The Life

Summer 2022

by NuTech Seed

The Product Issue

2023 SEED GUIDE INSIDE
Products and recommendations to start planning for next year

NUTECH GETAWAY RECAP
Punta Cana was a great trip and we're getting ready for the next one

TECHNOLOGY & AGRONOMY
New products and good advice for your season

WOMEN IN AGRICULTURE
Reflections on changing roles and breaking the mold

NuTech Seed®

MOMENTS AND MEMORIES

There are moments in life that stick with you. Planting your first crop. Meeting the person you decide to spend your life with. Buying your first farm. Saying goodbye. These moments become our most important memories.

I experienced one of those moments earlier this year, when my dad passed away at age 89. I know many of you have experienced similar losses. In my grieving, I have also found reflection and gratitude.

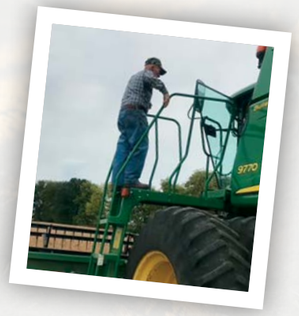
Over the years, my father shared a lot of wisdom with me: Corn doesn't grow in the bag. If you take care of the land, it will be good to you. Respect people with the courage to create something. These are ideas we've embraced as the NuTech team and they've helped build the Lifestyle that continues to bring in more enthusiasts.

Working the land is a wonderful life. The few of us that get this privilege understand the blessings and the challenges. None of us would trade the opportunity for one more crop, one more season or one more perfect stand of corn. Because even in the challenges, there are those moments that become memories. That first day you can "row" a great stand of corn. A sunrise burning the dew off a knee-high field in early June. The sunset from a combine cab. These are moments that make you proud and make you think of everyone who helped you get to this point. These are the moments that drive the farmers we work with, and our team here at NuTech.

Thanks to the support of our friends and NuTech family, the Lifestyle and NuTech acres continue to grow, and grow rapidly. Our philosophy of success, enjoyment and family is contagious, because those are the things that count. The passion and skills of our team along with an outstanding product portfolio are a powerful combination.

What an exciting and challenging time to be in production agriculture. A chance to both generate the most dollars ever per acre, and at the same time, risk the most dollars per acre in getting there. When you partner with people who get that responsibility, who respect and live the same Lifestyle that you do, it's all the more special.

To my dad, I say goodbye, old friend. I'll save the last 12 rows for you, and I'll remember to watch the sunset more than the yield monitor. Thank you for the moments and the memories. We will continue to respect the Lifestyle and make sure we see the corn every day.



Brad Damery
General Manager

THE Product ISSUE ..... Summer 2022

The Life by NuTech Seed

What's happening at NuTech this season?

Find the latest technology and agronomy news

In this issue, we're starting a new feature section focused on bringing you updates in technology and agronomy from our team here at NuTech and our colleagues at Corteva Agriscience. In coming months, we'll use this News & Notes section to spotlight tech-focused topics like traits, breeding, seed treatments and crop protection as well as updates on agronomy issues to have on your radar. Our goal is to introduce you to some new ideas and deliver straight-talk information you can rely on as you're making decisions about your season. Check it out starting on page 68.

Farm Progress Show

August 30 - September 1, 2022

Come visit us at booth 19S.

Dealer kickoff meetings and plot tours

8/2 **Champaign, IL**
Corteva Research Site
985 County Road 300 E., Ivesdale, IL 61851

8/9 **Princeton, IL**
Corteva Research Site
19741 IL Hwy 26, Princeton, IL 61356

8/15 **Johnston, IA**
Corteva Research Site
700 NW 62nd Ave, Johnston, IA 50131

Contact your DSM or info@nutechseed.com for more information.

Welcome to the NuTech team

We'd like to welcome Nick Kessler to the NuTech team as a DSM in SW Illinois. Nick started with NuTech at the end of 2021. He grew up on a grain and livestock farm in Washington County, Illinois, and now lives in Waterloo, Illinois, with his wife, Jenny, and their three children Claire, Grace and Luke. Nick graduated from SIUC and has spent the last 19 years working in breeding R&D with Monsanto/Bayer, most recently as a Regional Field Testing Lead. In his spare time, he enjoys hunting, cutting firewood, attending his kids' sporting events and helping out on the family farm.

Agronomy Insights & Info Series

Check out our Facebook page each Friday as we post a new video from one of our agronomists discussing important agronomy topics.

*Follow us on **Facebook, Twitter and Instagram** to stay up to date on what's happening at NuTech and to catch some fun giveaways.*

NuTech *Intern Roundup*

Summertime means the chance for a new group of college interns to become part of the NuTech family. Learn more about these impressive students you'll meet around the office or out in the field as they learn about the agronomy business.

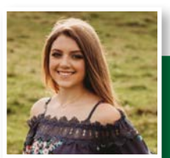
Cade Moon

Agronomy Intern, central Iowa

Iowa State University, agricultural studies major

Cade was interested in working with NuTech because, "I wanted to learn more of exactly what the seed business is all about. It has definitely been fun." Cade has appreciated the way his internship is introducing him to the world of business in general. "It exposes you to customer relations while working alongside the farmers while also being efficient in what we are doing." Cade grew up on acreage where his family showed livestock, and he still shows award-winning sheep. "My parents' sides of the family are farmers, so I have always been exposed to the crop production side."

