

## **Implications of the Market Dynamic for Asian Agriculture**

### **1. Introduction**

1. Asian agriculture has grown rapidly since the 1960s, benefiting from the introduction of modern technology that contributed to increases in the productivity of land and labor. The average growth was 3.8 percent per year over the 1967-95 period, substantially higher than the world average of 2.2 percent.<sup>1</sup> The highest growth rate was reached in China, at 4.4 percent per year over three decades beginning in the mid-1960s. In most Asian countries, agricultural expansion averaged more than 3 percent per annum, significantly greater than population growth. Per capita agricultural output increased in most parts of Asia, with the exception of Bangladesh and Sri Lanka, which achieved 1.5 percent annual growth between 1967 and 1995.<sup>2</sup>

2. In terms of performance, agriculture growth in the region accelerated to 4.4 percent during the period 1982 - 1995, increasing from 3.3 percent during the 1967 - 1982 period. The accelerated growth was a result primarily of economic expansion in China, India, and Indonesia. The strongest growth was in cereal crops, with significant increases in land productivity generated by the application of modern technologies to rice and wheat. These developments were further enhanced by investments in lowland areas in irrigation facilities, agriculture research and development, policy support for subsidies through agricultural credit, and provision of new inputs. This became the primary source of food supply for the escalating world population, without having to extend cultivation to marginal lands.<sup>3</sup>

3. The primary contribution of the Green Revolution was an increase in the production of cereals. Recently, however, there has been a slowdown in the productivity growth of primary cereals, namely rice and wheat. In addition, the dissemination of new technologies to increase yields in irrigated areas has been completed, with farmers having reached the yield plateau for existing high-yielding varieties, and suitable varieties for marginal lands are needed.<sup>4</sup> The availability of funds for investments in infrastructure and agricultural research and policy support for agriculture has diminished, contributing to the sluggish growth of the crop sector since the mid-1980s. Fisheries and livestock products grew and even accelerated over time, due to the initial low production base and very high-income elasticity of demand for these products. The demand growth for livestock products has been faster in high-income economies, such as in East Asia, than in low-income economies, such as in South Asia.<sup>5</sup>

4. Strong agricultural growth contributed to the development of the rural non-farm sector in three ways:<sup>6</sup>

- (i) Modernization of agriculture and improved living standards of rural people increased the demand for non-farm goods and services, including education and health, materials for housing construction, modern agricultural inputs such as chemical fertilizer and agricultural machinery and equipment, processing of

marketed surplus of agricultural produce, and the trade and transport services for rural consumer goods and agricultural inputs and products;

- (ii) A growing agricultural sector was able to generate capital to finance the development of rural non-farm activities; and,
- (iii) Agricultural growth transformed rural regions, providing households with more diversified sources of employment and incomes and increased livelihood opportunities without people migrating to cities.

5. Issues related to the marketing of food and agricultural products have emerged relatively recently in the phased development of commercialized agriculture in the region. Currently, two important concerns about agricultural markets and the marketing of food and agricultural products dominate: (i) increased urbanization, accompanied by the withdrawal of rural labor from productive agriculture; and, (ii) the question of continued availability of crop surpluses in rural areas. Prior to the development of urban centers, food was consumed locally by families and communities, with urban households either operating as part-time farmers or engaging local labor to produce a cereal crop. Even with the arrival of modern cities following World War II, urban markets retained a rural character, and marketing remained relatively uncomplicated.

6. It is only with the expansion of the Green Revolution throughout the 1960s and 1970s, with its package of improved seeds, farm technology, better irrigation and chemical fertilizers, that any significant surpluses became available for export. The Green Revolution was highly successful at meeting its primary objective of increasing crop yields and augmenting aggregate food supplies. In Asia, where the Green Revolution package was the most widely adopted, food production increased substantially in those decades, creating crop surpluses. Simultaneously, national and international transportation and communications networks were expanded, facilitating trade, and bringing into the forefront critical issues related to markets and marketing.

7. Several Asian nations recently have emerged as major producers of processed food and agricultural products having graduated from being producers of primary products and raw materials for export and processing in developed countries. As suppliers of processed food and agricultural products, these expanding economies frequently are challenged by a plethora of trade constraints, including import tariffs, tariff quotas, licensing, foreign exchange regulations, and administrative procedures.<sup>7</sup> The countries that join the ranks of food and agricultural product exporting countries whose trade partners are regional as well as global face similar challenges consisting of a long list of tariff and non-tariff barriers to trade and market access, which the WTO is managing under a rules-based system. Specific tariff and non-tariff barriers to trade that impact on net food exporting countries include market access, export subsidies, and domestic support (i.e., supports that distort trade).<sup>8</sup>

8. In the context of 21<sup>st</sup> century Asia, and in addition to the impacts from the rules-based international trading system, two dimensions of the market dynamic have emerged which will challenge government's control of the food and agriculture systems, specifically:

- (i) The accelerated pace of change in consumer food preferences, with the consequence that demand will drive agricultural production; and,
- (ii) The global expansion of multinational corporations in retail, wholesale, and production activities, with far reaching consequences for Asia's food production and distribution system, and the structure and character of future commercial agricultural development in Asia.

