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# Unit 5

# Agriculture &

# Rural Land Use

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This PPT has been created using the information from the *AMSCO Human Geography: Preparing for the Advanced Placement Examination* book.  
Palmer, David. *AMSCO Advanced Placement Human Geography*. Perfection Learning, 2019.



**UNIT 5 – AGRICULTURE, FOOD, & RURAL LAND USE**  
**CH 13: AGRICULTURAL REGIONS**

***“Without agriculture it is not possible to have a city, stock market, banks, university, church or army. Agriculture is the foundation of civilization and any stable economy.”***



**-Allan Savory, biologist and farmer, Zimbabwe**

# ESSENTIAL QUESTION



Why does agriculture vary  
so greatly around the  
world?

# OVERVIEW

- Two forces that shape agriculture are **physical geography** and **climate**.
- Climate and landforms determine which crops can be grown and what animals can be raised (example: coffee in low latitudes)
- Economics, the workings of supply and demand, influence the competing use of land. Consumer demand influences what farmers will decide to grow.

# ENDURING UNDERSTANDING (5.B)

By the end of this section, you will *understand* that **major agricultural regions reflect physical geography and economic forces.**

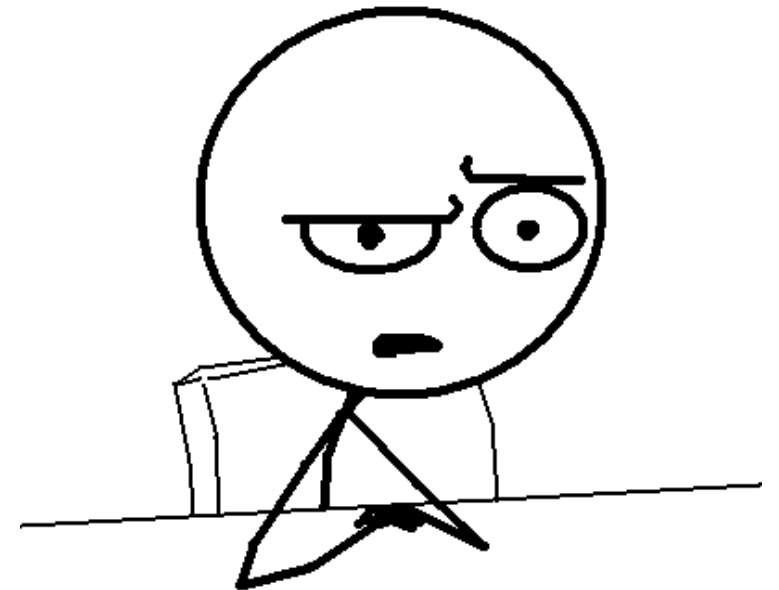


# LEARNING OBJECTIVE (5.B.1)

By the end of this section, you will *be able to identify* **agricultural production regions associated with major bioclimatic zones.**

