

Spring 2024 | Vol. 78



THE SEED CONSULTANT

A QUARTERLY NEWSLETTER NEWS AND VIEWS FROM THE FIELD

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Setting the stage for
the entire season

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A “jump start” for
addressing early
growth challenges

BILL MCDONALD RETIRES

We thank Bill for his
years of service to Seed
Consultants



PLANTING DEPTH CRITICAL TO ACHIEVING HIGH YIELDS

By Matt Hutcheson, CCA

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Planting is one of the most critical management practices of the year because it sets the stage for the entire growing season. There are several key aspects of planting, one of which is planting depth. Invariably, every year Seed Consultants' agronomists come across problems that are caused by variable and improper planting depth. Planting depth is critical because it impacts germination, seedling development, root development, emergence, and ultimately crop yields.

For corn, seed needs to be planted no shallower than 1.5 inches below the soil surface. Typically, the suggested range is 1.5 to 2 inches, however, some studies and growers have seen success at depths up to 3 inches. It is important to make sure that corn is planted into adequate soil moisture for germination. In addition, corn needs to be at least 1.5 inches deep for the proper early development of the root system.

After germination, as the coleoptile nears the soil surface, it senses light and signals the plant to stop elongation of the mesocotyl as well as signaling development of the root system. Corn that is planted shallower than 1.5 inches does not give the plant enough room between the seed and the soil surface to properly signal for and develop its root system. A shallow nodal root system can lead to decreased water and nutrient uptake as well as increased root lodging and standability problems later in the growing season.

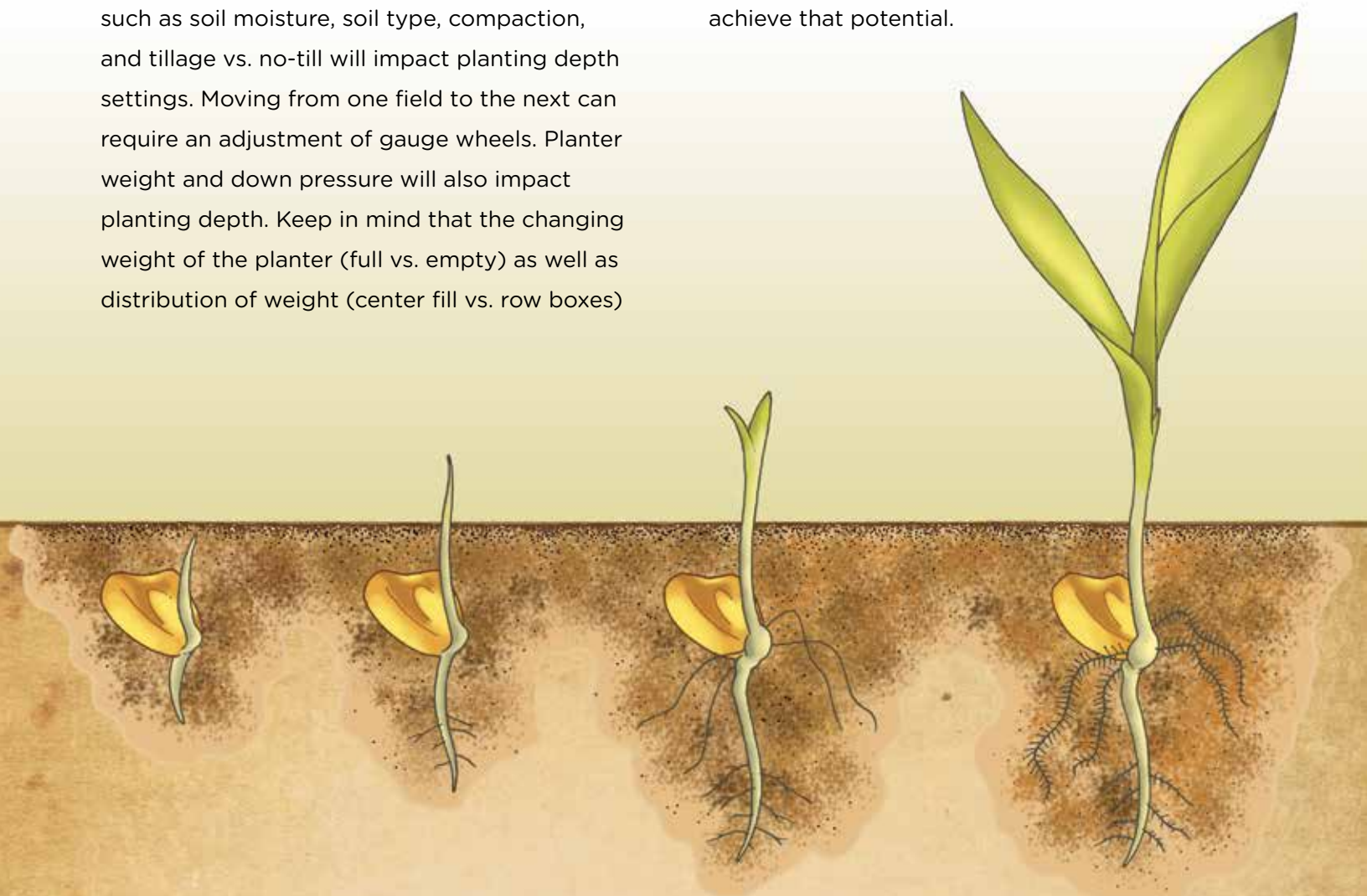
Soybean seed should be planted at a depth of 1 to 1.5 inches. As with corn, it is critical to plant the soybean seed at the proper depth into adequate soil moisture to ensure germination and emergence. Soybeans must take up 50% of their weight in water to germinate, therefore, ensuring they are planted at enough depth to imbibe moisture is the key to uniform emergence.

