TECHtalk®

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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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Latham® HI-TECH SEEDS

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The History of Latham® IRONCLAD™ Soybeans

by **MARK GRUNDMEIER** SOYBEAN PRODUCT MANAGER
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Soybean Cyst Nematode, Iron Deficiency Chlorosis, Phytophthora Root Rot and Sudden Death Syndrome are just a few of the pests, diseases and agronomic issues that have contributed to lower yields and higher costs. Farmers, who needed protection against these agronomic issues, were hesitant to plant defensive soybean lines in fear of giving up yield.

Then in the late 1990s soybean breeding techniques were developed that could quickly identify cultivars that had sound defensive traits and were high yielding.

In 2011, Bill Latham, then head of Latham's Research program, challenged our Soybean Product Team to find an idea or a concept that would help change the way farmers felt about defensive soybean products. Bill, an ex-Marine aviator, was a military history buff as were several other members of our team at that time. We remembered back to the pre-Civil War era when naval warships were made almost exclusively out of wood. Offensive firepower from these ships was quickly outmatching their wooden defense. Innovators at the time were quick to experiment with using iron plates over the wooden sides. Hence, the term "Ironclad" was born.

The first ever battle between two ironclads took place in 1862. The *Monitor* was the Union warship. The Confederacy had captured the Union ship *Merrimack*, plated it with iron, and renamed it the *CSS Virginia*. However, the battle has gone down in history as the *Monitor* versus the *Merrimack*. Although both sides claimed a victory, in essence it was a draw as neither ship could sink the other. It did, however, dramatically change the course of naval warfare. From that battle on, navies all over the globe began using metal plates over wood and eventually made their ships completely out of metal!

Back to 2011… After much discussion, it was decided to use the designation of IRONCLAD™ for Latham brand soybeans that had a resistance gene for Soybean Cyst Nematode, a gene for Phytophthora Root Rot and scores of 2.2 or better (on a scale of 1-5) against Brown Stem Rot, Iron Deficiency Chlorosis and either White Mold or Sudden Death Syndrome.

Latham's first IRONCLAD soybeans were introduced in our 2013 Product Guide. It was quickly evident that these defensive traits were exactly what farmers in Latham Country needed to protect yield and increase profitability.

It should be noted here that since the start of our Ironclad program, we have never had a #1 selling soybean that was NOT an IRONCLAD! Additionally, our 2021 Product Guide features 28 Ironclad soybeans out of the total 56 we have listed. That's truly an amazing advancement during a short eight-year period of time!

There is Value in Grid Soil Sampling

by **PHIL LONG** PRECISION AGRONOMY ADVISOR
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One of the best ways to incorporate technology into your operation is through soil sampling. We can pull a soil sample, mark that point with GPS and then come back to it in the future and monitor our progress.

Because soil samples are like a report card for your soils, it's important to consistently sample the same spot and maintain the same sampling frequency. Many farmers ask, "Do I need to sample every 2.5 acres or can I just take one sample per field or maybe on a 4.4- or a 10-acre grid?"

Understanding your field on a 10-acre grid is somewhat helpful, but those samples are usually just one point in the middle of 10 acres and don't show the variability that's typical in most Midwestern fields. **Sampling on a 10-acre grid is like using one teaspoon of soil to understand 20 million pounds of soil!**

Adequate soil fertility allows your crops to take up nutrients as they need them. If you have poor soil fertility, it's like you're asking your crops to skip breakfast and lunch but still deliver top yield. Would you expect a star football player to skip meals and have the energy to deliver his best performance?

Nutrient availability is crucial to the plant. A drop in pH to 5.0 can rob 27 percent of your corn yield and 21 percent of your soybean yield because the crop cannot take up what it needs, when it needs it.

Frequency of Soil Sampling

If you have never soil sampled, or if you have only done composite sampling, I recommend more intense sampling such as 2.5 acres.

Consider this… a three-bushel increase in yield in one year pays for the samples. The cost of sampling 2.5-acres grids is about $10 per acre. If you only sample every four years, that equates to $2.50 per acre per year. The cost of sampling an 80-acre field at $2.50 per acre equals $200 per year or a total of $800 every four years.

Soil sampling helps you get the right balance of nutrients in the soil, which has these added benefits:

- Stalk strength;
- Drought, insect, disease and other stress tolerance;
- Early senescence and low seed weight;
- Late senescence and added drydown costs;
- Nutrient availability to the plant;
- Soil porosity and the ability to hold onto moisture; and
- Soybeans will have the ability to develop nodules to produce nitrogen.

Soil fertility plays the biggest role in supporting the genetics you plant. Dr. Fred Below from the University of Illinois, who coined the "7 Wonders of the Corn Yield World," attributes fertility and narrow rows as the leaders for high yield corn practices.

Feel free to call me or my teammate Darin Chapman at 887-GO-LATHAM with any questions you might have about how soil sampling can pay for you!

