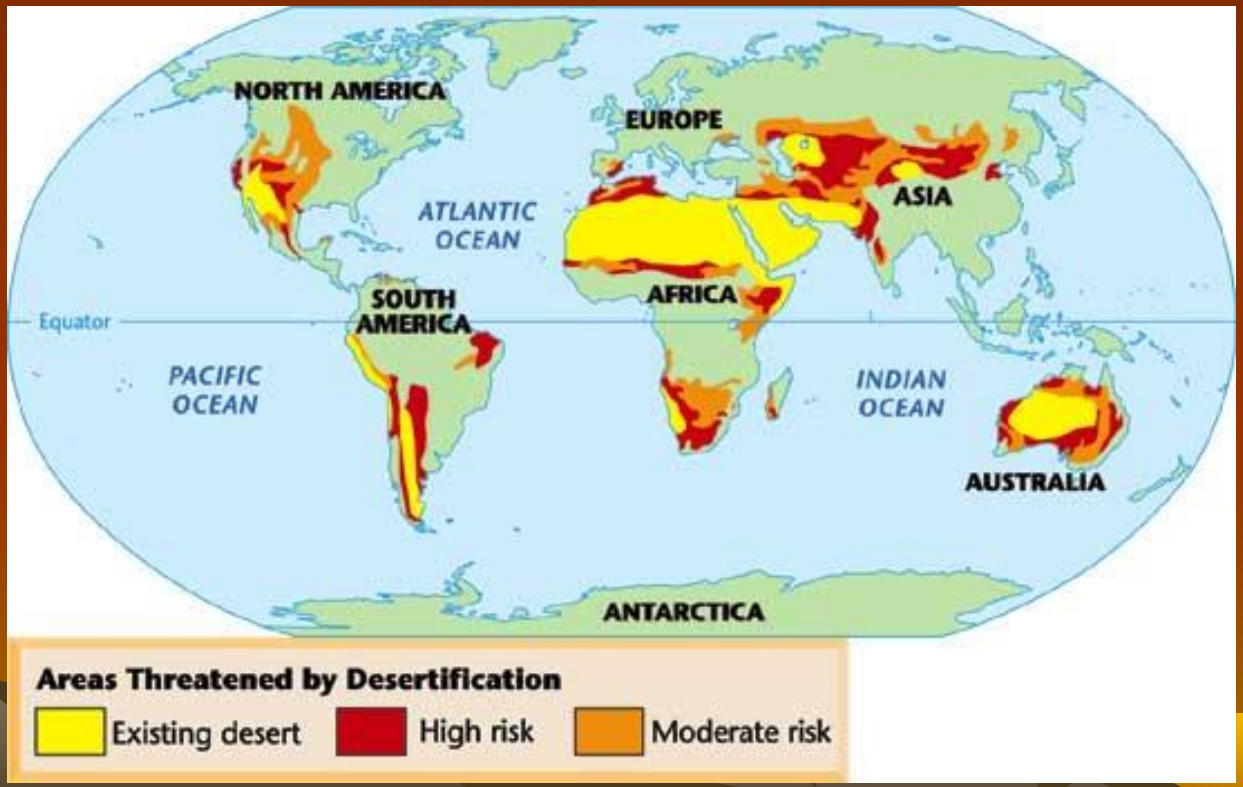
Soil Conservation

Soil Conservation

- The management of soil to prevent its destruction.

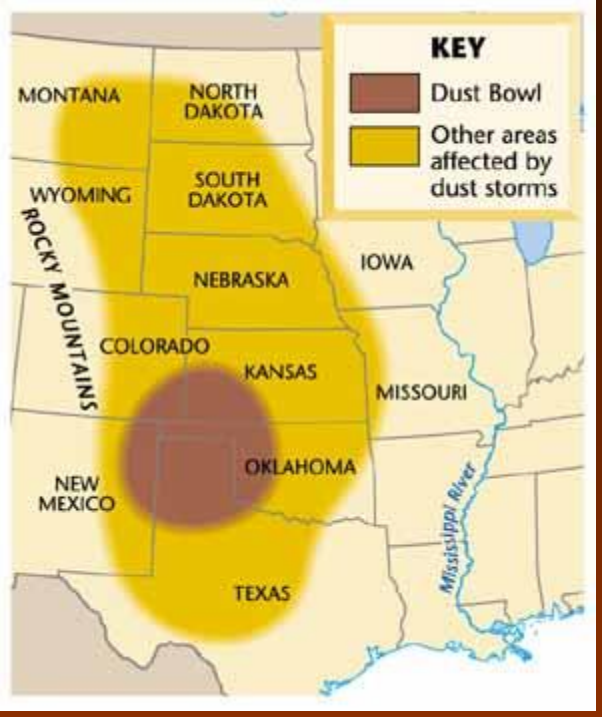
Desertification

- The advance of desert-like conditions spreading across once fertile areas.
- Caused by drought, climate change, overgrazing, and the cutting down of forests.

