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Short Article

Organic Farming – a Potential Cure for Poverty?

The global market for organic food and drink was estimated at nearly US$ 40 billion in 2006 and is expected to reach US$ 70 billion in 2012 (FAO, 2007). Demand for the organic food produced in developing regions from the major consumer markets, mostly in industrialized countries, is growing. In addition to exports, the local demand is also increasing in developing regions, due to improving incomes and growing concern for health. For example, according to Bina Sarana Bakti (BSB), the biggest producer of organic vegetables in West Java, Indonesia, their sales increased from 70 tonnes in 2001 to 100 tonnes in 2004 (Prawoto and Surono, 2005).

From the viewpoint of poverty alleviation, organic farming seems to be an ideal solution because it is labour intensive, uses no chemicals and has higher value produce. Organic agriculture requires 30 per cent more labour input per hectare than conventional farming (Scialabba, 2007) and the price of organic products can reach three to five times as high as conventional ones. Reduced pesticide can save farmers in production costs and avoid pollution. Additionally, the fair trade movement has increased opportunities for farmers in developing regions to export their organic products at the right price.

The reality, however, may not be so easy. Organic farmers in poverty prone areas face various constraints. The yield of organic farming is significantly lower than conventional farming. In order to market their goods organic farmers must avoid contaminating their goods with non-organic products. The biggest challenge will be certification. If the products cannot be proven to be organic, then consumers will not be willing to pay higher prices for them. To realize its potential high value, the certification of organic produce is a critical issue.

Sometimes dubious organic products make their way to the market. For example, the labels on some food packages claim that their contents are organic and that prestigious research institutes have analysed and confirmed the food is free from pesticide residue. Yet, these labels don't contain adequate producers' information (name of farmers, place of production, etc.). How can we trace the production record without these details? Does a chemical analysis of the product assure it is pure organic? The answer is definitely “No”.

The FAO defines organic agriculture as "a holistic production management system that avoids use of synthetic fertilizers, pesticides and genetically modified organisms, minimizes pollution of air, soil and water, and optimizes the health and productivity of interdependent communities of plants, animals and people." According to this definition, most of the international and local standards for organic food determine a production 'system', not an organic product itself. Therefore, no food analysis can show concrete evidence that food was produced in an organic way.

This means that organic farmers need to fulfil complicated processes to ensure their production system meets the certification standard. It starts with the submission of an application form. This usually includes general information about the fields, cropping patterns, input application, source of irrigation water, contamination prevention measures, and other necessary information to describe their production system. Then, the certification body inspects their fields for several days, and this is followed by a number of consultancies with advisors.

Compulsory certification by law seems to be a quick fix to drive fake organic produce away from the market. However, the expensive cost of certification could be a constraint for the farmers in developing regions. Examples of initial costs for certification are JPY 52,000 (US$ 444) per hectare in Japan (Eco-design Certification, 2007) and Rp 3 million (US$ 333) per hectare in Indonesia (Author's survey). Moreover, an annual inspection is requested in most certification systems. How can small-scale farmers afford these costs? Even in Japan, where farmers are thought to be better off, many organic products lost their organic status and the market size of organic products shrunk after compulsory certification was introduced in 2001 (Sahotal, 2004).

One of the solutions might be financial support to farmers who cannot afford the cost of certification. Formulation of organic farmers' groups will be a good way to reduce the financial burden since many inspection bodies offer discounts to such groups in their certification process. Suspending law enforcement is not a wise idea because the destination countries of organic food exports usually request legal certification. However, if farmers can establish a mutual trust with consumers and deliver their products directly from farm to table, certification is not necessarily a must. There is plenty of scope for policy implementation if policy planners wish to foster organic farming for the rural poor. ■

Written by Tomohide Sugino, Senior Researcher, Japan International Research Center for Agricultural Sciences (JIRCAS).

FlashBREAKING

Governments Move to Stem Spiralling Food Prices
As prices for staples soar across Central Asia, officials in Kazakhstan – the region's key grain supplier – have moved to control exports and stem rising domestic costs. As President Nursultan Nazarbayev toured wheat fields in northern Kazakhstan, he said price rises were part of the economic process, and went on to praise this year's harvest. The government has ruled out grain shortages in Kazakhstan: the harvest is estimated at 19-20 million tonnes. Some nine million tonnes are being set aside for export. To combat rising domestic prices, Kazakhstan has set up regional stabilization funds to purchase grain and manage supplies, and local officials have been ordered to monitor prices.