## **2. Issues related to changes in consumer food preferences**

### **2.1 Factors affecting the change in consumer food preferences**

9. Literature on consumer preferences identify several factors that affect the change in consumer food preferences, namely:

- ? Raising incomes: Much analysis exists in social and economic literature pointing to the influence of rising incomes on consumer food preferences and the level of food consumed. Real income, as measured by GNP per capita in inflation-adjusted US dollars, grew on average by almost 100 percent globally during the last four decades. Although 1998 inflation-adjusted per capita income levels were just over US\$500 for low-income countries compared with almost US\$28,000 for high-income countries, the rate of income growth among low-income countries (221 percent between 1960 and 1998) has generally surpassed that for higher income countries.<sup>9</sup>
- ? Level of economic development: Shifts in food consumption patterns tend to vary among countries based on the level of economic development. In high-income countries, per-capita consumption of both cereals and roots and tubers decreased between 1961 and 1998, while that of meat and produce increased substantially.<sup>10</sup> Food supplies significantly increased also in middle-income countries. In low-income countries, decreases in root and tuber availability were more than offset by impressive increases in per capital supply of all other food types. These increases can partially be attributed to increased demand for livestock feed, resulting from the increased demand for meat.<sup>11</sup>
- ? Urbanization: Widespread urbanization also has influenced global food preferences in recent decades. Effective marketing facilities have been developed in urban areas offering a greater volume and diversity of food resulting from increased trade. Urban areas are recognized as centers of economic opportunity and have a greater percentage of women working outside the home. Increased opportunity cost of women's time increases the demand for non-traditional fast food in many developing countries.<sup>12</sup> Urbanization has resulted in significant increases in wheat consumption in Asian countries, such as China, India, and Indonesia, while the consumption of coarse grains (corn and sorghum) and cassava has declined.<sup>13</sup> The FAO reports significant increases in meat and produce consumption among urban areas of many developing countries.<sup>14</sup> In addition, dual-income households (occurring mainly in urban areas)

have less time for cooking, resulting in increased preferences for more highly processed, convenience foods in many countries.

- ? Health concerns: Health concerns are becoming an increasingly important factor in consumers' food preferences. Emerging issues include nutritional recommendations, campaigns informing consumers of health benefits of different foods, and labeling. Consumer awareness of and attitudes toward health issues affect their consumption decisions. No longer is taste the sole factor influencing choice of food, particularly among consumers in high- and middle-income countries.
- ? Safety, ecology, and animal welfare concerns: Increased affluence and education influence consumers' food preferences and increase the demand for improved quality and safer food products. Wealthier countries with more scientific information about food safety risks tend to demand more rigorous food safety standards on both domestically produced and imported food. The rise of organic foods is an example of increased consumer interest in particular food characteristics. There is interest in organic foods among higher income, better education population segments in nearly every country, consumers in the United States, Europe, and Japan are driving the growing demand for these products.<sup>15</sup> Most recently, consumer concerns have emerged regarding the environment and animal welfare, leading to changes in food production and marketing in some countries. New regulations have been imposed in many developed countries restricting the conditions under which livestock and dairy producers and processors may raise, feed, and slaughter animals. Quality assurance schemes have been developed for the production, processing, and transport of food and frequently include standards for environmental management.
- ? Reduced prices of high-value food products: Advances in biotechnology, farm mechanization, and industrial consolidation in the North American and European food and agriculture systems have contributed to the maintenance of reasonable food production and distribution costs. In addition, advances in transportation technology over the last thirty years have helped increase global trade of high-value food products. Packaging innovations, fruit and vegetable coatings, and other techniques that reduce deterioration of food products have extended the marketing reach of perishable products. Lower transportation costs have a similar effect on trade as tariff cuts, by reducing transaction costs, thus stimulating trade.<sup>16</sup> Tariff reductions, made possible through multilateral and bilateral trade agreements, also have reduced retail prices of high-value food products in high- and middle-income countries, resulting in imports of a greater diversity of products increasingly preferred by consumers.
- ? Advertising: The dramatic expansion of global marketing and explosion of advertising have given consumers a variety of choices and options that once could only be imagined. Such an onslaught of publicity has raised consumer expectations in developing countries, leading to increased demand for a wide diversity of high-value imported food (and other consumable) products, which are prestigious and convey an image of wealth.

10. The rapid social and economic development that has transpired in Asia over the past 30-40 years, reflects all of the above factors, with significant repercussions implications for the social, economic, and political structures in Asian countries. Some of the most significant impacts have occurred in the rural and agriculture sectors, with serious implications for producers, entrepreneurs, and governments.

## **2.2 Implications for producers**

11. In reacting to changing market demand in response to a change in consumer preferences, farmers and rural households producing for export markets are being required to re-evaluate the status of natural, physical, human, and financial resources that serve as the foundation of the production process. Producers have become increasingly aware that the agro-ecological conditions that have provided the base for producing primary products and traditional cereal and tuber crops, may be degraded and no longer be suitable for producing food products currently demanded by consumers in traditional export markets. Specifically, soil quality, rainfall patterns, and the availability of water resources, as well as seasonal temperature and humidity changes resulting from climate change, the presence of pests, and other physical factors affecting production, all must be taken into consideration when cropping patterns and farming systems are modified in response to changes in market demand reflecting new consumer preferences.