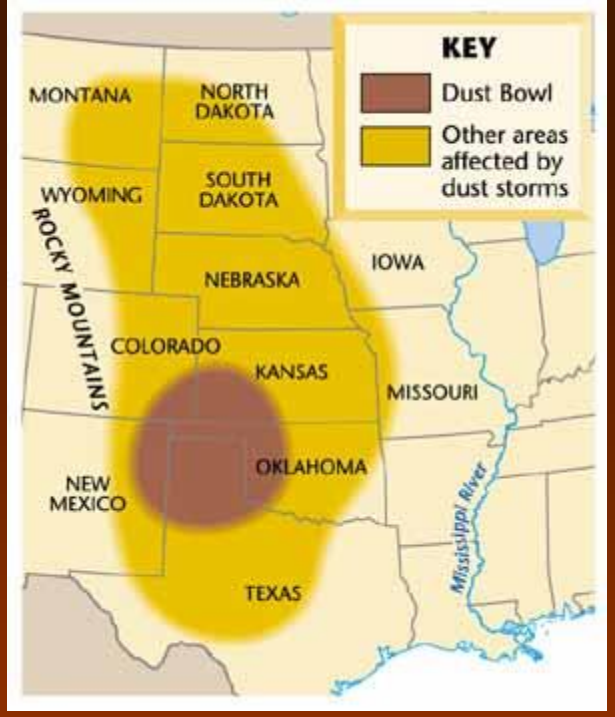


Dust Bowl

- In the 1800's settlers in the Great Plains turned the fertile, moisture laden sod into farmland.
- In drought, this land dried up and blew away as dust.
- In the 1930's, severe drought, overgrazing by cattle, and lack of plant cover allowed this soil to be blown away in great, dark clouds.
- This lasted until 1938. Many farmers in the "Dust Bowl" had to abandon their homes and move away.



Dust Bowl


KEY
Dust Bowl
Other areas affected by dust storms
MONTANA
NORTH DAKOTA
WYOMING
SOUTH DAKOTA
ROCKY MOUNTAINS
NEBRASKA
IOWA
COLORADO
KANSAS
MISSOURI
OKLAHOMA
NEW MEXICO
TEXAS
Mississippi River