IRIN, 2007. CENTRAL ASIA: Governments Move to Stem Spiralling Food Prices, http://www.irinnews.org/ (18 September 2007).

Reuters to 'Light Up' India's Farming Community
Reuters has launched a mobile phone-based service, called Reuters Market Light (RML), which will connect farmers with various buyers and traders through their mobile phones. The RML has been designed to support India's 250 million member agricultural community and offers Indian farmers up-to-date, local and customized commodity pricing information, news and weather updates. So far, 7,500 farmers have already signed up for the service. The RML will soon be developed from an information service to a full mobile news, information and price facilitator. The service aims to facilitate greater transparency in the Indian agricultural markets, allowing individual farmers to increase their productivity and maximize their revenue.

OneWorld South Asia, 2007. Reuters to 'Light Up' India's Farming Community, http://southasia.oneworld.net/ (9 October 2007).

Could Vertical Farming be the Future?
Imagine a farm inside a skyscraper: an18-storey building with each floor devoted to growing staple crops, and capable of producing enough to feed 50,000 people. According to a Columbia University Professor, such a model may be the answer to feeding the world's rapidly expanding population. The researcher believes that current farming practices will not cope with the globe's future demand for food. Among the advantages of vertical farming are the containment of diseases that occur in traditional agricultural settings, and the reduction of transport costs. Critics counter that improving the management of existing farming practices is more practical and efficient, and that energy costs for vertical farming would be exorbitant.

Nelson, Bryn, 2007. Could Vertical Farming be the Future? MSNBC.com, http://www.msnbc.msn.com/ (8 October 2007).

Launch of 'e-agriculture' Website
The Food and Agriculture Organization has announced the launch of www.e-agriculture.org, an interactive knowledge base for researchers, policymakers, farmers, rural service providers and communicators involved in the development of the agricultural sector. The website enables users to share experiences, good practices and resources related to agriculture. Over 3,400 stakeholders from 135 countries were involved in the website's development. The website was launched concurrently with 'e-agriculture Week', which brought together over 300 global participants to look at the role of information, communication, and knowledge management in the development of the agricultural and rural sector.

FAO Newsroom, 2007. Launch of an Interactive Web-based Platform in Support of Agriculture and Rural Development, http://www.fao.org/ (28 September 2007).

Agricultural Intensification: What if the Answers Lay in Nature?

Intensive agriculture with massive use of pesticides, chemical fertilizers, water and fossil fuels to increase production is now being questioned. The developed world's soils are gradually losing their biological fertility, its water is becoming polluted and its biodiversity has suffered from this type of agriculture. In developing countries where the intensive agriculture model has never been adopted, yields are low. Expanding the area farmed at the expense of forest ecosystems is therefore the way to boost production. At the same time, global population and demand for food have continued to grow. Satisfying food requirements while preserving the environment is therefore a big issue. Researchers from CIRAD, a French agricultural research centre for international development, and partner institutes looked into this subject during a discussion day in Montpellier, France, in August. The approach currently being developed is 'Ecological Intensification'. The idea is to use the ecological processes available within ecosystems to produce more. It is necessary to break with the usual agriculture model which uses huge quantities of fertilizers and pesticides. Ecological intensification means making the system operate by acknowledging its complexity. For instance, intercropping is one way of controlling pests. Agroforestry systems, combining crops and forest and mulch-based systems also look like promising solutions. Integrating ruminant production, which makes use of cellulose-rich resources, into innovative production systems, could be another alternative. Ecological intensification is a societal, scientific and human issue. ■

Based on CIRAD, 2007. Agricultural Intensification: What if the Answers Lay in Nature?, http://www.cirad.fr/ (26 September 2007).

Can Farmers Help Fight Climate Change?