12. Changes in cropping patterns and farming systems frequently require farmer re-training, which includes acquiring knowledge of new production technologies. It also may require that farmers re-learn and apply forgotten or unlearned local indigenous knowledge, consisting of technologies previously used by the household or the community, that for the most part have been abandoned for modern technologies. Changes in production patterns and techniques will require investments in tests, trials, and demonstrations of new technology, including in some cases biotechnology (although the precautionary principle continues to be expressed by some countries in the Asian region). The introduction of new crops will require additional investments in the human resource base that has been reduced by migration to urban areas; that has aged, with young people abandoning farm work for factory work; and, that has become somewhat inflexible, having concentrated on cultivating familiar crops that have reduced demand and fewer markets.

13. Changes in cropping patterns and farming systems also will require changes in farm-level investment patterns to support the introduction of new crops and production models. Contract farming has proven to be a successful production model. It is currently operated by small and medium scale enterprises (SMEs) as well as larger multinationals in several Southeast Asian countries. However, the traditional middleman-smallholder farmer credit financing relationship may no longer be suitable for meeting the more intensive management requirements of contract farming, implemented on a rigid schedule, and dependent on premium quality products as output.

### **2.3 Implications for private sector**

14. Asian farmers living in rural areas with limited access to commercial information and trends in global trade and investment patterns are not readily aware of changes in consumer preferences and altered market demand. Through field experience in the region, it has been observed that governments are often unable to provide the breadth, depth, and consistency data and analysis required by producers enabling them to be aware of changing nature of markets. It is therefore left to traders, processors, and others who are connected to internal and external markets to take the initiative for giving advice to other key participants in the supply chain. The private sector is expected to have a greater leadership and liaison role, because of its depth of understanding of the market and of market dynamics. It should focus on communicating to producers and bankers (i.e., specifically those who provide credit for crop production, investment for processing, and financing for trade), indicating new directions for production, investment, and trade.

15. To ensure the competitiveness of products sourced near their processing base, traders and manufacturers are required to develop and execute initiatives, as well as to be innovative and resourceful risk takers. To survive, compete, and prosper, the private sector is obligated to identify opportunities for introducing products that can be produced at sites nearby processing facilities. They also should be advocates for new and creative ideas for the financing of trade and investment.

16. In addition, to be competitive, the private sector is expected to serve as a channel for the transfer of industry-best technologies to their manufacturing base. Food industry technology is changing constantly. Food safety and environmental measures, including national and international sanitary and phytosanitary standards, are modified and upgraded regularly, as new science based innovations are revealed. Although in its role as a facilitator and coordinator government is responsible for keeping the public informed, the private sector is in the vanguard of the trading system and most directly affected by application and enforcement of these measures. It is therefore crucial for private sector representatives to keep abreast of the most recent developments in not only packing, packaging, processing, and shipping technologies, but also critical elements of production and post-harvest handling technologies.

### **2.4 Implications for government**

17. The most important role for government is to provide an enabling environment for investment. This can best be defined as ensuring that public sector institutions and organizations have a common understanding of the policies enunciated by central government policy makers, and make an effort to implement those policies in their respective jurisdictions. As applied particularly to SMEs, this also includes ensuring the cooperation of local officials in solving problems as they arise.

18. When seeking innovative methods to support private sector investments in food processing in rural areas, government should examine options for facilitating and

coordinating the production of raw materials for processing facilities. Food processors cannot operate without a strategic volume of one or more food and agricultural commodities. It is thus necessary to generate a sufficient and consistent supply of raw materials for processing (e.g., fruits, vegetables, poultry). Linked to the production of raw materials is the need to ensure consistent quality, through the application of science-based technologies to maintain standards (e.g., certification of shrimp and poultry). This is best achieved through the provision of on-site technical assistance for post-harvest handling and value added processing at the farm level, through establishment of a cadre of officials to promote, facilitate, coordinate, monitor, evaluate, and re-engineer (as appropriate) contract farming linked to processing facilities, which in turn are linked to market demand.

19. A more basic role of government is to provide institutional structures to enhance the ability of producers and the private sector to respond to changing preferences of consumers in the Asia region, namely:

- ? A legal framework for creative financing to support production;
- ? Mechanisms for conflict resolution at the local level with officials trained to mitigate community conflicts as they arise;
- ? Technical assistance for production, as new crops are introduced; and,
- ? Financial assistance in the event of natural disasters.

### **3. Issues related to consolidation in the food and agriculture system**

#### **3.1 Factors emerging from the consolidation in the food and agriculture system**

20. A former chairman of one of the world's largest agribusiness firms, Archer Daniels Midland (ADM), Dwayne Andreas is quoted as saying:

The food business is far and away the most important business in the world. Everything else is a luxury. Food is what you need to sustain life every day. Food is fuel. You can't run a tractor without fuel, and you can't run a human being without it either. Food is the absolute beginning. (Reuters, 25 January 1999)

21. In light of the above statement, an important question arises: whether food is so important that its production can no longer be left in the hands of smallholder farmers. In the beginning of the 21<sup>st</sup> century, Asian smallholder farmers are increasingly threatened by historically low prices for agricultural output perpetrated in part by the consolidation and concentration of global food and agriculture businesses. To compensate for these market distortions, farmers in developed countries are provided with relatively large subsidies by their governments. The Organization for Economic Cooperation and Development (OECD) reports<sup>17</sup> that total agricultural support and subsidies in 2001 reached US\$311 billion. The payments equaled 1.3 percent of GDP in the OECD area in 2001. About three-quarters of farm subsidies consisted of payments to producers, while the rest consisted of general support for collective goods such as infrastructure, inspection, research, and marketing, the report said. Support payments for producers

primarily consisted of market price support and output payments, which the report called "the most production and trade distorting measures." Such payments comprised 69 percent of producer payments in 2001. OECD farmers received about 31 percent of their total receipts in the form of support payments in 2001, slightly below the 2000 figure of 32 percent. It also points out that the "current support levels impose a burden on consumers and taxpayers in the OECD countries. They also constrain agricultural growth and development opportunities in non-OECD countries." The recently enacted US Farm Bill represents a formal increase of almost 80 percent in the subsidies allocated to agriculture, of which a significant percentage is allocated to traditional farm households.