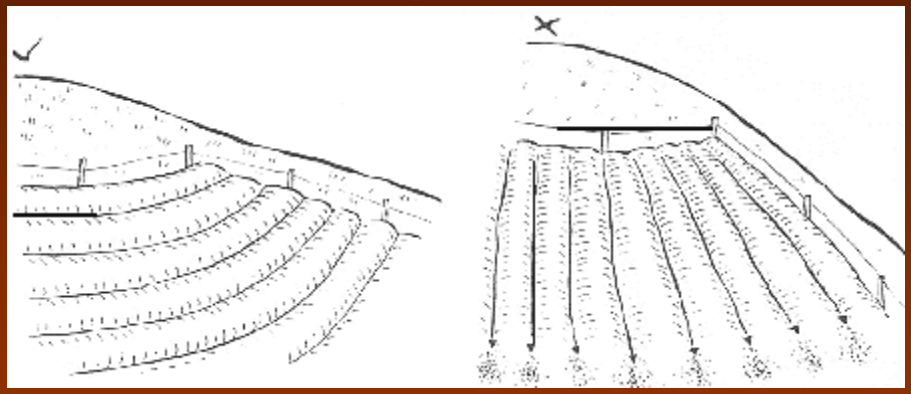
Soil Conservation

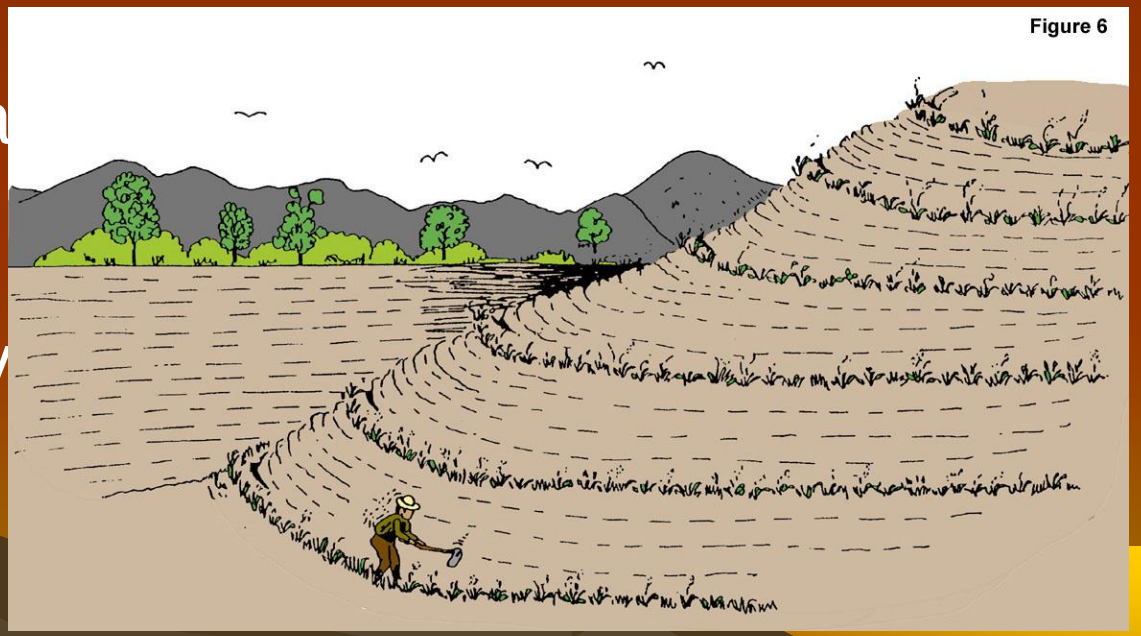
- 1. Contour Plowing
- 2. Conservation (“No Till”) Plowing
- 3. Terracing
- 4. Allowing Fields to Lie Fallow
- 5. Windbreaks
- 6. Cover Crops
- 7. Crop Rotation

Contour Plowing

(aka contour farming)

- Plowing fields along the contour lines of a slope.
- This prevents the rain runoff from making gullies and eroding the soil away.
- In contour plowing, the rows of soil act a a series of dams to prevent water from eroding topsoil away
- Can reduce the soil lost to erosion by 50%.





