

Directions: Follow the page guidance as you complete this guided reading.

1. Rubenstein p 320 – 321. Note differences between subsistence and commercial farming.

	Subsistence	Commercial	
Where important?			
Definition or Purpose		What is a cash crop?	
Farmers as % of labor force	In developing countries (LDCs) -	In developed countries (MDCs) - <b>(R p 332)</b> What % of Americans are in <b>agribusiness</b> ? What is <b>agribusiness</b> ?	
Technology			
Types found in LDCs (details to follow)	<ol style="list-style-type: none"> <li>Intensive Wet Rice Dominant</li> <li>Intensive Wet Rice not Dominant</li> <li>Shifting Cultivation</li> <li>Pastoral Nomadism</li> <li><b>Plantation (exception!!! This is commercial agriculture)</b></li> </ol>	Types found in MDCs (and more developed LDCs)	<ol style="list-style-type: none"> <li>Mixed Crop and Livestock</li> <li>Dairy Farming</li> <li>Grain Farming</li> <li>Livestock Ranching</li> <li>Mediterranean</li> <li>Commercial Gardening and Fruit</li> </ol>

2. Now that we've learned about the main differentiation between categories of agriculture (subsistence vs. commercial), let's go back and learn about the history of the development of agriculture. **Use both Rubenstein p 318 – 319, 342 - 343 & de Blij p 369 – 373.** Read both completely and summarize below.

**Timeline on the Development of Agriculture**

<b>Neolithic Revolution or First Agricultural Revolution</b>	<p>What is agriculture?</p> <p>What is a crop?</p> <p>Describe did humans live prior to the invention of agriculture.</p>
	<p>What was the agricultural revolution? When did it happen?</p> <p><b>What is domestication (look it up?)</b></p> <p>In how many places is this believed to have originated? What is this called (lecture)? List possible hearths.</p> <p><b>(de Blij p 369 -370)</b> Where does Carl Sauer believe that agriculture first began? What crops were first domesticated in his theory?</p> <p>To what area and crop (provide examples) do we attribute the "First Agriculture Revolution"?</p> <p>What did the surplus which was generated from this type of agriculture result in?</p>
<p><b>Second Agricultural Revolution</b> <b>(de Blij p 375 – 376)</b> <b>When did this happen?</b> <b>Where did it begin?</b></p>	<p>What new crops were introduced and from where?</p> <p>What English law allowed farming innovations to take place? What did it allow? Explain.</p> <p>What other technologies improved production as well and spread agriculture?</p> <p>How are the Industrial Rev. and the Second Agricultural Revolution connected (<b>lecture</b>)?</p>

**Third Agricultural Revolution or the Green Revolution**

**Rubenstein p 343 – 345**

What were the two main practices that led to increased agricultural production during the 1970s and 1980s?

Who won the Nobel Peace Prize for his development of the “miracle wheat seed”?

How did miracle seeds affect productivity? Cite India as an example.

In order to take advantage of the new seeds, what are farmers required to use?

What three minerals are critical to increasing soil fertility?

What must governments in LDCs do in order to keep up the momentum of the Green Revolution?

What does “GM” (GMOs) stand for?

What are they specifically designed to do?

By what “brand name” term are they known?

What corp. created them?

How widespread is the use of GM worldwide and within the United States? Provide statistics as evidence.

Why would LDCs (like those in Africa) be resistant to the adoption of GM crops?

- 1.
- 2.
- 3.

What is another controversial practice especially as applied to the raising of livestock? Why?

What do some countries/regions (identify) require?

Why are some opposed to this?

**de Blij p 377 – 378 (this is the better discussion of this topic)**

How far back and to where does the Green Rev. REALLY begin?

With what crop was the Green Rev. **MOST** effective in increasing yields in Asia?

Since the Green Revolution has increased production, what has caused most famines?

Because of its focus on rice, wheat and corn, where has the Green Revolution been less effective? Why?

