



African indigenous foods

Opportunities for improved food and nutrition security



This executive summary presents key insights and results from the full paper 'Pathways to improved food and nutrition security for the poor: the promise of African indigenous foods and technologies' that is published in a series of articles based on a synthesis study of the Food & Business Research programme. The study is led by Ellen Lammers and Daniëlle de Winter.

Picture: Courtesy of Francesco Rampa



The promise of African indigenous foods and technologies

Local and indigenous foods have a great potential to contribute to improved food and nutrition security, as well as economic empowerment, of poor and marginalised farmers and consumers in Sub Saharan Africa. For this potential to be realised, better knowledge is needed on the production, processing and marketing opportunities of valuable indigenous crops and foods. In addition, policymakers need to come on board. They play an important role in promoting value chains that are inclusive of poor, rural and female farmers and producers who aspire to bring these nutritious indigenous foods to a wider market.

After decades of decline, hunger is slowly on the rise again. In Africa, one in every five people is undernourished. The fight for food and nutrition security features prominently on the 2030 Agenda for Sustainable Development. Interventions by donors, governments and businesses focus on innovations in crop varieties, agricultural inputs and technologies. A group of research projects funded under the Food & Business Research Programme explored a completely different approach: to promote local and indigenous foods and crops, building on the traditional knowledge and technologies, and the 'local food plate' of local farmers and communities.

Seven transdisciplinary projects set in Sub Saharan Africa researched the production, processing and marketing challenges and opportunities of indigenous vegetables (such as African nightshade and spider plant) and other plants (such as *Moringa oleifera*, popularly called the Miracle tree), fermented dairy foods, and infant formulae made from local plant and animal resources.

Based on a synthesis study of this research, this executive summary presents key insights on the potential of indigenous foods to contribute to food and nutrition security of the poor and marginalised, as well as to food system diversification.

Indigenous foods are plant and animal-based foods that are naturally existing and produced in specific locations and consumed as part of traditional diets

Social benefits & challenges

Promoting indigenous foods has two major social benefits: these healthy and nutritious foods are affordable for the poor, and they can empower the producers and processors, who often are women.

The Food & Business Research programme aims at addressing persistent food security challenges in low and middle income countries. It focuses on the urgent and growing need for adequate knowledge and solutions for regional and local problems related to food security. Food & Business Research consists of two funding instruments: the Food & Business Global Challenges Programme (GCP) and the Food & Business Applied Research Fund (ARF). Both are part of the Food & Business Knowledge Agenda of the Netherlands Ministry of Foreign Affairs.

- The objective of GCP is to promote research-based advanced understanding of emerging key issues in global and regional food security and their impact on local food security and the role of private sector development.
- The objective of ARF is to promote research-supported innovations that contribute to food security and private sector development in the partner countries of Dutch development cooperation.

The projects are all run by a consortium of academic, private sector and NGO partners to promote research uptake by relevant local, national and international stakeholders.

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Picture: Courtesy of Anita Linneman

Because of the traditional knowledge attached to indigenous foods, their promotion may also enhance respect for people's cultural identities.

The major challenge to realising these social benefits is a lack of scientific knowledge on the nutritional value of many indigenous foods, as well as on effective processing and preserving technologies. This is where the Food & Business research projects made important contributions. In Zambia, Kenya and Benin, the nutritional value (macro and micronutrients, minerals, vitamins, proteins and acids) of traditionally consumed fermented foods and over 300 edible plants, vegetables, cereals, seeds and animal resources (such as snails, insects, fish) were tested and documented. Based on the research insights, a hospital in Zambia experimented with using *mabisi*, a traditional fermented milk product, to treat babies that were severely malnourished. In Kenya, new preservation techniques developed for indigenous vegetables increased not only their shelf life but also their nutritional value.

