Weekly Newsletter

May 4, 2018

CaroVail

This Issue

Locations

Auburn

55 Columbus St Auburn, NY 13021

800-492-4929

315-253-7379

Bernardston

472 Northfield Road

Bernardston, MA 01337

413-648-9900

Niverville

831 Route 28 Niverville, NY 12130

800-852-8012

518-784-9166

Oriskany Falls

8341 US State Rt 20

Oriskany Falls, NY 13425

888-991-9292

315-841-3201

Salem

4134 State Rt 22 Salem, NY 12865

800-390-1930

518-854-9446

Tri Valley Crop Center

337 State Hwy 162

Sprakers, NY 12166

800-800-4289

518-673-5336

Miller Spraying

8624 State Route 26

Lowville, NY 13367

315-376-6509

Pre-Plant and Pre-Emergent Herbicides for Corn and Soybeans

In order to preserve maximum yield potential, getting the crop out of the gate early without weed competition is essential. Weeds growing from crop emergence to canopy closure can significantly compete for sunlight, moisture, and nutrients. Which is why a good pre-plant or pre-emergence program is the way to go. Several studies have shown that, in corn, yield loss potential from early weed competition can be as much as 15-20%. Additional losses from running over corn (with a Post program) is another factor worthy of consideration. Especially with the recent adoption, by many growers, to move away from 30" to 15-20" rows. These herbicides also have different, overlapping modes of action which can help control trouble weeds that have developed. Glyphosate and acetolactate synthase (ALS) resistance is occurring in weeds such as lambsquarters, ragweed, and marestail.

There are several pre-plant and pre-emergence residual herbicide programs available for corn and soybeans, but with most things, there are pros and cons to consider. Pre-plant products require some degree of mechanical incorporation prior to planting and a certain amount of timely precipitation is needed to activate pre-emergence chemistry. But, the advantages and benefits of using Pre vs. Post herbicide programs are significant enough to make it a worthy endeavor.

For more information and discussion about a pre-plant or pre-emergent herbicide program, please contact your local CaroVail location.

When is the Soil Ready for Crops?

Following the theme of Spring in the last Newsletter, we certainly have seen the irregular weather that is often associated with Springtime. As the days get longer, everyone is ready to get started with the next growing season. But, there is only one, maybe two, chances to get it right each season, and then we have to wait a year to try again. So, it is imperative that we make the most of each attempt and use the resources available to make the best possible decisions.

However, if crops are planted before the soil is ready, in the best case you can have slow germination and in the worst case you could have to replant. So, what should the soil be like when you are ready to plant?

We hit on soil temperature in the last newsletter, but waiting until the soil temperature is right will have huge benefits in the long run. Soil temperature should be at or above 50F for corn planting and 54F for soybeans. Higher soil temperatures at planting can result in faster germination. Soil moisture content will have a large influence on the rate at which soil temperature changes. Water buffers temperature and the higher the moisture, the slower temperature will change in either direction. Higher moisture levels will also have more potential for seeds to swell, not germinate, and rot.

Other factors that will influence soil temperature change:

Tillage Practices: a no-till soil will warm slower than a soil that is tilled in the spring. Mixing the soil will help move water out, resulting in increased soil temperatures.

Soil Type: as we have all observed, some soils hold water tighter than others. Clay soils will warm more slowly due to its higher moisture content and attraction to water. Conversely, soils with higher sand content will warm faster because water moves out of the soil faster.

Artificial Drainage: drainage is installed in fields to manage water content. Fields with heavier soils (more clay) and drainage will warm faster than clay fields with no drainage.

Finally, remember that soil and water temperature change more slowly than air temperature, so the best thing to do is measure soil temperature before you are ready to plant.

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Seedbed Prep and Planting Depth

Well it's here! The time of year we plan for, pray for, cuss about, and can't live without…Planting season! All the hours spent reviewing and planning crop rotations, tweaking fertility plans, servicing planters and tillage equipment have been in preparation for this moment. Making sure that we are putting in all the necessary efforts to our fields and planter preparations ensures our crops will be established and primed for a successful growing season.

Seedbed preparation is one of the single most influential factors in seed germination and establishment. Good seed to soil contact enables seed to utilize the moisture available in the soil and helps provide nutrients later as the plant matures. Most commonly, seedbed preparation is achieved through tillage. Thorough tillage serves several purposes in seedbed preparation:

Loosen soil surface - creates better soil surface conditions and ensures good seed to soil contact.

Eliminate existing weeds or vegetation - Tilling under weeds or plant debris helps ensure that weeds or weed seeds do not have the opportunity to get established before the intended crop.

Incorporation of fertilizer - Tillage is a great means for making sure our fertilizers are incorporated into our seedbed. Getting those fertilizers into the top few inches of soil helps ensure those nutrients will be there when the plant needs them the most.

