Agriculture, Biosecurity, Nutrition
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Food and Agriculture Organization
of the United Nations

More fruit and vegetables

An FAO/WHO initiative seeks to boost production, supply and consumption of fruit and vegetables worldwide

Most people should be eating more fruit and vegetables. Research indicates that when consumed daily in sufficient amounts and as part of a balanced diet, they help prevent serious diseases - including heart failure, stroke, diabetes and cancer - and deficiencies of precious micronutrients and vitamins. WHO places low fruit and vegetable intake sixth among its 20 risk factors for global human mortality, just behind such better known killers as tobacco use and high cholesterol.

Yet global consumption of fruit and vegetables is well below WHO's minimum recommended level of 400g per head a day. While diet preferences have changed over the past half century - away from cereals and pulses and towards vegetable oils, sugar and meat - the share of fruit and vegetables has increased only slightly, and it is estimated that people worldwide eat just 20-50% of the recommended minimum.

Ambitious goal. Now FAO and WHO are leading a campaign to reduce the risk of chronic diseases by ensuring adequate supply, availability and consumption of fruit and vegetables around the world. To achieve its ambitious goal, the Global Fruit and Vegetables Initiative for Health (or GlobFaV) seeks to maximize synergies between WHO's global work on diet, physical activity and health, and FAO's programmes on nutrition, food security and the horticultural supply chain. In concert with other UN agencies, the initiative will support national programmes in developing countries involving coalitions of stakeholders - from ministries of agriculture, health and transport, to farmers, extension services, schools and the food industry.

"Yes, it is a huge challenge," says Eric Kueneman, chief of FAO's Crops and Grassland Service, "but the stakes are high. The importance of fruit and vegetables in promoting nutrition and health in general is undervalued. As the nutrition transition towards meals high in fat and sugar gains speed around the world, there's a risk that fruit and vegetables will be marginalized in people's diets."

So why aren't people eating their fruit and vegetables? Alison Hodder, an FAO senior horticulturalist, explains that barriers to consumption range from unsuitable climate for horticulture, poor farming practices and post-harvest losses, to poverty, cultural misconceptions and the rise of modern "convenience foods".

"For example," says Hodder, "low-income farmers in Ethiopia just cannot afford to lose horticultural crops to pests and diseases, and prefer to grow lower-risk cereals and pulses instead. Although there is commercial horticultural production in the country's eastern region, most of that is exported. The result is Ethiopians eat less than 100g fruit and vegetables a day - equivalent to a medium-sized carrot." Surveys in the US have found that the main barriers to eating more fruit and vegetables are "high cost" and "poor quality", while - in contrast - vegetables are snubbed as "poor people's food" in some countries of southern Africa.

Kobe framework. Given the variety of constraints, GlobFaV is promoting a framework for action at country level produced at an FAO/WHO workshop in Kobe, Japan. Drafted by more than 50 experts in the fields of health, nutrition and agriculture, the "Kobe framework" recommends creation of national coordinating

teams to mobilize stakeholders and manage national action programmes.

The overarching goal of those interventions will be to increase, in all sections of the population, the consumption of fruit and vegetables that are affordable, of good quality and safe to consume. But fruit and vegetable chains are often long and complex, with many inter-related processes and actors, and a range of supply and consumption domains, from subsistence to supermarkets. William Clay, chief of FAO's Nutrition Programmes Service, says the key to improving intake almost always lies in increasing effective consumer demand: "Achieving that means aligning the supply of, and demand for, specific foods by specific consumer domains which, in turn, requires comprehensive efforts to raise incomes, lower prices, expand, diversify and stabilize supplies, ensure food safety and increase the desirability of fruit and vegetables."

To build a viable and sustainable fruit and vegetable sector, FAO says, countries need to take a holistic view of the supply chain - from seed to table - with an eye to opportunities for improving production and distribution practices. Improvements will not only boost supply, but generate extra income for rural producers and other small-scale operators along the chain.

While FAO work on horticulture includes large-scale commercial production, it places particular focus on rural household and urban and peri-urban production systems. In rural areas of developing countries, home vegetable gardens - combined with community nutrition education campaigns - offer a proven means of enhancing household food security, improving nutritional status and providing a much-needed supplement to the household income. FAO says programmes to promote fruit and vegetables should encourage cultivation of varieties that are known locally and widely accepted, and introduce simple technologies for production, post-harvest handling and conservation.

In and around urban areas, too, small scale horticulture has great potential. Urbanization brings with it increased demand for fresh fruits and vegetables, which affluent sectors of the population are able to satisfy from commercial outlets. But many poor rural families migrating to cities turn to gardening on small plots to produce fruit and vegetables for their own consumption and surpluses for local markets.

Micro gardens. If well managed, urban and peri-urban agriculture could provide fresh food commodities for a significant section of the urban population, as well as offering a means of self-employment and income generation. To develop that sector sustainably, FAO says, intervention programmes will need to foster innovative technologies, such as micro gardens, help insert urban agriculture into city planning, and involve stakeholders in addressing associated issues of land tenure, water and waste management, food safety and quality, and marketing infrastructure.

Production costs along the supply chain affect the ultimate selling price and, therefore, consumers' access to fruit and vegetables. "In all production systems, growers need access to technologies that lead to efficiency gains," says Hodder. "Since horticulture makes highly intensive use of natural resources, extension services need to promote integrated management of soil, water and plant nutrients, and sustainable management practices. Farmers need to adopt modern techniques such as crop programming, which helps schedule production throughout the year, and access to good planting material - vegetable seed supply and efficient nursery systems for tree fruits are key inputs supporting the entire supply chain."

Post-harvest, fruit and vegetables are also highly perishable, with losses estimated at up to 50% in some developing countries. FAO identifies other fundamental problems in the post-harvest sector, such as poor quality produce, inefficient marketing and information systems, and weak research and development capacity. Since post-harvest processing adds value to primary production, improving post-harvest management will contribute to farmers' incomes as well as increased supply.

Finally, GlobFaV aims at ensuring that higher levels of production do not compromise food quality and safety. "The risks arising from inappropriate use of pesticides or from polluted irrigation water would certainly be in contrast with our goal of improving people's health," says Alison Hodder. Ensuring food safety and quality will depend on application of good practices at appropriate points throughout the food chain, from pre-production to the point of sale.