

# Unit 5: Agriculture and Rural Land-Use

## Patterns and Process

Learning Objectives Essential Knowledge  
12-17% AP Exam Weighting

### Topic 5.1 Introduction to Agriculture

- **Explain the historical context of the Cold War after 1945.**
  - **PSO:** Agricultural practices are influenced by the physical environment and climatic conditions, such as the Mediterranean climate and tropical climate.
  - **PSO:** Intensive farming practices include market gardening, plantation agriculture, and mixed crop/livestock systems.
  - **PSO:** Extensive farming practices include shifting cultivation, nomadic herding, and ranching.

### Topic 5.2 Settlement Pattern and Survey Methods

- **Identify different rural settlement pattern and methods of surveying rural settlements.**
  - **PSO:** Specific agricultural practices shape different rural land-use patterns.
  - **PSO:** Rural settlement patterns are classified as clustered, dispersed, or linear.
  - **PSO:** Rural survey methods include metes and bounds, townships and range, and long lot.

### Topic 5.3 Agricultural Origins and Diffusions

- **Identify major centers of domestication of plants and animals.**
  - **SPS:** Early hearths of domestication of plants and animals arose in the Fertile Crescent and several other regions of the world, including the Indus River Valley, Southeast Asia, and Central America.
  - **SPS:** Patterns of diffusion, such as the Columbian Exchange and the agricultural revolutions, resulted in the global spread of various plants and animals.

### Topic 5.4 The Second Agricultural Revolution

- **Explain the advances and impacts of the second agricultural revolution.**
  - **SPS:** New technology and increased food production in the second agricultural revolution led to better diets, longer life expectancies, and more people available for work in factories. In China eventually led to communist revolution.

### Topic 5.5 The Green Revolution

- **Explain the consequences of the Green Revolution on food supply and the environment in the developing world.**
  - **SPS:** The Green Revolution was characterized in agriculture by the use of high-yield seeds, increased use of chemicals, and mechanized.
  - **SPS:** The Green Revolution had positive and negative consequences for both human populations and environment.

### Topic 5.6 Agricultural Production Regions

- **Explain how economic forces influence agricultural practices**
  - **PSO:** Agricultural production regions are defined by the extent to which they reflect subsistence or commercial practices (mono-cropping or monoculture).

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### **Topic 5.7 Spatial Organization of Agriculture**

- ***Explain how economic forces influence agricultural practices***
  - **PSO:** Large-scale commercial agricultural operations are replacing small family farms.
  - **PSO:** Complex commodity chains link production and consumption of agricultural products.
  - **PSO:** Technology has increased economies of scale in the agricultural sector and the carrying capacity of the land.

### **Topic 5.8 Von Thünen Model**

- ***Describe how the von Thünen model is used to explain pattern of agricultural production at various scales.***
  - **PSO:** Von Thünen's model helps to explain rural land use by emphasizing the importance of transportation costs associated with distance from the market; however, regions of specialty farming do not always conform to von Thünen's concentric rings.

### **Topic 5.9 The Global System of Agriculture**

- ***Explain the interdependence among regions of agricultural production and consumption.***
  - **PSO:** Food and other agricultural products are part of a global supply chain.
  - **PSO:** Some countries have become highly dependent on one or more export commodities.
  - The main elements of global food distribution networks are affected by political relationships, infrastructure, and patterns of world trade.

### **Topic 5.10 Consequences of Agricultural Practices**

- ***Explain how agricultural practices have environmental and societal consequences.***
  - **IMP:** Environmental effects of agricultural land use include pollution, land cover change, desertification, soil salinization, and conservation efforts.
  - **IMP:** Agricultural practices—including slash and burn, terraces, irrigation, deforestation, draining wetlands, shifting cultivating, and pastoral nomadism—alter the landscape.
  - **IMP:** Societal effects of agricultural practices include changing diets, role of women in agricultural production, and economic purpose.

### **Topic 5.11 Challenges of Contemporary Agriculture**

- ***Explain challenges and debates related to the changing nature of contemporary agriculture and food-production practices.***
  - **IMP:** Agricultural innovations such as biotechnology, genetically modified organism, and aquaculture have been accompanied by debates over sustainability, soil and water usage, reductions in biodiversity, and extensive fertilizer and pesticide use.
  - **IMP:** Patterns of food production and consumption are influenced by movements relating to individual food choice, such as urban farming, community-supported agriculture (CSA), organic farming, value-added specialty crops, fair trade, local-food movements, and dietary shifts.
  - **IMP:** Challenges of feeding a global population include lack of food access, as in cases of food insecurity and food deserts; problems with distribution systems; adverse weather; and land use lost to suburbanization.
  - **IMP:** The location of food-processing facilities and markets, economies of scale, distribution systems, and government policies all have economic effects on food-production practices.

**Topic 5.12 Women in Agriculture**

- ***Explain geographic variations in female roles in food production and consumption.***
  - **IMP:** The role of females in food production, distribution, and consumption varies in many places depending on the type of production involved.