TECHtalk®

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HELPING FARMERS FEED AND FUEL THE WORLD

TECHtalk is published monthly for dealers of Latham Hi-Tech Seeds, focusing on technology, agronomy, trends and news from around the seed industry.

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IN THIS ISSUE

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Do's and Dont's for Spring 2021

by **MARK GRUNDMEIER** SOYBEAN PRODUCT MANAGER
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"In farming you only get one chance every year, so it's worth it to do it right the first time."

That statement is so very true. Below are a few things to keep in mind to optimize your corn and soybeans yields:

- **Soil Moisture.** Working ground when it is too wet leads to slabbing and clodding of the soil, so areas within fields dry at different rates. A kernel of corn imbibes, or takes in, about 30% of its weight in water during germination. When kernels in a row are exposed to varying amounts of soil moisture, their germination rates and emergence will vary from plant to plant. The result is uneven emergence, poor early growth and potentially severe stand loss. Soybeans need more water at germination, taking in about 50% of seed weight on average. As with corn, good seed-to-soil contact is critical, so avoid cloddy conditions.

- **Soil Temperature.** Corn germinates best when soil temperature is close to 50° F. Approximately 120 growing degree units (GDU's) are required for corn to emerge. During periods of cool temperatures, it can take several days to achieve those GDU's. Once a corn seed germinates, it can exist for about 14 days on the energy that is contained in the endosperm. Under ideal conditions, the seed will emerge and develop a root system in much less than 14 days. Most researchers agree that soybeans emerge best when the soil temp is 55° F or warmer. Avoid planting soybeans if the temperature is below 55° and a cold rain/weather event is expected within 24 hours after planting.

- **Planting depth:** Soybeans respond best when planted at 1¼ to 1½ inches deep and should never be planted deeper than 2 inches! Remember, a soybean seedling must push that cotyledon through the soil as it emerges. The soybean seedling requires much more energy than a corn seedling with its narrow coleoptile (shoot). Target depth when planting corn is 1½ inches to 2¼ inches. Planting corn shallow is as bad as planting soybeans too deep because nodal roots will not develop properly and "Rootless Corn Syndrome" may result.

- **Soybean inoculant:** Old-timers say if soybeans have been planted in a field within the past four to five years, then an inoculant is not necessary. However, recent studies and more advanced inoculant formulations show otherwise. Using inoculants in light, sandy soils, as well as weather-stressed (flood, drought, etc.) fields have shown increased plant health and improvements in overall yield. Consider running side-by-side trials on your farm to see if inoculants will work for you.

Problems like sidewall compaction, surface crusting, herbicide injury, seedling insects and seedling diseases can all lead to delayed plant and root development. These, and many others, can all cause uneven emergence and poor stands in corn and soybean. **That's why it's important to control what you can to set up your crops for success!**

Tips for Adjusting Hybrid Maturities

by **LYLE MARCUS** CORN PRODUCT MANAGER
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Your FieldxField™ plan guides you for greatest success in each field by placing the best hybrid for that field. That plan will result in greatest yield success when followed even late into the planting season. Years of experience from our product team members, as well as many studies completed by Land Grant universities across our sales footprint, show that you should not switch hybrid maturities until at least May 25.

Many university studies prove that full-season hybrids can adapt to later planting dates and reach maturity and dry-down targets. Although you may see slight yield reduction if you plant your intended hybrid until May 25, switching to an early hybrid usually means less yield potential overall. There is a point of diminishing returns after May 25.

We recommend not making big maturity changes. Instead, adjust hybrid maturity by only five days for planting that will occur between May 25 and June 10. Then make another five-day reduction in maturity or possibly switch to another crop like soybeans after June 10.

Your decision, of course, will be based on your original plan. Things to consider before switching to soybeans include:

- **Fertility application made in a given field**
  - Will you waste resources by not planting corn?
- **Pre-plant herbicide applications**
  - Will another crop tolerate the pre-plant product applied?
- **In-season herbicide plan**
  - Will you be able to control the weed pressure in the field?
- **Long-term crop rotation**
  - Will you be able to balance your crop rotation next season?
  - Will you have capacity to plant corn-on-corn next season to balance your farm's crop rotation plans?

Below are university links for additional guidance for producing the highest yielding corn crop should a delayed planting situation occur:

- **https://crops.extension.iastate.edu cropnews/2019/05/late-corn-planting-options**
- **https://extension.umn.edu/corn-planting considerations-late-planted-corn-minnesota**

Your Latham® dealer or Regional Sales Manager can provide valuable insight if you must depart from your field-by-field crop plan. Latham has an outstanding portfolio of products to help where needed.

Hope your 2021 planting season goes well!

Emerge Fast. Grow Strong. Yield More.

by **COREY CATT** FORAGE PRODUCTS MANAGER
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There are certain tenants that help increase the germination and performance of any crop. It all starts with quality seed and seed treatments, followed by proper seed placement for the correct variety.