Cade is based in central Iowa for his internship but has also traveled to Illinois and Missouri for various tasks. "In the early parts of the internship, I was running a lot of seed to different places to ensure everybody has what they need. Currently, I have been getting signs gathered and started getting those up," he said. "My favorite part of the internship is all of the farmers I get to drive seed to and talk to. Each of them has their own stories and information they wish to share."



Madison Conrad

Agronomy Intern, central Iowa

Iowa State University, ag business major

Madison Conrad grew up showing cattle through 4H, winning grand champion for her breed at the Iowa State Fair multiple times. She still goes to cattle shows, but her interest in ag has shifted to the agronomy business side. She's enjoying the variety of activities she does in her NuTech agronomy internship—from making seed deliveries to reviewing test plots to checking corn fields for rootworm. But her favorite part of her internship has nothing to do with the work. "It's meeting new people. It's how nice everybody has been so far."

Madison is hoping the people she's meeting this summer can help her shape her future. She isn't sure yet what agronomy path she wants to pursue following graduation, but says, "I'm hoping this internship will give me an idea what I want to do with my future. I hope talking with others can help me figure that out."

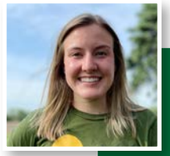
Allie Smith

Agronomy Intern, northern Illinois

Iowa State University, agronomy major

During her freshman year at Iowa State, Allie Smith worked in the school's seed lab. She liked getting to see the varieties of seeds that came in for testing. The opportunity to work with seed is what appealed to her about her NuTech internship. She's excited to see how seeds do in test plots this summer as well as starting to look at pest problems in the field.

Allie likes that her internship is hands on. "I like working in the test plots and getting to see the corn coming up instead of just talking about it in class. I'm looking forward to being able to apply what I've been learning in the classroom to the field and seeing where those two things connect." And Allie says what she's learning in her internship is getting her excited for her classes next year and exploring different aspects of the ag industry.



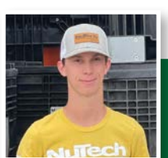
Jade Miles

Marketing & Sales Support Intern, NuTech Champaign office

University of Illinois-Urbana-Champaign, crop science major with a focus in crops agribusiness

This is Jade's third year as a NuTech intern. She was a supply chain intern the last two summers, but welcomes the chance to switch to her new marketing role this year. "I hope to learn more about how marketing affects the company and then be able to apply that to the real world after college. I'll be taking marketing classes my last two semesters to learn more as well."

Jade likes how NuTech allows her to explore different opportunities in addition to her internship duties. "Last summer, my main role was the supply chain, but I was able to go out and visit with agronomists and shadow them for a few days and get more hands-on experience." This year, she'll be helping with planning activities for the Farm Progress Show and dealer meetings, but looks forward to learning more about multiple areas of the NuTech business.



Austin Schuster

Agronomy Intern, south central Illinois and beyond

Rend Lake College, ag business major

Austin Schuster grew up in the ag world. Both sets of grandparents farm, and his dad steps in sometimes, too. Austin knows that he wants to farm once he graduates, but also knows that he'll likely need another job to supplement his farming income. He sees his NuTech internship as an opportunity to explore different functions within the seed industry and gain some valuable experience, something that will help him choose a second career to complement farming. "I like seeing the diversity of jobs in the seed business. And I think working for NuTech shows that I'm capable of branching out and doing things other than what I'm used to."

Austin says that flipping boxes is fun, and he likes monitoring the test plots to see how new corn varieties are doing compared to some established ones, but his favorite part of his internship is making connections with people in different areas. "I'm seeing a lot of new country and meeting a lot of new people—I enjoy it!"

NuTech ♥'s PETS

On the farm, animal friends come in many varieties. Whether yours sleeps at the foot of your bed, swims in a tank or beds down in a barn, there's no question that in NuTech country, pets are a big part of the farm family. If you have an interesting pet to tell us about, share it on our social channels or reach out to us at info@nutechseed.com.

My grandbaby, Ryker, 3 years old, with his bearded dragon.
Submitted by: Laura DeOrnellas

Claire and her mini highland heifer Rosie
Submitted by: Katie Dowson

Schroder is our farm mascot.
Submitted by: Lisa Kubik

Levi loves his pigs.
Submitted by: Gina Hodgson

Women in Agriculture

By Kate Lambert

It's ten at night. We are in the heat of farming. Tractors, planters, sprayers—everything and everyone is running full force.

Well not everyone. I am actually lying in bed. I worked all day, but in my office, not in a tractor. I only set foot in the barns twice this week, spent a single lunch break in the tractor cab, haven't even helped the crew move yet this season and (knock on wood) have not had to make a single part run.

There was a point in my life that I would have carried shame with so openly admitting that. When I was still a new farmer's wife, I carried a sense of not belonging, not being enough, not fitting the mold. I felt like there was a right way, and a less right way, to be a woman in ag and most days I felt like I was closer to the "less right" way.

Fifty years ago, the role of a farm woman was more clear than it is it today, or at least, we've painted history that way. A woman on the farm was tough as nails, wise beyond her years, not afraid of dirt, dust or snakes and could cook biscuits from scratch with one hand while plucking a chicken with the other. She didn't need to look up recipes on Pinterest and she didn't have time to share her farm story on Facebook. She wasn't in boardrooms or Capitols. And even though she was likely cut out of huge parts of the farm and industry, she was still committed to her role back home taking care of the farm and the farm family.

Those were farm women. Those were women in agriculture. But today's women in ag?

