Controlling Soil Erosion
Small Scale Solutions for your Farm

NRCS
Natural Resources Conservation Service

Do you have a problem with:

- Low yields
- Time & expense to repair and gullies
- Small rills and channels in your fields
- Soil deposited at the base of slopes or along fence lines
- Sediment in streams, lakes, and reservoirs

Erosion from cropland

Soil Erosion May be the Problem!

What is soil erosion?

Soil erosion by wind or water is the physical wearing away of the soil surface. Soil material and nutrients are removed in the process.

Signs of Erosion – Sediment entering river

Why be concerned?

- Erosion reduces crop yields
- Erosion removes topsoil, reduces soil organic matter, and destroys soil structure
- Erosion decreases rooting depth
- Erosion decreases the amount of water, air, and nutrients available to plants
- Nutrients and sediment removed by water erosion cause water quality problems and fish kills
- Blowing dust from wind erosion can affect human health and create public safety hazards
- Increased production costs

Erosion removes our richest soil.

How much does it cost?

- Technical assistance to assess and plan erosion control systems from NRCS is free
- No till and mulch till may require special tillage equipment or planters if this equipment is not already available
- Vegetative barriers may cost $50-$100 per mile of barrier
- Cover crops may cost between $10 and $40 per acre depending on the type of seed used

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Signs of Erosion – Small rills and channels on the soil surface are a sign of water erosion

Dust clouds & "dirt devils" such as the one pictured here are signs of wind erosion.

How to Reduce Erosion:

The key to reducing is erosion is to keep the soil covered as much as possible for both wind and water erosion concerns. Keeping the soil covered involves one or more of the following:

High residue crops (corn, hay, and small grain) produce large amounts of residue that helps control erosion. In addition, planting crops on the contour further reduces erosion.

Chisel and other forms of mulch tillage leave more crop residue on the soil surface to protect the soil from erosion.

No till planting reduces erosion by keeping more residue on the soil and less soil disturbance.

Grasses, small grains, and legume cover crops protect soil from erosion during non-crop periods .

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How to install erosion control practices?

Many erosion control practices such as no till or mulch till can be implemented with little or no assistance from NRCS. However, practices such as contour farming and vegetative barriers may require some technical assistance from NRCS. NRCS conservationists can assist farmers to decide which practice or combination of practices would work best on your farm and how to install the practices.

Narrow vegetative hedges planted across the slope reduce erosion and take very little land out of production.

Other Benefits of Erosion Control:

- Higher crop yields
- Cleaner air and water
- More wildlife
- Reduced labor with less tillage
- Healthier and more productive soils
- Less drought stress

Conservation provides healthy and productive soils.

How to maintain the erosion control practices.

- Evaluate the effectiveness of the practices and adapt if needed
    - May need to modify the rotation
    - May need to modify the tillage system
    - May need to modify the practices being applied (add or delete a practice)
- Repair vegetative barriers if damaged by storms or tillage

An NRCS conservationist measures slope to determine erosion. Technical assistance is available from NRCS to help plan low cost erosion control systems with farmers.

Help is Available

NRCS Natural Resources Conservation Service

SMALL SCALE SOLUTIONS FOR YOUR FARM

Technical Help Is Available

Your local Natural Resources Conservation Service (NRCS) office has experienced conservationists that can assist you with controlling erosion on your land. They can also help you develop a Conservation Plan to solve other problems you have identified on your farm.

There is no charge for our assistance. Simply call your local office at the number listed below to set up an appointment and we will come to your farm.

You may also be eligible to receive financial assistance, through a state or federal program. Your NRCS office will explain any programs that are available so you can make the best decision for your operation. All NRCS programs and services are voluntary.

Helping People Help the Land

For More Information Contact the:

Natural Resources Conservation Service

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Warwick, RI 02886
(401) 828-1300
Web Address: www.ri.nrcs.usda.gov
E-mail Address: NRCSInfo@ri.usda.gov

NRCS accepts applications on a continuous basis throughout the year.

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January 2009