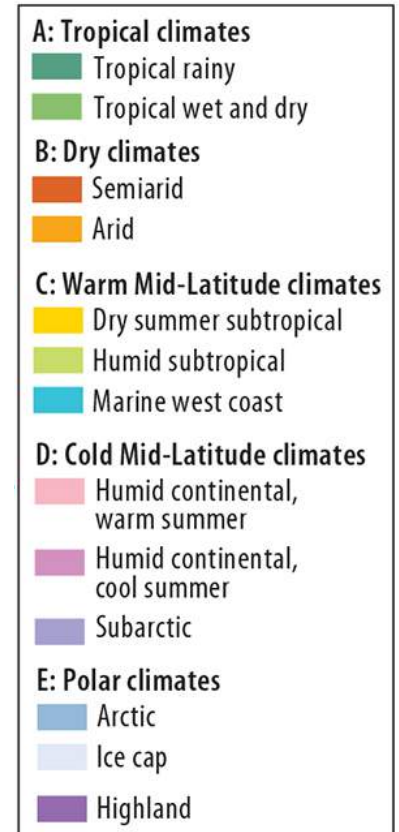
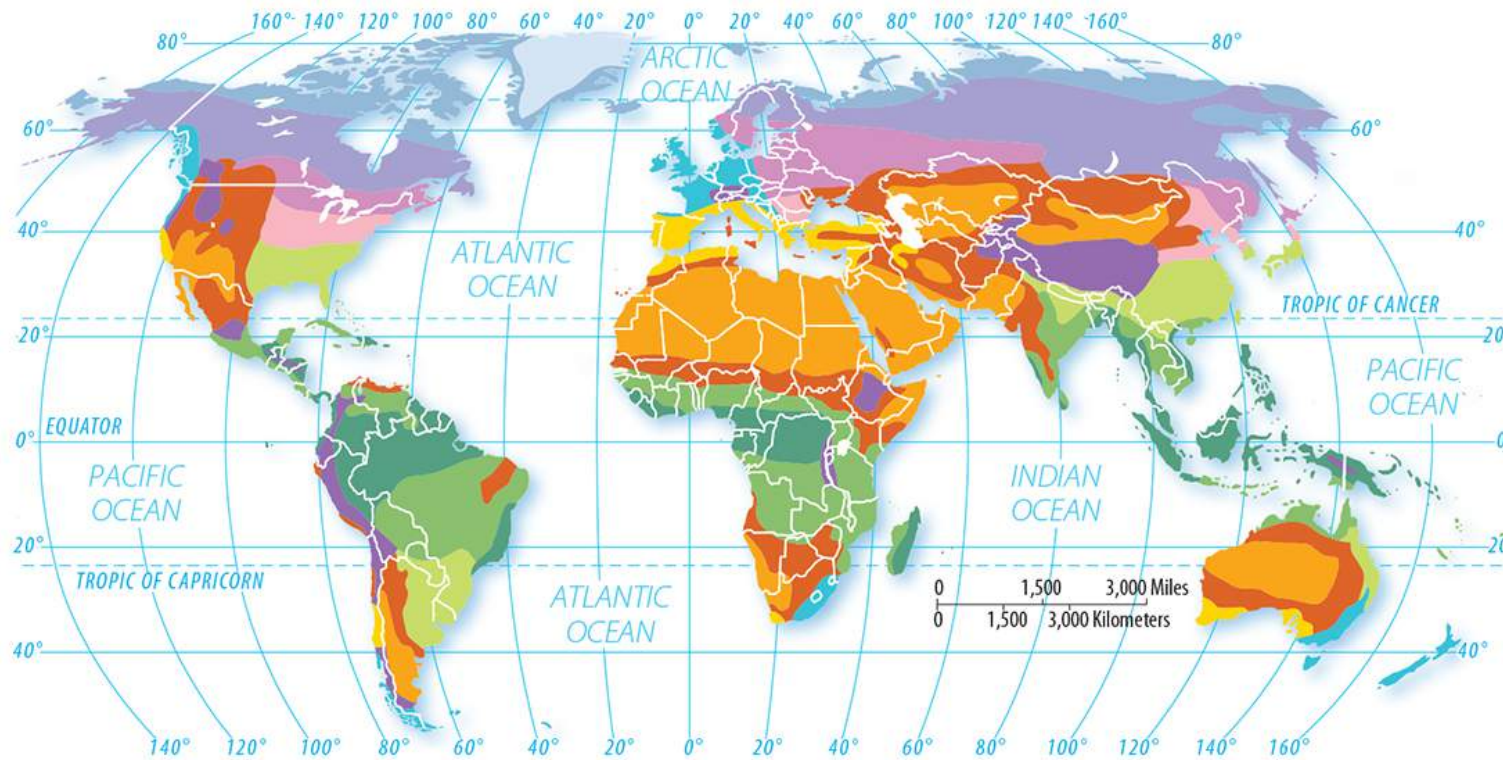


**Wait, what?!**



# UNDERSTANDING THE TERMS

**Agricultural production region** simply refers to *where* agriculture is practiced. A **bioclimatic zone** is a broad zone of vegetation that corresponds to the average annual temperature at different latitudes and altitudes.