I've got a girlfriend right now, just a short drive away, running a tractor with a planter behind it. Half their kids are in her tractor and half of them in his. They'll work into the night to get beans put in the ground before this rain comes, assuming it shows up, that is. She'll get up the morning after a short sleep, wrangle kids, feed the household and head back out to do it all again. She's one of the toughest women I know.

She is a woman in ag.

I've got another friend a few hours south that is probably just now closing her laptop and contemplating pouring a glass of wine. She lives in an adorable little subdivision on the edge of a small city and spends her weeks, and many of her weekends, serving farm and ranch families across the country. She doesn't own a farm, a cow or a tractor and it's a good possibility she never will. But she's committed her soul to service of the industry.

She is a woman in ag.

I've got another friend a few hours the other way who runs her own business from the farm, devotes hours of time to speaking on behalf of the industry but will openly admit she has no interest in working calves, driving a tractor or participating in the daily grind of the farm. She has a powerful voice that reaches far beyond our inner circles and serves us all more than we will ever know.

She is a woman in ag.

And then there is me. I work full time in industry, for an organization and team I love. My days, and often nights and weekends, are filled with conversations around corn, soybeans, cattle and the families that raise them. Many weeks I am in boardrooms more than I am in the barns, and I certainly have more windshield time on the highway than I do in a tractor.

Yet, I am a woman in ag.

We've broken the mold for women in agriculture, broken the mold on what a farm woman "should" look like. I just pray that as we go forward we keep the mold busted, and don't use the pieces to create some new set of "shoulds."

SUMMER GATHERINGS

While you patiently wait for your corn and soybeans to do their thing out in the field, it's a great time to enjoy family, friends and everything you work so hard for.

Here are a few no-fuss tips for a backyard get-together, where the only measure of a "perfect" party is laughs shared and memories made. Here's to a beautiful summer.

Set up your backyard in distinct spaces: A place to eat, spots to sit in small groups and converse and areas for outdoor games (cornhole, anyone?) help guests move throughout the party. Make sure at least some of your seating is in areas that will stay shady throughout the day.

Create a kid zone: Set aside one main area where kids can play. Or, if your party will include kids of different ages, set up different spots where big kids can get rowdy and little ones have a safer space to play with age-appropriate toys and activities. This lets parents relax a little more.

If it's a hot day, add a water play area. Water balloons, a sprinkler or a water table for little ones will keep kids occupied all day long—just place it a good distance from food and adults who prefer to stay dry. Set out towels so kids can wrap up as soon as they're done (and parents have one less thing to tote to the party). Consider investing in a set of 8-10 low-cost bath towels you can reserve just for outdoor fun.

Make amenities available: Put out sunscreen, bug spray and hand sanitizer in a few areas throughout your party space, so guests can help themselves.

Have a lighting plan: The best backyard parties keep going after the sun goes down, so be prepared with a little extra outdoor illumination. String lights are lovely, but not always practical depending on your yard setup. As an alternative, use battery-powered LEDs inside simple paper lanterns. You can hang them anywhere for instant style that costs just a few bucks and are quick to set up if the party runs a little later than you expected.

Don't hesitate to make it a pitch in: Take the pressure off yourself for hosting and have guests contribute. (This is the Midwest. Your guests all WANT to bring something anyway!) Loosen up the criteria for your get-together: Instead of asking guests to bring foods in the typical categories (mains, sides, desserts), have each guest bring an item that begins with the first letter of their first name. Might you end up with four desserts—yes! (But is that really a problem?) Try out some of the recipes on the next page—perfect for hosts to make or guests to bring.

Fire up the grill

What's a backyard party without cooking over an open flame? Every grill master will tell you the best results depend at least as much on technique as recipe. Here are some super-smart hacks we can't wait to try at our next cookout.

Preheat with the lid closed

The experts at Weber advise heating a closed grill for 10-15 minutes until it reaches a temp of 400°-500°.[1] After preheating, give the grill a quick clean. Ball up some foil and use a pair of tongs to run it across the grates and get rid of all the gunk from your last cookout.

Get perfect grill marks on your steaks

Picture your grill surface as a clock and place meat so one end of the steak is pointing at 10 o'clock and the other is pointing at 4 o'clock. After the steak has seared, turn it clockwise, so the ends point to 8 o'clock and 2 o'clock. Let the meat cook a few minutes, then flip and finish cooking to desired doneness.[2] Resist the urge to flip: Whether you're doing steaks, burgers, chicken or chops, the experts suggest flipping meat just one time.

Serve juicy burgers

Try this trick to keep burgers from drying out: When forming the raw meat patty, place a small ice cube or pat of cold butter in the middle. As the meat cooks, the water or butter seeps into the beef and keeps it moist.[3]

Check out these sources for more expert advice:

[1] **Weber 10 Useful Grilling Tips**
https://www.weber.com/US/en/blog/tips-techniques/ten-essentials-for-better-grilling/weber-31137.html

[2] **Certified Angus Beef Blog**
https://blog.certifiedangusbeef.com/

[3] **Real Simple Grilling Tips**
https://www.realsimple.com/food-recipes/cooking-tips-techniques/grilling/grilling-hacks

Good for a *gathering*

Keep it simple and refreshing at your next backyard get-together.

BEST BEEF MARINADE

This marinade elevates flank steak, sirloin and skirt steak, but is also worthy of fine cuts. Try it with filet mignon or beef tenderloin.

½ cup soy sauce

1 Tbsp fresh lemon juice

¼ cup bourbon

¼ cup packed brown sugar

Whisk ingredients together and pour over meat. Seal in plastic zipper bag and marinate for at least 4 hours. Overnight is better.