22. In this context and with the realization that bigger is more profitable, over the past few years the North American and European economies have experienced an unprecedented increase in market concentration in nearly all agricultural sectors<sup>18</sup>The US based National Farmers Union reports that this trend is accompanied by a gradual rural exodus, as farm communities collapse under a system that generates no local capital Prices, and the price floors created by the government, are too low for farmers to recover their costs The system encourages larger, industrial operations while farm families try to grow more with less time, working other jobs to stay on the land Agribusiness benefits, posting record profits in recent years, as they pay less and less for their raw material inputs. As has been the experience with other global social and commercial trends, the current concentration of ownership and control of the food system is indicative of a trend that can be expected to recur in Asia.

23. In this regard, agricultural policy can no longer be separated from the global food system. It is becoming increasingly clear that major factors of change with implications for agriculture come from the larger food system, and thus diminish the impact of domestic agricultural legislation. Increasingly, major decisions in the food system are being made by an ever-declining number of multinational firms, a growing number of which are involved in clusters of multifunctional firms that increasingly dominate the food system. To understand the global food system, one must understand the operations of multinational agribusiness firms such as Cargill, ADM, Zen Noh, Ahold, and ConAgra. Cargill for example, has operations in 70 countries and is a privately held firm; and, ConAgra says its major mission is to increase the wealth of its stockholders. One interpretation is that these firms are in position to decide which people in the world will eat. In fact, their decisions are based on whether one has the money to buy food. The ability to buy food thus becomes another dimension of the food security issue.<sup>19</sup>

### **3.2 Implications for producers**

24. Smallholder farmers in Asia appear to be minimally impacted by the vertical and horizontal integration and consolidation of multinational food and agricultural corporations, when compared to their counterparts in North America. However, elements of the trend towards consolidation have been introduced in middle-income Asian economies such as Thailand. The presence of several well recognized global retailers including megastores like Tesco-Lotus, Makro, Carrefour, make Thailand one of the

more globally commercialized Asian markets linked to multinational agribusiness giants. However, at present, these mega-outlets continue to source fresh fruits and vegetables for their retail food sales from local wholesale wet markets. These wholesale markets are served by traditional middlemen traders, who purchase from smallholder farmers at scattered upcountry locations, including at the farmgate or at district or provincial wet markets.

### 3.3 Implications for private sector

25. Although smallholder Asian farmers continue to be an integral part of the food supply chain, producing for sale to traditional middlemen traders who deliver to wholesale wet markets, the implications of consolidation for private sector small- and medium-scale food processors are expected to be more critical. The presence of multinational megastores has generated a debate in Thailand on how to protect the interests of traditional small domestic retailers - a debate that may portend a similar discussion concerning domestic food processors. Three scenarios are proposed that describe the implications for traditional small-scale Asian food processors.

- (i) Liquidation: In this doomsday scenario, SMEs and even larger domestic processors cannot compete with consolidated and highly efficient multinationals, due in part to the poorly developed local food system, compared with integrated vertical and horizontal multinational food and agricultural operations in North America and Europe. Although smallholder farmers may survive through contract farming schemes (if local processing facilities continue to operate), it is expected that the agribusiness giants will either takeover or shut down (drive out of business) most domestic food processors. The argument for liquidation is strong because vertical integration in several Asian countries is constrained by a high level of smallholder land ownership, with individual plots being very small when compared to North American or European farms. This is not to say however, that they cannot be purchased and consolidated for corporate farming purposes, similar to farmland procured for the construction of suburban housing estates in many Asian countries.
- (ii) Integration or absorption into the multinational commercial structures: The “supply or surrender” scenario will materialize if it is profitable for the multinational food suppliers to continue processing operations to meet local or regional demand. In this way developing country processors become part of the production supply chain by joining one of the agro-industrial clusters (see the Appendix). The domestic processor can make contractual arrangements to supply partially processed or pre-processed products for finishing at a foreign location. This currently occurs with Thai shrimp, which is produced and pre-processed (frozen) in Thailand, then exported and shipped to Texas (and other North American locations), where it is breaded and refrozen, and sent to retail outlets. A second option is to ensure that products meet international standards, thereby qualifying them to carry the label of the multinational processor. A Thai SME, Malee Foods, operates a medium size food processing facility in Thailand’s

northeastern province of Nakhon Phanom, near the Mekong River. It is processing sweet corn for a multinational retailer in the United Kingdom, with raw materials sourced from smallholder Thai farmers under contract farming arrangements. The product is produced solely for export, although Malee markets many other products under its own label in Thailand. Asian processors like Malee increasingly are subject to supplier audits by experienced neutral parties. As a result of a significant increase in the sourcing of food and agricultural products from Asian suppliers, the US based National Food Processors Association has established an office in Bangkok, with plans to train Thai food technicians to do supplier audits for the Association's members in the USA and Canada.

