Big Hollow Watershed Newsletter

DES MOINES COUNTY SOIL & WATER
CONSERVATION DISTRICT
3625 FLINT RIDGE DRIVE
BURLINGTON IA 52601
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News: **March 2025**

Cost Share Opportunities

Cover crop- $30 per acre. (Cover crops can be chopped or grazed.)

No Till- $15 per acre

Terrace, Grass Waterways, and Water and Sediment Control Basins– Up to 75% cost share.

If you have any questions or would like us to look at a proposed project give us a call or stop by the NRCS Office.

Tom Brockett

319-753-6221 Ext 3

Please Welcome Richard Lyons to Iowa on March 28th.

Please RSVP to Jamie Stewart

jamie.stewart@usda.gov

319-753-6221 Ext 3 by March 17th

Join us for our spring Conservation Workshop at Clover Creek Event Venue on March 28th at Noon for lunch followed by a presentation by the 2024 Illinois Leopold Conservation Award winner Richard Lyons. Richard, a former agriculture instructor for 32 years at Lincoln Land Community College and IL State University, is a cash grain farmer for the last 50 years in South Central IL. He plants a two year rotation of corn, cereal rye, soybeans and tillage radish/barley/rape/Austrian winter pea. He is a strong believer of using the soil health practices on his farm of: no-till/strip till, cover crops, biodiversity of crops, and a living root throughout the year. Richard couples his soil health practices with the conservation practices of nutrient management of N, P, & K on every acre while protecting streams and drainage ditches with filter strips, two-stage ditch designs and streambank stabilization. Keeping the soil on the land by preventing erosion and keeping the nutrients of nitrogen and phosphorus out of the runoff waters and tile waters for water quality maintenance is the strong moral ethos by which Richard farms and lives. Locally, Richard is a drainage commissioner in the two drainage districts where he farms and is a member of the Lake Lou Yaeger and Glenn Shoals Lake watershed committees in Montgomery County. In 2021, he wrote the resolution to the Illinois General Assembly for a Soil Health Day and Week in Illinois. Most recently, Richard was honored by the IL Corn Growers Association with the Mike Plumer Environmental Award for his practices and commitment to saving soil and nutrients in order to enhance water quality.

Conservation Partners:

United States Department of Agriculture
Natural Resources Conservation Service

IOWA DEPARTMENT OF AGRICULTURE & LAND STEWARDSHIP

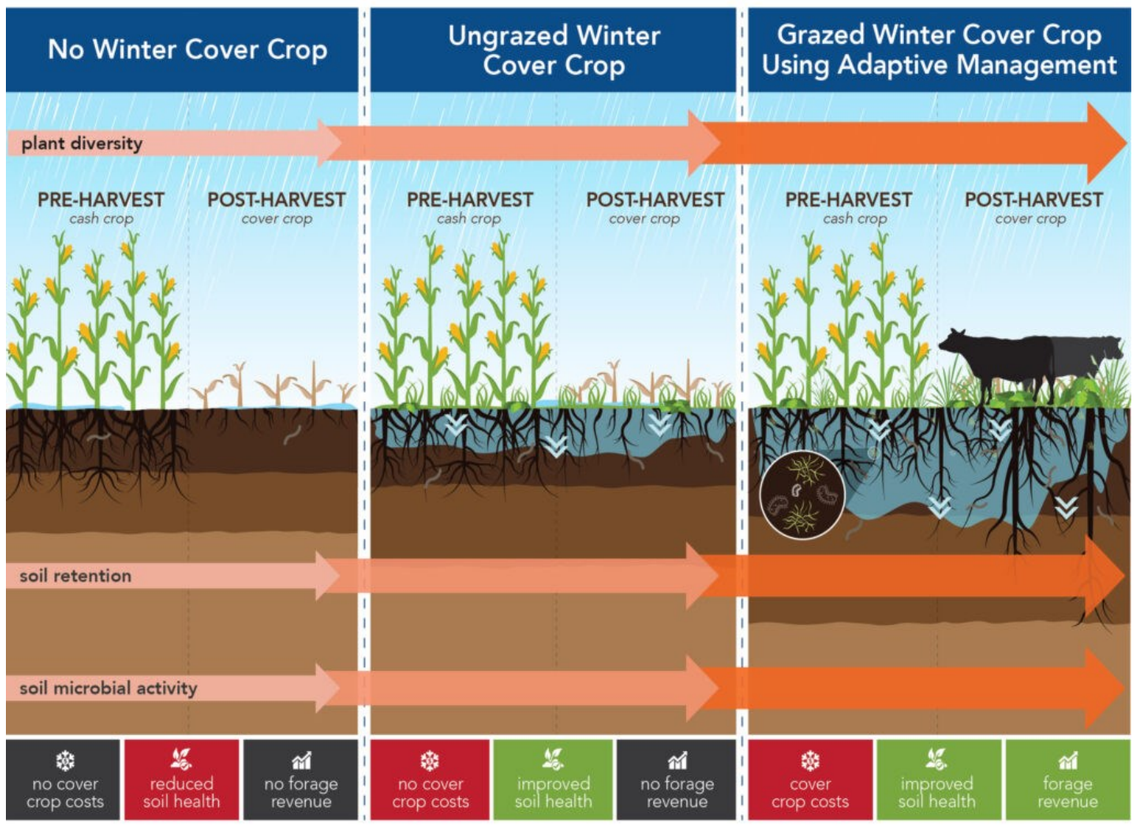
DES MOINES COUNTY SOIL & WATER CONSERVATION DISTRICT

