

## **Agriculture – Key Words and Concepts**

*Agriculture:* a science, an art, a cultural practice, and a business directed at the cultivation of crops and livestock for sustenance and for profit. The conscious manipulation of plants and animals to produce food, fiber, drink, and other necessities.

A system of food, feed, and fiber production involving a variety of domesticated plants and animals together with a sustained input of human effort for cultivating the soil and for tending and harvesting the crops.

*Agricultural society:* one which has become dependent on cultivated foods and which commits its resources to the maintenance of its agricultural systems

### **Historical overview of agriculture and population growth**

hunting and gathering  
origins and spread of agriculture  
what factor lead to rise of agriculture?  
domesticated plants  
centers of plant domestication

market/commercial agriculture  
enclosure of the commons  
innovations in crop rotations  
early mechanization of agriculture  
impact of new world crops on old world agriculture  
2 ways (only 2 ways) to increase agricultural output  
guano, Chilean nitrates  
biological controls of pests  
entry of science into agriculture

mechanization of agriculture  
industrialization of agriculture  
important 20<sup>th</sup> century transformations of agriculture  
hybrid seeds  
Green Revolution technology  
increased use of pesticides  
internationalization of agriculture (CIMMYT, IRRI, CIAT, CGIAR) – rationale, impact  
environmentalism and agriculture  
DDT  
genetic engineering  
integrated pest management  
minimum tillage  
sustainable agriculture

1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> agricultural revolutions

## **The Green Revolution**

doubly green revolution

Green Revolution technology

initial centers of experimentation

crops

why were historic yields lower in the lower latitudes?

challenges of hybridizing corn, wheat, rice

cross-pollination, open pollination, self-pollination

dwarf varieties

high yielding varieties

fertilizer use

package of agricultural supports

successes of Green Revolution technology

problems of, limitations of Green Revolution technology

spatial and social impacts

Green Revolution “lands”

## **genetically modified foods**

impact on food production

questions and concerns about genetically modified seeds

distribution of production of genetically modified crops

impact of public protest

potential impacts on food supply for developing countries

## **Hunger and Malnutrition**

why is food supply still a problem?

Major foodstuffs consumed

per capita calorie production and per capita calorie consumption

minimum calorie requirements

poverty and hunger

poverty and malnutrition

impact of changing population dynamics on food demand

other factors affecting food demand

vulnerable populations

Food and Agriculture Organization

World Food Summit

## **Food Aid**

donors, recipients

food for development

food for emergency relief

problems with food aid

**Globalization of food and agriculture** – technological and institutional forces affecting globalization of agriculture. Transportation, mechanization, WTO, development efforts

## **Basic vocabulary for agriculture**

subsistence  
traditional  
commercial  
modern  
monoculture  
polyculture  
mixed cropping  
agroforestry  
kitchen/household/dooryard gardens  
intensive  
extensive  
shifting, slash-burn cultivation  
land tenure, land holding patterns  
plantation agriculture  
peasant farming  
paddy rice, irrigated rice  
upland rice  
dairying  
ranching  
pastoralism, herding  
transhumance  
horticulture  
agribusiness  
mixed farming (grain and livestock)  
truck farming  
organic farming  
community based agriculture

### ***requirements for plant growth:***

soil  
soil nutrients (nitrogen, phosphate, potassium– primary nutrients)  
water  
light (day length)  
appropriate temperatures for plant

you should also have a basic idea of the global distribution of agricultural types