GAZPACHO

Simple, refreshing and healthy, this recipe is easily doubled (or tripled) to feed a crowd. It's also a great way to use produce from your garden.

1 cup tomato, chopped

½ cup each, diced: green pepper, celery, cucumber

¼ cup green onion, sliced

2 tsp parsley, chopped

1 tsp chives, chopped

If you like extra spice, add 1 jalapeno, chopped

2 cups tomato or vegetable juice

3 Tbsp vinegar

2 Tbsp olive oil

½ tsp garlic powder

1 tsp salt

¼ tsp pepper

1 Tbsp Worcestershire sauce

Stir together tomato or vegetable juice, vinegar, oil and seasonings until well-mixed.

Add vegetables and herbs and stir until combined.

Refrigerate at least 2 hours before serving to let flavors blend.

Can be made a day ahead.

Serves 4-6

PITCHER COCKTAIL: ELDERFLOWER CUCUMBER GIN & TONIC

1 cucumber

6 oz elderflower liqueur (such as St. Germain)

6 oz gin

1 liter tonic water

Grate the cucumber and place it in a fine-mesh strainer over a bowl.

Use a spoon to press the juice out of the cucumber.

Combine cucumber juice, liqueur and gin in a pitcher with ice.

Top with half-bottle of tonic water.

Garnish with cucumber slices.

Serves 8

PITCHER MOCKTAIL: WATERMELON MINT FIZZ

8 cups cubed watermelon

⅓ cup fresh mint

1 cup fresh lime juice

1 cup simple syrup

¾ cup sparkling water

Crushed ice

Blend watermelon until smooth. Strain it, discarding pulp.

Combine watermelon juice, mint, lime juice and simple syrup in a pitcher.

Top with sparkling water.

Serve over crushed ice and garnish with mint and a slice of lime.

Serves 6

COOL TIP

Garnish ice cubes for a pretty and flavorful addition to any drink.

Ideas:

- **Basil leaf**
- **Mint sprig**
- **Rosemary sprig**
- **Citrus zest (lemon, lime, orange or combo)**
- **Raspberry**

Fill ice trays halfway and partially freeze (about 1 hour). Add garnish, top with more water and finish freezing.

A Rocking Good Time IN PUNTA CANA

Our first NuTech Getaway in two years was full of fun in the sun and the chance to connect with friends old and new. The Hard Rock Hotel & Casino in Punta Cana was the perfect site for swimming, socializing, learning and laughter.

"On the beach, looking out over the ocean, how do you beat it?"

—Wayne Bingham, NuTech DSM

Punta Cana, 2022

It's been a long time since we were able to do a NuTech Getaway, and boy, was everyone ready! Visiting the Hard Rock Hotel & Casino in Punta Cana in the Dominican Republic was a Valentine's Day gift for everyone who attended. With beach volleyball, our "pool rodeo" tradition (which started on the Panama trip), lounging at the beach and more, it was a welcome week of fun and relaxation.

For NuTech TSR Ben Hortenstine, Punta Cana was his first NuTech Getaway. He embraced the "enjoyment" part of the NuTech Lifestyle on this trip, taking part in pool bull riding, beach volleyball, cocktail gatherings, dinners, group activities and lounging on the beach or at the pool.

But what stood out for Ben the most was the camaraderie among trip attendees. "That was nice to see as a first-time attendee," Ben said. "You'd see the interaction between people who have been on trips multiple years. They may be from across the country, but they still know each other and they interact and mingle and it's pretty neat to see. They just strike up a conversation like good old friends."

Trip satisfaction by the numbers

Following this year's trip to Punta Cana, we surveyed attendees to see what they like about our trips. Here's what we learned.

The top 5 reasons for attending a NuTech trip:

#1 location

#2 food

#3 hotel

#4 beach/pool

#5 exclusive NuTech activities

More than half of respondents attended information sessions like the Ag Symposium and Corn & Coffee, and nearly all that attended said they gained useful information.

★ ★ ★ ★ ★

Survey responders really liked a lot of things about this trip – rating them a 4 or 5 out of 5 – including:

Welcome bags – 86%

NuTech-sponsored activities – 78%

Prizes for those activities – 74%

Best of all, 94% of respondents said it was an amazing trip and they can't wait for the next one!

NuTech TSR Adam Anderson is one of those long-time attendees—he's been on 10 or more trips, and he's loved them all. "We have a great time every time we come and it's for all the same reasons," Adam said. "It's because we get to meet old friends again. We get to see employees that show their appreciation in ways that are very heartfelt. And then you meet new friends. You fly a thousand miles and meet people who live a half an hour from you. It's just a really fun thing."

Adam was happy to get back to traveling after missing it due to Covid-19. "It's nice to get reacquainted with people, talk farming, learn a little bit about corn and soybeans and have a lot of fun, too," he said. Adam appreciated the travel planners and NuTech staff that made sure that everyone was safe and healthy during the trip. "It was great how seamless they made navigating through the tenseness around Covid and getting tested, making sure that you had all the documentation that you needed. They were superb," Adam said. "That's a funny thing to have stand out, but all the concerns were addressed and they took care of us. That was a nice feeling."

Adam loved the chance to get away and relax, whether that was in his room's private hot tub, at the rum tasting or at the pool. "We love our free afternoons, where we can spend time with our friends in a pool and have a few adult beverages and just have a good time," he said.

