

Trade and Environment Briefings: Sustainable Agriculture



International Centre for Trade
and Sustainable Development

Introduction

For many developing countries, trade in agricultural products is one of the most important sources of livelihoods and economic growth. Trade patterns and policies often drive changes in agricultural practices, which is particularly important in developing countries given the link between agricultural production, rural development and poverty alleviation. Agricultural trade is also highly regulated to ensure the sector's important role in food security, safety and quality of products and other domestic interests.

The agricultural sector represents a catalysing force for a global shift to a green economy. A transformation of the current predominant paradigm - which is based on high levels of input against a backdrop of shrinking resources - is urgently needed to provide nutrition to a growing population on a sustainable basis. The greening of the agricultural sector is also critical from an equity perspective: by expanding smallholder production through green practices and integrating them into global supply chains, sustainable agriculture has a tremendous potential to create jobs and improve many developing countries' terms of trade.

Background

Despite more than two centuries of unprecedented growth, nearly one billion people remain malnourished. At the same time, more than 50 percent of the edible crop harvest is lost during different stages of conversion or as food waste.

Although advancements in seed varieties and technologies have significantly increased productivity, conventional agriculture's heavy reliance on chemical fertilisers, irrigation, and fossil fuels has led to a loss of biodiversity and the degradation of ecosystem services with severe consequences for the climate system, soil fertility, availability of freshwater and long-term agricultural productivity. Farming operations produce nearly a third of global greenhouse gas emissions. In addition, the sector is a major user of water, as well as a significant contributor to water pollution through runoff of excess nutrients, pesticides and other pollutants.

These unsustainable practises have been compounded by developed countries' farm subsidy schemes, which keep the prices of agricultural products in highly industrialised countries low in comparison to producers from developing countries. Furthermore, the subsidisation of agricultural inputs results in inefficient and excessive use, with ensuing environmental and health impacts.

However, evidence is mounting that sustainable agricultural production systems present viable alternatives to existing farming practices. Sustainable agriculture emphasises efficient and productive uses of resources (e.g. through low tillage, crop rotation and efficient irrigation systems). It increases farm productivity and profitability while ensuring the provision of food, reducing negative externalities and rebuilding ecological resources.

Agriculture-related trade measures include import tariffs, quotas, subsidies and standards. The use of these measures is governed at the international level by the World Trade Organization (WTO), as well as bilateral and national levels. Overall, agricultural goods are significantly less liberalised than industrial goods. Public and private labelling schemes also play an increasingly important role in the sector as consumers are becoming more interested in the way their food is produced and are willing to pay a premium to satisfy their desire for food that is healthy, takes into account environmental impact and helps alleviate poverty, i.e. organic, fair trade or other sustainably produced food.

Opportunities

Policies promoting greener and sustainable agriculture offer multiple economic, social and environmental benefits, including a number of trade opportunities. In particular, export opportunities for organic food and beverages have remained strong despite the global economic downturn, with average growth rates in the purchase of organic products of 10-20 percent in recent years. According to the International Federation of Organic Agriculture Movements (IFOAM), in 2010, the global organic market increased to US\$59 billion. While 80 percent of the world’s organic producers are located

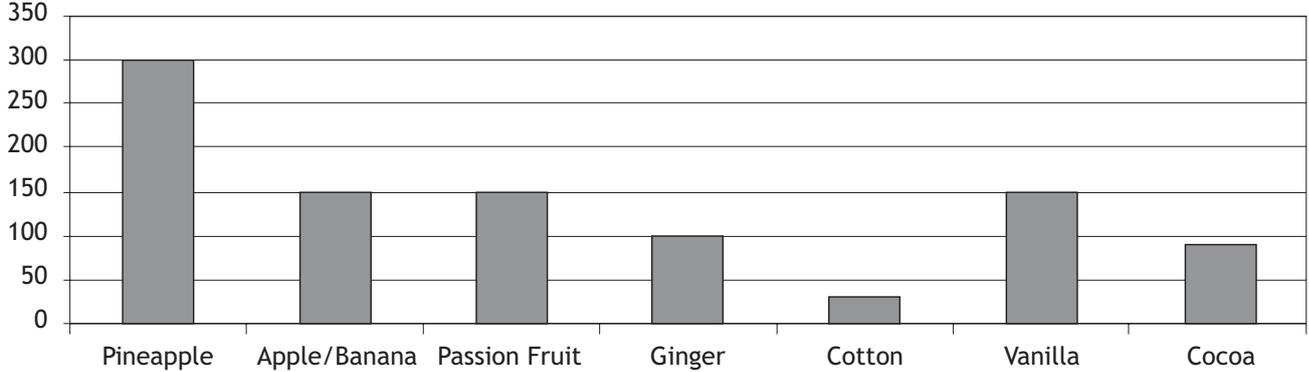
in developing countries, 97 percent of the consumption is in developed countries, creating substantial export opportunities. Additionally, not only is the organic market in developed countries increasing, but in many sectors demand from the market is outstripping supply. In particular, there is increasing demand for high value and value-added organic products such as juices, semi-processed vegetables, textiles, coffee and spices.

Furthermore, sustainable products often command high price premiums, resulting in higher incomes for farmers and others in the supply chain. For instance, farm gate prices of organic products in Uganda have increased significantly compared to conventional products, thereby boosting incomes for organic farmers and Uganda’s export earnings (see Figure 1).