**Criticisms of the Green Revolution (de Blij p 378 – 381)**

What is “**monocropping**” (Rubenstein p 332)? What does it make farms vulnerable to (de Blij)?

What are two concerns about the increased use of chemicals associated with the Green Revolution?

Amongst what group has the Green Revolution done little to alleviate poverty?

In what area of the world have consumers expressed concerns over GMOs?

How has the Green Revolution, increase tensions within rural households in Sub-Saharan Africa?

3. **Major Global Agricultural Regions (Rubenstein p 324 – 336, read de Blij p 386 – 392 to supplement).** These don’t go in order, they skip around.

As you fill this out you should also be working on your Agricultural Regions Map using the powerpoint as a visual guide and supplement for info.

Area	Type	Characteristics/Vocabulary	Future or Challenges
<b>LDCs</b>	<b>Plantation (R p 329)</b>	What climate regions? Where?	Examples of crops specialized?
		Owners? Crops sold where? How is plantation agriculture different from the types practiced in LDCs?	Labor force/housing ( <b>powerpoint</b> )?

	<p><b>Intensive Subsistence</b> (R p 324 – 325)</p> <p>Major regions?</p> <p>What is the agricultural density? How is the work done?</p> <p>Plot sizes/structure?</p> <p>Land usage? Give examples</p> <p>These characteristics are representative of what descriptive term?</p>	<p><b>Wet rice not dominant.</b> What climate conditions? Where?</p> <p>Two most common crops? What practice is used to avoid exhausting the soil but still maximizing the amount of land planted?</p> <p><b>Wet rice dominant.</b> Where dominant?</p> <p>environmental factor required (<b>powerpoint</b>): sawah (paddy):</p> <p>How do wet rice farmers modify their land so it can be flooded (<b>powerpoint</b>)?</p> <p>double cropping:</p>
<p><b>LDCs</b></p>	<p><b>Shifting cultivation</b> (R p 326 – 327)</p> <p>What type of climate region/biome? Describe two chief characteristics.</p> <p>Describe the two distinctive features of shifting cultivation.</p> <p>How is the land owned? swidden:</p> <p>Describe the cyclical nature of land use.</p> <p>What might population growth require? What is the visual appearance of the fields, as opposed to fields in developed countries?</p> <p>% of world's land? How does that compare to other types of agriculture? What % of the world's population is engaged in shifting cultivation? Why the difference between these two numbers?</p>	<p>Trend in the amount of land dedicated to shifting cultivation? What competing activities are replacing shifting cultivation?</p> <p>Why do defenders of shifting agriculture say it is environmentally sound?</p> <p>What process contributes to climate change?</p>
	<p><b>Pastoral Nomadism</b> (R p 328)</p> <p>What is it? Best climate? Where? Examples of nomadic groups?</p> <p>How do pastoral nomads use their herds?</p> <p>How do they view their herds? How do the nomads feed themselves?</p> <p>What are the four major types of animals? Describe their pattern of movement.</p> <p>transhumance:</p> <p>pasture:</p>	<p>How has modern tech. threatened the pastoral nomadism lifestyle?</p> <p>What would govts prefer to use the pastoral nomads' land for?</p>