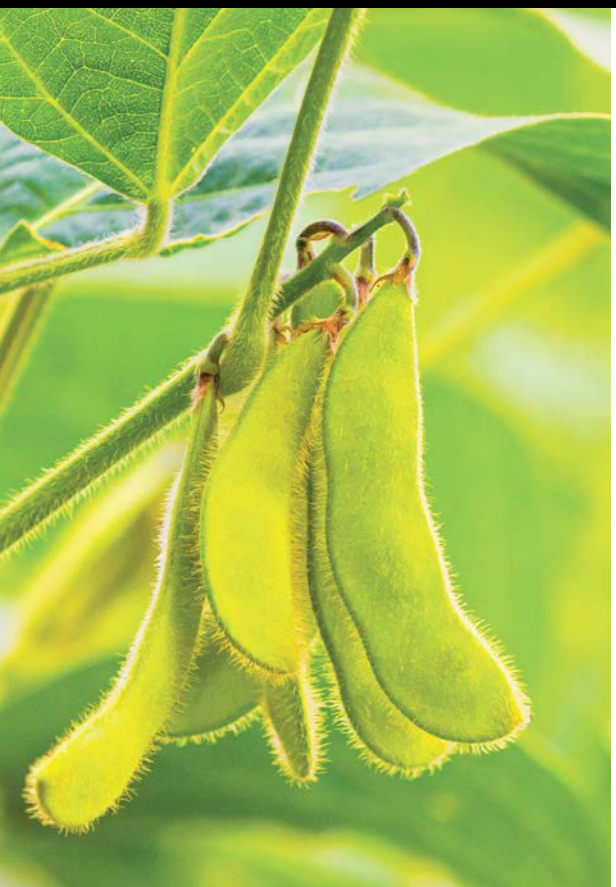
DSM Wayne Bingham also loves the relaxing nature of NuTech trips, which he's been attending since 2015. He likes going where it's sunny and warm and sitting on the beach soaking up the sun. "On the beach, looking out over the ocean, how do you beat it?" Wayne asked.

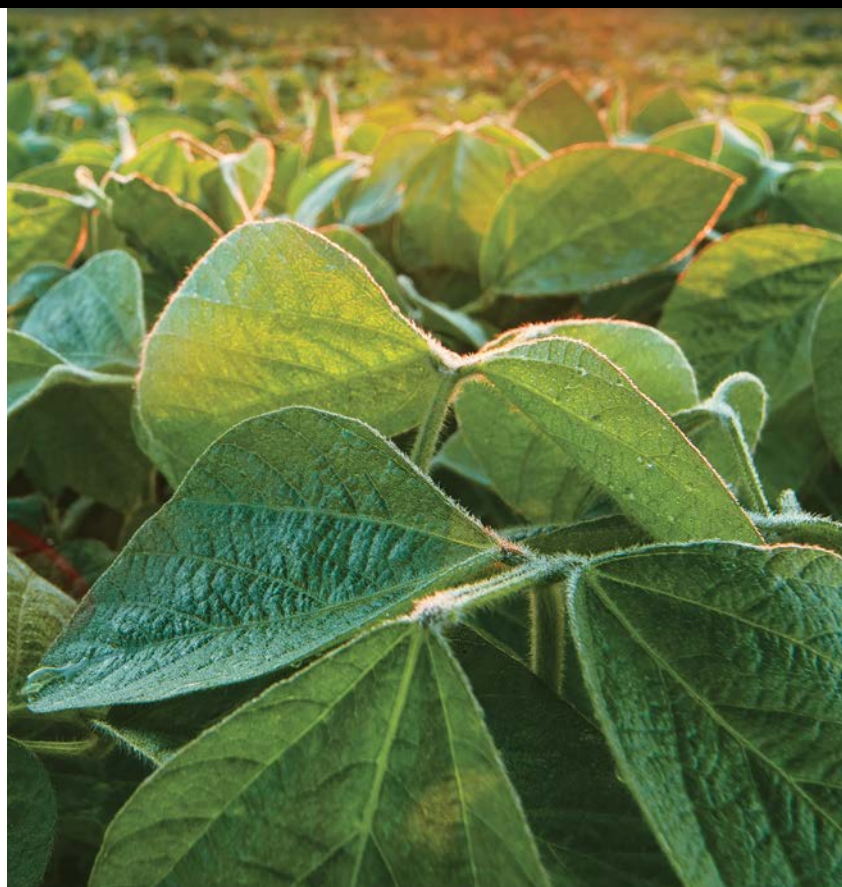
The trip was a great opportunity for Wayne to get to know his guests better as they enjoyed meals together and participated in activities and information sessions. "Something that's fun for me as a rep is to see people growing their network," Wayne said. "I had a younger couple that I introduced to someone else, and the next thing you know, they're running around with them. And that's what it's all about: meeting new people and maybe staying in touch after the trip."

We're thankful that so many people were able to attend this year's Punta Cana Getaway. We can't wait to see everyone for our next NuTech Getaway, February 20-25, 2023, to Puerta Vallarta. Adam has already been talking to folks about this next trip. "It never disappoints!" he said. Ben hopes to make it his second NuTech Getaway, though he says he might trade off with his brother next time, letting him attend while Ben stays home with the cows!