Funding provided by the Iowa Department of Agriculture & Land Stewardship – Division of Soil Conservation and Water Quality and by the Iowa Department of Natural Resources through a grant from the U.S. Environmental Protection Agency under the Federal Nonpoint Source Management Program (Section 319 of the Clean Water Act).

Equal Opportunity Employer

WHY GRAZE COVER CROPS? Cover crops are effective at improving water quality, reducing field nitrogen losses by 31% and phosphorus loads by 50%, and provide significant on-farm benefits such as increases in soil organic matter. However, cover crops have been adopted slowly across the US, partially due to high costs. Fortunately, coupling diverse cover crop mixes with livestock grazing can provide positive soil health and water quality impacts while producing economic benefits for the producer that offset the costs of establishing and termination. Cover crops provide winter forage valuable for livestock, replacing purchased or stored winter feed. Further, employing adaptive grazing principles such as high stock density and frequent movement between paddocks can result in significant nutrient application to cropland from manure, thereby reducing input costs and increasing cost savings in the following growing season.

Start small and try it.



Deep Banding Fertilizer:

Broadcast fertilization of phosphorus (P) and potassium (K) is a popular and low-cost fertilizer application method. A band application theoretically could further increase yield of row crops or reduce the optimum fertilization rate under some conditions. Concentrating these nutrients in bands could increase nutrient uptake in soils with unusually high capacity to fix P and K and when root growth is restricted by unfavorable soil conditions. Particularly with no-till or ridge-till management, deep banding also could increase nutrient uptake and yield compared with broadcast or banding with the planter when the soil surface layer becomes drier.

Deep banding of K may provide distinct yield advantages by making K more available in ridge-till and no-till fields, even on soils that test optimum to high in K. Producers can deep-band P at the same time to increase early corn growth, which could be important in some conditions. A thorough economic analysis of these results was not completed at this time. Deep banding increases fertilizer application costs, but the magnitudes of the yield responses suggest that deep banding will be cost-effective in most ridge-till fields and in many no-till fields, but not in a chisel-plow system.

The economic benefit of deep banding can be increased in two ways. An ongoing on-farm project in no-till fields shows that a combination of fall strip tillage, anhydrous ammonia application, and deep banding of P and K produces higher yields and does not increase costs significantly compared with a separate broadcast P and K application. Also, deep banding the needed P and K once for the 2-year corn-soybean rotation will produce yield increases in both crops equivalent to application before each crop.

Deep banding fertilizer significantly reduces runoff compared to broadcast application because it places the nutrients below the soil surface, minimizing exposure to rainwater and preventing them from being washed away by erosion; this is particularly effective for phosphorus-based fertilizers which can readily leach into water sources if not properly managed. By: Dr. Antonio Mallarino is a former professor of agronomy and nutrient management research and a former extension specialist at Iowa State University.