



How it works

Crop row ridges built by tilling and planting on the contour create hundreds of small dams. These ridges or dams slow water flow and increase infiltration which reduces erosion.

How it helps

- Contouring can reduce soil erosion by as much as 50% from up and down hill farming.
- By reducing sediment and runoff, and increasing water infiltration, contouring promotes better water quality.

Planning ahead

- Will more than one key contour line be needed because of steep or irregular slopes?
- Are terraces or stripcropping needed for steeper slopes?
- Are field borders needed to replace end rows in the contouring system to control sheet and rill erosion?

Tech notes

- Establish a key line around the hill by using a hand level or contour gauge.
- Contour key line grade should not exceed 2% except within 100 feet of an outlet. In that case, the grade can be a 3% slope.
- Perform all tillage and planting operations parallel to the key contour line.
- Contouring is less effective in preventing soil erosion on steeper or longer slopes.
- Replace end rows with field borders to reduce erosion.

Maintenance

- Use grassed waterways in areas where runoff is concentrated to prevent gully erosion.
- Contoured rows should enter the grassed area of waterways on the level, but should direct water into the grass.
- To avoid having to lay out new key contour lines every year, establish a narrow permanent strip of grass along each key contour line.



How it works

Strips of perennial vegetation are established at the outside edges of a field where excessive sheet and rill erosion is occurring. The grass or legume strips replace crop end rows, which would be planted up and down hill and be highly erosive. Field borders are sometimes referred to as picture frames of grass, and are used with contour farming, terrace, buffer strip and contour stripcropping systems.

The grass or legume in the strip protects steep field edges from soil erosion, and provides turning and travel lanes around the field.

How it helps

- Vegetative cover reduces sheet and rill erosion by slowing water flow.
- Vegetation filters runoff to improve water quality.
- Grass and legume strips may be harvested in some cases and are easier to turn on than end rows.
- Vegetation provides cover and habitat for small birds and animals.

Planning ahead

- Will the width be wide enough to turn your equipment?
- Can that land qualify for set aside?

Tech notes

- Borders must be at least 16 feet wide, or wide enough for your equipment.
- Borders need to be seeded or left in place when a meadow field is plowed.
- Seed with perennial grasses, legumes or a mixture of the two.
- Seed cool season grasses between March 1 and May 15 or during late summer seeding period, August 1 to September 15. Plant warm season grasses between April 1 and June 1.

Maintenance

- Delay mowing field borders until August 1 to allow time for young nesting birds to leave their nests.
- Reseed as necessary to maintain desired cover.
- Shut off farm chemical sprayers when turning on a field border, and insist custom chemical applicators do the same.
- Maintain nutrient levels. If vegetative cover declines, apply 30 lbs. nitrogen, 20 lbs. phosphate and 20 lbs. potash per acre.

Well protection... changing farming practices which occur on or near the farmstead in order to reduce the risk of contamination of water sources—mainly the well.



How it works

The way you handle materials that could contaminate a water supply, and the distance of possible contaminants from a well or other water source, can have a dramatic effect on the quality of drinking water on the farm. For instance if you typically mix pesticides near the well, your chances of drinking water contamination from pesticides escalates. To protect your well, take an inventory of farming practices like pesticide mixing and container washing and disposal. Then assess the risk of contamination and make necessary changes.

How it helps

- Modifications in farming operations may improve your efficiency and reduce operation or production costs.
- Soil conservation practices may be necessary to divert runoff from the well area.

Planning ahead

- Are necessary soil erosion practices in place?
- Have you taken an inventory of the operations you complete at or near the farmstead well?

- Have you properly closed and sealed all abandoned wells near the farmstead?
- Where is your well in relation to any feedlots and pesticide and herbicide spraying, storage and mixing?

Tech notes

- Mix farm chemicals and rinse containers a minimum of 100 feet from the well.
- Apply pesticides on days with minimal wind to prevent chemical drift into farmsteads.
- Use a device in the hose when filling a sprayer tank to be sure chemicals will not siphon back to the well.

Maintenance

- Keep an emergency chemical spill kit handy.
- Maintain any filter strips surrounding the farmstead or wellhead.
- Repair wellhead casing as needed.
- Repair any cracks in concrete pads used for chemical mixing, loading or container washing.

Windbreak...rows of trees and shrubs that protect areas from wind and provide food and cover for wildlife.



How it works

Multiple rows of coniferous trees or a combination of coniferous and deciduous trees are planted to protect a farmstead or feedlot from wind and snow. One or two rows of shrubs are also often planted. The established windbreak slows wind on the down-wind side of the windbreak for a distance of 10 times the height of the trees. The tree rows also act like a snow fence, trapping snow within the windbreak. Field windbreaks can also be planted to reduce wind speed in open fields.

How it helps

- A windbreak reduces wind erosion, conserves energy, reduces heating bills and beautifies a farmstead.
- Trees serve as a sound barrier and muffle road noise.
- Trees and shrubs provide food and cover for wildlife.
- Improved livestock weight gains can be expected when livestock are protected from winter winds and snow.

Planning ahead

- Have you planned enough space for summer air circulation, travel lanes or gardens?

- Will the mature windbreak cast a shadow over the driveway or nearby road, prolonging icy conditions?
- Will trees in the windbreak attract the desired wildlife species?
- Will the position of the mature windbreak cause a visibility hazard for drivers or dump snow where it's not wanted?

Tech notes

- Preferred planting time is after winter thaw and before May 15.
- Plant on at least the north and west sides of the area to be protected; extend rows 50 feet beyond that area.
- Don't plant trees on the south or east side of a road. At mature height the trees will cast a shadow and prolong icy road conditions.
- Keep plantings 20 to 30 feet away from phone or utility lines.
- Plant trees according to spacing recommendations for the species.

Maintenance

- Control competing vegetation with tillage or herbicides before planting and for the first three years after planting.
- Fence livestock out.
- Inspect regularly to help control damage.