

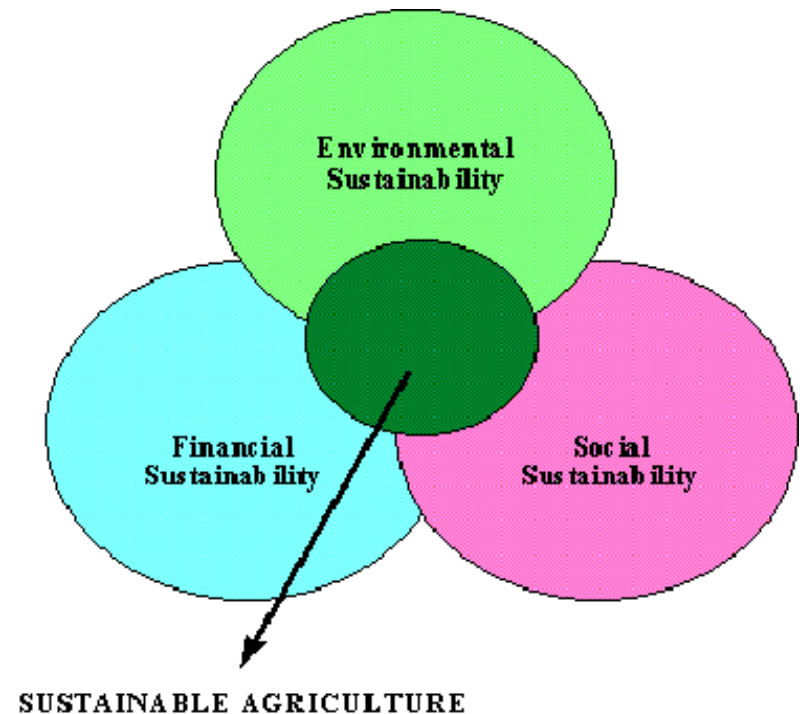


SUSTAINABILITY



SUSTAINABILITY

- ▶ The capacity to maintain a certain process or state indefinitely
- ▶ Examples:
 - ▶ Connecting different forest/plant regions allowing wildlife to move through each
 - ▶ Selective harvesting of only mature individuals



SUSTAINABLE AGRICULTURE

- ▶ Kenya:
 - ▶ Farmers are planting weeds to trap insects and prevent them from damaging maize crops
- ▶ Bangladesh:
 - ▶ Raising fish in flooded rice paddies
- ▶ Use biodegradable herbicides
- ▶ Leave fields to sit empty for decades to replenish nutrients in the soil



UNSUSTAINABLE AGRICULTURE IN CANADA

- ▶ Chemicals from pesticides and manures can run off and contaminate water killing other species
- ▶ Tilling soil puts air into the soil and increases erosion and loss of soil nutrients



SUSTAINABLE PRACTICES

STRATEGY	EXPLANATION
Crop rotation	Crops do not become vulnerable to specific pests and diseases
Green Manure	Placing decomposing plants back into soil increase nutrients in soil
Biological control	Natural predators such as birds and spiders can control some insect pests
Genetically modified crops	Genetically engineer plants to possess desired traits (ie. Repel insects)



WATER MANAGEMENT

- ▶ Canadian farmers use about 9% of available water for irrigating crops
- ▶ Solution:
 - ▶ build farm close to streams or ponds
 - ▶ Manage water use and only use when crops need it most



SUSTAINABLE FORESTRY

- ▶ Canada has >400 million hectares of forest (10% of the world's forests)
- ▶ Maintained by **sustainable forest management**:
 - ▶ Plan use of forest
 - ▶ Reseed half of the harvested forest
 - ▶ Other half is left to reseed naturally

