

Chapter 9

Agricultural Transformation and Rural Development

■ Key Concepts

This chapter emphasizes that a country's development strategy must include plans for achieving agricultural progress and rural development, as explained in section 9.1. The major topics addressed in the chapter include:

- How to increase per capita agricultural output and productivity in order to benefit the average rural dweller and provide a sufficient supply of food for the country. ← China
- Role of Government with respect to agriculture and poverty alleviation.
- How to transform traditional low productivity agriculture into high productivity commercial agriculture.
- Explaining why the decisions of peasant farmers are rational. ←
- The role of risk faced by subsistence farmers and strategies to cope with this risk.
- Explaining the role of economic and price incentives in increasing output.
- Explaining the exact meaning of rural development.

In section 9.2, progress in the agricultural (cereal yields) sector since 1960 is reviewed and Sub-Saharan Africa's continued stagnation features prominently. In many developing countries the agricultural sector often accounts for a majority of total employment; yet low productivity causes agriculture to represent a much smaller share of output.

There is a fairly detailed explanation on the structure of Developing World agrarian systems in section 9.3. Two types of world agriculture are defined: low and high productivity. Agricultural productivity (value added/worker) and land productivity (average grain yield) is compared for some developed and developing countries as an illustration of the difference. There is also a new discussion on the categorization of world agriculture in developing countries into three dynamic categories: agriculture-based countries, transforming countries and urbanized countries where movement from one category to another is expected. Agricultural practices in Asia, Africa, and Latin America are compared and contrasted in terms of the structure of their agricultural sectors and the advantages/disadvantages of each, while acknowledging regional disparities within regions and countries:

- Latin American agriculture is characterized by the dualistic latifundio-minifundio system, in which a small fraction of landowners own the great majority of cultivated land in the region. Land concentration is discussed using the Gini coefficient. Total factor productivity is twice as high on family farms as on latifundios. Latifundios under-utilize labor, while minifundios over-utilize labor, relative to land. The latifundio system persists partly because land ownership provides such positive externalities as social status and political power.

- Asian agriculture is characterized by too many people crowded onto too little land (land fragmentation). Farms tend to be small, and production is often characterized by sharecropping and tenant farming. There is a good discussion of the impact of colonial rule, money lending, and recent population growth.
- African agriculture is characterized by low productivity subsistence farming, traditional techniques, a lack of investment, shifting cultivation, and labor scarcity during the peak agricultural season. Though traditionally land has been less scarce in Africa, population growth has caused land to become more scarce, and production has been shifting towards small owner-occupied plots, as opposed to communal shifting cultivation.

Section 9.4, the section on the role of women, points out that, although women perform a majority of the work inside and outside of the home in the rural regions, development programs have often targeted men. In addition, recent research indicates that the contribution of men and women to family income leads to different expenditure outcomes. Women spend more on children's health and education compared to men, which yields larger social returns. Also, reallocating inputs, including training and credit access to women and their plots has a major impact on the productivity and the incomes of women.

Section 9.5 on the economics of agricultural development, includes an extensive discussion of the transition from subsistence farming to diversified and partially commercial farming, and to specialized commercial farming. Key topics include:

- Identifying characteristics of subsistence farming. For example, risk aversion may lead poor peasants to resist new techniques that offer higher average yields because the variance of the yield may be larger. The relationship between risk aversion and sharecropping is discussed. Interlocking factor markets and monopoly and monopsony power are mentioned.
- Identifying characteristics of the transition to mixed farming.
- Identifying characteristics of modern commercial farming. Technology plays a major role at this stage. An example of the importance of shared learning and technology is given, focusing on pineapple farms in Ghana.

Section 9.6 covers strategies for a comprehensive program of agricultural and rural development. The discussion covers the role of technology, pricing policy and other economic incentives, land reform possibilities, and supportive policies.

The chapter concludes with a case study on women farmers in Kenya has been revised to reflect current developments.

■ Sample Questions

Short Answer

1. Explain the concept, goals, and methods of integrated rural development.

Answer: A solid answer will usually be based on the section, "Toward a Strategy of Agricultural and Rural Development," in the text.

2. What are the primary determinants of agricultural labor productivity?

Answer: See the section on the economics of agricultural development.

3. Explain the case for land reform in Latin America. Are there any potential negative effects? What steps could be taken to address these effects?

Answer: The goal would be to increase productivity, and reduce poverty and inequality. Peasants must be prepared with technical and business skills. Incentives must be offered to keep competent large farmers in business. Possibility (very real) of conflict and resistance from large landowners.

4. What are the implications for a successful agricultural development strategy of the finding that women perform 60 to 90% of all work in the traditional rural areas?

Answer: Agricultural extension programs and access to small scale credit must be focused on women.

5. In Bangladesh, the government guarantees rice farmers that it will buy rice at a specific price. Explain the costs and benefits to farmers in good and bad harvest years.

Answer: Supply and demand analysis with reference to elasticities plus a discussion of risk aversion is called for.

6. Describe briefly five major characteristics or problems of developing countries' agricultural sector. Make reference to specific countries or regions where you can.

Answer: Answers may be expected to vary according to lecture topics, and might include a discussion of land ownership, available inputs, credit access, training program, etc.