Could carbon sequestration in farmland be a viable approach to reducing atmospheric carbon dioxide and helping fight climate change? Terrestrial carbon sequestration is a more natural and environmentally friendly way to absorb CO2 than technological solutions. Agricultural carbon sequestration uses farmland as a carbon sink. The soil is a repository of organic carbon, holding twice as much carbon as the atmosphere. In an agricultural system there is a continual fixation and release of carbon. When more carbon is fixed than released, there is a net increase in carbon sequestration. There are farm management practices that can achieve this, such as manure application instead of fertilizer, use of green crops, minimum or no tillage, mulching, and erosion control. These also convey benefits to the farmers such as improved soil nutrients and soil structure. Research in America shows that improved farm management can lead to the sequestration of up to an additional 0.52 tonnes of carbon per hectare per year. However, such greenhouse-friendly farm management is a prohibitively expensive option for poor farmers. A current research programme in Indonesia is examining the effect of improved soil management in agricultural land. Among other things it is investigating the potential for farmers to increase CO2 sequestration in farmland. If the carbon sequestration is high enough, then farmers are potentially competitive sellers in the global carbon market. One possible scenario is that carbon credits can help offset the steep increase in production costs of greenhouse-friendly farming. ■

Based on Sugino, Tomohide, 2007. RI Farmers Can Join Fight Against Climate Change, The Jakarta Post, http://www.thejakartapost.com/ (2 October 2007).

Developing and Connecting Markets for Poor Farmers

The development of efficient agricultural markets has a large impact on the economic opportunities of rural households because more than half of the population in developing regions and more than three-quarters of the poor live in rural areas where agriculture constitutes a large majority of household income. Rural households, however, are subject to a number of marketing constraints that can be roughly categorized as those that raise marketing costs and those that increase the risk associated with commercialization. High marketing costs often stem from poor transportation networks, lack of market information, and, sometimes, lack of competitiveness of markets. Poor government policy can also contribute to high marketing costs through over-regulation or sporadic intervention. Production risk is a factor constraining market participation. For example, growing an unfamiliar crop for market involves more uncertainty than growing a staple food crop. In addition, producing for markets sometimes requires intensive and costly inputs, which result in substantial risk for small farmers when yields are uncertain. Another factor is marketing risk. A farmer's food security will be threatened if the price of the cash crop at harvest is lower than expected. Perishable crops imply additional risk because their prices are more volatile. Also farmers may not have the option of returning to the market for better prices another day, and may have to accept very low prices. ■

Based on Minot, Nicholas and Hill, Ruth V., 2007. Developing and Connecting Markets for Poor Farmers, 2020 Focus Brief on the World's Poor and Hungry People, IFPRI, http://www.ifpri.org/ (October 2007).

Poverty and the Globalization of the Food and Agriculture System

The globalization of the food and agriculture system is a hot topic of debate. As globalization occurs, poverty may or may not decline, and the two phenomena may or may not be linked. The globalization of the agrifood system can be broadly defined as the integration of the production and processing of agriculture and food items across national borders, through markets, standardizations, regulations, and technologies. Poverty trends during globalization, aggregated for all developing countries, indicate the number of people living on less than two US dollars a day, during the period 1981 to 2002 increased by 164 million. Analysis of the links between globalization and poverty must take into account the dynamics and volatility of the globalization process. Four major aspects to consider are: market integration through trade liberalization; market integration capital flows (foreign direct investment); increased access to information and innovation across borders; and the adoption of global social policies. Globalization offers opportunities for growth, but that growth alone is not a guarantee that poverty reduction will occur. Many countries have not shown a capacity to transform globalization opportunities into poverty reduction. To improve their chances of exploiting the opportunities of globalization for poor people, developing countries should be working toward improving their terms of trade, overcoming domestic institutional constraints, improving governance, and valuing the growth opportunities in rural areas by investing in infrastructure, rural education, and agricultural innovation. ■

Based on von Braun, Joachim and Mengistu, Tewodaj, 2007. Poverty and the Globalization of the Food and Agriculture System, 2020 Focus Brief on the World's Poor and Hungry People, IFPRI, http://www.ifpri.org/ (October 2007).