Area	Type	Characteristics/Vocabulary	
MDCs	Livestock Ranching (R p 334)	<p>How is ranching land usage described? <span style="float: right;">In what areas is it best adapted for?</span></p> <p>What areas/countries are leading producers of meat?</p> <p>What group of countries has seen the largest growth in ranching? What is their relative share of meat production today?</p> <p>Where are cattle fattened today?</p> <p>What is a CAFO? What shift does this represent in the description of land use involved in ranching? <b>(powerpoint)</b></p>	
	Mixed Crop and Livestock (Rp336)	<p>Where is this most common?</p> <p>How are animals and crops integrated? Include land usage and income breakdown.</p> <p>Advantages:</p> <p>What are the two most important crops? <b>(see powerpoint)</b> What practice has traditionally been followed? Why?</p> <p>How is this changing <b>(powerpoint)</b>?</p>	
	Dairy Farming (R p 335)	<p>Located near what? Why?</p> <p>What is this area called?</p> <p>Traditionally where has production and consumption of dairy products been concentrated?</p> <p>How and why has this changed?</p> <p>How is the location of the dairy farm with relation to the market/milkshed related to the product produced?</p>	<p>What two features of dairy farming have caused economic difficulties?</p>
	Grain Farming (R p 332)	<p>What are examples of grains?</p> <p>Who is the main consumer of grains?</p> <p>How are grains farmed in developed countries?</p> <p>What previously defined term refers to the variety found in grain farming?</p> <p>What countries are the world's largest grain producers?</p> <p>What climate are grains grown in?</p> <p>Why is wheat significant economically?</p>	
	Mediterranean (R p 333)	<p>Where does this activity primarily exist?</p> <p>How is the physical environment similar in these areas?</p> <p>What are the two most important crops in the Mediterranean region?</p> <p>What is horticulture?</p> <p>What state has a large portion of its farmland dedicated to horticulture (we will color code these areas as Commercial Gardening and Fruit Farming)?</p>	
	Comm. Gardening & Fruit (R p 333)	<p>In what areas of the U.S. does this activity predominate? Why?</p> <p>What is another name for this activity? Why?</p> <p>What are some popular items with consumers grown on "truck farms"?</p> <p>How are these products sold?</p>	

4. (Rubenstein p 330 - 331) Fishing

- a. In what two ways is water-based food acquired?
  - i. \_\_\_\_\_
  - ii. \_\_\_\_\_
- b. How much did human consumption of fish and seafood increase between 1960 and 2016? \_\_\_\_\_
  - i. What percent of calories consumed by humans is from fish and seafood? \_\_\_\_\_
- c. How has global fish production increased over the past half-century? \_\_\_\_\_
  - i. To what acquisition method (above) is this almost entirely attributable? \_\_\_\_\_
  - ii. Why has the population of some fish species declined? Define. \_\_\_\_\_
  - iii. What is the status of fish stocks according to UN? \_\_\_\_\_

5. Read "Importance of Access to Markets" (exemplified by von Thünen's model) (Rubenstein pg 337, de Blij p 376 – 377 "Understanding...")

Draw von Thünen's model (use de Blij Fig. 9-51)	Describe von Thünen's model.
	When was von Thünen's model first proposed? What is considered first by commercial farmers when deciding which crops and animals to cultivate? What two costs does the farmer compare when making this consideration?  <b>EXPLAIN</b> the pattern in von Thünen's model (link rings to economic motivation)?
(de Blij p 377) von Thünen's model is described as the first effort to do what?	What assumptions did the model make?  According to von Thünen, what could alter the basic shape of the model?  What did the model fail to take into account?

**What imprint does agriculture make on the cultural landscape? (de Blij p 381 – 386, Rubenstein p 450 – 451)**

- 6. What is a cadastral system? \_\_\_\_\_
- a. What is the prevalent survey system in the United States (west of the Appalachian Mountains)? \_\_\_\_\_
  - i. This is based on what cadastral system? \_\_\_\_\_
  - ii. What law helped to establish this cadastral system as dominant (**lecture, not the Homestead Act**)? \_\_\_\_\_
  - iii. What was the purpose of this law? \_\_\_\_\_
  - iv. What is the visual effect on the landscape of this cadastral system (**lecture**)? \_\_\_\_\_
- b. What cadastral system predominates on the eastern seaboard? \_\_\_\_\_
  - i. What is used to demarcate parcels of land under this system? \_\_\_\_\_
  - ii. Consequently, the shape of parcels of land under this system can be describes as what? \_\_\_\_\_
- c. Where was the Long-Lot Survey common? This shows the influence of what culture? \_\_\_\_\_
  - i. Describe the shape of the lots? \_\_\_\_\_
  - ii. Why do you think is a fair way of surveying land (**lecture**)? \_\_\_\_\_
- d. What is primogeniture division of land? \_\_\_\_\_
  - i. What is the impact on the landscape of using this inheritance system? \_\_\_\_\_

