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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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Considerations for Applying Foliar Fungicide to Soybeans

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The use of foliar fungicide on soybeans during any growing season is a tough decision. There are many factors that enter into the equation like growth stage of the crop, weather, presence of diseases and history of the field.

Years ago, when fungicides were first made available for post-emergent application on soybeans, many farmers took a “shotgun approach.” Rather than scout their fields, they applied fungicide as more of an insurance against disease. We’re seeing the effects of those decisions as many diseases are becoming resistant to fungicides, especially those in the Qoi (Quinone outside inhibitor) family, commonly called the strobilurins.

Before pulling the trigger on using any foliar-applied fungicide on soybeans, I encourage farmers to walk their fields or hire a competent scout. Here are a few ideas and suggestions for the more common soybean fungal diseases that show up in Latham Country:

- **White Mold, or Sclerotinia Stem Rot**, is widespread across our territory. Infection usually occurs at or just after the R1 (flowering) stage during periods of high humidity and temperatures below 85° Fahrenheit. Look for leaves that are starting to turn yellow after R1 but well before normal senescence should happen. Once leaves turn brown and the stem starts to develop that white, cottony growth leading to dark sclerotia (like mouse droppings) along the stems and pods, it is too late to save that plant. Research from the University of Wisconsin indicates that applications of foliar fungicides registered for use against

White Mold can be helpful if applied in the R1 to R3 stage. If you miss the target window for application and the disease becomes severe, harvest that field last so you don’t spread the sclerotia to your other fields.

- **Septoria Brown Spot** is found in most fields in Latham Country but it’s seldom the primary source of lost yield. It can, however, contribute to overall yield loss in fields where Fusarium Root Rot is a problem and when damage from Soybean Cyst Nematode is severe. Severe infestations also can occur in the early part of the season where rainfall is over-abundant. Symptoms are small, irregular-shaped spots on leaves and typically start in the lower canopy and can show up as early as V2 stage and as late as R6. Leaves that are severely infected will turn prematurely yellow and drop from the plant. If warranted, foliar fungicides can be helpful when applied at the R3 to R5 growth stage.

- **Frogeye Leaf Spot** is caused by the *Cercospora sojina* fungus. Symptoms appear as small, round gray spots on the upper leaf surface with dark reddish-brown borders. Infection can occur anytime throughout the season but is most common after flowering and after periods of warm, humid weather. Check the upper canopy of plants, especially in the R3 to R6 growth stage. Iowa State researchers have shown that an application of a foliar fungicide containing two or more different active ingredients at R3 is fairly effective in reducing the severity of Frogeye Leaf Spot damage. Application of a product containing only strobilurin chemistry (Qoi) was not effective at all due to resistance.



A Satellite Image is Worth a Thousand Words – or More



by **DARIN CHAPMAN** PRECISION AGRONOMY ADVISOR
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You know the old saying, “A picture is worth a thousand words.” A satellite image used in precision agriculture today might provide a thousand dollars’ (or more) worth of value to your operation. Satellite crop imagery can help you detect either potential or small issues before they turn into bigger problems.

Crop health imagery has improved immensely in recent years. Satellite images are now high quality enough to help farmers make management decisions like whether to replant or apply nutrients. Today’s images help farmers evaluate emergence, detect weed pressure and monitor nutrient stress. A satellite gives you a bird’s eye view of a field, so you can see crop performance throughout the season.

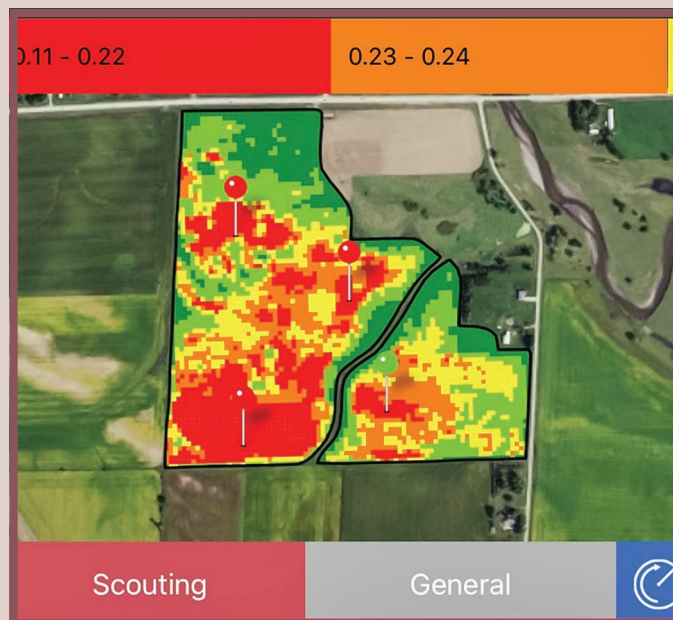
Latham’s Data ForwardSM App can help understand where or why problems exist within your fields such as: nutrient deficiency, insect infestation, field applications, soil compaction, disease, and more! Your field health imagery may be viewed from the Data Forward app. Simply navigate to problem areas on the map, and then enter the information you collected while walking fields. If you notice a problem area in the field, pull up this satellite image in the Data Forward app and use the image to identify issues within a field. This saves you having to spend time walking the entire field.

By using satellite imagery, you can improve crop management

by easily tracking crop growth, plant health and soil quality across entire fields. You can vary the application of inputs such as water, seed, fertilizer, and pesticides. You also can support the planning of harvest through crop yield predictions. This is essentially the best information available until you get an actual yield map.

One reason satellite imagery is more helpful than ever is due to the Normalized Difference Vegetation Index (NDVI), which measures plant health based on how the plant reflects light because chlorophyll indicates plant health. NDVI helps farmers notice issues that are impossible to spot with the naked eye.

