School Organic Gardening and Curricula

Pacific Organic Policy Toolkit
http://www.organicpasifika.com/poetcom

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Political justification

"As environmental concerns broaden and diet-related health and nutrition problems increase, governments and development partners are increasingly interested in the potential of school gardens," FAO observes. School organic gardens and curricula have strong potential not only to teach fundamental lessons about biology, ecology, food and nutrition. School gardens and curricula can also start the developmental pathway for acquisition of vocational skills in agriculture. Last but not least, they also have the potential to shape the values and expectations of children and their families about regenerative organic agriculture systems and food supplies. It can help to increase awareness and demand for organic products. Government support at all levels, from national to local, to school organic gardening and education initiatives is among the effective options to support development of the organic sector in the country and help to create many related public goods. The most effective supports take a multidisciplinary approach.

Governments can and should take the lead in providing appropriate political signals and resources for developing school organic gardens and curricula. At some point the implementation will have to be at local level, but national governments may identify ways to help the schools and local leaders help themselves in their endeavours. The FAO observes that "Some well-documented success stories suggest that the most sustainable programmes often grow organically: they start small, take little for granted and expect slow progress; they allow schools to opt in and later to 'graduate' and help others; they offer small incentives and long-term coordination. All of these factors should be taken into account when deciding the best way forward and how far the process of setting up, reviving or re-orienting school gardens should be divided between top-down facilitation and bottom-up initiative." Governments can provide resources including support for training (train-the-trainer programs), and primary school materials such as culturally and geographically appropriate lesson plans and activities linked to mainstream multidisciplinary curricula. There are many good resources worldwide that could be purchased or freely acquired and adapted.

Suitable contexts

Supporting the inclusion of organic gardening and organic curricula in schools can be implemented in all contexts.

Possible modalities of implementation

Initiatives tend to be housed in the Education Ministry, with support from Agriculture. Health and Nutrition and Environmental agencies should also be represented. NGOs and International Development Agencies focusing on food production or horticulture can also play a part. The multidisciplinary approach requires building capacity across the board. It is not only children and teachers who must learn: nutritionists and agriculturists need to learn about education; agriculturists need to learn about nutrition and nutritionists about agriculture; educators need to learn about both; everyone needs to learn about the teachers, the children and their families.

Approaches to implementation may be either top-down or bottom-up. National governments, possibly in cooperation with international developmental agencies and other NGOs, may develop model curriculum modules for various grade levels and educational topics, and make them available to both public and private schools nationwide. National and regional governments could co-sponsor teacher training programs. Local governments could support and facilitate the provision of resources, both human and financial for constructing and maintaining school gardens. Whatever the implementation model, organizers should build a means for measuring outcomes into the project. Governments at all levels should publicize the garden initiatives, not only at launch, but also through performance measurement and dissemination of program results.

More information is available in several excellent FAO guides for supporting and implementing school gardens and curricula: The publication, *A New Deal For School Gardens*, outlines a 12 point program for how national governments can lead a top-down approach and offers an explanation of bottom-up approaches by local governments, schools and community.

FAO: A New Deal for School Gardens

FAO School Garden Website
http://www.fao.org/schoolgarden

FAO Manual on School Gardens
http://www.fao.org/docrep/009/a0218e/A0218E01.htm

A Teaching Toolkit for School Gardens

http://www.fao.org/docrep/012/i1118e/i1118e00.htm

Possible pitfalls and challenges

FAO notes the following: "It is not easy to choose what to imitate from the many models of school gardens that exist around the world. Many projects disappear from public view after they are launched. Mistakes and failures, which could be instructive, are seldom published. There is a serious lack of evaluation of the long-term impact of projects that may have had impressive initial results. Do these gardens still exist? Are they still productive? Some of the most demonstrably successful initiatives are long-term 'garden movements', characterised by slow growth over a number of years, continuity of support, and gradually increasing involvement of the community. They often take a holistic approach, integrating gardening, nutrition, school food, education and environmental concerns. With organic approaches, inputs are low, except where irrigation infrastructure is called for. Such schemes start small, taking little for granted in terms of capacity and interest. Schools opt in, inspired by other schools or motivated by small grants, choose their own pace and measure their own progress. In most cases the gardens are seen as important contributors to self-reliance and aim eventually to be self-supporting; schools 'graduate' when they no longer need help. There is a long-term coordinator or a coordinating group, which helps with resources and promotes mutual support and exchange of experience and information, and monitoring and evaluation."

