

Sustainable Agriculture

- Resources can be RENEWABLE or NON-RENEWABLE

Renewable Resources

- Renewed through natural processes:
- Agriculture, Fishing, Forestry.



Non-Renewable resources

- Can not be renewed by natural processes in a short period of time:
- Fossil Fuels (Coal, Oil, Natural Gas),
- Minerals.

Sustainable/Sustainability

- Managing resources for future generations.



Agriculture



Arable vs Pastoral

- Arable Farming = Crops
- Pastoral Farming = Animals

Chemicals in Agriculture

- Used in Fertilizers, Pesticides, and Herbicides to increase crop yields.
- Pesticides help create cosmetically attractive products. Herbicides kill weeds that use up valuable nutrients and water.

Is Agriculture really Renewable?

- Use of Fossil Fuels on huge commercial farms and chemicals as fertilizers and in pesticides make agriculture non-renewable

Organic Farming

- Producing crops using natural methods rather than chemicals and fossil fuels



Integrated Pest Management

- Use natural predators instead of pesticides
- Lady bugs eat aphids
- Scrape off pests by hand with water

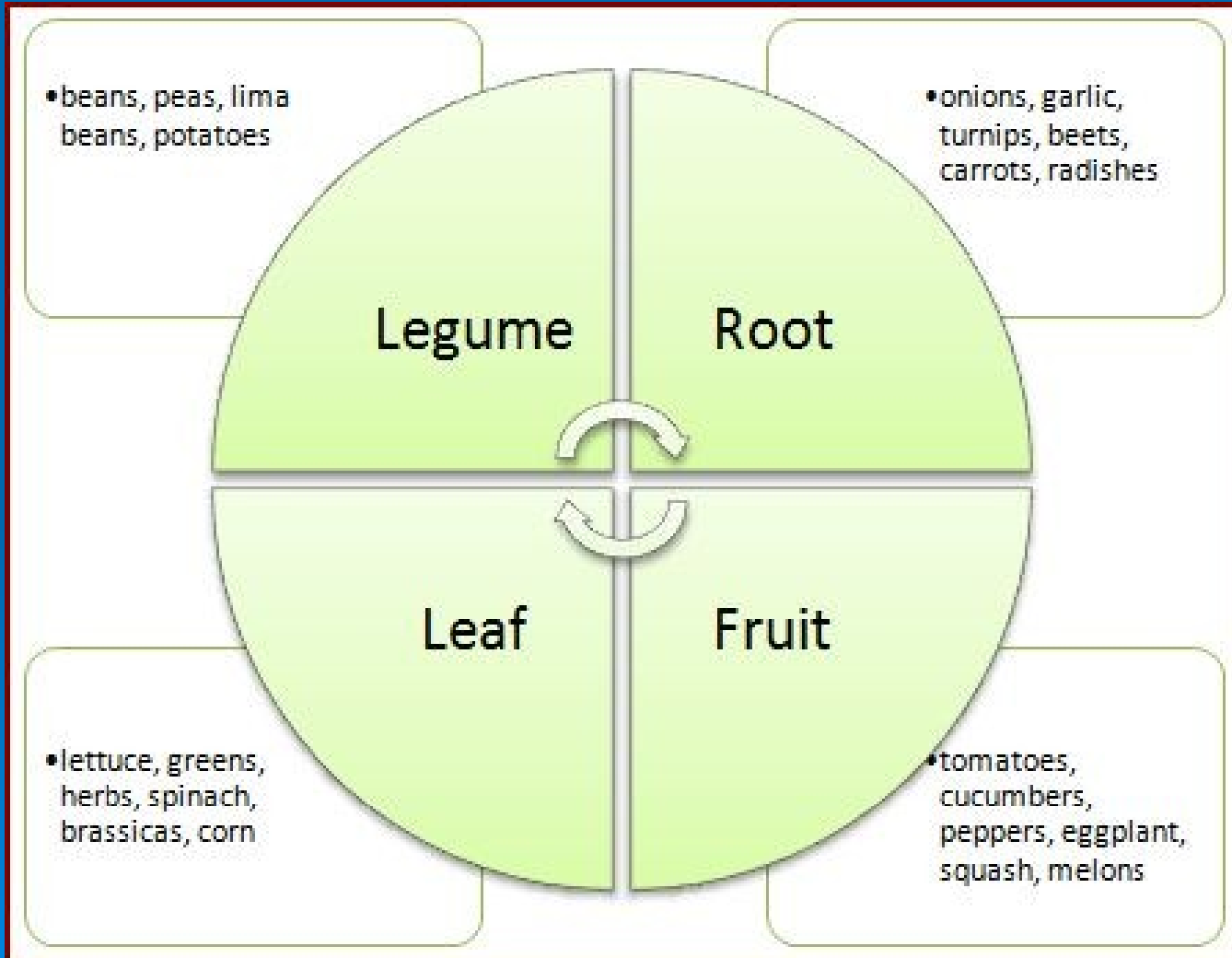


Crop Rotation

- Rotate crops leaving one field fallow (empty) each year
- Legume crops add nitrogen to soil
- Improves soil fertility



Crop rotation



Intercropping

- Growing alternate rows of different crops
- Prevents spread of pests and diseases
- Increases nutrients available



