

Chapter 10 Learning Guide – Agriculture

Key Issue 1 – *Where Did Agriculture Originate?*

Pgs. 306 - 314

Origins of Agriculture

1. Define *agriculture*:
Changing of the Earth's surface through cultivation of plants and rearing of animals to obtain sustenance or economic gain
2. Define *crop*:
Any plant cultivated by people
3. What are the characteristics of a *hunter-gatherer society*?
Small groups who travel that hunt and fish, pick berries and roots; no permanent home settlement; movement with seasonal growth
4. How many hunter-gatherers are there today?
250,000 people (.005% of world's population)
5. Where do they live?
Outside of world settlement in Australia, India Andaman Islands, Botswana and Namibia
6. Indicate the crop hearths and animal hearths on the map below.



Latin America & S. America – squash, pepper, cassava, cotton, lima bean, maize, potato, sweet potato, turkey, llama, alpaca

Sub-Saharan Africa – yam, sorghum, cowpea, African rice, coffee, finger millet

Middle East – barley, einkorn wheat, emmer wheat, lentil, oats, rye, bread wheat, broadbean, olive, pig, dog, sheep, goat, cattle

East Asia & India – rice, soybean, Chinese chestnut, walnut, cattle, chicken

Southeast Asia – mango, taro, coconut, pigeonpea, slender millet

Western Asia – Horse

Subsistence and Commercial Agriculture

7. Define *subsistence agriculture*:
Found in LDCs and is the production of food primarily for consumption by the farmer's family
8. Define *commercial agriculture*:
Found in MDCs and is the production of food primarily for sale off the farm
9. Who prepared the most widely used map of world agricultural regions? When? What does it do?
Whittlesey in 1936. Divides world into 11 agricultural regions: 5 in LDCs and 6 in MDCs.
10. What are the 5 principal features that separate commercial agriculture from subsistence agriculture?
Purpose of farming; percent of farmers in labor force; use of machinery; farm size; relationship of farming to other business
11. Read pgs. 311-314 and complete the chart below with important information. The text will generally explain commercial agriculture, and you will need to deduce the situation of subsistence agriculture on your own.

	Subsistence Agriculture (Mostly in LDCs)	Commercial Agriculture (Mostly in MDCs)
Purpose of Farming	For their own consumption; some surplus for sale	For sale off the farm to food processing companies; not for personal consumption by farmer
% of Farmers in Labor Force	50% of workforce farms	5% of workers directly farm (2% in North America)
Use of Machinery	Use of people, animals, hand tools	Less reliance on human power; use of tractors, combines, corn pickers, planters, transportation improvements, electronics & scientific advances
Farm Size	Small areas operated by families	Average 450 acres in North America; farmland growing in U.S.
Relationship of farming to other businesses	No need for agribusiness as farming just for consumption	Agribusiness using modern communications & information technology to stay in touch, keep track of prices, yields & expenditures related to food processing, purchasing, storing, distributing & retailing; many aspects controlled by large corporations

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Key Issue 2 – *Where Are Agricultural Regions in Less Developed Countries?*

Pgs. 314 – 322

Shifting Cultivation

1. In what climate does shifting cultivation predominate? And, what are its two characteristics?
2. Identify the two hallmarks of the technique of shifting cultivation.
3. What is a *swidden*?
4. What is *potash*?
5. How long are swiddens used?
6. **Case Study:** A Kayapo swidden field in Brazil's Amazon region. Make notes and draw and diagram to illustrate the description given in the text.
7. How is land owned in a typical village that practices shifting cultivation?
8. What percentage of the world's land area is devoted to shifting cultivation?
9. What percentage of the world's people work it?
10. Describe the PROS and CONS of shifting cultivation, or the arguments made for it and criticisms leveled against it in the space below.

Pros (Arguments against replacing shifting cultivation)	Cons (How is shifting cultivation being replaced?)
-	-

Pastoral Nomadism

11. What is *pastoral nomadism*?
12. In what type of climate is it usually found?
13. What regions of the world are currently occupied by this practice?
14. How do pastoral nomads obtain grain (several ways)?
15. What animals are chosen, and where?
16. Describe territoriality among pastoral nomads.
17. What is *transhumance*?
18. In what way do modern governments currently threaten pastoral nomadism?

Intensive Subsistence Farming

19. What is meant by “intensive”?
20. Where is intensive subsistence agriculture practiced? Why there?
21. What is “wet rice”?
22. What is “sawah”? What is a “paddy”?
23. What is double-cropping?
24. Where is double-cropping possible? Where is it not?
25. In areas of intensive subsistence agriculture where wet rice is not dominant, what is the major crop?
26. How are multiple harvests made possible in these less mild regions? Explain.