Sustainable agriculture is typically more labour intensive than conventional farming and thus, according to UNEP’s recently published Green Economy Report, could create up to 30 percent more employment, which could increase global employment by as much as 4 percent. The creation of better and more sustainable jobs in rural areas, in which workers are less exposed to pesticides and other hazards, can further discourage rural-urban migration. This would reduce strains on urban centres, including food supplies.

Sustainable agriculture also helps in the fight against poverty. A joint UNEP-UNCTAD study showed that farmers in Kenya, Tanzania and Uganda have doubled their productivity - and ensured food security - by shifting their production to organic or near-organic methods. Changing from subsistence to organic farming can increase yields by up to 180 percent. For every 10 percent increase in farms yields, there is a 7 percent reduction in poverty in Africa and more than 5 percent poverty reduction in Asia.

Figure 1: Percentage of price premium on organic products in Uganda in 2006



Note: Calculations from Agro Eco Consultancy (2006)

Higher levels of biodiversity have been recorded on sustainably managed farms in terms of both terrestrial components and soil biodiversity, leading to improved long-term soil fertility, healthier ecosystems and sustainable ecosystem services.

In addition, sustainable farming uses 20-56 percent less energy per produced unit of crop. Greenhouse gas emissions, per hectare, from organic agricultural systems were on average 64 percent lower than emissions from conventional farms.

Challenges

Agriculture faces several key challenges. Arguably the most important one is the increasing demand for food. By 2050 levels of food production must increase by 50 percent to meet the demand that will result from increasing incomes, urbanisation, dietary changes (especially increased meat and dairy consumption) and population growth, not taking into account the losses in yield and land area as a result of environmental degradation. Furthermore, the agricultural sector is the largest consumer of water, increasing global water stress, which will require the adoption of practices that enhance water-use efficiencies.

Moreover, agriculture is becoming increasingly vulnerable due to climate change. Models by the Intergovernmental Panel on Climate Change (IPCC) suggest that crop productivity will decrease as a result of even a small local temperature increase in dry and tropical regions. Sub-Saharan Africa will be most affected. Yields in Central and South Asia could decrease by up to 30 percent by the mid-21st century.

In addition, some measures aimed at greening agriculture may distort trade, for example, the application of some subsidies. While “green” agricultural subsidies are generally considered less trade distortive than conventional agricultural subsidies, they might still give an advantage to organic farmers in developed countries, which can more easily afford to provide their farmers with financial support.

Standards can also inflict high costs on businesses, particularly small- and medium-sized enterprises in developing countries, and thereby hinder their exporters’ access to the growing markets for sustainable products in developed countries. This trend is further strengthened by the fact that developing country producers often remain outside the standard-setting process.

What’s next?

The successful conclusion of the ongoing WTO Doha Round could offer a number of potential opportunities to support the greening of the agricultural sector, including by increasing disciplines on subsidies and enhancing access for agricultural products in developed countries’ markets. Addressing tariff escalation represents an important opportunity in this regard. In addition, domestic and international efforts could focus on the following:

- *Reform energy subsidies:* In addition to improved international disciplines on agricultural subsidies in the WTO, the removal of energy subsidies would have a positive impact on the efficient use of inputs in the agricultural production process.
- *Harmonise standards:* It is important to ensure that standards and labelling schemes for sustainable agriculture do not effectively exclude developing country producers from the export markets. Rather, international standards and labelling schemes could be used as opportunities to document and promote good practices by developing country producers. Thus, support should be provided to enable producers to participate in standard-setting processes, as well as complying with export market standards. Establishing equivalencies between standards would further reduce the costs for exporters to enter developed country markets.
- *Encourage investment in agriculture:* Investment in green agriculture could provide improvements, for instance, in developing countries’ storage and transport infrastructure - and thus reduce post-harvest loss. Green Banks and micro-credit programmes for farmers could be established offering small “green” loans to buy organic inputs or pay for organic certification, for example.
- *Support capacity-building:* Institutions could be strengthened to build supply-side capacities in order to meet the requirements of major markets - especially health and environment requirements - at all stages of supply chains, but particularly at the production level. Aid-for-trade, and similar trade facilitation initiatives, can be an important tool in this context.

Resources

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Founded in 1996, the International Centre for Trade and Sustainable Development (ICTSD) is an independent think-and-do-tank based in Geneva, Switzerland and with operations throughout the world, including out-posted staff in Brazil, Mexico, Costa Rica, Senegal, Canada, Russia, and China. By enabling stakeholders in trade policy through information, networking, dialogue, well-targeted research and capacity-building, ICTSD aims to influence the international trade system so that it advances the goal of sustainable development. ICTSD co-implements all of its programme through partners and a global network of hundreds of scholars, researchers, NGOs, policymakers and think-tanks around the world. ICTSD acknowledges the contribution of its donors in supporting this project.

About the International Trade Centre, www.intracen.org

Formed in 1964, the International Trade Centre (ITC) has been the focal point within the United Nations system for trade related technical assistance (TRTA). ITC's mission is to enable small business export success in developing and transition-economy countries, by providing, with partners, sustainable and inclusive development solutions to the private sector, trade support institutions and policymakers. Working with partner organisations, both within and outside the United Nations, ITC works to promote projects and programmes with global efforts to achieve the Millennium Development Goals and the Aid for Trade agenda.

About the United Nations Environment Programme (UNEP), www.unep.org/

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