2023 SEED GUIDE

NuTech Seed®





The Right Seed for Your Field

Look for our product categories to make sure you're getting the most out of your fields

High-yield fields

Rich, productive soils

Field focus: Plant early, harvest timely and reap the benefits of fungicide application

Primary strength seed brands:
57A4, 59A1, 60A2, 60A4, 601, 62A8, 64B5, 64D1, 65A5, 65B2, 66C2, 308, 68A7, 68A9, 68B3, 9909, 69A6, 69B9, 70A8, 70B4, 70F2, 70F6, 72A5, 72A8, 72B7, 72D4, 2213, 73A6, 74A9, 74B6, 74C4, 75G1, 77A5

Corn-on-corn fields

Continuous corn environments

Field focus: Emphasis on stalk and root strength

Primary strength seed brands:
57A4, 59A1, 60A2, 60A4, 601, 62A8, 64B5, 64D1, 65A5, 65B2, 66C2, 308, 68A7, 68A9, 68B3, 9909, 69A6, 69B9, 70A8, 70B4, 70F2, 70F6, 72A5, 72A8, 72B7, 72D4, 2213, 73A6, 74A9, 74B6, 75G1, 77A5

Heat/drought-stressed fields

Low organic matter soils at risk of moisture stress

Field focus: Built-in stress tolerance to handle periods of heat and low rainfall

Primary strength seed brands:
59A1, 60A2, 60A4, 601, 64B5, 64D1, 65A5, 65B2, 66C2, 308, 68B3, 9909, 70F6, 72A5, 72A8, 72B7, 77A5

Poorly drained fields

Fields with wet feet problems

Field focus: Exceptional plant health coupled with a solid agronomic package

Primary strength seed brands:
57A4, 601, 64D1, 308, 68B3, 70F2, 72A8, 2213, 74C4, 77A5

PRODUCT IDENTIFICATION

Q: Qrome® products feature dual modes of action to defend against above- and below-ground pests. Qrome products include a unique molecular stack of the proven *Bt* proteins from the Herculex® I and Herculex® RW traits and allow for a 5% refuge product. The refuge hybrid component is treated with a high rate of seed-applied insecticide and is blended in the bag with the *Bt* hybrid component stack to create a fully integrated refuge for both above- and below-ground pests. The non-blended version would be denoted as CYFR.

RASS/SSR: SmartStax® trait technology uses multiple modes of action for control of above- and below-ground insects to cover a broad spectrum of insect threats and defend your yield. Conveniently packaged as a single-bag solution with no separate structured refuge required for planting in the Corn Belt.

SXE/SE: SmartStax® trait technology uses multiple modes of action for control of above- and below-ground insects to cover a broad spectrum of insect threats and defend your yield. The Enlist® corn trait adds advanced herbicide-tolerant technology, with tolerances to 2,4-D choline, glyphosate and FOP herbicides such as quizalofop.

SX/SS: SmartStax® trait technology uses multiple modes of action for control of above- and below-ground insects to cover a broad spectrum of insect threats and defend your yield.

AMXT:** With proven above- and below-ground insect control which allows growers to simplify and reduce refuge in one bag. Two different modes of action against corn borers (MON810 & TC1507) pyramided with two different modes of action against corn rootworm (MIR604 & DAS59122-7) allow for a 5% refuge product. The refuge hybrid component is treated with a high rate of seed-applied insecticide and is blended in the bag with the *Bt* hybrid component stack to create a fully integrated refuge for both above- and below-ground pests. The non-blended version would be denoted as CYXR.

** In EPA-designated cotton counties, 20% separate corn borer refuge is required.

PCR/PWRA: PowerCore® trait technology is a combination of three modes of action to provide superior control of above-ground insects. This focused insect control is specialized for areas with minimal rootworm pressure, conveniently packaged as a single-bag solution with no separate structured refuge required for planting in the Corn Belt.

PWE/PE: PowerCore® trait technology is a combination of three modes of action to provide superior control of above-ground insects. This focused insect control is specialized for areas with minimal rootworm pressure. The Enlist® corn trait adds advanced herbicide-tolerant technology, with tolerances to 2,4-D choline, glyphosate and FOP herbicides such as quizalofop.

PW: PowerCore® trait technology is a combination of three modes of action to provide superior control of above-ground insects. This focused insect control is specialized for areas with minimal rootworm pressure.

AML:** The new pyramid of traits for superior control of above-ground pests which allows Corn Belt growers to simplify and reduce refuge in one bag. Three different modes of action against corn borers (MON810, TC1507 and MIR162) allow for a reduced refuge of only 5%. The refuge hybrid is blended in the bag with the *Bt* hybrid component to create an integrated refuge for above-ground pests. The non-blended version would be denoted as VYHR.

AM:** The above-ground insect control solution which allows Corn Belt growers to simplify and reduce refuge in one bag. Two different modes of action against corn borers (MON810 & TC1507) allow for a reduced refuge of only 5%. The refuge hybrid is blended in the bag with the *Bt* hybrid component to create an integrated refuge for above-ground pests. The non-blended version would be denoted as YHR.

CYFR

CYFR: This product contains a unique molecular stack of the proven *Bt* proteins from the Herculex® I and Herculex® RW traits, Agrisure® RW, YGCB, LL and RR2 traits.

CORN NAMING CONVENTIONS

First Character:

Denotes the presence or absence of a transgenic herbicide tolerance event.

- **0** **Conventional** (Absence of any transgenic event)
- **3** **Glyphosate Tolerant** (NK603 or GA21 event)
- **5** **Glyphosate Tolerant/LibertyLink®** Herbicide Stack (NK603 or GA21/Bt11, T-25 or TC1507 event stack)

Last Four Characters:

Denotes a specific hybrid family or series (i.e., 5QB-2213Q™). Hybrid family or series may be available in several different technology versions.

Last Two Characters:

Denotes relative maturity. "13" indicates a relative maturity of 113 days, while a "97" would indicate 97 days.