# LEARNING OBJECTIVE (5.B.1)

So let's try this again...

By the end of this section, you will *be able to* **identify agricultural production regions associated with major bioclimatic zones.**

Students will know that:

- a. Plant and animal production is dependent on climatic conditions, including spatial variations in temperature and rainfall.
- b. Some agricultural regions are associated with particular **bioclimatic zones** (e.g., Mediterranean, shifting agriculture, pastoral nomadism).

# CLIMATE AND AGRICULTURE (PG. 209)

## Climate Conditions and Agricultural Production

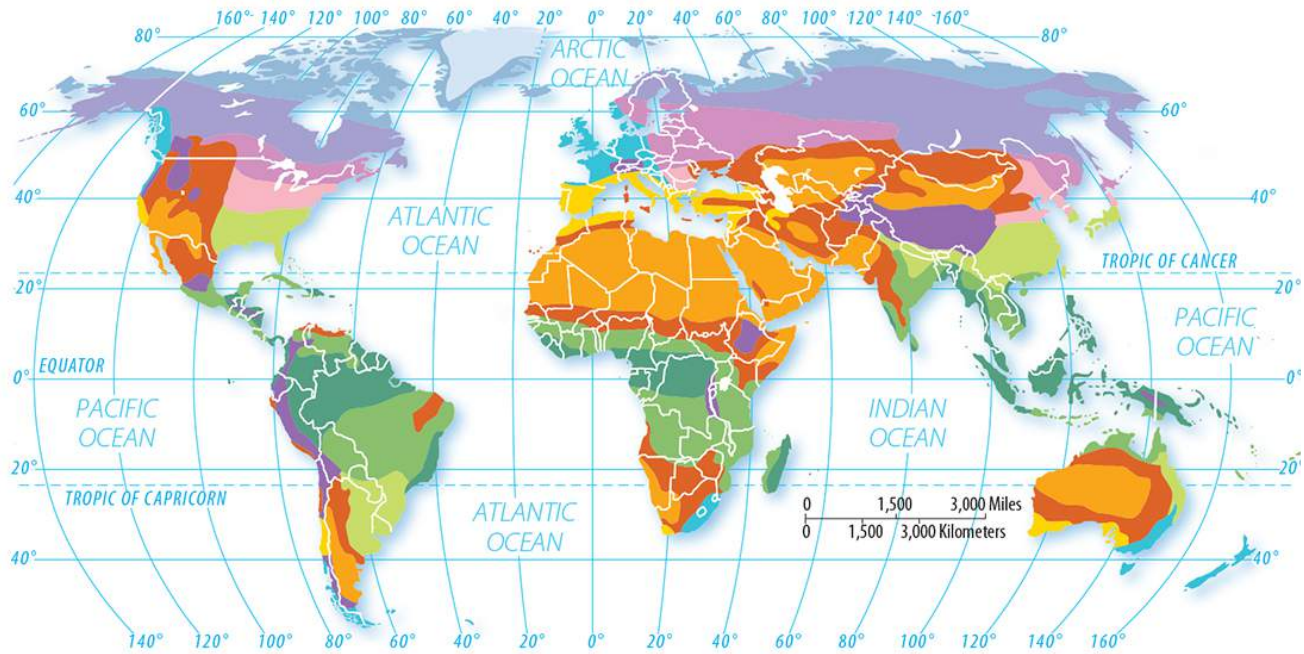
- Most of the earth's land surface supports some type of agricultural activity.
- Exceptions: high latitudes around the north and south poles and high altitudes like the tops of mountains.
- **Derwent Whittlesey**
  - In 1936, Whittlesey identified *eleven* main agricultural regions.