- (iii) Compete: This scenario places an emphasis on modifying the performance of private sector food processing facilities, to improve the ability to compete and to retain market share. To realize his option requires significant additional investment; the development of partnerships with both government and producers; a careful balance between public and private sector sources of financing; a high level of resourcefulness and risk-taking; an in-depth knowledge of target markets; and, excellent market contacts. An elaboration of this scenario is presented below.

### **3.4 Implications for government**

26. The implications for government are seen as being somewhat more complex. The collapse of the independent farmer is foreseen in some countries as having grave social and economic consequences. The vertical and horizontal integration of the food system operated with great efficiency by clusters of multinational corporations requires that more attention be given to the enforcement of antitrust laws where appropriate, and closer regulation of integrated operations, to ensure that competition is preserved. To this end, Dr. Supachai Panitchpakdi, Director General Designate of the WTO indicated that he was planning: "to bring in, to introduce, some sort of a code of conduct" to govern the activities of multinational corporations, particularly in regard to their influencing international trade agreements.<sup>20</sup>

27. In collaborating with multinational agribusiness firms, producers and governments are committed meeting obligations under international conventions related to intellectual property rights on plant and animal genetics. The result is loss of legal control over plant material and breeding animals purchased by farmers. In addressing this issue, Dr. Supachai also pointed out that the WTO agreement on intellectual property rights (TRIPS): "was one of the glaring examples of the pressure coming from the corporate sector on governments that ultimately resulted in some agreements being forced on countries that we have to try to prevent."<sup>21</sup> The consequence of the lack of regulation of multinationals is likely to be control over the entire food processing chain by private corporate interests, through vertical and horizontal integration within the agriculture sector.

28. Due to the challenges of globalization and the introduction of the rules based system of international trade operated by the WTO, some Asian governments are being restructured. To ensure survival of commercialized smallholder agriculture in Asia, governments will need to refocus government programs during the restructuring, to place greater emphasis on food safety, environmental issues, and creating an enabling environment for agribusiness investment in rural areas. Significant changes are required in the role of the traditional extension and support services, with agriculture agencies being reoriented to be service providers, treating producers more like clients and customers, than recipients of the state's assistance.

#### **4. Appropriate responses to the two dimensions of the market dynamic**

##### **4.1 General comments**

29. In response to the multidimensional character of the market dynamic, recommendations are offered in the form of responses appropriate to each of the key players in the global food and agriculture system. It is pointed out that both dimensions (i.e., (i) consumer preferences, and (ii) concentration in the food system) require that producers respond more effectively to market demand by being aware of several key factors in each potential market:

- ? The income level of the target market dictates the level of sophistication of that market, including the level of awareness of food safety and environmental issues;
- ? Urbanization will influence significant changes in food consumption patterns;
- ? Food safety is monitored by importing governments to protect consumers, and in some cases will apply the precautionary principle, which requires that government take anticipatory action to prevent harm;
- ? The level of trade liberalization is determined by the government of each potential export market and is concerned with tariff and non-tariff barriers to trade;
- ? The diversity of food products available in each export market will increase as incomes increase, and the demand for selected products will change as a result; and,
- ? The level of foreign direct investment will influence the presence of subsidiaries of multinational agribusiness firms from importing countries, with production aimed at both internal and external markets.

##### **4.2 Responses of producers**

30. To compete, Asian producers are obligated to change their mindset and become agribusiness managers. To be competitive, producers must increase their productivity by aiming to become science-based land stewards or animal husbandry specialists. Farming can no longer be seen as an alternative livelihood, but as an enterprise, that requires knowledge and commitment. Measures aimed at improving farm management may include:

- ? Adoption of modern and industry-best technologies, adapted to local conditions, including the application of indigenous technologies or appropriate biotechnology (however some Asian government continue to be opposed to even tests and trials of genetically engineered crops);
- ? Strengthening of community-based producer groups, since strength lies in numbers, including the strengthening of cooperatives and other civil society groups;
- ? Seeking out contract farming opportunities, which may require re-location of production activities to special agroindustrial development and investment zones, where direct links to food processors can be more easily developed; and,
- ? Defining a lead role for decentralized local governments, including formulating and operating programs that serve the needs of farmer entrepreneurs and contract farming schemes.

### **4.3 Responses of the private sector**

31. The private sector is expected to act as an innovating factor. Local private sector trade and investment groups and associations are encouraged to build partnerships. SMEs in particular will survive only through resourceful partnerships with networks of producers and with national and local governments.

- ? Partnerships with growers should be a two way street, with producers being provided with data, information, technology, and most importantly, premium prices for premium products. In exchange, the processor receives premium products and a consistent supply of raw materials from producers. The medium-term development objective is to build a relationship of trust, thus ensuring dependability of the supply of raw materials.
- ? Partnerships with government should be built on common understandings of key international trade and investment issues. Frequent opportunities to exchange views should in the medium-term lead to formulation of common policies and common positions in international forums. In the long-term, the government should seek to negotiate trade agreements that will benefit domestic agribusinesses and producers.