Brand

5QB-2213Q™

Second and/or Third Character(s):

Denotes the presence or absence of a transgenic insect resistance event.

A	**Absence** (No transgenic insect resistance event)
Q	**Qrome®** (DP4114/MON810/MIR604 event stack plus 5% blend of similar hybrid that serves as refuge component)
D/DB	**Optimum® AcreMax® Xtra** (MON810/TC1507/DAS59122-7 event stack plus 10% blend of similar hybrid that serves as refuge component)
F/FB	**Optimum® AcreMax®** (MON810/TC1507 event stack plus 5% blend of similar hybrid that serves as refuge component)
L/LB	**Optimum® AcreMax® XTreme** (MIR604/MON810/TC1507/DAS59122-7 event stack plus 5% blend of similar hybrid that serves as refuge component)
N	**Agrisure® 3000GT** (MIR604/Bt11 event stack)
T/TB	**Optimum® AcreMax® Leptra®** (TC1507/MON810/MIR162 event stack plus 5% blend of similar hybrid that serves as refuge component)
DN	**Optimum® Intrasect® Xtra** (MON810/TC1507/DAS59122-7 event stack without refuge component blend)
FN	**Optimum® Intrasect®** (MON810/TC1507 event stack without refuge component blend)
TN	**Optimum® Leptra®** (TC1507/MON810/MIR162 event stack without refuge component blend)

Suffix:

The suffix behind the hybrid name may be required by some technology providers and summarizes the information described by the first two characters of the product name.

Base Variety | **Trait Suffix**

72 A5 Q™

Relative Maturity:

Add 40 to this number to get RM days.
Ex: 72 = 112 RM

Random Code:

One random letter followed by one random number.

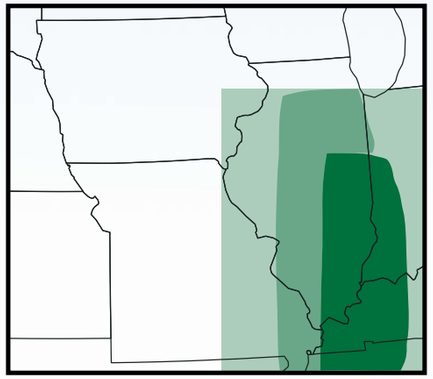
Trait Code:

Q	Qrome®
RASS/SSR	SmartStax® Refuge Advanced®
SXE/SE	SmartStax® Enlist™
SX/SS	SmartStax®
AMXT	Optimum® AcreMax® XTreme
PCR/PWRA	PowerCore® Refuge Advanced®
PWE/PE	PowerCore® Enlist®
PW	PowerCore®
AML	Optimum® AcreMax® Leptra®
AM	Optimum® AcreMax®
RR	Roundup Ready® Corn 2
CV	Conventional
CYFR	CYFR
CYXR	Optimum® Intrasect® Xtreme
YHR	Optimum® Intrasect®
VYHR	Optimum® Leptra®

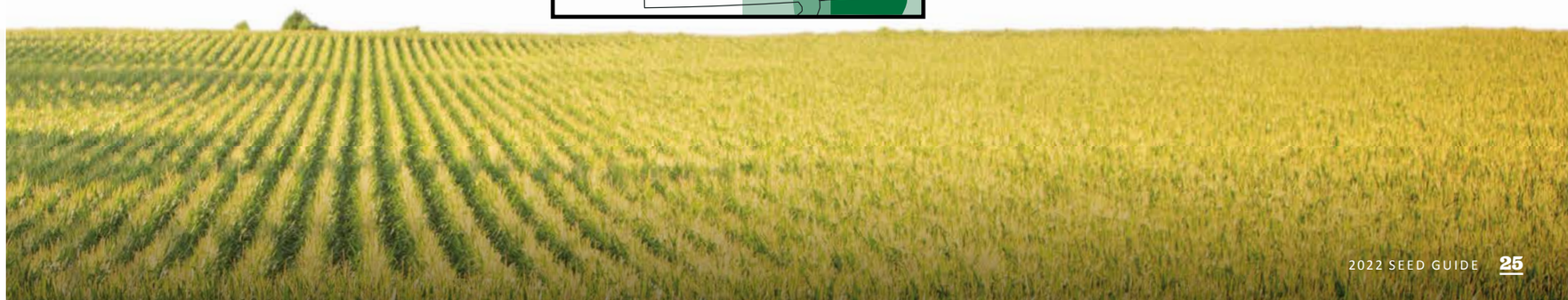
Area of Adaptation Maps:

Consult with a NuTech Seed representative for planting outside of AOA recommendation. NuTech AOA maps provide a guide for corn product placement based upon a **recommended** area, an area of **better** fit and an area defined as **best fit** for optimized performance potential. These recommendations are based on multi-year research testing, disease ratings and overall agronomic fit.

Recommended | Better | Best fit



Note: All existing products will continue using the existing product name.



57A4™

97 RM

57A4CV™ CV

57A4AM™ AcreMax LIBERTY LINK Roundup Ready CORN 2

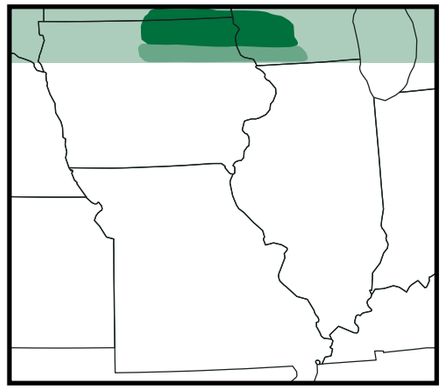
57A4Q™ QROME LIBERTY LINK Roundup Ready CORN 2

- Reliable roots all season long
- Strong Goss's wilt allows western movement
- Utilize a fungicide where GLS and NCLB are a concern
- Good southern movement for an early hybrid
- Dependable drought tolerance for western adaptation
- Large area of adaptation

Semi-Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
5	6	5	8	6	6	5



59A1™ NEW!