Planting soybean seed too shallow can result in inconsistent soil moisture at the seeding depth and uneven emergence. Some studies have shown that planting at 1.5 to 2 inches provides more even emergence, however, soybeans should not be planted deeper than 2 inches.

Planting depth should be set properly and checked regularly throughout the planting season. Planting depth will vary throughout the season based on changing conditions and equipment will need to be adjusted periodically. Field conditions such as soil moisture, soil type, compaction, and tillage vs. no-till will impact planting depth settings. Moving from one field to the next can require an adjustment of gauge wheels. Planter weight and down pressure will also impact planting depth. Keep in mind that the changing weight of the planter (full vs. empty) as well as distribution of weight (center fill vs. row boxes)

will also play a role in the down pressure and seed placement.

Planting depth is something that is easy to set at the beginning of the season and overlook as time goes on. Each year agronomists visit fields with crop development problems and yield loss that could have been avoided if more attention was given to planting depth in the spring. The crop begins the season with its highest yield potential, it only makes sense to take the time to plant it at the correct depth so that it has the best chance to achieve that potential.



Planting depth is critical because it impacts germination, seedling development, crop root development, emergence, and ultimately crop yields.

THE INVISIBLE ENEMY: FIGHTING SOILBORNE DISEASES

By Bill McDonald, CCA

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As farmers check their fields and soil temperatures in preparation for spring planting, they need to remember a silent adversary lurks beneath the soil, threatening soybean yields.

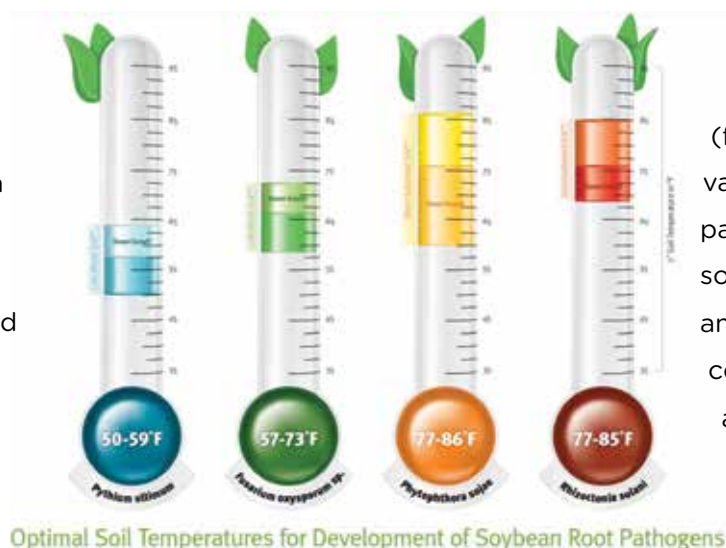
THE SOIL ENEMIES: PYTHIUM, FUSARIUM, PHYTOPHTHORA, RHIZOCTONIA, AND SCN

The soil harbors a formidable lineup of adversaries: Pythium, Fusarium, Phytophthora, Rhizoctonia, and the Soybean Cyst Nematode (SCN).

These microscopic troublemakers can wreak havoc on soybean crops, leading to poor germination, reduced stands, and compromised yield. They're in your soil, ready to attack untreated soybean seeds.