Economic benefits & challenges

Promoting local and indigenous foods has the potential to significantly improve the livelihoods of small-scale farmers and entrepreneurs that grow, process and market these foods. Women in Kenya and Benin gained a higher and more regular income by growing and processing indigenous foods. There are moreover many opportunities for collaboration for improved value chain governance, for instance with farmer cooperatives, women's organisations, youth groups, community seed banks, or consumer organisations.

However, there are considerable challenges too, which the projects addressed. One bottleneck for small farmers who aspire to upscale their production beyond the household and informal market, is a lack of approved and reliable production and processing technologies (required for quality consistency). The research insights contributed to better processing techniques of parboiled rice in Benin and vegetable drying in Kenya. Another bottleneck is the lack of certification of most indigenous crops and foods. Two projects reached important milestones by working closely with government agencies: in Benin, a newly developed infant formula was certified and is now for sale in supermarkets; in Uganda, indigenous vegetable seeds were granted improved legal recognition. In Zambia, collaboration is ongoing to determine the optimum processing parameters – combining indigenous knowledge and scientific lab test – as well as for the certification of fermented dairy foods. The project proved the high marketing potential, also in urban areas, of these traditional dairy foods.

High marketing potential, however, also implies a risk. The opportunities for small farmers and entrepreneurs to upscale their indigenous foods businesses may well be hijacked by more powerful commercial companies. In this case, economic benefits are captured by the stronger value chain actors. The formalisation of value chains can cause another trade-off that needs to be addressed upfront: product prices of indigenous foods may increase, which makes these nutritious foods less affordable for the poor.

Environmental benefits & challenges

Indigenous foods have the potential to improve environmental sustainability by contributing to agrobiodiversity, strengthening climate resilience (for instance because of the genetic diversity within the farmer varieties of indigenous crops), and because of often lower natural resource requirements compared to more commercial and intensively farmed crops. Because indigenous vegetables can be harvested more times per year compared to many other crops, they moreover support the resilience of farmers who, due to climate change impacts, are more often faced with failed harvests.

Although these environmental benefits were no primary research objectives, several projects gained relevant insights into the use of organic fertilisers and pest management tools, water saving techniques, or the conservation of local forest resources. The potential ecological benefits of indigenous crops deserve more research investments, even more so because local farmers' know-how on growing and preserving these crops is also on the decline.

A way forward

The potential of local and indigenous foods for food and nutrition security has long been ignored, yet interest is growing globally. An All-Africa Summit on the topic will take place in 2020, sponsored by international donors and the

World Vegetable Centre. The research moreover showed that urban consumers in African cities are progressively buying indigenous and traditional food products, especially if these have proven health benefits. This important finding questions the usual assumption that promoting indigenous foods is tricky because of their low status among young, urban consumers. The growing worldwide market for organic and health foods also suggests attractive business opportunities.

To capitalise on all these opportunities, however, indigenous foods need to become part of policymaking. Local and national policymakers in the project countries showed interest especially when there were positive market prospects. Yet because 'money talks', the project results stress that in liaising with policymakers, critical questions must be raised about who will benefit from the promotion of indigenous foods (smallholders or commercial producers? Women or men? Rural or urban consumers?), and how this can best be achieved (Formal versus informal value chains? Production for the rural or urban market? For domestic consumption or export?). Openly and critically discussing the political and market dynamics and trade-offs is vital to ensuring that the promotion of indigenous foods will first and foremost benefit the food and nutrition security of the poor and marginalised.

Weblinks

- Full paper 'Pathways to improved food and nutrition security of the poor: The promise of African indigenous foods and technologies'
- Food & Business Research programme
- Food & Business Global Challenges Programme project overview
- Food & Business Applied Research Fund project overview
- Food & Business Knowledge Platform

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NWO-WOTRO Science for Global Development, a division of the Dutch Research Council (NWO), programmes, funds and monitors innovative research on global issues, with a focus on sustainable development and poverty reduction. NWO-WOTROs research projects are realised by interdisciplinary teams of researchers from the North and South and in close collaboration with non-academic stakeholders. These partnerships yield solutions for development challenges and strengthen the bridge between research, policy and practice.

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