

What causes soil erosion?

Soil erosion by water

How much soil is carried away by water depends on these factors that influence erosion:

- Rainfall—more rainfall means more erosion.
- Soil type—some soils erode more easily than others.
- Length of slope—the longer a slope, the more erosion you can expect.
- Steepness of slope—steep slopes erode more easily than gradual slopes.
- Ground cover—the more completely your soil is covered with protective grasses, legumes, or crop residues, the better the erosion control.
- Erosion control practices—practices such as contouring slow water runoff.

A formula known as the Universal Soil Loss Equation helps landusers and conservationists estimate the average amount of annual soil loss. From this estimate, they can assess current soil loss conditions and plan prevention practices.

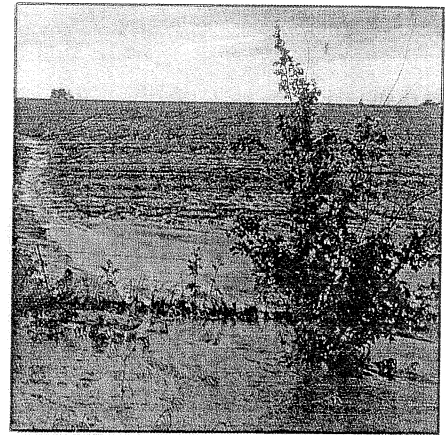
Soil erosion by wind

Loose, bare, and dry soils are especially vulnerable to the wind erosion. A wind as gentle as 13 miles per hour wind one foot above the ground can lift soil particles.

The wind lifts soil particles off the ground and carries them a short distance; they then fall back to the ground and dislodge more soil particles. This process accounts for 50 to 80 percent of wind erosion.

The amount of soil erosion by wind can be estimated by these factors:

- Climate
- How easily the wind can lift certain soil types
- Roughness of a soil ridge
- Distance across a field with no barriers
- Kinds and amounts of vegetative cover



Long, steep hills with no ground cover in areas with heavy rainfall are highly susceptible to soil erosion by water (top). Soil blown by wind often is dropped into road ditches (bottom).

The Revised Universal Soil Loss Equation