Nutrient depletion

- Overcropping can suck all of the nutrients out of the soil
- This leads to quicker erosion from wind and water

Water erosion

- Water erosion
- Gully erosion is small V-shaped gouges that form easily in unprotected soil
- Sheet erosion – gradual removal of topsoil on sloping or unprotected land



Wind Erosion

- In dry areas soil is prone to wind deflation and wind erosion



Preventing Wind Erosion



Shelterbelts

- Rows of trees planted perpendicular to prevailing winds
- Reduces wind erosion as roots bind soil
- Also provides habitat for birds that eat insects
- Plant a fruit or nut tree that can be harvested



Stubble Mulching

- Leaves stubble on the fields to prevent wind erosion
- Also adds nutrients to soil as stubble decays



Contour Ploughing

- Planting crops with the contours (slope of the land) prevents erosion



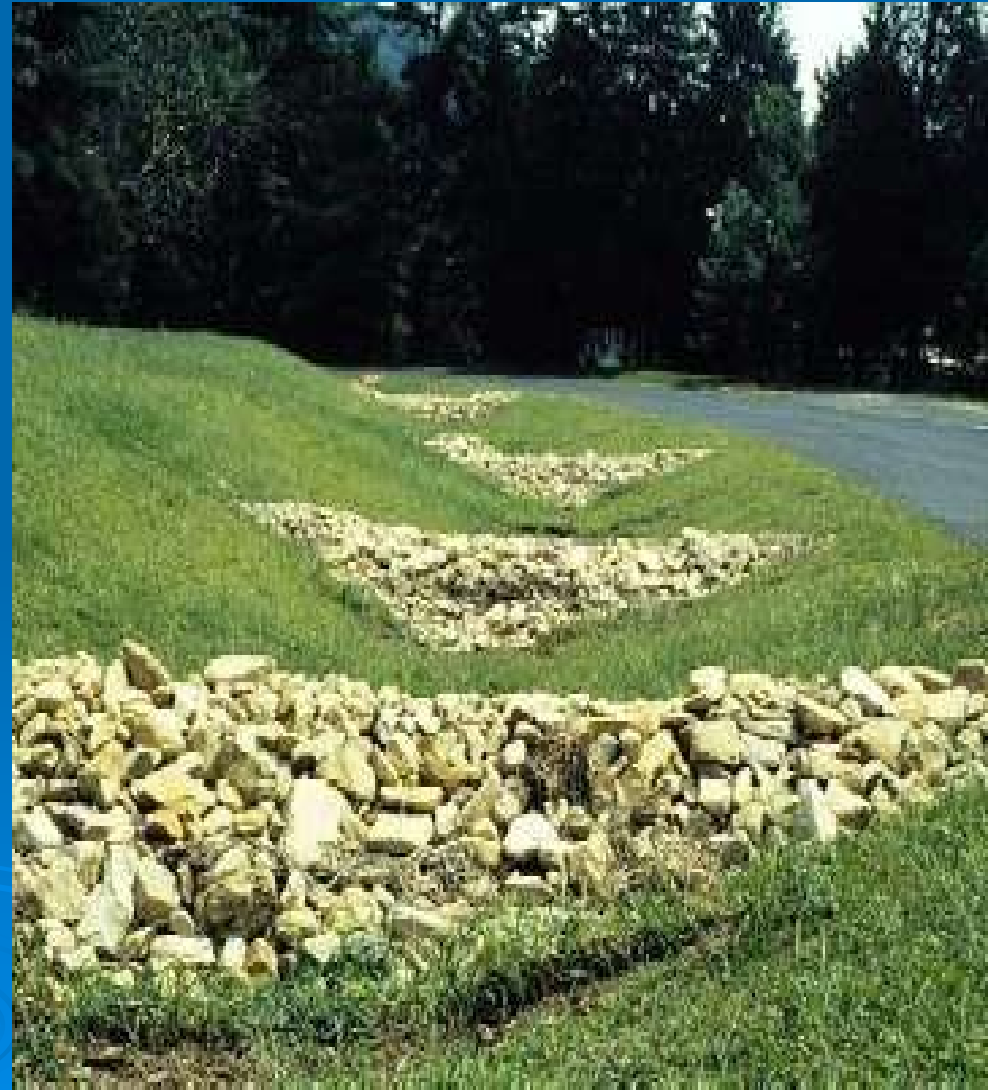
Terracing

- Prevents water erosion on steep slopes



Check Dams

- Simple dams that prevent water erosion from flooding



Revegetation

- Planting vegetation helps roots hold soil in place preventing erosion



Bunds

- Small dams used in surface irrigation that prevents water erosion



OMG GMO's

- Genetically Modified Foods
- What are they and why many scientists today in favor of them?


Global Warming

- How is Global Warming expected to increase our fresh water worries?



Fresh water

- Divided into 3 categories
 - 1) Domestic
 - 2) Industrial
 - 3) Agricultural

 - What is most of the fresh water in the World used for?
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- The background of the slide features several faint, concentric circular ripples in a lighter shade of blue, resembling water droplets or ripples on a pond, positioned in the lower right and bottom center areas.

Diversified Farm vs Monoculture

- What is the difference between a diversified farm and monoculture?
- What are the benefits and drawbacks of each?

Vocalize Localize

- What are some of the benefits of buying local produce?