Flash EVENTS

WTO/ESCAP Regional Seminar on Agriculture Negotiations for Asia-Pacific Economies
28 - 29 November 2007
Bangkok, Thailand
Info:
http://www.unescap.org/tid/projects/agrnego07.asp

International Symposium on Underutilized Plants for Food, Nutrition, Income and Sustainable Development
3 - 7 March 2008
Arusha, Tanzania
Abstract Deadline: 15 August 2007
Info:
http://www.icuc-iwmi.org/Symposium2008/index.htm

International Conference on Food Security and Environmental Change: Linking Science, Development and Policy for Adaptation
2 - 4 April 2008
University of Oxford, UK
Info:
http://www.foodsecurity.elsevier.com/

5th International Crop Science Congress: Recognizing Past Achievements, Meeting Future Needs!
13 - 18 April 2008
International Convention Center, Jeju, Korea
Abstract Deadline: 13 August 2007
Info:
http://www.cropscience2008.com/

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Book Review

An East Asian Renaissance: Ideas for Economic Growth

Indermit Gill and Homi Kharas, The World Bank, Washington DC, USA, 2007. ISBN 0-8213-6747-1.

During the last five decades, many countries have moved from very low-level incomes associated with abject poverty to middle-income status. But during this period, only a few have gone from middle-income to high-income status. In Latin America for example, many countries were not able to reach beyond middle-income levels. In East Asia however, four high-performing economies, Hong Kong, Korea, Singapore and Taiwan, have done so.

The authors richly and insightfully explain and explore what these countries did to transit successfully through middle-income stages of development, what the Latin American countries did wrong, and what today's middle-income countries in East Asia, such as China, Indonesia, Malaysia, the Philippines and Thailand, might do to emulate the achievements of their successful neighbours.

Neither classical nor neoclassical economic theory has been able to explain the East Asian (and general world growth) phenomenon, with its accompanying income disparities. The book uses advances in economic thought based on modern development economics and modern trade theories, backed up with empirical evidence to explain the phenomenon. It proposes policies and growth strategies to help middle-income East Asian countries sustain high rates of income growth and attain high-income levels.

The slow convergence between rich and poor countries, contrary to expectations, is explained by the presence of increasing returns to scale in certain factors; in particular knowledge – especially due to its non-rival and excludable nature. Chapter 2 (the role of trade), Chapter 3 (the relevance of innovation), and Chapter 4 (the role of the financial system), explain extensively and empirically how East Asia has been able to exploit the 'economies of scale' requirement for growth. The next three chapters explore the distributional implications of growth and discuss how the countries might address these issues to strengthen the foundations for growth. Chapter 5 discusses the role of city-based growth as a source of agglomeration economies, Chapter 6 deals with cohesion and covers the issues of within-country inequality as a consequence of scale-based growth, and Chapter 7 examines corruption as an inhibiting factor for growth.

Trade has been the major engine of growth in East Asia. Unique to trade in this region, is that it is driven by intra-industry trade, and trade in components and parts through production networks in the supply chain that are linked to FDI. Centred on China, the regional trade is supported by low costs and low trade barriers. The authors stress the future importance of trade in services. This will facilitate production networks that enable countries to liberalize quickly and thus reap the rewards.

Innovation, as with capital investment, is affected by factors such as macroeconomic stability, cost of capital, openness, competition, support from governments, and the learning capacity of the economy. The book provides ample evidence that all these factors are conducive to the growth of innovation in the region.

With respect to the financial system, the region has moved toward stronger corporate securities markets. These are necessary to support innovative activities that are often risky ventures but have greater returns in the long run. Similarly, countries in the region have moved toward a more market-determined exchange rate, without which the regional production network would be undermined. The authors argue that the priority for the region is to develop equity and bond markets to permit more effective risk sharing at home and abroad.

The authors also suggest that cities are the most visible manifestation of economies of scale and play an important role in economic growth. Cities enable people to benefit from the ideas of others, translate ideas into production, and bring entrepreneurs together. By creating markets for labour, capital and intermediate and final goods, cities enable cost saving and efficiency, and the agglomeration of economies. But with increasing income comes increasing urbanization, so in order to maintain the liveability of cities extra effort is required from both the national and provincial governments. A solution might be to foster the growth of well-managed and well-connected small and midsize cities in the future.

While poverty has declined and human development indexes have improved, inequality within the region has grown – arguably the price of rapid growth. Some proposed areas of public policy are investment in human capital, facilitating migration, development of social protection systems, and promoting greater fiscal equalization.

The book provides a solid and insightful theoretical explanation of the rapid growth in the East Asian region supported by ample empirical evidence. Furthermore, alternative policies are elaborated for the economic advancement of middle-income countries in the region. As such, I recommend this book as a must for researchers in the field as well as policymakers. ■

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