THE OHIO STATE UNIVERSITY

Field Notes for The Week Of

4-24-2023

Do Cover Crops Conserve Soil Moisture?

Time continues to fly by as we enter the last week of April, so far April has been a very pleasant and productive month for farmers across the county. In actuality, April has been just about average for temperatures but well below average when it comes to precipitation. Friday, April 21st did provide the land with a drink with precipitation amounts ranging from 1-1.7 inches of rain. Before the rain, many producers told me that the soil was as dry as they have seen in the middle of April! I would have to agree with that statement, even some of the wettest soils and even some wet weather springs in my pastures were drying up. The dry weather conditions this early in the growing season should be something to keep an eye on especially as future forecasts are predicting a warmer and drier summer season ahead. As I traveled across the county this week, the dust was flying as farmers poured the coals onto the tractors. Tillage, fertilizer applications, spraying, and planting were all practices this past week. With moisture concerns on the minds of farmers no matter if it is tried or wet the use of cover crops has been growing in popularity over the last several years. Cover crops have many benefits but with those benefits come many challenges. One of those challenges is the decision of when to kill the cover crop before planting the cash crop. Some species of cover crops are well known for growing deep roots, breaking up compaction, and pulling up need nutrients deep in the soil profile. On the flip side, those extensive root systems can also pull a lot of moisture out of the soil. The big question is when should the cover crop be terminated to avoid water loss? Here are some considerations to think about.

- **Species-specific-** Grasse species such as winter wheat, triticale, and annual rye can hold moisture in the soil while growing and after decaying. On the other hand, cereal rye is a species that can consume large amounts of moisture as it matures. If the spring season continues to be drier than normal terminating the rye 2 weeks before planting can alleviate moister consumption. Legume species consume more surface and subsurface moisture than grass species due to their deep tap root system.
- **Type of Termination-** There are 4 main ways to terminate cover crops, rolling crimping, herbicide chemical, mechanical, or harvesting for forage (including grazing). Each practice has its pros and cons but when it comes to conserving moisture tillage or mechanical tillage should be avoided. Rolling crimping is by far the best for conserving moisture but this is very dependent on the species of the cover crops. If harvesting for forage or grassing prevent cutting or grazing below 4 inches in height. Cereal grains like wheat and rye can act as straws pulling moisture out of the ground after harvest.