IDENTIFYING EARLY SEASON SEEDLING & ROOT DISEASES:

- Phytophthora Root Rot/Water Mold - Water Lover - prefers wet and is more common in warmer soils, causing damping-off and root rot. Phytophthora infection occurs early in the growing season during wet conditions.
- Rhizoctonia Seedling Blight - Affects seeds and seedlings in warmer conditions, leading to cankers and stunted growth.
- Fusarium Root Rot (fungus) - Thrives in various soil conditions, particularly hot and dry soil, causing root decay and plant stunting. A cold, wet spring can also encourage the development of



sudden death syndrome in seedlings.

- Pythium Seedling Blight - Symptoms include rotten, mushy seedlings with poorly developed roots and wet conditions after planting. These are typically a problem in cooler soils in the North Central U.S.

- Soybean Cyst Nematode (SCN) - Major yield-reducing tiny worm-like parasite-pathogen. Moisture and fertility stress can enhance the disease. High soil pH can favor SCN. Planting continuous susceptible soybeans favors SCN.

YIELD IMPACT AND PREVENTION STRATEGIES

While it's uncommon for soybean diseases to wipe out entire fields, they can significantly dent yields. The battle begins before the seed breaks through the soil. You want to ensure those seedlings emerge evenly. Ensuring that vegetation remains unaffected during emergence is crucial.

THE COST OF CUTTING CORNERS

Be cautious with the temptation to cut costs by planting untreated seed. The adage 'keep your spaces and lose your gaps' is still relevant today. By investing in treated seed, you can strike a balance: fewer seeds per acre, but each with the best chance to thrive.

THE ARMOR AGAINST SOILBORNE PATHOGENS

Most soybeans available today come with seed treatments designed to thwart disease

Different soybean pathogens can develop across a range of environments which makes it critical to protect the start with multiple modes of action against key diseases

development. My advice is to focus on seed treatment with fungicide, acting as armor to shield the young seedlings from the pathogens waiting below. Skimping on these treatments may save costs upfront, but the long-term

consequences can include significantly reduced yields.

Talk to your Seed Consultants sales professional about our seed treatments featuring LumiTreo™ fungicide. LumiTreo™, backed by Lumisena®, has multiple modes of action against the five early-season diseases, ensuring broad-spectrum defense for your seeds. Using seed treatment is like giving your crops an immunization shot, allowing them to fend off these threats until they're strong enough to resist on their own.

Research in multi-year Phytophthora trials shows soybeans treated with LumiTreo™ fungicide seed treatment produced a 4 bu/A yield advantage over metalaxyl, the previous leading technology for Phytophthora protection*.

BEST DEFENSE IS OFFENSE

Like in sports, the best defense is a good offense for giving your soybeans the best chance to grow big yields. While the science behind seed treatments is complex, the message is simple: every seed counts. You can enhance stand counts, maximize sunlight capture, and boost their yields using high-quality treatments.

* Data is based on 638 head-to-head comparisons between Lumisena® fungicide seed treatment (0.568 fl oz/cwt) and metalaxyl (0.75 fl oz/cwt) in the top 10 soybean-producing states through Dec. 12, 2017. Comparisons were made utilizing the same soybean variety. DO NOT USE THIS OR ANY OTHER DATA FROM A LIMITED NUMBER OF TRIALS AS A SIGNIFICANT FACTOR IN PRODUCT SELECTION.

STARTER FERTILIZERS IN CORN PRODUCTION

By Jordan Bassler

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As farmers walk through their spring planting plans, I want to share my insights on using starter fertilizers in corn production. In my experience, I've seen starter fertilizers become a pivotal "jump start" for addressing the early growth challenges that corn seedlings often encounter. As an agronomist, I've observed how soil conditions and unpredictable weather can significantly impact plant development. Here are some of my observations that may help you determine whether to use starter fertilizer.

STARTER FERTILIZER BENEFITS

The key benefit of using starter fertilizers lies in their ability to supply essential nutrients—namely nitrogen (N), phosphorus (P), and potassium (K)—directly near the burgeoning seedlings. This proximity ensures that the young plants have immediate access to these crucial nutrients, vital

for the early stages of growth, especially in root development.

However, it's important to note that the effectiveness of starter fertilizers isn't uniform across all farm fields. I've observed that their benefits are most pronounced in no-till or high-residue cultivation practices, regions with colder climates, and soils that are either coarse-textured or low in phosphorus. In these scenarios, starter fertilizers can be a game-changer, giving young corn plants the boost they need to overcome initial growth hurdles.