27. Make some important notes about intensive subsistence farming in communist China.

Agriculture in Communist China	
Agriculture following the communist revolution, communes.	Agriculture in communist China today, post-commune.
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Plantation Farming

28. Define and describe plantation farming by filling out the chart below.

Plantation		
Regions: Latin America & Asia		
Situated In: Sparsely settled locations	Operated By: Plantation managers	Workers: Imported & provided with food and housing
Types of Crops: Cotton, sugar, coffee, rubber, tobacco, cocoa, bananas, tea	Definition: Large farm that specializes in one or two crops	

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Key Issue 3 – *Where Are Agricultural Regions in More Developed Countries?*

Pgs. 322 – 329

Mixed Crop and Livestock Farming

1. Where is mixed crop and livestock farming common?
2. Describe the irony between the amount of land devoted to crops vs. animals and the income generated by each in this region.
3. How does this type of agriculture allow farmers to more evenly “distribute their workload”?
4. In what different ways is the corn used?
5. Where is the U.S. Corn Belt, and what crops are grown there?
6. Define *fallow* and describe how it relates to crop rotation.
7. Define *cereal grains* and describe how it relates to crop rotation.
8. Define *rest crop* and describe how it relates to crop rotation.

Dairy Farming

9. What is a *milkshed*?
10. Why do some regions specialize in “milk products” like cheese and butter rather than fluid milk? Identify some of these important regions.
11. What country is the world’s largest producer of dairy products?
12. What problems do dairy farmers currently face?

Grain Farming

13. What is the principal difference between grains grown in “commercial grain farming” regions and grains grown in “mixed crop and livestock” regions?
14. Complete a bullet list that details the significance of wheat as a crop.
15. Identify the three regions of large-scale grain production in North America.
16. How do farmers and combine companies make use of the fact that the wheat matures at different times in the spring and winter wheat belts?

Livestock Ranching

17. Define *ranching*:
18. What type of climate is livestock best adapted to? And, where is ranching practiced?
19. Why did cattle ranching expand in the U.S.?
20. Why did cattle ranching decline?
21. Where does cattle ranching take place today?
22. Define *feed lots*:
23. Make brief notes to describe the following:

Ranching in Argentina	Ranching in Australia
-	-

24. What were the three U.S. and world stages of ranching?

Mediterranean Agriculture

25. Describe the conditions of Mediterranean climate and agriculture.

26. Most crops in Mediterranean lands are grown for ____ rather than for ____.

27. What is *horticulture*?

28. List the two most important cash crops of Mediterranean regions.

29. Describe the role (and changing role) of **California** in Mediterranean agriculture.

30. What three conditions make the southeast U.S. an ideal location for this type of agriculture?

31. What is “**specialty farming**” and where has it spread in the U.S.? And, give examples of specialty crops

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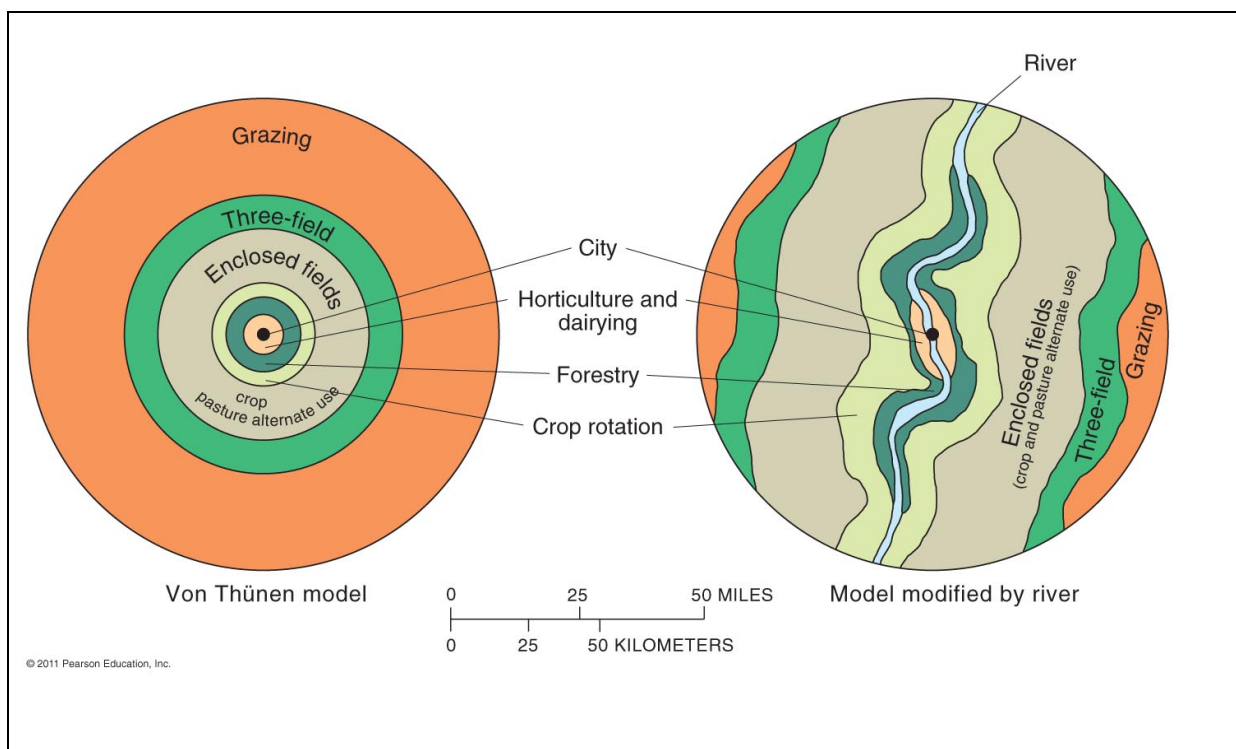
Key Issue 4 – *Why Do Farmers Face Economic Difficulties?*