- ii. Where are the principal areas where this is used? \_\_\_\_\_
  - iii. What is the effect on the landscape if primogeniture is **NOT** used? \_\_\_\_\_
  - iv. Where is this system the norm? \_\_\_\_\_
- e. Rural Settlement Patterns
- i. Traditionally where did most farmers live in relation to their farmland? \_\_\_\_\_
  - ii. What kind of settlement is the most common rural residential pattern GLOBALLY in agricultural regions? Describe. \_\_\_\_\_
  - iii. How is the settlement pattern in the American Midwest different? Why? What is this called? \_\_\_\_\_
  - iv. What buildings might a prosperous American homestead include (**lecture**)? \_\_\_\_\_
- f. Briefly sketch the five village forms (Fig. 11.13).

Non-nucleated	Nucleated			
Linear	Cluster	Round	Walled	Grid

- g. What percentage of the world's population still lives in villages and rural areas (**de Blij p 384**)? \_\_\_\_\_
- i. Is the total # of rural dwellers increasing or decreasing? \_\_\_\_\_
- ii. Is the proportion of rural dwellers compared to global population as whole increasing or decreasing? Why? \_\_\_\_\_

7. **Economic challenges** faced by Subsistence and Commercial farmers (Rubenstein p 320 – 321, 339, 340, 342; de Blij p 373 – 374)

	Subsistence Farming	Commercial Farming
<b>Farming Efficiency and Production</b>	<p>(<b>Rubenstein p 342</b>) According to Ester Boserup, in what two ways can subsistence farmers increase supply of food?</p> <p>1) 2)</p> <p>(<b>Rubenstein p 339</b>) What do subsistence farmers need in order to increase production?</p> <p>Why is it difficult for them to secure these supplies?</p> <p>What do they do in order to raise the funds?</p> <p>What specific term is used to identify this type of cash crops? Examples.</p> <p>What is the dilemma that is faced by focusing on export crops?</p> <p>What illegal export crops have some in developing countries turned to?</p>	<p>(<b>Rubenstein p 320-321</b>) What has happened to the # of farms/farmers in the US in the 20<sup>th</sup> century?</p> <p>List examples of machines that have replaced manual labor.</p> <p>Besides machinery, what other advancements have aided comm. farmers? Include a couple details to help understand.</p> <p>1.</p> <p>2.</p> <p>What is the relationship between mechanization and farm size?</p> <p>Term (<b>lecture</b>)? What type of financial cost/financing does this necessitate?</p>

	Subsistence Farming	Commercial Farming
Land Use and Ownership	<p>(de Blij p 373 – 374 for this box) How is the land often held when a community engages in subsistence agriculture? What concepts are often limited and/or restricted when a community engages in subsistence agriculture?</p> <p>During the 1900s what has been the trend in the practice of subsistence agriculture? Why?</p> <p>What role did the US and other MDCs play in this process?</p> <p>Why have some farmers returned to subsistence agriculture?</p>	<p>(Rubenstein p 320 – 321 continued) What type of farm dominates commercial agriculture in the US? Provide statistic.</p> <p>(lecture) This type of farming is referred to as?</p> <p>What was the trend in land used by farming in the US during the 20<sup>th</sup> century? How was this achieved?</p> <p>Why has the acreage of farmable land declined in the 21<sup>st</sup> century?</p> <p>Term (lecture)? The loss of what particular type of land is the most serious problem (p 340)?</p>

8. **Agricultural Environmental Sustainability** (detail the issues related to sustainability faced by both subsistence and commercial farmers?)  
(Rubenstein p 341, 346 – 349)

