

COVER CROPS CAN PROTECT FIELDS FROM SEVERE EROSION AND PROVIDE OTHER BENEFITS ON YOUR FARM



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In recent years there has been increased interest in the use of cover crops in conventional cropping systems. The USDA NRCS (Natural Resource Conservation Service) has promoted cover crops and provided cost-share programs for farmers to encourage their use to help improve soil health and reduce erosion and degradation of soils. Nebraska Extension, with its On-Farm Research Network and NRCS have partnered together on several field scale on-farm research projects with cover crops across Nebraska. You can search for information on these projects at this link; <https://cropwatch.unl.edu/farmresearch/resultshome> and just put in the key word cover crop to find results for up to 53 different cover crop experiments. Research with cover crops has shown that with continued long-term use of cover crops there is a benefit in soil health; i.e. improvements in organic matter, water infiltration, aggregate stability, scavenge nutrients and nutrient recycling. Other major benefits of cover crops include; a significant reduction in erosion (soil loss), weed suppression, particularly marestail and water hemp (Palmer Amaranth) and an excellent forage source for cattle.

With several fields of corn and soybeans coming out the last couple of weeks, there is still an opportunity to drill in cover crops. It is too late to get much growth and benefit from oats, turnips, radishes and most legumes. While it has been dry recently, winter-hardy cereal cover crops, i.e. cereal rye, triticale, winter wheat and winter barley can generally still be planted for several weeks and will become established if we receive some precipitation. Even if there is not a lot of growth, these cover crops will put down roots and with the growth above the ground will provide much needed erosion control on highly erodible land. Many areas of southeast Nebraska have received some torrential rains the past couple of years, and there has been extreme erosion in many areas. Check with your local NRCS about programs on the use of cover crops to control ephemeral erosion. Many producers have used cereal rye, wheat or triticale with success in controlling erosion. On highly erodible soil, a cover crop of rye following soybeans can be very beneficial, it is generally the most winter hardy of the cereal crops. Cover crops maybe used as an annual waterway that can hold the soil and prevent ephemeral erosion. Cover crops can also have the potential to provide other benefits as well; i.e. improve water infiltration, scavenge nutrients, weed suppression and forage for livestock.

If you need forage for grazing in late winter or early spring, either rye or triticale provides excellent forage for cows or yearlings. Either of these forages planted in corn stalks also provides excellent forage for grazing along with the corn stalks, and generally can be utilized longer in the spring for grazing if the field is going back into soybeans. These forages can provide excellent quality forage, lower hay and pasture requirements, and reduce soil erosion from springtime thunderstorms. A number of farmers in southeast Nebraska are making excellent use if cereal rye as a forage for their cowherds and also seeing some of the other benefits.

In research conducted in Illinois, rye has shown to be beneficial in suppressing some weeds (Marestail and Glyphosate-resistant Marestail) and also disease pests, i.e. SCN (Soybean Cyst Nematode), SDS (Sudden Death Syndrome) and other foliar diseases in soybeans. Recent research at Kansas State University showed cereal rye was effective in suppressing growth of Palmer Amaranth, one of the most invasive weeds in the United States that has recently made its presence in southeast Nebraska. Research indicates cereal crops, such as wheat and rye can delay emergence up to 3-4 weeks

and slow down growth of Palmer Amaranth compared to no cover crop. Farmers in Nebraska have also seen the benefits of cereal rye suppressing Marestalk. A significant amount of research is currently being conducted in Nebraska to evaluate the impact of cover crops in cropping systems, although many farmers have been utilizing cover crops in no-till cropping systems for several years and also as forages for grazing. Research is indicating benefits of growing a cover crop by adding carbon and building soil structure, especially under no-till environments. If winter hardy cover crops like rye or triticale are planted, they are usually chemically killed prior to planting in the spring, although under intensive management some producers are planting green into the rye with success. If using a cover crop, be sure to check with your crop insurance agent on the rules for cover crop termination in crops. To find out more about cover crops in Nebraska, go to: <https://cropwatch.unl.edu/cover-crops>. If you have not used cover crops before and are concerned about termination in the spring, you may want to use wheat as a cover crop, especially going back into corn. It is easier to terminate in the spring than rye and doesn't grow as fast. Here are a couple of cover crop recipes for Nebraska; <http://mccc.msu.edu/nebraska-cover-crop-recipe-post-corn-going-soybean-use-cereal-rye/> ; <http://mccc.msu.edu/nebraska-cover-crop-recipe-post-soybean-going-corn-use-mix-oatswheatrapeseed-wheat/>.

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