Provides firm seed bed for seeding - Tillage practices including harrowing and cultipacking provide a firm, smooth seedbed providing the best opportunity for soil contact and germination.

There are several tillage practices that all work in conjunction to create a better environment for seed germination and establishment. Whatever practices a grower chooses to implement, there should be one common goal and that is to have a smooth, uniform and firm seedbed free of most debris and weeds. A good seedbed should allow the desired crop to germinate and grow without having to fiercely compete for moisture nutrients and sunlight.

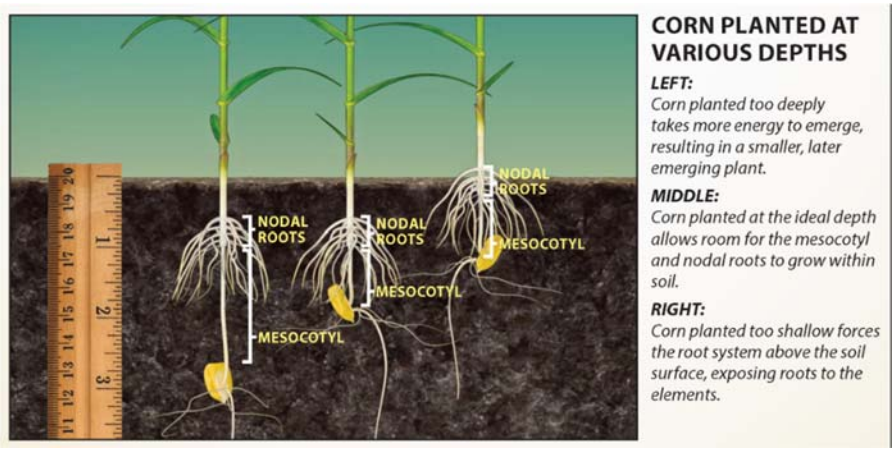
Once a good seedbed is established or if you have made the decision to no-till plant a crop, the next practice to focus on is planting and planting depth. Whether you're planting grain corn, soybeans or seeding down some acres with a grass alfalfa mix, proper seed depth and soil coverage is extremely important to crop establishment and overall yields.

Soybean planting depth is very important for proper germination and establishment. Under most soil conditions, soybeans should be planted between 1 and 1.5 inches in depth. Growers that are planting early into moist fine textured soils or fields with high residue conditions should be on the shallower end of depth. Growers that are late planting into coarse textured or dry soils should be planting closer to 2 inches in conditions that call for it.

Optimum seed planting depth for corn lies between 1.5 to 2 inches for two important reasons. One being to achieve good seed to soil contact, so a corn seed can imbibe the necessary water to germinate and the second is to establish a strong nodal root system well below the soil surface. In some cases, a grower may choose to plant at depths greater than 2 if soil conditions call for it. A good rule of thumb is to always shoot for at least 1.5 inches in depth, anything less may be too shallow.

Shallow planting may cause root systems to develop at or even above the soil surface allowing them to be affected by environmental stresses (i.e. frost, hail or bird feeding damage). Shallow planting may also lead to a condition known as rootless corn syndrome in which plants lack a strong nodal root system often resulting in downed corn. Shallow seed may also be exposed to herbicide residues increasing the potential for herbicide injury. Uneven emergence and decreased populations may also be contributed to by shallow planting. No-till planting applications if not closely managed according to field conditions, can be troublesome to achieve the ideal seed planting depth.

The reality is that the ideal planting depth should be based on a number of factors that should be determined at the time of planting. Management decisions may vary drastically if you are employing no-till, strip till or conventional tillage systems. Field conditions in our geography may vary so much so that planting depth could warrant being adjusted each time we pull a planter into a different field. Logically that doesn't make a whole lot of sense when we are under the gun and time is working against us to get crops planted. Finding and maintaining the planting depth that allows for good seed to soil contact and provides the seed with the best opportunity for moisture intake and emergence will make all the difference. Be sure to monitor seed depth and make changes as needed. We really only get one shot to establish a seeding the way that it should be the first time, let's not rush over things or neglect how important the factors that we can control are when planting crops. Good luck and well wishes for a successful 2018 crop season!



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Weekly Weather Report

	Approx. Weekly Rainfall (in)	Avg. Expected High Temp Next Week (F)	Avg. Expected Low Temp Next Week (F)	GDD (Base 50) since Jan 1	GDD (Base 50) since Mar 1	GDD (Base 50) since Apr 1	GDD (Base 50) since May 1
Auburn	.73	68	47	44.5	39	39	28.7
Bernardston	.64	71	47	81.1	69.9	69.9	41.2
Lowville	1	62	43	61.1	58.5	58.5	48.2
Niverville	.63	70	49	81.2	64.2	64.2	46.2
Oriskany Falls	.51	65	45	70.6	58.4	58.4	44.7
Salem	.64	68	54	71.5	59.3	59.3	43.8
TVCC	.51	69	48	63	55	55	44