# CLIMATE AND AGRICULTURE (PG. 209)

## **Climate Conditions and Agricultural Production**

- Compare the two maps on the next slide.
- Do the agricultural regions match the climate regions more closely in the developed regions of North America and Europe or in the developing regions of Latin America, Africa, and Asia?



## AGRICULTURAL REGIONS

| <b>Agricultural Practice</b>     | <b>Climate</b>                | <b>Locations</b>  |
|----------------------------------|-------------------------------|---|
| <b>Pastoral Nomadism</b>         | Drylands                      | <ul style="list-style-type: none"><li>• Southwest, Central, and East Asia</li><li>• North Africa</li></ul>                            |
| <b>Shifting Cultivation</b>      | Tropical                      | <ul style="list-style-type: none"><li>• Latin America</li><li>• Sub-Saharan Africa</li><li>• Southeast Asia</li></ul>                 |
| <b>Plantation</b>                | Tropical/Sub-Tropical         | <ul style="list-style-type: none"><li>• Latin America</li><li>• Sub-Saharan Africa</li><li>• South and Southeast Asia</li></ul>       |
| <b>Mixed Crop/<br/>Livestock</b> | Cold and Warm<br>Mid-Latitude | <ul style="list-style-type: none"><li>• Midwestern United States and<br/>Canada</li><li>• Central Europe</li></ul>                    |
| <b>Grain</b>                     | Cold Mid-Latitude             | <ul style="list-style-type: none"><li>• North Central United States</li><li>• South Central Canada</li><li>• Eastern Europe</li></ul> |

|                              |                            |   |
|------------------------------|----------------------------|---|
| <b>Commercial Gardening</b>  | Warm Mid-Latitude          | <ul style="list-style-type: none"> <li>• Southeastern United States</li> <li>• Southeastern Australia</li> </ul>  |
| <b>Dairy</b>                 | Cold and Warm Mid-Latitude | <ul style="list-style-type: none"> <li>• Northeastern United States</li> <li>• Southeastern Canada</li> <li>• Northwestern Europe</li> </ul>  |
| <b>Mediterranean</b>         | Warm Mid-Latitude          | <ul style="list-style-type: none"> <li>• Southern coast of Europe</li> <li>• Northern coast of Africa</li> <li>• Pacific coast of the United States</li> <li>• Southern tip of Africa</li> <li>• Chile</li> </ul> |
| <b>Livestock Ranching</b>    | Drylands                   | <ul style="list-style-type: none"> <li>• Western North America</li> <li>• Southeastern South America</li> <li>• Central Asia</li> <li>• Southern Africa</li> </ul>  |
| <b>Intensive Subsistence</b> | Warm Mid-Latitude          | <ul style="list-style-type: none"> <li>• South, Southeast, and East Asia</li> <li>• Near large populations</li> </ul>   |
| <b>None</b>                  | Polar                      | <ul style="list-style-type: none"> <li>• Arctic</li> <li>• Antarctica</li> </ul>  |

# CLIMATE AND AGRICULTURE

## Climate Conditions and Agricultural Production

- Climate influences agriculture.
  - **Example:** animal herding takes place in drier climates (western U.S., North Africa, Southeast Asia)
- However, economics can influence animal herding too.
  - **Pastoral nomadism** in the developing world – people travel from place to place with their herds of animals.
  - **Ranching** in the developed world – livestock graze over large areas while the owners stay in the same place.





# CLIMATE AND AGRICULTURE

## Climate Conditions and Agricultural Production

- Technology can overcome climate.
  - **Example:** Iceland and Greenland are cold but farmers can grow crops in greenhouses.
  - **Example:** tomatoes, once grown mostly in Florida and California, are now grown in Canadian indoor facilities.
- Culture can shape economic activity.
  - **Example:** consider food – southwest Asia is good for raising hogs but the region is mostly Muslims and Jews who object to eating hogs.