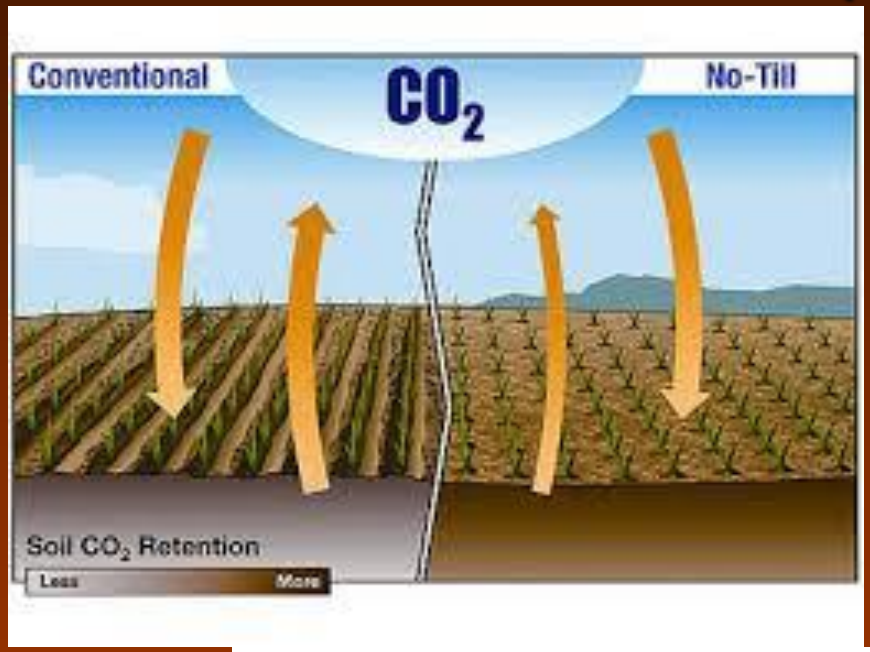
Contour Plowing

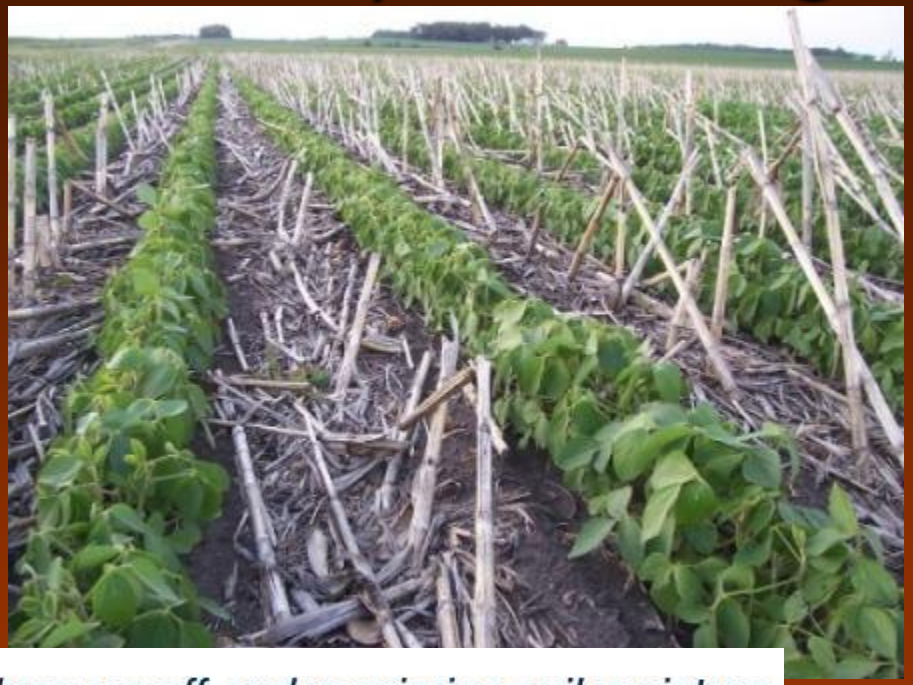
(with strip cropping)

Conservation (“No Till”) Plowing

- Farmers use machines that plow the dead stalks back into the ground.
- This helps hold the soil in place and fertilizes the soil.

Conservation ("No Till") Plowing





Increases water infiltration to reduce runoff and maximize soil moisture

Terracing

- If hills are steep, farmers can use terracing.
- Terracing changes one steep field into a series of smaller, flatter fields.

