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How did your waterways fare this spring?

Mahdi Al-Kaisi
Iowa State University, malkaisi@iastate.edu

Michael J. Tidman
Iowa State University

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Abstract
Last fall, many producers established grassed waterways on their land. However, an early, cold winter and the wet spring have contributed to the failure of seed germination and grass establishment in new waterways. To compound these problems, snow melt and spring rains have lead to severe erosion within some of these waterways. Before gearing up for planting, take an inventory of your waterways--old and new--to be certain that they are ready and functioning as designed.

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Last fall, many producers established grassed waterways on their land. However, an early, cold winter and the wet spring have contributed to the failure of seed germination and grass establishment in new waterways. To compound these problems, snow melt and spring rains have lead to severe erosion within some of these waterways.

Before gearing up for planting, take an inventory of your waterways--old and new--to be certain that they are ready and functioning as designed. If your new waterway seeding has failed, temporary measures that minimize soil erosion can be used. Establish surface cover for waterways with fast-growing nurse crops (oats or rye). Nurse crops can provide temporary protection until grass cover emerges.

Failure of seed germination in new waterways can lead to eroded soils.

Another option is to install fabric check strips perpendicular to the waterway. If the waterway is very steep or susceptible to erosion, protect it with biodegradable erosion control mats until grass is established.

Importance of waterways

Establishing sound waterways is important. They are often the best means of carrying surface water runoff out of a field. Waterways also prevent gully erosion, lower sediment loads in runoff, and provide in-field infiltration of rainfall and nutrient-loaded runoff. Waterways can contribute significantly to improving water quality by reducing sediment load and by preventing runoff of phosphorus and nutrients into water bodies. In addition, protect

your water quality by shutting off the sprayer before crossing the waterway and emphasize to commercial applicators that they must do so as well.

Components of waterways

The grasses in waterways, the shape of waterways, and the type of outlet structure are important components of successful waterways. Grasses in waterways reduce the impact of raindrops and protect soil particles from being dislodged and eroded. Vegetation also slows the flow of water runoff.

The shape of waterways plays a major role in their efficiency. Maintaining the bowl shape keeps the flow of runoff inside the waterway (on the grass) and ensures that the waterway performs as intended. Waterways also should have a flat bottom channel that follows the natural drainage pattern of the watershed and should be shallow enough so that they can be easily crossed with farm equipment.

This waterway needs to be reshaped (into a bowl shape) and reseeded to restore proper function.

In addition, waterways require a structure or dam at the outlet to stabilize them. Outlet structures prevent gullies and gulches from cutting back into waterways, and they are recommended where the runoff empties into a creek or ditch.

Maintenance of waterways

Rainfall and runoff subject waterways to a constant cut-and-fill process. You should plan to make routine inspections of waterways and be prepared to perform periodic maintenance to keep them in optimum condition.

If a waterway does fill with sediment, reshape and reseed it to restore its proper function. Also, determine what factors contributed to the erosion and address them. Make sure you are using sound conservation strategies on upland areas above the waterway. Conservation tillage and no-till practices and other practices, such as contour farming, can prevent sediment from entering waterways.

Another important part of maintaining a waterway is mowing. If the grass gets too high, the flow of water slows and allows sediment to "settle out," changing the shape of the waterway and harming its function.

When operating tillage equipment in fields with waterways, go a couple feet into the waterway before raising the implement out of the ground, cross the waterway and enter the field on the contour on the other side. Do not "nibble away" at the edges of a waterway--maintain its designed width with every tillage pass.

Remember that a waterway is not a thoroughfare and that tire tracks and livestock hooves can start gully formation. Control burrowing animals such as badgers, groundhogs, and moles. Because running water tends to swirl around obstructions, keep the waterway free of rocks, tree stumps, or debris.

Summary

Several programs provide assistance to establish waterways, including Environmental Quality Incentives Program (EQIP) and the Conservation Reserve Program (CRP) Continuous Sign-Up. CRP allows producers to offer areas for 10- and 15-year contracts with rental payments, incentive payments, and bonus payments, with up to 50 percent cost share and a practice incentive bonus of 40 percent.

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