Pgs. 329 – 338

Challenges for Commercial Farmers

Complete the questions 1 – 7 on the von Thunen model from your reading pages 329 – 330 and figure 10-24.

1. Who was von Thunen?
2. According to this model, what two factors does a farmer consider when deciding what to plant?
3. Draw a sketch of agricultural land use according to von Thunen.



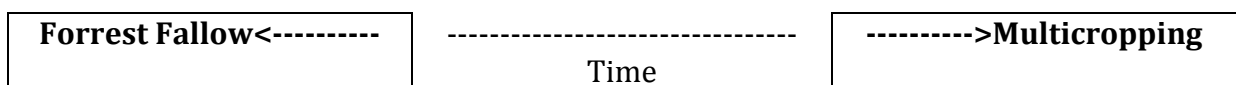
4. How does transportation cost influence profitability of growing wheat?
5. How does cost determine what farmers grow?
6. List things that von Thunen did NOT consider in his model but which influence farmers' choices of crops. (Note, these might be cited as weaknesses or criticisms of

his model)

7. How could von Thunen's model be applied at a global scale?
8. How have efficient agricultural practices, fertilizers and mechanical equipment, etc. created a problem for commercial farmers?
9. Create three bulleted points that highlight current ways in which the U.S. government currently deals with excess agriculture capacity, and explain each.
10. Define *sustainable agriculture*:
11. What are the principal practices that distinguish farmers practicing *sustainable agriculture* from those operating conventionally?
12. List the advantages of ridge tillage.
13. In what ways are animals treated differently in sustainable agriculture? And, how is this a benefit?

Challenges for Subsistence Farmers

14. According to the "Boserup Thesis", in what ways can subsistence farmers increase food supply?
15. Look at the graphic below. What is basically happening?



As time goes on, the amount of land area devoted to growing crops expands

16. What is the **dilemma** that is faced by LDCs as they seek to increase the amount of export crops to sell to MDCs?
17. Some LDCs turn to the production of drug crops for export. The geography of these crops is distinctive. Identify the countries associated with the crops below.

Cocoa Leaf	South America - Columbia, Peru, Bolivia
Marijuana	Globally – But most that reaches U.S. is grown in Mexico
Opium	Afghanistan; Myanmar

Strategies to Increase Food Supply

18. Four strategies have been proposed to increase the world's food supply in places where populations are underfed.

- Expand current ____.
- Increase agricultural ____.
- Identify new food ____.
- Increase ____ from other countries.

19. There is little new land actually available for farming. In fact, the current trend is to reduce agricultural land rather than increase it. Identify and briefly describe three reasons why land is currently being removed from agricultural use.

20. What are the two main practices of the **Green Revolution**?

21. Because of the Green Revolution, agricultural productivity at a global scale has ____ than ____

22. Describe the characteristics of the “**miracle wheat seed**”.

23. Describe the characteristics of the “**miracle rice seed**”.

24. What specific problems do farmers in LDCs have which might prevent them from taking full advantage of the Green Revolution?

25. List and describe one problem with each of the strategies for increasing the world's food supply by identifying new food sources.

Strategy	Problem
Cultivate oceans	Overfishing Population of tuna & swordfish declined by 90%
Develop higher protein cereals	Limited application in LDCs where most people grow their own food
Improve palatability of rarely consumed foods	Not a reality; Foods don't taste good & most people won't eat them

26. What are the top three export grains in the world?

27. List the largest grain **exporting** countries and what grains they export.

28. Shade and label the largest grain **importing** countries and what grains they import.



Japan – Corn & rice

China – Wheat & rice

S.W. Africa, Sub-Saharan Africa & Northern Africa – Corn, wheat & rice

Saudi Arabia - Rice