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CC56 Control Gullies with Grass

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BEFORE the native grass was broken up in Nebraska, broad, flat, grass-covered drainage-ways carried surplus water away without destruction. Where drainage ways in cultivated fields have never been plowed, native grasses prevent the development of gullies. There is no problem here.

Excessive rainfall, however, can be expected to run off sloping cultivated land. Surplus water has created many field gullies that will grow wider and deeper unless grass is established where they now exist. This circular indicates methods of gully control successfully used to save soil and, consequently, to increase production. The information contained herein should prove useful and profitable.
This drainageway was improved by filling up the gully before seeding.

If a ditch has not developed in a drainageway no extra work beyond seedbed preparation will be necessary. It is more economical to grass the draw before a gully starts.

Ditches may be filled with plows, fresnos, graders, bulldozers, or any combination of available implements.

Spring or early fall is generally the best time for this work since the soil must have sufficient moisture to pack firmly. Pack the soil by travelling on the fill during the filling.

Leave the center of the drainageway lower than the edges of the grass strip. This prevents water from washing ditches beside the grass.

Make the waterway wide enough to carry the surplus water in a shallow stream. Shallow water flows more slowly and does less damage than deep water. In order to make mowing and raking convenient, the narrowest waterway should be at least twice the width of a hay rake.

Waterways should be shaped to make it practical to cross them with machinery, to operate haying equipment in them, or perhaps to use them as headlands for turning machinery.

An application of manure, mixed with the soil by harrowing is desirable prior to seeding, especially on eroded drainageways.
Where considerable filling has been done in a gully, it is generally preferable to seed a fast growing annual crop such as sudan, oats, or barley. Mow the crop in the fall leaving a high stubble, in which grasses can be seeded early the following spring without additional seed bed preparation.

Seed the fast growing crop immediately following preparation of the waterway. If it is early in the fall or early in the spring and conditions are favorable, the grass may be seeded at the same time.

Pack the soil firmly or harrow before and after seeding.

Seed twice the usual rate of grass seed per acre. Seeding a small amount of alfalfa with the grass improves the sod.

Brome grass or a mixture of brome and western wheat grass is desirable for seeding waterways in eastern to central Nebraska. From central to western Nebraska either western wheat grass alone or this grass with the addition of about one-third crested wheat grass is satisfactory for waterways.

Call your county agent or Soil Conservation District office for most desirable dates and rates of seeding.

E. H. Doll Extension Soil Conservationist, College of Agriculture.
Frequent mowing is necessary the first year to prevent smothering of grass seedlings, and in later years to prevent silting.

Raise tillage implements out of the ground when crossing a waterway.

Sod or reseed any breaks that may appear.

Keep as much water as possible out of the drainageway by holding rain where it falls with contouring, terracing, protective covering on the soil, and the use of good crop rotations.

Do not use the waterway as a road, since driving may develop ruts even after the grass is established in the waterway.

A waterway should never be used for a grazing lane since paths may form which might later develop into gullies.

Harvesting a crop of seed in a protected waterway can return a profit from what was previously an ugly gully or wasteland.

When sufficient silt has been caught by the grass to appreciably broaden and raise the base of the drainageway, it becomes necessary to extend the grass up the side slopes to prevent gully formation along the sides of the draw.
A STUDY IN INCREASING THE VALUE OF A FARM

An Ugly Field Gully, Twelve Feet Deep

Controlling this Ugly Gully by Blading In

The Same Gully, Finished for Waterway