Terracing

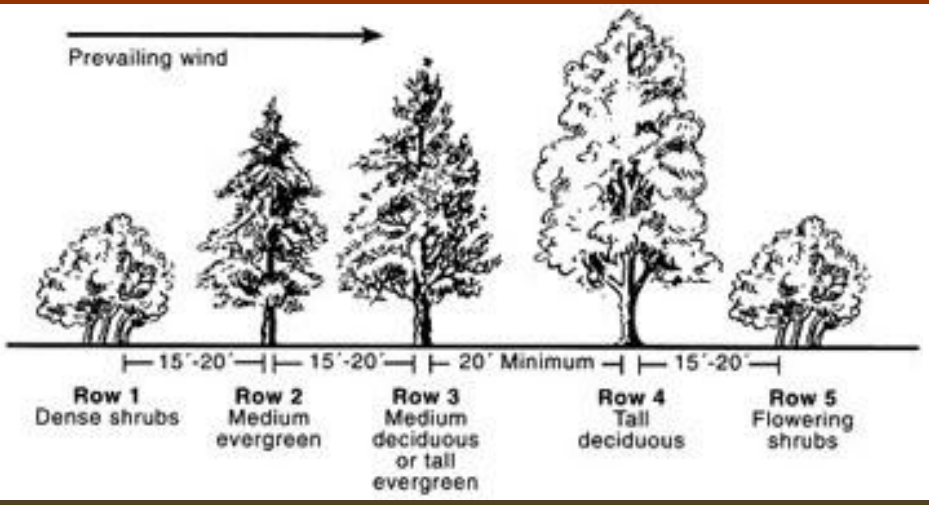
Terracing

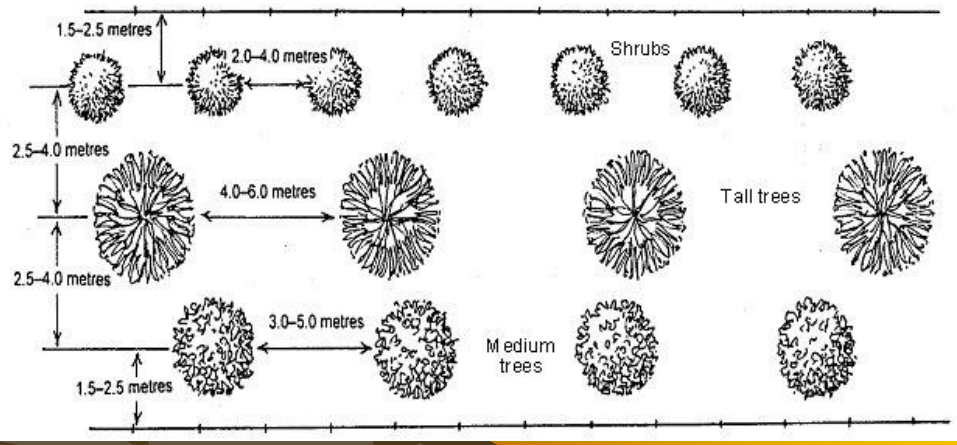
Fallow Fields

- This is when farmers don’t plant a field for several years to allow the soil to restore its nutrients.

Windbreaks

- Rows of trees are planted along the edges of fields to block the wind and also trap the soil.
- Using fruit or nut trees as windbreaks provides an extra benefit for the farmer.





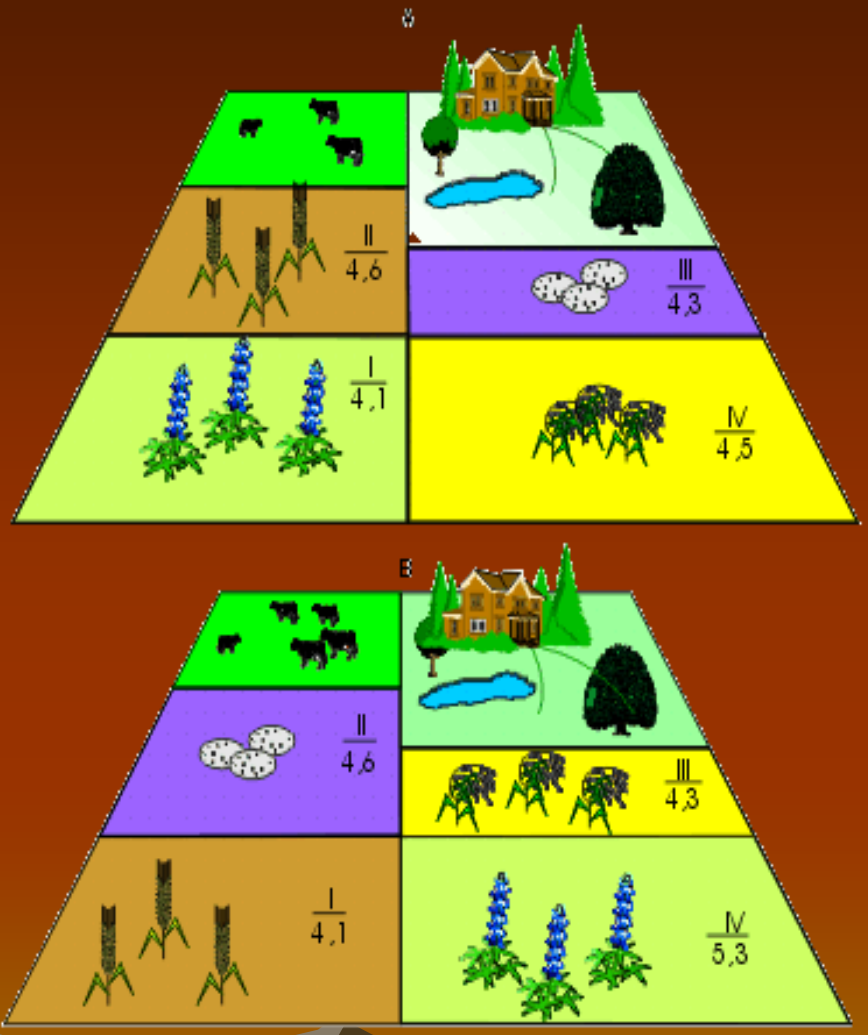
Cover Crops

- Cover crops are crops that are planted between harvests to replace certain nutrients and prevent erosion. Cover crops prevent erosion by providing cover from wind and rain.

Soybeans are a cover crops which restore nutrients to the soil. Other examples include legumes, clover, peanuts, oats, barley, rye, and mustard.

Crop Rotation

- Farmers rotate the crops that they plant each year.
- Since different plants use different nutrients, the fields can be used longer.
- Some plants can actually add nutrients to the soil, especially those that are plowed back under.



Review of Soil Conservation

Contour plowing helps prevent erosion from heavy rains.

Terracing prevents erosion from heavy rains on steep hills.

No-till farming prevents erosion by providing cover that reduces water runoff.

Soybeans are a **cover crop** which restores nutrients to soil.