

‘The school food revolution’: can local farmers and food biodiversity be part of it?’¹

Background to the issue/problem

Successes and evidence from around the world demonstrate the potential for multiple benefits – enhanced nutrition, improved school performance and achievement, employment and national economic growth - of locally-sourced school meals. The purchasing of food for schools from local farmers can support farming households and livelihoods, and promote sustainable local markets for diverse, nutritious foods. Well planned and joined-up interventions have the potential to realize much synergy and multiple wins at many levels. While many local and national governments are today implementing components of such an approach few are integrating the different components to create these multiple benefits (1). This includes the better integration of more underutilized, nutrient-rich food biodiversity - the diversity of plants, animals and other organisms used for food, both cultivated and from the wild, which can be used to maximize nutritional adequacy of diets.

Diversifying school feeding programmes and public procurement of food by integration and promotion of underutilized, nutrient-dense fruits, vegetables and pulses, as well as appropriate animal-source products can help realize multiple benefits in addition to diversifying diets, enhancing educational outcomes and local income generation. If linked to local agricultural development and procurement of locally produced food biodiversity it can also promote environmental sustainability, conservation, sustainable diets, as well as climate change adaptation and resilience. While initiatives such as home-grown school feeding (HGFS) have been around for some years now and actively link to the local procurement of food, efforts to date to encourage the integration of underutilized, nutrient-dense food biodiversity have been limited. This is hardly surprising given the many barriers and challenges that need to be tackled to achieve this. The challenge remains, how can we better link school feeding, local farmers and food biodiversity?

Opportunities

Despite the barriers and challenges, the opportunities to explore this issue are favourable. The IPES-Food (2016) *From Uniformity to Diversity* report highlights sustainable and healthy sourcing of underutilized food biodiversity as an opportunity for both home-grown school feeding programmes and public procurement programmes (p.64). The 2016 Global Panel Foresight Report, *Food Systems and Diets: Facing the Challenges of the 21st Century*, in highlighting its 10 priority actions to effect diet change draws attention to the need to *institutionalize high-quality diets through public sector purchasing power* including food provided in schools which should be of the highest dietary benefit. The Global Panel has also produced a policy brief calling for greater policy emphasis on the multiple-win agenda that couples meals in schools with benefits to agriculture, education and nutrition and summarises knowledge, evidence and successes (1). The 2014 Second International Conference on Nutrition (ICN2) stresses that *healthy diets should be fostered in preschools and schools* in its Rome Declaration, supported by a number of relevant recommendations on diversification of food systems (recommendation 10) and diets in school settings (recommendations 16, 19 and 20). In fact, recommendation 20 calls for the *improvement of diets through better access to food which conforms with the beliefs, culture, traditions, dietary habits and preferences of individuals*. The 2016 Global Nutrition Report (GNR-2016) highlights that *schools also provide a huge opportunity to reset norms about healthful diets and good nutrition practices* (p9), while panels 1.4, 6.2 and 6.6 in the GNR-2016 provide guidance on realizing diverse diets and healthy eating environments in school settings as well as how school feeding can support agricultural development such as through the reorienting of school feeding and public procurement in Brazil.

Of course there are many ongoing school feeding and food procurement programmes under the auspices of the World Food Programme (WFP) and its partners. While the global policy environment seems supportive and initiatives such as HGFS, Purchase 4 Progress (P4P) and Purchase from Africans for Africa (Africa-PAA) demonstrate that school feeding can be effectively linked to agricultural development at the national level, the actual integration of underutilized, nutrient-dense food biodiversity thus far is limited. However, initiatives such as Africa-PAA do strive to increase sustainable and diverse farm production while also ensuring diversified local products in school feeding.

A couple of recent initiatives illustrate that progress can be made to better mainstream underutilized nutrient-dense food biodiversity into public food procurement and school feeding. Taking the GNR 2016 example of Brazil from above, interventions have been made targeting already existing federal public policies to better promote underutilized nutrient-rich foods. Both the Brazil National School Feeding Program (PNAE) and Food Procurement Program (PAA) include regulations favourable to the promotion of underutilized, nutrient-dense foods. The PNAE includes a law passed in 2009 which stresses that 30% of food procured for school feeding must be sourced from local family farmers while the PAA pays a premium of 30% for agroecology and organic products both of which favour underutilized food biodiversity. Strengthening the knowledge base and enabling environment – including research partnerships to demonstrate the nutritional value of these foods, new supportive policies such as an ordinance on ‘sociobiodiversity’, and ongoing advocacy and awareness raising – has provided a stronger platform for mainstreaming underutilized nutrient-rich food biodiversity into these policies and programmes (2). Similar, but more decentralized approaches have