32. To respond effectively to changes in consumer tastes in traditional markets and to survive in a global environment dominated by consolidation in the food and agriculture system, the private sector will need to be even more resourceful risk takers than they have in the past. In addition to partnerships with local and national governments, private sector groups will need to expand contacts with international financing organizations such as the International Finance Corporation and the ADB's private sector financing window. Good examples include the Lao-BGA Company in Laos, which borrows locally to establish tree plantations; and, the Ikea / Burapha consortium in Laos, which has borrowed from the IFC to process wood from sustainably managed tree plantations in Laos and Thailand. Both enterprises have participation of the Lao Government and support from international financing organizations.

33. To be competitive and perform at maximum efficiency, Asian entrepreneurs should become market and marketing experts. They should have a good understanding and familiarity with selected markets; carefully define the terms and conditions for operating in those markets; and, identify and exploit marketing opportunities. The rigorous pursuit of new markets can best be achieved by providing detailed and timely information to producers related to domestic and export market demand, while keeping the government informed of ongoing or potential changes in demand trends and recent advances in technology development, and changing credit and financing needs. The private sector should also serve as a channel of information back to home country governments, so that policies can be more responsive to market development and marketing needs; and to producers, so that farm production is responsive to market demand. Without the strengthening of this crucial link; without continuous dialogue among partners; and, without a greater sense of trust among partners, neither governments nor producers can effectively support local private sector initiatives.

34. Having experience in regional and global markets, private sector processors become the producer's window to the world. The private sector can enhance the production capacity of producers by identifying and introducing producers to industry-best technologies adapted to local conditions. If necessary local expertise can be trained or foreign expertise imported to facilitate the transfer of technologies. It may be possible to take advantage of the high level of technical capacities of international research centers, institutes, organizations, and foundations, which have an announced mandate to build partnerships with the private sector, to accelerate the technology transfer process.

#### **4.4 Responses of government**

35. The over-riding response of government is to provide an environment that fosters the level and intensity of investments that will enhance the competitiveness of food and agricultural products for export. This can be achieved by providing an enabling environment for investment, with incentives for strategically locating processing facilities and agricultural input industrial facilities in rural areas, with the objective of creating new employment opportunities for rural people.

36. Several countries in Asia (e.g., Pakistan, Thailand, Philippines) are undergoing a process of decentralization and devolution of power to local authorities, with a corresponding reduction of intervention from central governments. More emphasis is placed on the devolution of agricultural management to the farm level. However, a role for government continues to exist in selected areas, namely:

- ? Transferring appropriate technology, including technical assistance in production and post-harvest operations;
- ? Providing farmers with training in farm management (including marketing and finance) technology, simple bookkeeping
- ? Provision of agricultural credit responsive to the needs of producers and processors;

- ? Providing investment incentives for agricultural infrastructure including commodity storage, community-based processing facilities, irrigation systems, and central markets; and,
- ? Provision of quality control and assurance services at the community level, including introduction of the concept of self-audit and quality awareness.

37. An important and creative new role for local government is seen as being a facilitator and coordinator of managed production. As the administrative unit closest to the community, local government is strategically placed to organize and manage contract farming. This can best be achieved through partnerships with producer groups, agricultural cooperatives, and credit groups, as well as with local processing facilities. To achieve success in this new role, reorientation of the traditional agricultural extension services will be required, with extension workers becoming experts in marketing extension, farm management, and agribusiness, thus refocusing extension from production orientation to support farm decision-making processes.

## **5. Case Study: Japan as the market for GMS agricultural products**

38. Japan has the potential to become a major market for agricultural products from the Greater Mekong Subregion (GMS) – Cambodia, China/Yunnan, Laos, Myanmar, Thailand, and Viet Nam. As the world's biggest food importer, Japan provides significant opportunities for aspiring food exporting countries and enterprises in the GMS to expand and diversify their markets. Japan currently imports a high level of selected food products from the United States, China, and New Zealand. In targeting the Japanese market as a potential source of demand for horticultural crops from the GMS, several global trade facts should be considered, namely:

- ? Three of the top six importers of US fresh fruits and vegetables are in Asia: Japan, Taiwan, and Hong Kong.<sup>22</sup>
- ? The top five US processed food exports to Japan are meatpacking products, fresh and frozen fish, frozen fruits and vegetables, pet food, and canned fruit and vegetables.<sup>23</sup>
- ? Trade in fresh horticultural products has a 12 percent share of world agricultural trade, and has remained almost unchanged during the past 20 years.<sup>24</sup>
- ? Worldwide markets for organic foods are expanding, with annual growth rates of 15-30 percent in Europe, the United States, and Japan, for more than five years. As many as 20-30 percent of consumers surveyed in Europe, North America, and Japan, claim to purchase organic foods regularly.<sup>25</sup>
- ? Consumer concerns about food safety, the environment, and animal welfare will increasingly affect demand in many developed countries.<sup>26</sup>
- ? Japan is a strong market for organic food products, with major trading companies increasing their imports of organic frozen vegetables. Several US based organic certifying agencies have opened offices in Japan to certify producers of organic foods.<sup>27</sup>
- ? Food safety concerns about meat products, particularly beef, have resulted in an increase in the consumption of vegetables in Japan.<sup>28</sup>

- ? Japan's vegetable imports account for 11 percent of its total agricultural products and 15 percent of its vegetable consumption. China exports over 50 varieties of vegetables to Japan, making up 40 percent of Japan's imports.<sup>29</sup>

39. With these facts in mind, several opportunities arise for GMS producers to capture a share of the Japanese fruit and vegetable market, due primarily to food safety concerns with vegetables sourced in China; an increased demand for organic foods, which could be produced in "uncontaminated" areas of the GMS (i.e., absence of agricultural chemical use for a minimum of three years); and, the willingness of Japanese firms to invest in food production operations in the GMS under existing cooperation frameworks.

