solutions: Quality of inputs can be improved by farmer education that increases demand for quality products and through better enforcement of regulations on standards (11). Suppliers of inputs to farmers can better tailor both products and services offered (such as timely provision of stock, advisory services and inputs better suited to the needs and budgets of farmers) by leveraging better understanding of the output markets for which those farmers are producing. Contracts with culturally appropriate enforcement mechanisms (such as through local traditional community leadership) ensure both parties in production agreements meet their obligations. Governments can reduce market distortions by having more targeted subsidies towards farmers linked to longer-term development agendas rather than short-term political narratives (e.g. at election time).

Output Markets:

Challenges: Farmers, particularly smallholders, can face many disadvantages that result in having to accept lower prices – lack of storage capacity, compulsion to sell to lenders who provide inputs, variable production quality, etc. There is a lack of innovative business models that link farmers to markets in fair and remunerative ways. Poor infrastructure for post-harvest storage and lack of access to credible and timely market information also affects costs and incomes adversely (12). Much of the investment to address these issues needs to come from public sources both due to the scale and to the associated public goods that are generated. Output markets do not place additional value on the nutritional benefits from nutritious foods that tend to be more expensive to produce.

Solutions: Improving access to post harvest technologies either on-farm or at the cooperative level enables farmers to retain control over when they sell their production. Support for quality standards during production coupled with a quality-based pricing model can drive both quality and farmer incomes. Government investments in infrastructure, along with services such as crop insurance and timely market information sharing systems can improve the linkages between farmers and output markets (13). Marketing of nutritional benefits to consumers is crucial and greater integration between producers and processors would better align demand and supply.

Retail Markets:

Challenges: Retail markets in rural areas offer limited range of foods or inconsistent availability through the year. Lack of steady purchasing power amongst rural households is one reason for this but cost of transportation can also be a factor (14). These markets can be driven by cultural preferences that favour staple foods with low nutritional value (15). Retail markets can also be distorted by public subsidies or private marketing efforts that drive consumers towards foods that have lower nutritional value, but which are cheap or offer convenience and aspirational imagery.

Solutions: Market and input subsidies can be provided for foods that have a social benefit or to create incentives in the short-term that reduce their costs or makes them more attractive for vendors to stock and sell. Broader income improvement initiatives can improve purchasing power of households but need to be combined with efforts to avoid the increased income going towards buying unhealthy convenience foods. This is especially likely when time is an issue for working women. Rules and restrictions on distribution, marketing and taxation of energy-dense, processed foods can help level the playing field in the market. Motivating consumers to make better choices remains fundamental to improving the functioning of retail markets for improving rural diets.

Case Studies

The online call included two case studies, the first from Femke de Jong on how East West Seeds, a major international seed company specifically targets smallholder farmers in Africa with vegetable seeds that can improve rural diets.

BOX 1. EAST WEST SEEDS CASE STUDY

East West Seed's experience demonstrates how knowledge transfer can catalyse market development in rural areas. The company's approach centres on establishing demonstration farms that showcase profitable and sustainable farming practices using quality seeds and simple, replicable techniques with local materials. Through these demos, farmers learn improved agricultural practices from seed selection to harvest, with careful record-keeping to demonstrate the business case. The model follows a pattern where trained "key farmers" achieve success, inspiring their neighbours to adopt similar practices.

East West Seed emphasizes the importance of balancing nutritional value with market demand, integrating commercial crops with nutritious varieties like leafy greens and pumpkins. Their experience shows that knowledge transfer must precede market development, as farmers need to understand the value proposition of quality inputs before they're willing to invest in them.

This gradual adoption creates demand for quality inputs, leading to the emergence of local agricultural input dealers and even innovative business models like seedling enterprises. The emergence of these intermediaries increases the availability of improved seed for farmers, because these companies can offer financing for the seeds, other inputs that are needed (including advisory) and are frequently local level aggregators who buy production for other actors in the value chain – bringing together input and output markets for the benefit of farmers and other food consumers.

The second case study from Bharat Bangari of GAIN on how farmer producer organisations have developed in India to better link farmers to markets.

