

AIM: \_\_\_\_\_

Human Nutrition

<b>Malnutrition : poor nutrition (imbalanced, lacking, or in excess)</b>	
<b><u>Overnutrition:</u></b>	<b><u>Undernutrition</u></b>
Diseases:	Diseases:

**1. Traditional Subsistence Agriculture**

- grow what you need
- human and animal labor
- slash and burn & shifting cultivation esp.in tropical forest regions
- nomadic herding on marginal land
- polyculture
- intercropping
- agroforestry

**2. Traditional Intensive Agriculture**

- grow to eat and sell for income
- increased human / animal labor to increase yields
- polyculture
- increased water use
- fertilizer use

**3. Industrialized Agriculture (high input)**

- monoculture
- uses large amounts\_of water, fertilizers, pesticides, fossil fuels
- chemical use, soil degradation, waste, pesticide resistance

**4. Green Revolutions - HYVs** - the production of more food per acre of cropland

**First Green Revolution (1950-1970): Developed Countries**

- selective breeding and hybridization monocultures
- genetically engineered high-yield key crops: wheat, rice, corn

**Second Green Revolution (since 1967): Developing Countries**

- fast-growing dwarf varieties of rice and wheat
- varieties of corn can be planted more densely

Pros and Cons:

- can protect biodiversity because less land is needed and virgin land is not encroached upon
- uses large amounts\_of water, fertilizers, pesticides, fossil fuels (machinery and pumping water)

## BOTANY OF DESIRE: Video Study Guide

1. What is the most interesting fact about apple seeds that you probably didn't know?

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2. How do horticulturalists perpetuate traits of an apple that people like?

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3. Why do tulip farmers perform manual pollination? What are they hoping to achieve?

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4. How did modern cultivation of apples by cloning cause problems for farmers?

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5. How did the Peruvians achieve success in potato farming?

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6. How do farmers that engage in polyculture stay in business?

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7. What was Monsanto's agricultural breakthrough?

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8. What is the impact on pest control from our increasing use of insecticide-encoding genes from the soil bacterium *Bacillus thuringiensis* (Bt)?

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