7. Explain the role of risk and uncertainty in an analysis of the economic behavior of peasant farmers. What kinds of questions does this analysis enable us to answer?

Answer: Answers may be expected to vary according to lecture topics, with some discussion of why peasant production decisions are rational. See the section in the text that discusses sharecropping.

8. Critically evaluate the following statement: Government policies to keep the price at which staple foods are bought and sold low helps to reduce poverty and inequality.

Answer: Students must consider negative effects on rural areas.

9. Is sharecropping economically efficient or inefficient? Explain

Answer: See the section in the text.

10. What are the key characteristics of the agrarian system in Asia that distinguish it from that of Latin America? Explain your answer.

Answer: Land fragmentation, greater population density and absentee landlords.

11. Women bear a disproportionate burden in the agrarian system of Sub-Saharan Africa, Asia and Latin America. In addition their productivity is low. Explain these statements with specific examples from individual developing economies. What measures/policies have been implemented to deal with these two issues? Once again discuss with specific examples from individual developing economies.

Answer: Discussed in the section on the role of women in agriculture. Specific policies aimed at raising female agricultural productivity include facilitating access to credit, training programs, providing titles to land as a way of securing property rights (and thus the possibility of borrowing), cash subsidies in exchange for sending children (especially girls) to school etc.

12. What is (are) the key characteristic(s) of the agrarian system in Sub-Saharan Africa?

Answer: Lack of complementary inputs (mechanical power, irrigation, tools, seeds, fertilizer), shifting cultivation, labor scarcity during the harvesting season while surplus labor during the rest of the year, rights of the extended family to land and water.

13. What are some of the specific policies aimed at improving the productivity of women farmers in Kenya?

Answer: Discussed in the case study to the chapter.

14. What is the Alliance for a Green Revolution in Africa and who are its primary supporters?

Answer: Discussed on Page 443

15. What role should the government play with respect to the agricultural sector in developing countries in their attempt to alleviate poverty?

Answer: Discussed on Page 446-447

■ Multiple Choice

1. Crops produced entirely for the market are known as
- basic crops.
 - mixed crops.
 - hybrid crops.
 - cash crops.

Answer: D

2. An agrarian system refers to
- the pattern of land ownership.
 - the type of crops grown.
 - the processing of agricultural commodities.
 - an economy that has no industry.

Answer: A

3. The primary goal of an agricultural extension service is to
- bring new areas under cultivation.
 - increase the yield per hectare.
 - introduce land reform.

- (d) assist rural-urban migration.

Answer: B

4. Which of the following is an important factor in the success of agrarian land reform policies?

- (a) the introduction of sharecropping.
- (b) the introduction of tenant farming.
- (c) farmer training programs.
- (d) the introduction of more capital intensive methods.

Answer: C

5. It is important to place particular stress on the role of women in rural development programs because

- (a) women have received less training in the past.
- (b) women perform a large majority of the work in the rural sector.
- (c) women tend to allocate more resources to their children's health and education.
- (d) all of the above.

Answer: D

6. Sharecropping can be best understood as

- (a) a type of agreement preferred by peasants.
- (b) a type of agreement preferred by landlords.
- (c) a compromise between peasant and landlord preferences.
- (d) a type of agreement preferred by neither but given by tradition.

Answer: C

7. A program through which new ideas, methods, and advice are offered to farmers to increase farm yields is known as

- (a) agricultural extension.
- (b) agricultural mechanization.
- (c) an agrarian system.
- (d) land reform.

Answer: A

8. In South Asia and Sub-Saharan Africa, about what share of the labor force works in agriculture?

- (a) One tenth.
- (b) One third.
- (c) One half.
- (d) Two thirds.

Answer: D

9. In South Asia and Sub-Saharan Africa, about what share of output is contributed by agriculture?

- (a) One tenth.
- (b) One fifth.
- (c) Two fifths.
- (d) One half.

Answer: B

10. In which of these developing regions has food production per capita steadily fallen over the last quarter century?
- (a) Africa.
 - (b) East Asia.
 - (c) South Asia.
 - (d) Latin America.

Answer: A

11. In a world of perfect certainty, sharecropping would be less efficient than a farm owner working his own farm because
- (a) sharecroppers receive only half of their marginal product.
 - (b) paying a worker a wage gives him or her an incentive to shirk.
 - (c) sharecroppers are exploited by landlords.
 - (d) renting farmland concentrates risk on the renters.
 - (e) all of the above.

Answer: A

12. During the 1990s, food production increased faster than population in all regions of the developing world except
- (a) Latin America.
 - (b) East Asia.
 - (c) Sub-Saharan Africa.
 - (d) none of the above.

Answer: C

13. The African agrarian system is characterized by
- (a) absentee landlords.
 - (b) a dual agrarian system known as latifundio-minifundio.
 - (c) land fragmentation.
 - (d) shifting cultivation.

Answer: D

14. The system of land tenure in which tenant farmers pay a fixed share of their crop to landowners is called
- (a) communal farming.
 - (b) collective farming.
 - (c) latifundio-minifundio system.
 - (d) sharecropping.

Answer: D

15. Absentee landowners characterize the agrarian system of
- (a) Asia.
 - (b) Latin America.
 - (c) Sub-Saharan Africa.
 - (d) all of the above.

Answer: A