40. Foreign direct investment (FDI) from Japan in China led to the significant increase in the import of food products from China, particularly vegetables. Specifically, Japanese firms have invested in locations in both northern and southern China, which makes possible the production of vegetables throughout the year.<sup>30</sup> In addition, the Chinese port of Qingdao is a short 16 hours from the closest Japanese port,<sup>31</sup> greatly facilitating shipment. However, the Japanese Government opposes any increase in imports of vegetables from China for two reasons: (i) the trade balance between Japan and China is strongly in China's favor; and, (ii) food safety issues, (i.e., high levels of pesticide residues have been found in vegetables imported from China<sup>32</sup>).

41. Therefore, the potential exists to produce vegetables in the pesticide free areas of Laos and Cambodia, and the central highlands of Viet Nam in response to demand in the Japanese market. Japanese vegetable imports from New Zealand during the northern winter could be replaced by vegetables from the GMS. These vegetables likely would include broccoli and other vegetables that require heading (cabbages, cauliflower, etc.) that have been successful in Thailand and Viet Nam. Requirements to initiate such a program would include the following elements.

- ? Based on the model used in China, Japanese FDI would be required to initiate the production process and to upgrade existing food processing facilities. This could be achieved through existing framework arrangements for regional cooperation, including the ADB's Greater Mekong Subregion Economic Cooperation; the Working Group on Industrial Cooperation for Cambodia, Laos, and Myanmar; and, the Basic Framework for Development Cooperation in the Mekong River Basin.
- ? Through technical assistance agreements, both public and private, Japanese expertise could be mobilized to upgrade the capacity of GMS producers and processors to ensure that food and agricultural products were responsive to the preferences of Japanese consumers.
- ? Through the ADB supported GMS Business Forum, SME's willing to joint venture with Japanese firms could be identified and financing arrangements defined to pursue an accelerated program of horticulture crop development in the subregion.

## **6. Conclusions and recommendations for further consideration**

42. Conclusions and recommendations are offered (i) for consideration by Asian policy makers; (ii) for the financing of socially responsible investment and development; and, (iii) related to technology transfer issues.

43. Policy level conclusions and recommendations:

- ? Related to market driven production: Governments should recognize and support the valuable role that traders, exporters, and private sector entrepreneurs play as a source of market information. To survive, food and agriculture businesses are required to recognize and respond to market signals, to which they respond by sourcing raw materials from reliable suppliers. Central governments should facilitate and coordinate the operation of forums for the exchange of market and technical marketing information and to promote dialogue among regional traders and investors, on a continuous and systematic basis. The current efforts of ASEAN and the GMS may not be sufficiently intensive to achieve this goal. Such initiatives will require funding and organizational support from public sector sources, as well as contributions from the private sector. The most important information is that related to market demand and consumer preferences. Dissemination of this information and the formulation of policies and programs to promote agricultural production in direct response to market demand could be facilitated through existing public sector mechanisms.
- ? Related to consolidation of the global food and agriculture system: Asian policy makers should take action now to ensure that smallholder producers and SMEs will benefit from vertical and horizontal integration of the global food and agriculture system. In light of serious financial constraints faced by most Asian governments, the payment of large subsidies (i.e., equivalent to those provided in developed countries) in support of smallholder agriculture is not feasible. Alternative policy instruments should be defined therefore that will promote the integration of domestic producers, traders, and investors into the international trading system. Since outright protection (tariffs, quotas, investment embargoes, non-tariff barriers to trade, et al.) is proscribed by the rules-based trading system operated by the WTO, policies that reward multinationals for being socially responsible and inclusive, should be formulated and implemented.

44. Conclusions and recommendations for the financing of socially responsible investment and development:

- ? International financial organizations and regional development institutions in Asia have undertaken an obligation to redefine their agendas to take into consideration the Monterrey Consensus, which covers six key issues, which are the core of the Consensus:
  - ? Increased participation in international economic decision-making;
  - ? Reform of the international financial architecture;

- ? Innovative modalities to deal with external debt problems;
- ? Increased technical assistance for strengthening the financial sector;
- ? Support to regional focus; and,
- ? Concrete follow up mechanisms

This process should be accelerated and designed to bring direct benefits to the agriculture sector in Asia.

- ? Domestic agribusiness networks and partnerships between agribusiness enterprises and community production efforts, central governments, local governments, and progressive international foundations should be strengthened. Working collaboratively, they should define and operate mechanisms for financing the organization and management of contract farming, for supplying raw materials to food processing facilities from smallholder producers. Governments have an obligation to scrutinize the source of foreign investment. Tools such as the Dow Jones Sustainability Index should be used to identify companies that integrate social and environmental features into their investment strategies, and efforts made to attract these firms to the region.