BOX 2. FARMER PRODUCER ORGANISATIONS IN INDIA CASE STUDY

Farmer Producer Organizations (FPOs) in India represent an evolution beyond traditional cooperatives, serving as market intermediaries for both inputs and outputs while maintaining farmer-only membership. Unlike cooperatives that became politically complex, FPOs maintain lighter governance requirements while achieving significant scale. There are currently 10,000 FPOs operating, with government support for 10,000 more, giving the potential to reach 100 million people.

A key example from Rajasthan demonstrated how 15,000 tribal families collectively sell products like custard apple pulp and organic foods while also leveraging their aggregated buying power for essential commodities. The organizations have proven particularly effective when connected to digital platforms that enable quality control, price transparency, and market linkages. FPOs are increasingly seen as potential institutional buyers for nutritious foods, similar to school feeding programmes or public distribution systems. Their success stems from their ability to aggregate both supply and demand, giving farmers greater negotiating power while enabling bulk purchases of inputs and selling goods at better prices. The model has emerged organically rather than through top-down implementation, with organizations like Digital Green providing technological infrastructure to facilitate market connections.

Discussion in the online call

Several crucial themes related to market transformation for rural nutrition were discussed:

The dialogue emphasised the importance of integrated market approaches rather than isolated interventions. Participants highlighted how focusing on single aspects like input supply without considering demand often leads to failure, as demonstrated by examples of collapsed tomato initiative in northern Nigeria and carrot markets in Kenya due to oversupply. This led to strong consensus that successful interventions require understanding the entire value chain. Digital solutions were noted as being important in overcoming traditional market challenges, with examples from FPOs in India showing how they connect farmers with markets, give price transparency and enable quality control through verification systems.

The importance of thorough market analysis before designing interventions was highlighted. This includes understanding that different contexts require different solutions - what works in India may not work in Tanzania due to varying policy environments, infrastructure, and market structures.

Government policy was seen as being fundamental to market transformation as it can either constrain or enable market actors e.g., co-ops in India that became political vs. FPOs with lighter governance requirements. Or Tanzania lagging behind Kenya in agriculture despite having a better climate because of the regulatory burden. But governments do need to provide supporting regulatory infrastructure such as standards and consumer protection, stepping in during market failures etc. to support smoother functioning of markets. This requires support for development and enforcement of effective policies.

The need for more integrated approaches led to emphasis on partnering amongst organisations to pool capabilities and resources for greater effectiveness. This raised some questions about effectiveness of traditional agricultural development approaches in delivering food systems transformation.

Other related questions were about the struggle to reach millions of beneficiaries; the role women's economic situation plays in success or failure, especially regarding the growth in convenience foods; being sensitive to issues like food safety and indigenous crops; and promoting / protecting biodiversity while improving market access.

The dialogue concluded that process-based solutions are more effective than rigid structural models. Whilst the presentation focused on the FPO approach as an example, rather than seeking a universal approach, participants agreed that success depends on developing capabilities to analyse markets, build appropriate partnerships, and build integration across input, output and retail markets.

LEARNINGS FOR DEVELOPMENT PARTNERS

The key takeaways from the session can be summarised as:

- Conduct thorough market analysis before interventions to understand both supply and demand dynamics, consider local context, policy environment, and existing market structures and design interventions based on evidence rather than assumptions.

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- Avoid isolated interventions focusing on just one of the markets, and build partnerships to cover gaps in expertise coordinating with government, private sector, and other development actors and leverage existing market structures, where possible.
- Focus on commercially viable models that can survive without ongoing support. Build local capacity (especially of producer and consumer organisations as they scale) and ownership and ensure interventions align with market incentives.
- Work with government to improve the enabling environment and to address market failures.
- Leverage digital platforms for market linkages that i) provide transparency in pricing and quality, ii) enable efficient aggregation of demand and supply.
- Market-oriented programmes should facilitate knowledge transfer to community institutions such as FPOs for effective and efficient use of digital platforms.

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ABOUT GAIN

The Global Alliance for Improved Nutrition (GAIN) is a Swiss-based foundation launched at the UN in 2002 to tackle the human suffering caused by malnutrition. Working with governments, businesses and civil society, we aim to transform food systems so that they deliver more nutritious food for all people, especially the most vulnerable.

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