For best results when seeding alfalfa, follow the basics:

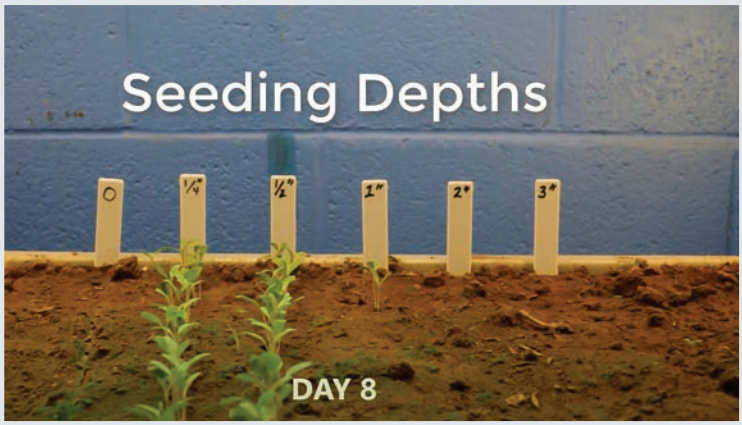
1. **Calibrate the seeder.** Research finds that careful calibration of each seed lot helps achieve desired results.
2. **Prepare a proper seed bed.** Make sure the seedbed is weed free. A consistent and firm seed bed helps achieve uniform seed placement. Check to make sure the seed isn't being planted too deep; a planting depth of ¼ to ½ inch is recommended for alfalfa seed. Rolling and press wheel drills help.
3. **Adjust soil pH.** The ideal soil pH for alfalfa is 6.8. If your soil has a low pH, a short-term fix is pel lime followed by ag lime for a longer-term fix.
4. **Test soil fertility.** Note: Potassium has a very strong salt index. For less risk of the potassium salt harming the seed germ, wait to fertilize until the plant has germinated and is growing strong. I have seen fertilizer injury during stand establishment, and it is more pronounced when conditions get dry.
5. **Study seeding rate.** Most farmers seed 18 to 20 pounds per acre. I suggest experimenting with at least one double-seeded pass in field. Note any growth differences and yield differences. Most people who have done this have noticed a thicker, long term stand with more yield. An independent farmer conducted his own multi-year study with three replicated alfalfa seeding rates. He tested 16- and 32-pound rates. A quick summary is 32-pound rate yielded 0.75 dry matter (DM) tons per acre more in year one and 0.85 DM Tons/A more in year two. Each grower has different equipment and soil types, so results may vary. However, there isn't a study more relevant to your operation than the one done on your acres!

The objectives of planting any seed is emerging rapidly and exposing leaf tissue to sunlight as quickly a possible. Delayed emergence adds risk that none of us can afford.

Emerge fast. Grow strong. Yield more.

Seed Depth

A high fidelity to seed depth will help have a higher success rate. In the study below, the seeding depth range with the best emergence is ¼ inch to ½ inch. I aim for ¼ inch. Check out a cool video about the **Impact of Seeding Depth on Alfalfa Emergence from University of Kentucky forage: https://www.youtube.com/watch?v=P023FVVWZaE**



Seed to Soil

Quick starts are getting that firm seed-to-soil contact to help the seed imbibe moisture quickly, which accelerates emergence.

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It Pays to Follow the Crop Plan

by **PHIL LONG** PRECISION AGRONOMY ADVISOR
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One of the most important to-do items for each of us this spring is following our Field X Field™ crop plans.

If a particular field dries out and is ready to plant, it's extremely tempting to plant the seed that's in the front of the shed even if that isn't the hybrid intended for that field. It pays to take the time to plant the right hybrid in the right field. **How many other decisions do you make every year that account for up to $200/acre?**

Planting the right genetics in the right field accounts for up to 20% of the yield. We can't predict the weather, so we plant more than one hybrid/variety to mitigate that risk. We also do our best to make sure the genetics are planted into the environment where they will thrive.

If you have the technology to capture planting data from the planter, make it happen! Equipment dealers can check your monitor systems and install updates. Then you can enter the hybrid/variety information as you move from field to field. The two minutes it takes to enter the information will pay you back all season long as you track progress on how you manage your farms the rest of the season. Remember, if you're running a Case IH planter/monitor, plug in a USB stick or it will not record any data. Most other monitors have internal memory that records data until it's full.

It's important to note where the hybrid "breaks" are during planting. If you don't have a planter monitor that can map where you start and stop different hybrids/varieties, then drop a pin in your monitor or even just draw a picture with landmarks. This allows you to go back and compare genetics as they emerge and grow. Another option is Latham's Data Forward℠ app, which allows you to easily split a field based on landmarks of where a hybrid/variety ran out and where the next one began.

For best success, the crop plan process shouldn't stop when the planter leaves the field. Take time to walk your fields during emergence. Corn establishes the girth of the ear during the 5-7 leaf stages. If you see stress during emergence, it will likely affect ear development in a few weeks. The premium version of Latham's Data Forward app provides satellite imagery after planting. This can help narrow areas of focus by noticing different hybrid/variety performance. I'll talk more about how satellite imagery can be used in upcoming articles because it is a very unique tool. Diligence in keeping records today means more opportunity to move the Data Forward in the future.