#### 45. Conclusions and recommendations related to technology transfer issues:

- ? Foreign direct investment continues to be an effective method of transferring technology from developed to developing countries. Recent investments by Japanese firms to produce vegetables in China for the Japanese market are a case in point. Over the past eight to ten years, Japanese supermarkets have been experimenting with vegetable production in China. Within the past two years, the quality of Chinese vegetables has been good enough to allow large-scale sales to Japan. Chinese producers are using Japanese seeds and other Japanese technology to improve their skills in vegetable production. As a result, the quality of Chinese vegetables is almost as good as those from Japan, and the landed price for most vegetables is about half of the Japanese price.<sup>33</sup>
- ? The GMS is seen as an area suitable for Japanese foreign direct investment and technology transfer in the agriculture sector similar to that between Japan and China. Within the context of the ADB supported Greater Mekong Subregion initiative and the Basic Framework for Development Cooperation in the Mekong River Basin, Japan can play a leading role in stimulating export-oriented agricultural development in the GMS and promoting agriculture as an engine of sustainable growth.
- ? Domestic agribusiness networks and commercial partnerships should be strengthened between agribusiness enterprises and community production efforts; and between central governments, local governments, and progressive international foundations (such as the Toyota, Rockefeller, Ford, and other concerned organizations such as the FAO, who are interested in food security and

agricultural development issues). Working in collaboration, they should design mechanisms for financing the organization and management of contract farming and supplying raw materials to food processing facilities, based on lessons learned from both successful and unsuccessful experiences in the region.

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<sup>1</sup> Rosegrant M.W. and Hazell PBR, *Rural Asia Transformed: The Quiet Revolution*, Asian Development Bank, IFPRI, Washington, D.C., 1999.

<sup>2</sup> Hossain M., *Transformation of Asian Rural Economy*, Keynote paper presented at the International Conference: The Chao Phraya Delta: Historical Development, Dynamics and Challenges of Thailand's Rice Bowl, Kasetsart University, Bangkok, 12-15 December 2000.

<sup>3</sup> Ibid.

<sup>4</sup> (Pingali et al., *Asian Rice Bowls: The Returning Crisis?*, CAB International, Oxon, 1997, and Mingsarn et al., *The Growth and Sustainability of Agriculture in Asia*, Asian Development Bank & Thailand Development Research Institute, Bangkok, Thailand, 2000.

<sup>5</sup> Hossain M., *Transformation of Asian Rural Economy*, Keynote paper presented at the International Conference: The Chao Phraya Delta: Historical Development, Dynamics and Challenges of Thailand's Rice Bowl, Kasetsart University, Bangkok, 12-15 December 2000.

<sup>6</sup> Ibid.

<sup>7</sup> Kakazu, Hiroshi, *Growth Triangles in ASEAN: A New Approach to Regional Cooperation*, Nagoya University, APEC Discussion Paper Series, March 1997

<sup>8</sup> This is a partial and summarized list. A broader, yet still incomplete list would include the following: tariff quota administration; export subsidies; export credits; state trading enterprises; special agricultural safeguards; trade preferences; consumer information and labeling; environmental issues; animal welfare issues; and, food aid. Source: WTO, April 2002.

<sup>9</sup> U.S. Department of Agriculture, *Food Review*, Vol. 24, Issue 3, "Consumer Preferences and Concerns Shape Global Food Trade," September-December 2001.

<sup>10</sup> Ibid.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

<sup>14</sup> FAO, "Compendium of Food Consumption Statistics from Household Surveys in Developing Countries, Vol. 1: Asia, FAO Economic and Social Development Paper 116/1, 1993, 1994.

<sup>15</sup> U.S. Department of Agriculture, *Food Review*, Vol. 24, Issue 3, "Consumer Preferences and Concerns Shape Global Food Trade," September-December 2001.

<sup>16</sup> Ibid.

<sup>17</sup> OECD, 6 June 2002

<sup>18</sup> Report to the National Farmers Union CONSOLIDATION IN THE FOOD AND AGRICULTURE SYSTEM Report prepared by Dr. William Heffernan Department of Rural Sociology University of Missouri Columbia, Missouri With the assistance of Dr. Mary Hendrickson Dr. Robert Gronski University of Missouri-Columbia February 5, 1999.

<sup>19</sup> Ibid.

<sup>20</sup> Keynote speech of Dr. Supachai Panichapakdi, Director-General Designate, World Trade Organization at the World Development Movement Annual Conference, London, 8 June 2002.

<sup>21</sup> Ibid.

<sup>22</sup> U.S. Department of Agriculture, *Food Review*, Vol. 24, Issue 3, "Processed Food Trade Deficit Continues in 2000," September-December 2001.

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.

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<sup>25</sup> U.S. Department of Agriculture, Food Review, Vol. 24, Issue 3, “Consumer Preferences and Concerns Shape Global Food Trade,” September-December 2001.

<sup>26</sup> Ibid.

<sup>27</sup> Market Ag.com website, 1997.

<sup>28</sup> U.S. Department of Agriculture, World Horticultural Trade & US Export Opportunities, April 2001.

<sup>29</sup> China People’s Daily, February 2001.

<sup>30</sup> Los Angeles Times, Iritani, Evelyn, “China’s WTO Challenge: U.S. Farmers’ Fears Growing,” 8 August 2001.

<sup>31</sup> China People’s Daily, February 2001.

<sup>32</sup> Nikkei, “Japan’s Perishable Food Imports Drop on Loss of Price Advantage,” 20 May 2002.

<sup>33</sup> U.S. Department of Agriculture, World Horticultural Trade & US Export Opportunities, April 2001.