

Planting crops into cereal rye when soils are cold and wet

Many farmers have had difficulty getting crops planted due to cold, wet soils.. Farmers who planted cover crops are also struggling to figure out how and when to plant to maximize the grain crop yield. Often this involves getting the cover crop killed at the right time. When it is cold and wet, often the best strategy is to let the cover crop grow so it can dry out the soil. Farmers often have waited too long to plant the cover crop field because they think it is too wet, but generally, cover crops use evapotranspiration to remove water from the soil and the soil is actually drier 5-7 days earlier than conventional fields. That is a big advantage for using the cover crop. Planting 5-7 days earlier generally results in 5-7 bushels of more soybeans. However, if farmers wait too long, the soil gets too dry and hard, and then farmers may lose 5-7 bushels of soybeans. I really like to see soybeans coming up before killing the cereal rye unless the soil is getting too dry.

Farmers have difficulty with their closing wheels in cereal rye. The soil may be hard or the trench would not close. One strategy is to just plant a little deeper and get the seed down to moisture. Another strategy is to attach a log chain, 15-18 inches long, behind the closing wheels on both side, and drag that chain along in a half moon through the rye. The chain will knock some soil into the trench and cover the seed. A third option is to do some strip tillage in front of the coulter or follow the planter with a light harrow to close the trench. If farmers get .5-1.0 inch of rain, it generally is not a problem. This year the rains have been really light and the seeds are slow to germinate or the soybean stand is very patchy, germinating at different times.

Some farmers killed their cereal rye early and planted early. However, they planted soybeans into soils that stayed cold and wet and the soybeans never germinated and got moldy. They are now replanting. Our experience has been that all these problems start to become less of an issue after 1-3 years, as the soil gains soil organic matter and the soils become more friable.

Several farmers commented that they never want to let their cereal rye get 4-6 feet tall again. Most organic matter comes from the roots (roots fully mature by early spring), not the stems and leaves, because stems and leave decompose quickly. However, in really wet years, it is beneficial to let the cover crop grow because it will dry out the soil. The goal is to start planting at the right time, and that is generally 5-7 days earlier than conventional farming. Each tillage trip dries out the soil by .5 to 1.0 inch of water. Cover crops do this naturally without using fuel.

Planting corn into cereal rye can be tricky. Some farmers killed their cereal rye early and planted early and this appears to be successful. Cereal rye may have an allopathic effect planted on corn by tying up nitrogen and/or changing the microbial community. A recommendation is to use 40-60 pounds of nitrogen with the starter and plant at least 2-3 weeks after killing the cereal rye. This avoids the “microbial bridge” associated with bacteria decomposing young lush cereal plants which are very similar to young emerging corn plants. By killing the cereal rye 2-3 week

before the corn is planted, the bacteria microbial population peaks and crashes before the young corn plants start to germinate, so the young corn is not struggling to compete with the bacteria as either a disease organism or for nutrients. Bacteria numbers fluctuate very quickly in the soil with the availability of water and soil nutrients. Give me a call if you have questions (419-421-7255).

The hardest time farmer have with converting to cover crops and planting no-till crops is in the first 1-3 years. Some of it is just the learning curve and some of it is just the fact that the soil needs to change and improve for this system to work. The quicker farmers can make that change, the more successful they will become at improving their crop yields and improving water quality in Lake Erie.