# CLIMATE AND AGRICULTURE

## **Agricultural Regions Associated with Bioclimatic Zones**

- Crops and livestock thrive best in specific bioclimates.
  - Pastoral nomadism
  - Shifting cultivation
  - Plantation agriculture
  - Mixed crop/livestock farming
  - Grain farming
  - Commercial gardening (truck farming)
  - Dairy farming
  - Mediterranean agriculture
  - Livestock ranching

# CLIMATE AND AGRICULTURE

## Pastoral Nomadism

- A form of subsistence agriculture practiced in the developing world
- Arid and semi-arid climates
- **Nomadism:** a way of life of peoples who do not live continually in the same place but move cyclically or periodically.
- Rely on animals – cattle, camels, reindeer, goats, yaks, sheep, and horses provide meat, milk for food, and hides for clothing and shelter.
- Nomads travel and trade meat for crops with other subsistence farmers.
- Regional animals: south central Asia and east Africa (cattle adapt to hot climate); deserts of the Middle East (camels survive without water); northern Siberia (reindeer thrive in cold weather)

# CLIMATE AND AGRICULTURE

## Shifting Cultivation

- Subsistence agriculture where farmers in tropical climate regions move from one field to another.
- Also called **slash and burn** or **swidden** agriculture
- Clear the land with fire (enriches nutrient-poor soil by adding nitrogen to it), plant and harvest crops, and when the soil is less fertile, they move to another location and repeat the process.
- Rice in SE Asia
- Maize (corn) in South America
- Millet and sorghum in sub-Saharan Africa
- One field, usually communal, is used for a variety of crops.



# CLIMATE AND AGRICULTURE

## **Plantation Farming**

- Biproduct of colonialism
- Large commercial farm that specializes in one crop
- Usually in low latitudes (the tropics) in hot, humid climates with a lot of rain.
- Labor intensive and often exploit cheap labor in nearby villages
- Processing may occur near plantation to reduce transportation costs.
- Crops include coffee, cocoa, rubber, sugarcane, bananas, tobacco, tea, coconuts, and cotton.

# Tea plantation





# CLIMATE AND AGRICULTURE

## **Mixed Crop/Livestock Farming**

- An integrated system common in *developed* regions, such as the Midwestern United States, northern Europe, and Canada but has diffused to the developing world.
- Majority of crops raised are fed to livestock fattened for eventual slaughter or fed to dairy cows.
- Animal manure is used as fertilizer.
- Owners of land and animals may be different but there is a strong interrelationship between the two.
- Most common in the United States: soybeans and corn



# CLIMATE AND AGRICULTURE

## Grain Farming

- Regions too dry for mixed crop, farmers often raise wheat
- Prairies and plains
- Top producers: China, India, Russia, and the United States
- Type of wheat reflects climate
  - **Spring wheat** – planted in early spring and harvested in the fall; cold regions like North Dakota, South Dakota, Montana, and parts of Canada
  - **Winter wheat** – planted in the fall and harvested in early summer; warmer regions like Kansas, Oklahoma, and Colorado



# CLIMATE AND AGRICULTURE

## Commercial Gardening

- In the United States, commercial gardening and fruit farming is known as **market gardening** and is found mostly in California and the Southeast (long growing seasons)
- Also called **truck farming** as products were traditionally driven to urban markets to sell.
- Today, most products are sold to companies for canning or freezing.
- Most common in United States: lettuce, broccoli, apples, oranges, and tomatoes.



# CLIMATE AND AGRICULTURE

## Dairy Farming

- Traditionally, dairies and creameries were local and supplied to customers in small geographic areas; currently in LDCs.
- Late 1900s, improvements in refrigeration and transportation expanded the **milk shed**, geographic distance that milk is delivered.
- Large corporate dairy operations replaced smaller family-owned farms (decreased farms but increased milk production).
- Most commercial dairy farms are in the US, Canada, Europe, and other highly developed countries near urban centers and transportation corridors.
- Some countries (Argentina, Brazil) saw an increase in a demand without an increase in consolidation, leading to more dairy farms.