Quick Tips to Understand Corn Silage Data

by **COREY CATT** FORAGE PRODUCTS MANAGER
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Technology in agriculture is helping us write new chapters in the book of performance, including yield as well as quality. Corn silage reports can get complicated. Understanding a few basic indexes, like those listed below, can help simplify your decision-making process as you analyze 2020 harvest results and choose silage hybrids for 2021:

1 **Yield –** Harvest day tonnage is found on the day we harvest the corn silage. It can range from 18 to 40 tons per acre, depending on the soil and weather. Most areas yield about 25 tons/acre. For easy figuring, one ton of corn silage is about 10 times the market price of #2 yellow dent corn. To compare hybrids, look at dry matter tons or simply run a calculation that removes all the moisture. It will be referenced as "DM tons/acre," which usually ranges from eight to 12. It's interesting to note that about 50% of this number is based on the grain portion. High-yielding hybrids have good tonnage as they excel in grain yield.

2 **Moisture –** The best range for most harvest and storage bunk storage units is 65 to 70% whole-plant moisture. It's important to understand how the plant was harvested; how it will ferment; and potential mycotoxin issues that could be looming. As the moisture drops below 65 percent, it becomes more challenging to pack the corn silage and leaves more air space. More available oxygen changes the fermentation dynamics, and it doesn't ferment as well. The free oxygen can also cause additional growth of some molds and mycotoxins.

3 **Quality –** The quality of corn silage is determined by several factors, including **starch, fiber, protein**, as well as **milk per ton and beef per ton:**

A. Starch – Starch digestibility is critical, so animals use the most starch. The higher the number, the better.

B. Fiber – The lower, the better for NDF (neutral detergent fiber).

The higher the better for NDFD (neutral detergent fiber digestibility). For every point of improvement of NDFD, you increase production by one-half pound of milk per head per day.

C. Protein – Higher protein is better.

D. Milk / Ton, Milk / Acre: The amount of milk is predicted per acre of corn silage. It's a combination of dry matter tons harvested and the quality of the corn silage. Higher numbers are better.

E. Beef / Ton, Beef / Acre: The amount of beef produced is predicted per acre of corn silage. It's a combination of dry matter tons harvested and the quality of the corn silage. Higher numbers are better.

In summary, data is only one piece of the yield puzzle. We have been experimenting with some soil testing discoveries, which I believe will be instrumental to risk management and the goal of not leaving any yield in the field. More to come on this!

2019 Corn Silage Data Sample from Alexander, IA Plot

		Milk/Ton	Milk/Acre	Beef/Ton	Harvest Yield	Yield Corrected to 70% WPM	Harvest Moisture	Harvest Pop	Ear:Stover Ratio	Dry Matter	CP	NDF	NDFD30	Starch	Ash	Fat	DM Tons	Lignin	Sugar	KD Rate	TDN Milk 2006	NFC
First plant date, unable to finish plot due to rain, had to wait																						
Latham	6175	2907	34194	261	27.6	33.7	57.4	34000	0.88	42.6	7.5	31.4	53.6	42.9	5.7	3.0	11.8	2.7	2.2	3.5	67.6	53.9

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Use 2020 Harvest Information to Prepare 2021 Crop Plan

by **LYLE MARCUS** CORN PRODUCT MANAGER
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Harvest is the perfect time to assess your fields and adjust your field-by-field crop plans.

As you harvest your 2020 crops, you will learn more about what worked in a given field. Tools like Latham's Data Forward™ help collect information. Even if you use another mapping tool, Data Forward can organize your information.

Below are ideas about what data to record now to provide great value next spring:

- **Disease.** We faced lots of disease pressure in 2020. Be sure to note the diseases you see and where you see them. This is especially important on corn-on-corn acres, as well as on rotated acres. This will help you select products with disease tolerance from the Latham® lineup for greater success in 2021.
- **Weed escapes.** Use weed ID materials or Google them to confirm what weed escape you see. Documenting weed escapes aides in the type of herbicide tolerance you may need. Most of Latham's corn hybrids carry tolerance to glyphosate herbicide; a few carry traits that make them tolerant to glufosinate for use with Liberty herbicide.
- **Fertility issues.** Note areas of the field that show deficiency and sample those soils. Make plans to fertilize according to the requirements for next season's crop. Very uniform and high fertility fields are in the highly productive class. Fields with uneven fertility may be considered as lower productive fields. You can find some great recommendations in Latham product info sheets.
- **Soil conditions.** Fields with high residue, like many of the derecho-damaged fields, will require different management and possible product selection. Fields with heavy trash burdens will likely need the strongest emerging products next spring. We strive to provide the best info on emergence scores in our technical data.

Carefully assessing each field and recording notes at a high level about what you see adds the greatest value to any yield map information that you generate. Use the Latham® Hi-Tech Seeds product guide, website product tools, tech sheets (also found on our website), plus information from your dealer or RSM to find the best product for each of your fields.

We will continue to provide product highlights as harvest data becomes available. Have a safe harvest season!