- a. What is desertification? \_\_\_\_\_
  - i. By what more precise term can this process be called? \_\_\_\_\_
  - ii. What subsistence agricultural activity is this associated with? \_\_\_\_\_
    1. What three activities are most responsible for desertification? \_\_\_\_\_
  - iii. How much land is removed from agricultural production each year due to desertification (use the equivalency it is easier to understand)? \_\_\_\_\_
- b. How does conventional farming increase soil erosion in the American Midwest (Rubenstein p 347)? \_\_\_\_\_
  - i. Briefly describe three soil cultivation methods that reduce soil erosion and runoff.
    1. \_\_\_\_\_
    2. \_\_\_\_\_
    3. \_\_\_\_\_
- c. (Rubenstein p 346) What type of farming has grown the most rapidly in developed countries? \_\_\_\_\_
  - i. Define \_\_\_\_\_
    1. What sustainable practice involving complementary activities is stressed in organic farming? \_\_\_\_\_
    2. What methods prevalent on other commercial farms does organic farming not use? List. \_\_\_\_\_
- d. (Rubenstein p 348) What region of the US has grown rapidly despite limited supplies of water? \_\_\_\_\_
  - i. What does California contribute to US agricultural production? \_\_\_\_\_
  - ii. (Inset) What has California experienced recently which called US food production into doubt? \_\_\_\_\_
    1. What percentage of California's water usage is through agriculture? \_\_\_\_\_
    2. What is one way that homeowners and municipalities are conserving water in California? \_\_\_\_\_

9. **Food Security** (Rubenstein p 312 – 313, 314 – 315, 349) Food Supply and Distribution Issues

- a. What is the common name for the unit of measurement of dietary energy? \_\_\_\_\_
  - i. What is the min. amt. of calories that an avg. individual needs in order to maintain a moderate level of activity? \_\_\_\_\_
  - ii. What is the average worldwide consumption? \_\_\_\_\_
    1. What is the average daily consumption in developing countries? \_\_\_\_\_ In sub-Saharan Africa? \_\_\_\_\_
      - What does this indicate? \_\_\_\_\_
    2. What is the avg. American consuming? \_\_\_\_\_ What health problem in America has this resulted in? \_\_\_\_\_
      - (Inset) What other problem exists with the American food supply? \_\_\_\_\_

- What particular fruits and vegetables have been found to be pesticide-ridden? \_\_\_\_\_

b. **(Rubenstein p 314 – 315)** What is the UN definition of “food security”? \_\_\_\_\_

i. What percentage of the world’s population does not meet the above standard? \_\_\_\_\_

ii. What is undernourishment? \_\_\_\_\_

1. In what two world regions is undernourishment most prevalent (provide %)? \_\_\_\_\_

2. What is the worldwide trend in the total number of undernourished people (provide %)? \_\_\_\_\_

iii. What is the greatest challenge to food security in the 21<sup>st</sup> century? \_\_\_\_\_

1. What percent of income is spent on food in developed countries? \_\_\_\_\_

- What keeps food prices down in developed countries? \_\_\_\_\_

2. What percent of income is spent on food in sub-Saharan African countries? \_\_\_\_\_

- To what four factors does the UN attribute record high food prices in developing countries?

○ \_\_\_\_\_

○ \_\_\_\_\_

○ \_\_\_\_\_

○ \_\_\_\_\_

c. **(Rubenstein p 349)** How do government policies affect food supply, cost and distribution?

i. What do some governments do in order to meet the demands of their rapidly urbanizing populations? What effect does this have on farmers/agricultural production? \_\_\_\_\_

ii. Detail the three US government policies designed to improve the financial position of farmers.

1. \_\_\_\_\_

2. \_\_\_\_\_

- **(lecture)** By what other term are these payments called? \_\_\_\_\_ Avg. cost to taxpayers/year? \_\_\_\_\_

3. \_\_\_\_\_

- What other government program can be considered support for farmers as well? Why? \_\_\_\_\_

iii. What is the fundamental irony in how governmental policy affects food production? \_\_\_\_\_