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demonstrated that underutilized, nutrient-rich African leafy vegetables can play a role in helping link local farmer groups to school markets at the county and district level in Kenya (3) and that underutilized minor millets incorporated in school feeding programmes can enhance the nutritional status of school children in certain areas of Karnataka state, India (4). The majority of countries around the world already provide school meals of one kind or another, feeding an estimated 368 million children daily and representing an annual investment of roughly US\$75 billion. While there is growing recognition of the potential for schools to provide and promote the consumption of healthy, diversified foods by increasing the demand for local farm products, and supporting more efficient local food procurement and delivery systems (1), the actual integration of underutilized, nutrient-rich food biodiversity to date has been limited and therein lies an opportunity.

Barriers and challenges

The general barriers and challenges to enhance enabling environments to better promote and mainstream underutilized nutrient-rich food biodiversity have been highlighted (5). Morgan and Sonnino (6) highlight the 7 most common barriers to sustainable food procurement in school feeding as related to: cost; knowledge; awareness and information; risk; legal issues; leadership; and inertia. Barriers specific to the integration of underutilized nutrient-rich foods in the context of the Brazil and Kenya examples highlighted above have been described (2,3) and apply to all stages of the school feeding supply chain including barriers around: farmer organization (e.g. groups predominantly elderly, lack of business skills); capacity to produce (e.g. scarcity of indigenous seeds and poor seed quality); food procurement (e.g. poor knowledge of procurement procedures, limited understanding by procurement officers of underutilized species, low farmer negotiation skills, consistency of supply, seasonality); transport and storage (e.g. perishability, sanitary and quality issues, lack of and high transport costs); processing and distribution to schools (e.g. inadequate knowledge on processing, lack of timely delivery, poor infrastructure to receive underutilized species); food preparation (e.g. time for preparation, poor knowledge on preparation and recipes for underutilized species, poor knowledge of nutritional value); distribution to children (e.g. attitudes, perceptions of youth to underutilized crops).

Key messages and research questions

- Using food biodiversity to diversify diets is a critical element in response to calls for healthier school meals and towards sustainable food systems and improved access, availability, affordability and acceptability are key factors for achieving this.

However, many research questions still need to be answered across the entire school feeding supply chain and the enabling environment which supports it if we are to improve the integration of underutilized, nutrient-rich food biodiversity, including:

- What is the actual extent of the integration of underutilized, nutrient-dense food biodiversity in public food procurement and school feeding programmes?
- How can public policies provide incentives and subsidies to promote the better integration of underutilized, nutrient-rich food biodiversity from local family farmers into public food procurement and school feeding programmes?
- Can underutilized, nutrient rich food biodiversity compete with commonly procured, easily handled and prepared foods? Is procurement of local food biodiversity cost-effective?
- What are the main issues around addressing seasonality, perishability, quality and reliability of supply of food biodiversity?
- What are the infrastructure issues for schools to be in a better position to receive and process underutilized, nutrient-rich food biodiversity?
- Are there alternative markets for local farmers supplying local food biodiversity when schools close?
- While the multiple wins for coupling school feeding and local agriculture have already been elaborated (nutrition, education, income benefits) what are the additional multiple wins by integrating local food biodiversity (environmental sustainability, climate change adaptation)?

Key references

- (1) Global Panel (2015) Healthy meals in schools: Policy innovations linking agriculture, food systems and nutrition. Policy Brief No.6. London, UK. Global Panel on Agriculture and Food Systems for Nutrition.
- (2) Beltrame, et al. (2016, in press) Diversifying institutional food procurement – opportunities and barriers for integrating biodiversity for food and nutrition in Brazil. *Revista Raízes*, 36 (2)
- (3) Wasike, V. et al. (2016) Linking farmers, indigenous vegetables and schools in Western Kenya for improved nutrition. ACIAR Food Security Meeting for Africa. Australian Centre for International Agricultural Research, Nairobi, Kenya, 6th October
- (4) Bergamini et al. (2013) Minor millets in India: a neglected crop goes mainstream. In, *Diversifying Food and Diets: Using Agricultural Biodiversity to Improve Nutrition and Health* (Fanzo, J. and Hunter, D. et al eds) *Issues in Agricultural Biodiversity*, Earthscan, UK, p. 313-325
- (5) Hunter et al. (2016) Enabled or disabled: Is the environment right for using biodiversity to improve nutrition. *Frontiers in Nutrition* 3, 1-6
- (6) Morgan, K. and Sonnino, R. (2008) *The School Food Revolution: Public Food and the Challenge of Sustainable Development*. Earthscan.