Used mostly in row crop production due to high-density of biomass, NDVI helps identify changes in biomass growth across a field. The advantage of using NDVI through Data Forward is that each week we can process one image at a high enough resolution to notice differences in biomass changes. We can compare images from week to week, looking for changes that indicate potential problems.



Noticing changes in plant health or identifying weed outbreaks, for example, allows you to make farm management decisions that can enhance crop performance and yield potential. **To learn more about how you can benefit from using satellite health images or to enroll in Latham’s Data Forward service, give us a call today!**

Late-Summer Insect Management Helps Alfalfa Plants Prepare for Winter



by **COREY CATT** FORAGE PRODUCTS MANAGER
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Ugh, those pesky bugs!

We work so hard to help crops to reach their yield potential. There is so much promise when a crop emerges from the ground... and then the uninvited bugs show up to the party robbing yield and causing disease. The chart provided reviews the life cycle of these yield-robbing insects.

POTATO LEAFHOPPER TREATMENT GUIDELINE TABLE		
Average stem length	# Leafhoppers/Sweep	# Leafhoppers/100 Sweeps
Less than 3"	0.2	20
3" to 6"	0.5	50
8" to 10"	1.0	100
12" to 14"	2.0	200

APHID TREATMENT GUIDELINE TABLE		
Growth stage	Pea, Cowpea aphid	Blue alfalfa, Spotted alfalfa aphid
Seedling	5	1
< 10"	40	10
10-20"	75	30
> 20"	100	50, 100

The 2020 alfalfa bug of the year so far is the weevil. It's only about a quarter-inch long, but these little weevils can do big damage! If you don't see the alfalfa weevils, you'll notice their presence. Look for pinhole or lacing-type feeding damage on leaves.

Weevil numbers can resurge quickly in the fall, and we have third and fourth cuttings of alfalfa to protect. It's important to protect the crop in late summer, so tissue is intact to ensure the alfalfa plants capture nutrients required to overwinter.

Consider your spraying options if you see plant damage or notice the presence of weevils and other pests. As temperature cool in the fall, it's more challenging to control pest populations because insecticides must come into contact with the bug. A bug's activity levels decline as temperatures decline. Bugs may move toward the hard to reach, lower portion of plant.

Fall Seeding

Fall seeding is just about a month away! Seeding earlier is better because it helps ensure good crown development. If there is a delay in moisture, seeding earlier increases the window of getting rain to facilitate rapid emergence. Remember, it's important to get a good crown developed to prevent winterkill.

Now is a great time to tentatively plan which acres will be seeded and line up your seed. Below are a few considerations for late summer and early fall seeding:

1 Herbicide carryover. There have been many surprises in cover crop and fall alfalfa seeding. The seed will emerge. Once the radicle comes into contact with the carryover herbicide in soil, the plant dies. Here is a guide of some commonly applied spring herbicides and rotation restrictions:

<https://extension.sdstate.edu/sites/default/files/2019-08/P-00124.pdf>

2 Seed-to-soil contact ensures the seed quickly gets moisture. Quick emergence is critical in the fall.

3 Time can be your friend or enemy. Alfalfa breeders suggest fall seeding is complete by August 15 if you are roughly north of Interstate 90 and by September 1 if you are south of I-90. The later you start, the more risk you encounter for establishing the crown. Alfalfa seed is an investment worth protecting.

4 Latham's AlfaShield™ seed treatment helps draw moisture to the seed. There's a reason our ads read: **Emerge Fast. Grow Strong. Yield MORE!** Alfalfa seed must imbibe at least 125% of its weight in moisture to germinate, but it needs more available moisture to sustain growth. AlfaShield also contains key micronutrients and a growth promoter called Optimize Gold that accelerates early nodulation to speed up capturing nutrients. This process is critical to getting those desired nutrients and carbohydrates into the crown for winter survival.

Fall seeding is a great way to get a jump start on next spring's work and to capture more yield. Feel free to contact me if you have any questions.



Continually Searching for Better Products and Better Positioning

by **LYLE MARCUS** CORN PRODUCT MANAGER

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Product team members at Latham Hi-Tech Seeds continually search for new products to help our lineup perform better in your fields. We look at our MiniStrip trials to document the early season environmental issues at each location, so we can better understand harvest results. While we learn about new products in these plots, we also look for indicators to help us provide better positioning statements on key hybrids in our lineup.

Each season offers new challenges and opportunities for us to learn more to help better position products in your fields. Like many of your fields, some of our MiniStrip plot locations were planted in cooler soils this spring and endured the very cold temperatures over Mother's Day weekend. We are watching hybrid reactions to those environmental conditions.

Soon we will evaluate seed products on flower date. With the abundance of pollen during flowering in a commercial corn field, we generally do not get concerned about pollen viability. We watch for stresses on the plant that may cause issues with proper silking. We also look for differences between hybrids that are close in maturity, so that we can make sound recommendations on which hybrids to pair together that are similar in maturity but offer variation on pollination/silking timing.

Pairing hybrids in a field with varying pollination windows spreads risk of cool weather, super high temperatures or drought. It is uncommon for us to see issues with pollination but pairing complimentary hybrids in the same field offers protection in seasons of extreme stress.

July also is when we look for early onset of diseases. We evaluate for disease tolerance and for benefits we may see from in-season fungicide applications.

The continual evaluation of what we see in our plots helps us fine tune the hybrid characteristic information on our tech sheets. **Tech sheets help Latham[®] dealers make recommendations for customers and also assist farmers in choosing our products.**

We look forward to sharing any important findings from our summer research during Latham's post-harvest meetings this fall. Watch for more details coming soon!

