

Agriculture & Aquaculture

Agriculture



- Farming land for the growth of crops and animals
- Controlled by people
- Inputs:
 - Space
 - Water (irrigation)
 - Fertilizer
 - Pesticides/herbicides/fungicides

Benefits



- Reliable/predictable food supply
- Use of machinery increases efficiency
- Permits diversification of work force

Drawbacks



- Rapid depletion of soil nutrients
- Increase in erosion
- Machinery burn fossil fuels
- Decrease in biodiversity
- Chemical inputs lose effectiveness over time

Sustainable Agriculture



- Focuses on the long-term usability of the land as well as meeting present needs
- Techniques include
 - Crop rotation—protects soil nutrients
 - Multi-crop fields—reduces pests/disease
 - Organic pest controls—minimizes chemicals
 - Avoid overgrazing—continuous grass and prevents erosion

Aquaculture



- Water-based farming of fish and other seafood
- Controlled by people
- Inputs:
 - Space/tanks/netting—can be in existent aquatic ecosystem or 100% manufactured
 - Food
 - Water (manufactured)

Benefits



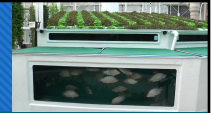
- Prevents overfishing of natural populations
- Reliable food supply
- Reduced heavy metal contamination of fish
- Less labor intensive than fishing

Drawbacks



- Higher chance of disease among fish
- Very high level of organic wastes in water (i.e. phosphate and nitrate!)

Sustainable Aquaculture



- Focuses on the long-term usability of the water as well as meeting present needs
- Techniques
 - Concentrate/remove organic wastes for use as fertilizer
 - Tanks directly linked to plants (hydroponics)



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