## Summary of Session 1: Food Problems in Asia

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This session addresses food problems facing Asian countries. The paper by Osamu Koyama identifies major uncertainties in assessing the future food supply/demand balances of Asian countries from the global perspective. The three other papers by Ke Bingsheng, Nipon Poapongsakorn and K. Purnachandra Rao deal with the food situation and outlook in China, Thailand, and India, respectively. My introductory remarks focus on food security is sues related to declining food self-sufficiency ratios and on addressing the difficulties in assessing the future demand for food in a country like China, Japan, Korea, or Taiwan. Needless to say, Asian countries have their similarities and differences when they come to deal with their own food problems. The papers presented in this session provide many insights into the food problems of several individual countries and cross-country comparisons. They also generate many interesting exchanges, further clarifications, and discussions in the session.

Highlights and main conclusions from the session sre summarized below :

1. Asia's food problem is mainly a grain problem. Even though the total cereal supply is not a problem globally, as pointed out by Koyama, countries like China and India perceive their main concern in food as "how to feed its people adequately?" A different view is also noted in the session and that is, we should not narrowly focus on grain because it is only part of the food sector. Of course, grain includes both food grain and feed grain. There is a converged consensus that, for food grain, production is not a major problem. Trade, specifically import restriction, is a political issue for food grain. Many countries like China would want to be self-sufficient in food grain and allow imports only in cases of emergency, caused by bad crops and poor harvest. With respect to feed grain, there are noted uncertainties related to meat consumption in the future. As many developing Asian countries further develop their economies and increase their household income, meat consumption will be likely to increase as occurred in other more developed countries. We are not sure that this is the most desirable path to follow for many Asian countries. As pointed out by Rao, calorie intakes of people in India with low per capita meat consumption have been rapidly reaching the recommended levels. Increasing meat consumption is not an absolute necessity for enhancing our nutritional status. Suggestions have been made that we should promote more desirable and healthy dietary patterns for Asian people, which may sctually reduce the demand for meats, and thus for feed grain.

2. Asian countries are not homogeneous in their stages of economic development, and thus view self-sufficiency in food from different perspectives. China and India see the constraints in cropland and water as the main threats to their ability to maintain self-sufficiency in food. On the other hand, food production in countries like Japan, Taiwan, and Thailand is losing

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competitiveness. Yet, they perceive the declining self-sufficiency in food as a threat to their food security.

3. There are many similar problems among the Asian countries discussed in the session. On the supply side, there are increasing scarcities of cropland and water. Shortage in water for irrigation is a common problem. With respect to labor, there has been a shortage in Thailand and other more developed Asian countries, and stagnation of productivity in India. There are also problems related to the uses of fertilizers and pesticides. Concerns are raised regarding their effectiveness and environmental impacts. It is important to note that Asian countries are increasingly concerned about the environment and food safety. On the other hand, most speakers indicate that the main concern about the current agricultural situation is how to raise yield. Long after the Green Revolution, our focus in agricultural development remains on quantity rather than quality. One would wonder whether or not we might be missing the boat if we continue to direct our R&D programs in agriculture to quantity enhancement. The future success of the agricultural sector may hinge on our scientific advancement to raise the quality rather than the quantity of agricultural products.

4. Population is a growing concern in many Asian countries. Population affects both supply of and demand for agricultural products. The specific problems related to population include its growth and migration. In Thailand, migration from rural to urban areas has created a serious problem in labor supply for agricultural production and in raising wages and thus the cost of production. In China, rapid increases in urban population have drastically increased the demand for foods from animal origins. These changing demographic factors will be the key players in shaping the future agriculture in Asia.

5. On the technical front, there is a concern about the uses of "average" data in most analyses and presentations at the session. Almost all papers use "average" figures, which many not show a complete picture of what is happening in food and agriculture. For example, the average intakes of calories may look very adequate. But, in fact, there may be many people with malnutrition and, in the same time, many suffering from obesity, suggesting that improvements in dietary patterns and nutritional status are necessary. We would need more detailed micro data to understand the food problems in Asia and in the world as well.

6. Most speakers and participants in the session voice the need to have policy reforms to improve the performance of agriculture and its sustainability. Specifically, a balanced agricultural policy should reflect concerns on food safety, food security, and environmental quality.

7. Finally, the declining trend of the government's R&D investment in agriculture is identified in the session as a key obstacle to further development in the agricultural and food sector. It is important to reverse this trend for the future of agriculture in Asia. More R&D investments are urgently needed in the areas of technology improvements in production, processing and marketing; food quality improvement especially variety breeding; and environmental protection in agriculture. Furthermore, government actions are also needed to enhance consumer information and education related to proper diets, nutrition and health. Changing dietary patterns will affect agriculture and its competitiveness in many Asian countries for years to come.