MITIGATE UNEVEN CORN STANDS

Another advantage is their ability to mitigate the uneven development of corn stands. This common issue, driven by factors like uneven residue distribution, soil compaction, and moisture variability, can be alleviated using starter

fertilizers. By fostering more uniform growth across the field, these fertilizers pave the way for improved yields and reduce the likelihood of yield losses associated with early plant stress.

YIELD BOOSTER?

I always caution farmers about expecting consistent yield increases solely from starter fertilizer applications, especially in conventional tillage systems. The research on yield increases is inconsistent, largely due to environmental and management practices.

Corn yield increases when starter fertilizer is used are typically observed in the following conditions:

- Within farming systems that adopt no-till or reduced tillage practices.
- On soils that have a coarse texture or low levels of organic matter.
- Soil is either not well-drained or tends to be cooler.
- Low levels of phosphorus (P) and potassium (K) in soil.
- Environmental or biological stress factors significantly hinder the growth of the corn's nodal roots.
- In soils where the pH level is exceptionally high or low.

- Areas where there is a significant risk of drought stress.

APPLICATION REQUIRES PRECISION

When it comes to application, precision and care are paramount. I remind farmers about the fine line between providing beneficial nutrients and causing seedling injury due to excessive salt concentrations. It's crucial to consider soil type, existing nutrient levels, and the specific nutrient composition of the starter fertilizer to avoid adverse effects.

5 THINGS TO CONSIDER

Before deciding to use starter fertilizers, I suggest considering the following to ensure it's the right choice for your field.

1. Consider Your Field's Needs:

- Starter fertilizer can boost early corn growth but doesn't guarantee higher yields.
- It is best for fields with cooler, wetter soils due to reduced tillage.
- Improved early-season uptake of nitrogen and phosphorus.

CONTINUED ON PAGE 8



STARTER FERTILIZERS IN CORN PRODUCTION

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2. Right Place, Right Nutrient:

- Place immobile nutrients (phosphorus, potassium, zinc) close to roots. Use caution when using potassium, as it can cause burning. Keep the potassium rate low and not place it directly with the seed.
- Mobile nutrients (nitrogen, sulfur) should not be too close to the seed to avoid germination issues.

3. Choosing the Right Starter:

- Pick a starter that provides the nutrients your corn lacks.
- For early growth, choose a starter high in phosphorus (P2O5) to apply in-furrow.
- In high residue, use nitrogen and sulfur starters on the soil surface.

4. Ortho vs. Poly-Phosphate:

- Calculate the cost of the products per unit nutrient applied and what nutrients your soil needs. Use a 10-34-0 starter for a good phosphorus source unless you need a low-salt option or need to supply potassium.

5. Determining the Right Amount:

- Use calculators for the correct rate, but keep in-furrow rates low.
- Fertilizer placement should be away from the seed based on soil dryness.
- Starter fertilizers are in addition to your regular fertilization.

The strategic use of starter fertilizers represents a promising strategy for enhancing corn production, especially in challenging environmental conditions. These specialized fertilizers lay the groundwork for a successful harvest by fostering early root development and providing essential nutrients. As with all agricultural interventions, informed application tailored to the crop's specific needs and the local environment's nuance is key.



PRODUCT USE GUIDE

Part of growing healthy crops is making sure they are protected with the right products. Visit the product page on our website to view our product use guide for information about insect control and herbicide tolerance to support technologies in our seed.



SEED CONSULTANTS 2024 REPLANT AND RETURN GUIDELINES

All replant paperwork must be received into the office by **July 1, 2024**.

Growers must contact and allow the seedsmen to assess the stand and approve all replant.

GENERAL GUIDELINES

- No replant credit, if seed is planted prior to insurance guidelines.
- Must replant in 2024; no credit for 2025.
- Delivered replant seed is subject to a delivery charge.
- Subject to product availability.
- Subject to change without prior notice.

SOYBEANS

- Grower must allow enough time for planted beans to emerge
- No replant if seed is still viable
- Lumigen FST/IST (Inoculated)... 100% replant
- Lumigen Base...75% replant
- Untreated...0% replant

CORN

- All traited hybrids...100% replant
- All treated hybrids...100% replant
- Untreated hybrids...0% replant
- Organic...0% replant
- Replant of replant 1/2 of list price

2024 SEED CONSULTANTS RETURN GUIDELINES

No return on treated soybeans.

Growers may return untreated soybeans to your seedsmen, area warehouse, or dealer.

No corn returns will be accepted after June 21, 2024.

