Natural Resources Conservation Service Report To Papio-Missouri River NRD Board December 14, 2017 Neil Jensen, District Conservationist

#Fridaysonthefarm Features

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USDA Natural Resources Conservation Service (NRCS) brings people together across the nation for: healthier food, natural resources and people; a stronger agricultural industry; and economic growth, jobs and innovation.

Each Friday, meet those farmers, producers and landowners through our #Fridaysonthefarm stories. Visit local farms, ranches, forests and resource areas where NRCS and partners help people help the land.



- Soil Health Systems
- Organic Farming
- Bats, Crayfish, Pollinators
- High Tunnels
- Dairy Farming

- Demonstration Farms
- Community Gardens
- Farming with Nature
- Beginning Veteran Farmer
- Irrigation

Cover Crops and Ecosystem Services: Insights from Studies in Temperate Soils (Source: UNL Crop Watch/Agronomy Journal, Volume 107, Issue 6, 2015)



Cover crops can provide multiple soil, agricultural production, and environmental benefits. However, a better understanding of such potential ecosystem services is needed.

The review summarized the current state of knowledge of cover crops effects on soil C stocks, soil erosion, physical properties, soil water, nutrients, microbial properties, weed

control, crop yields, expanded uses, and economics and highlighted research needs. The review indicated that cover crops are multifunctional.

Cover crops:

- Increase soil organic carbon stock with the magnitude depending on biomass amount, years in cover crops, and initial soil carbon level.
- Runoff loss can decrease by up to 80%.
- Sediment loss from 40% to 96% with cover crops.
- Cover crops alleviate soil compaction, improve soil structural and hydraulic properties, moderate soil temperature, improve microbial properties, recycle nutrients, and suppress weeds.
- Cover crops increase or have no effect on crop yields but reduce yields in water-limited regions by reducing available water for the subsequent crops.

Nebraska Cover Crops: What, Where, and How

(Source: UNL Crop Watch)

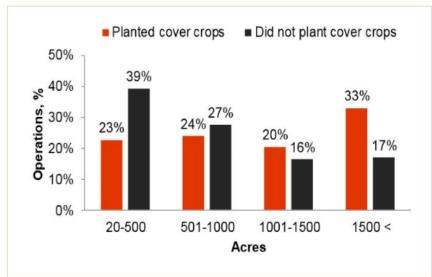


Figure 1. Survey responses indicated that the size of farming operation did appear to be a factor in whether cover crops were grown. Of the respondents reporting they had planted cover crops, 33% had operations greater than 1500 acres. Of those reporting they had not used cover crops, 39% were in the smallest land category, 20-500 acres.

See <u>Cover Crop Survey of Nebraska Farmers Summary</u> for more insights into cover crop use in Nebraska.

Farmers attending the 2015 Pesticide Safety Education Program Courses, Crop Production Clinics, and the Nebraska No-till Conferences were invited to take a survey. 258 Nebraska farmers responded to the survey.

The results of the survey showed:

- Of the participating farmers, 34% planted cover crops during the previous cropping season.
- The top ranked barrier to cover crop use was time and labor required to manage cover crops. This was followed closely by cover crop seed cost.
- Despite being a small proportion of the acres managed, corn silage and hybrid seed corn acres made up slightly over one-third of the cover crop acres.
- Brassicas and winter cereal grains were the most commonly planted cover crops.
- Of the farmers who planted cover crops, 49% grazed some portion of their cover crop acres.



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