Countries examples

Belize: The GATE programme organized by the NGO, Plenty Belize, has a long-term programme of assisting schools in developing organic school gardens. It links to the government school feeding programme and local agriculture, and is strongly consultative and participatory. Plenty Belize helps with resources, regular visits and teacher workshops. Schools opt into the scheme and 'graduate' once they become self-supporting. Over seven years, the number of schools grew from 4 initially to 36 in 2009, and 50 in total by 2014. Some schools are now processing food with solar dryers and canning equipment, installing solar pumps and see-saw pumps. The Telefood Report 2005 described the scheme as "a working model worthy of replication".
https://plentybelize.wordpress.com/current-projects/garden-based-agriculture-for-toledos-environment-gate/

Bhutan: The Ministry of Agriculture and the Ministry of Environment collaborate on an organic school agriculture program, involving 200 middle schools where school children in the agricultural club grow organic vegetables and sell to the school kitchen. Organic agriculture is now also included as a chapter in the agriculture textbook for high schools.

Rwanda: The Rwandan school garden pilot project was initiated in 20 schools to help make schoolchildren and their local communities aware of the importance of good nutrition as well as to supplement children's diets. The project was funded by FAO and implemented by the Ministry of Education, Rwanda.

The project started in 20 schools (10 primary and 10 secondary schools) and its aims were:

- The integration of practical garden skills and nutrition education into primary and
- secondary school curricula;
- The promotion of school gardens as living laboratories;
- The enhancement of synergies between the existing development programs such as the school feeding program funded by the World Food Programme (WFP) in primary schools; and
- The involvement of parents in creating school and community gardens.

The pilot project was funded by FAO with a grant of US$ 374,012. This sum provided 20 schools with seeds, tools, livestock buildings (cowsheds and henhouses) and twenty 3⁄4 crossbred Friesian cows. Under the supervision of a volunteer teacher, pupils created a garden of at least one and a half hectares at each school and cultivated vegetables such as tomatoes, onions, eggplants, beans, Soya bean, night shade, spider plant, cabbage, amaranth, leek, spinach, carrot, maize, potatoes and sweet potatoes. During the first three months, hard ploughing work was carried out by labourers paid by WFP on a food for work basis. Each class was given a plot where pupils grow a kind of vegetable every term. All pupils were involved in school garden activities. The work they carried out depended on their age and the physical demands of the tasks. The pupils' activities were mainly:

- Transporting waste from the kitchen, classes, dormitories and gardens for making compost;
- Transporting and spreading compost in the garden;
- Watering at the nursery and the garden. (This is, of course, one of the pupil's favourite tasks)
- Hoeing and weeding:
- Mulching in plantations; and
- Harvesting. (This is the pupils' favourite activity.)

Schools intend to follow up school garden and farm activities through pupil's nutrition clubs. These groups of students, supervised by teachers, discuss nutrition problems in each school and come up with solutions to tackle them. Each school was provided with a crossbred Friesian cow to produce milk and their dung improves soil fertility. Most schools built cowsheds themselves while 8 primary schools received support from the pilot project for this. School authorities benefited from trainings on cow farming organized by the pilot project. 25% of the cows are now producing between 4 and 8 liters of milk per day. This quantity is still insufficient to be

distributed to the whole school. The milk, therefore, is blended with maize gruel in order to improve its nutritional value and consumed by pupils at breakfast.

The pilot project had many positive results and was very well received and supported. There was broad support for it to be extended to other schools. The pilot project resulted in lower student dropout and repetition rates and a lower incidence of students' minor ailments such as eye problems and disturbances to the digestive tract. This was the result of various activities undertaken such as the promotion of vegetable production and consumption, milk cow farming and the promotion of balanced diets in the pilot schools.

Source: FAO School Garden Showcase