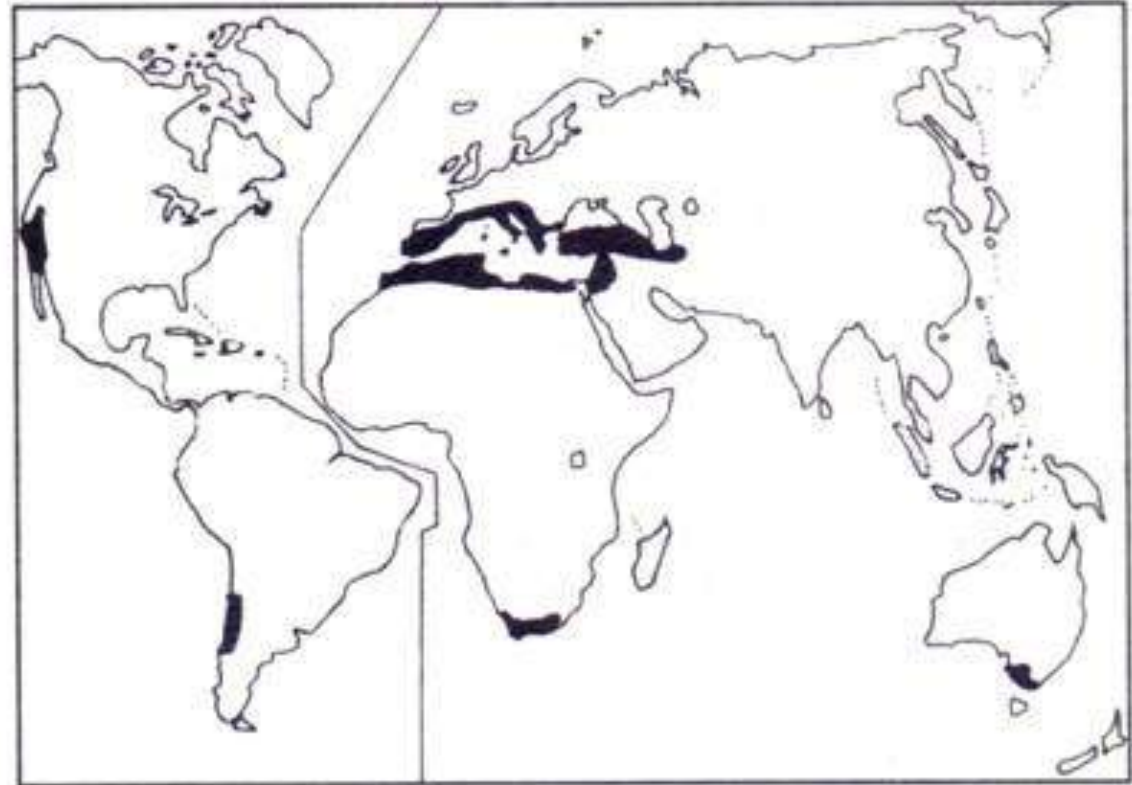
# CLIMATE AND AGRICULTURE

## Mediterranean Agriculture

- Regions with hot-dry summers, mild winters, narrow valleys, and often some type of irrigation system.
- Examples: southern Europe, northern Africa, southwestern Africa, southwestern Asia, southwestern Australia, California, and central Chile.
- Crops: figs, dates, olives, and grapes
- Herders practice **transhumance**, seasonal herded of animals from higher elevations in the summer to lower elevations in the winter.
- Principal livestock: goats and sheep (due to rugged terrain)



Areas of Mediterranean agriculture in the world



# CLIMATE AND AGRICULTURE

## Livestock Ranching

- Commercial grazing of animals confined to a specific area.
- Regions that are too dry for growing crops in large quantities
- Prevalent in the western United States, pampas of Argentina, southern Brazil, Uruguay, parts of Spain and Portugal, China, and central Australia.