No soybean returns will be accepted after July 12, 2024.

If you have seed returns, contact your seedsmen or your local dealers before the return/replant deadlines.

Seed Consultants soybeans are covered under multiple patents that are still enforced. Please adhere to SCI guidelines and avoid pirated bin run issues.

MCDONALD RETIRES

Bill McDonald spent seven years of his career with Seed Consultants in Ohio and retired on March 17, 2024.

Bill was born and raised on a grain and livestock farm in Madison County and later they moved and expanded the operation to Bainbridge, Ohio. Bill was a 10-year 4-H member and spent more than 20 years as an advisor. Bill started his career farming. He then moved into the agricultural retail business. He spent three months as a floater operator and then moved into the role of assistant manager and salesman. Within three years he was named branch manager which is a position that he held for close to 20 years. He then transitioned out of the operational side of the business to being a salesman until he joined Seed Consultants in 2017. Bill has had many accomplishments over the course of his long career including being named Certified Crop Advisor of the Year in 2006.



Bill McDonald

Bill has been married to his wife Rita for 30 years and they have four children and 10 grandchildren. Bill is looking forward to having more time to attend all his grandchildren's activities!

We want thank Bill for his years of service and wish him the best!

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- Approval and credit limits established by John Deere Financial &/or RABO...not by SCI.
- Terms and conditions apply. See respective credit applications for full terms and disclosures.
- To increase or establish your credit line call John Deere Financial (800-433-8964) or RABO (888-395-8505).
- Must be enrolled and approved to qualify for discounts.
- Discounts applied on approval date from John Deere Financial &/or RABO.
- Signed terms of disclosure on file.
- Minimum purchase of \$1,000.
- Due date of December 2024.

For John Deere Financial customers with current special terms balances at or near their credit limit, they may have an option to enable their seed purchase now and lock in their order. Contact your SCI Seedsman for details.

Finance Plan	DISCOUNT SCHEDULE	
	John Deere Financial	RABO
Purchase & Approval Date	Fixed 0%	Fixed 0%
April 2024	0%	0%
May 2024	0%	0%
In Season	0%	0%

LEADER UPDATE

By Daniel Call, CCA

General Manager
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Here we stand again facing the start of another growing season. There is a significant amount of both optimism and anxiety this year as we face the starting line. Commodity prices have dropped from where we were last year. Therefore, the decisions we make this spring are even more critical to have a profitable year in 2024.

Key lessons from previous years which seem to always pay dividends to raise a successful crop:

1. It's better to stay at home versus planting the day before a big rain.
2. Uniform planting depth and spacing are imperative to raise big yields.
3. Paying attention to the little details at planting time pays huge dividends. Make sure to constantly monitor equipment and planting conditions.
4. Being patient during stand establishment through difficult springs typically works in our favor and allows us to make better replant decisions. Thorough stand counts, combined with using university replant tables to determine replant needs helps us to make the best unbiased decisions.

Although we have no idea what obstacles we may experience this growing season, Seed Consultants has worked diligently to identify and advance products which exhibit outstanding stress tolerance and key agronomic characteristics suited to handle our customers unique growing environments. Combining these outstanding agronomics with excellent seed treatments gives our customers protection regardless of what the new growing season brings. Our new advancement class this spring only reinforces these advantages. We are excited to get these new products in the field.

Another item you need for a successful spring is support. Seed Consultants will be there for you this spring should you have additional seed needs. We have a good supply across most traits and maturities to fulfill your in-season needs. Contact your Seed Consultants sales representative and allow us to deliver your additional seed needs giving you one less thing to worry about this spring.

We thank you for your business and look forward to a successful 2024 planting and harvest. Lastly, we ask that each of you have a safe spring. Be careful and take time during the spring rush to ensure you and those around you are safe. Wishing you all a bountiful 2024 growing season!



Seed Consultants

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Don't miss a thing

The SCI free e-newsletter comes via e-mail every Monday. The newsletter is packed full of current agronomic topics. Subscribe by sending your e-mail address to matt@seedconsultants.com or by signing up on our website at www.seedconsultants.com.

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RR2 - Contains the Roundup Ready® Corn 2 trait that provides crop safety for over-the-top applications of labeled glyphosate herbicides when applied according to label directions.

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Varieties with the Glyphosate Tolerant trait contain genes that confer tolerance to glyphosate herbicides. Glyphosate herbicides will kill crops that are not tolerant to glyphosate.

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AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax products.

AMXT (Optimum® AcreMax® XTreme) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, a Bt trait, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax XTreme products.

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