

## Nebraska State Technical Meeting SWCS in 2019

**Date and Location:** Lincoln on August 29 2019

Attendance: Doug Garrison, Corey Brubaker, Robin Foulk, Dave Bedlan, Jim Culver, Craig Romary, Ross Scott, Dick Ehrman, Steve Grube, Ryan Chapman, Norm Helzer, Katie Torpy and Darwin Hinrichs, Kris Reed.

Technical Meeting dealt with measuring soil health, analysis and cover crop mixtures.

Gary Lesoing from Nebraska Extension was our first speaker covering the topic of Cover Crop Selection Tool. He used the SARE program in addressing the diversity of cover crops available to producers with up to 14 different species.

Benefits listed included: Prevent erosion, Forage production, Add nitrogen, Add carbon,  
Conserve moisture, Improve infiltration, Suppress weeds & diseases,  
Recycle nutrients and Scavenge Nitrogen.

Challenges: Termination, Pests, Voles, Tie up of N, Crop Insurance, Herbicide restrictions.

He suggested the use of Cereal rye as a very good plant to consider and Buckwheat as a very good pollinator plant. There are lots of good attributes for the use of cover crops.

Aaron Hird (State Soil Health Specialist) was our next speaker from NRCS. He went through examples of the Cover Crop Design Worksheet. The first question for producers is Why, How and When in considering to use cover crops. It is important to know if your objective is erosion control, forage production or adding nitrogen. He handed out three worksheets to show examples of which crop species you could use and their rates needed. His examples also considered the cost share rate available through NRCS to help with expenses. He also went over the timing of flying your mix into crops like corn, applying right after fall harvest or into stubble after wheat harvest.

Doug Garrison from NRCS went over the topic of Soil Health Assessments. Three sheets were handed out showing the evaluation of your soil health. There are Eight Soil Health Field Observations to use after you do a texture and infiltration test at your field site.

Doug included a brief history of the methods NRCS has used in the past for some of the ways to evaluate soil health. Some of his Soil Resource Concerns are: Compaction, Soil organic matter depletion, Aggregate instability and Soil organism habitat degradation. On the national scene there are eleven indicators to consider for soil health.

The last morning speaker was Dr. Humberto Blanco an UNL professor in Soil Management and Soil Physics with research in the field of Soil Health. His question to us was. Do cover crops improve soil health? Dr. Sabrina Ruis helped with some of his presentation. She is doing her post-doctorate on some of his research plots.

He has variety sites in eastern and central Nebraska. He has found some increase in soil organic matter and aggregate stability using grass species over 6-10 years. He found several factors that influence Soil Health Changes like Biomass Production and Duration with latest termination were the best to show increases in O.M.

The best conditions for showing an increase in soil O.M. were in problem soils showing low organic matter content and in sandy soils. His recommendation would be to use grasses for your cover crop and to terminate late.

The afternoon was spent at the UNL Rogers Research Farm east of Lincoln. It was hosted by Paul Jasa a UNL Research Extension Specialist. Paul gave an excellent history of the Rogers Farm. He is the Education and Demonstration Coordinator for this farm and has done work at this location since 1981.

Paul has eight seed mixes he calls cover crop cocktails that were drilled into wheat stubble. He had us walk by these test strips to see if we could identify which ones were in each test strip. We then went to see the difference between seeding right after wheat harvest or waiting several days. You could easily see the better weed control with the early seeding.

Paul has been using NO-TILL for his tillage operations since 1981 with many rotations using corn, sorghum and soybeans as his main crops.

The last presentation was by Doug Garrison showing how to do his soil health assessment in the field by digging a pit and then answering the eight areas from his morning handout sheets.