99 RM

59A1AM™ AcreMax LIBERTY LINK Roundup Ready CORN 2

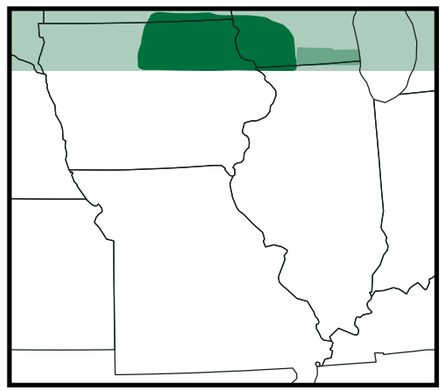
59A1Q™ QROME LIBERTY LINK Roundup Ready CORN 2

- Strong Goss's wilt tolerance makes it a good fit for northern Iowa
- Very good drought tolerance
- Yield leader across northern Iowa
- Fungicide candidate where GLS is a concern
- Consistent high yields east to west
- Dual-purpose hybrid for grain and silage

Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
5	7	5	5	5	6	7



60A2™

100 RM

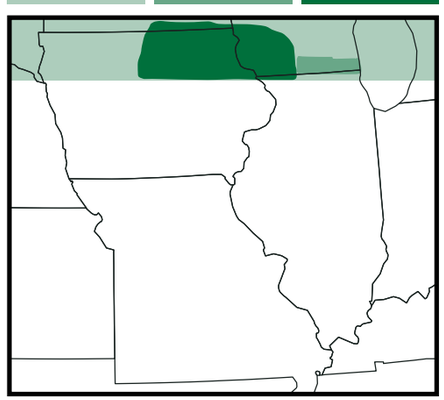
60A2Q™ QROME LIBERTY LINK Roundup Ready CORN 2

- Leader hybrid for NuTech marketing area
- Outstanding drought tolerance and brittle snap score
- Strong Goss's wilt for corn-on-corn acres
- Utilize fungicide where GLS and NCLB are a concern
- Dual-purpose hybrid for grain and silage
- Medium-stature plant with medium ear placement

Semi-Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
5	7	5	6	5	5	6



60A4™ NEW!

100 RM

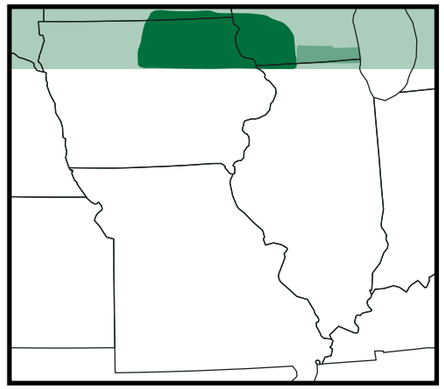
60A4AM™ AcreMax LIBERTY LINK Roundup Ready CORN 2

- Strong Goss's wilt makes it a good fit for northern Iowa
- Competitive yield potential with wide east to west adaptation
- Very good brittle snap for western movement
- Strong stalks and attractive fall appearance
- Moderate statured plant with moderate earline
- Fungicide candidate where GLS is a concern

Semi-Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
5	8	8	5	8	4	5



601™

101 RM

0A601™ AquaMax CV

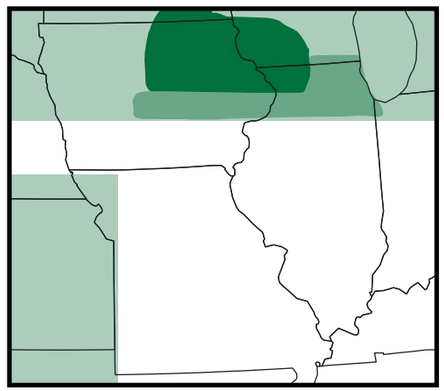
5F-601AM™ AcreMax AquaMax LIBERTY LINK Roundup Ready CORN 2

- Optimum® AQUAmax® hybrid
- Medium plant stature
- Girthy, semi-flex ear
- Good Goss's wilt tolerance
- Adapts to variable soil types
- Best performance in zone

Semi-Flex — Ear type

Medium-Medium High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
5	9	5	7	4	6	5



62A8™

102 RM

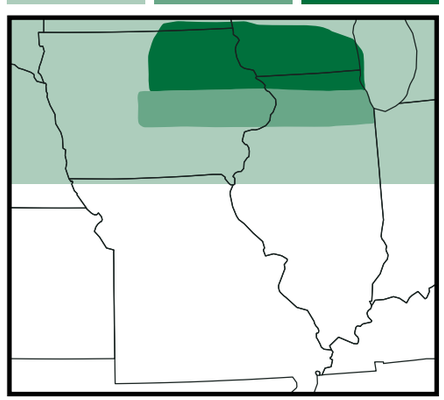
62A8Q™ QROME LIBERTY LINK Roundup Ready CORN 2

- Early silking product
- Good east to west movement
- Shorter stature with nice earline
- Respectable disease protection
- Very consistent ears with adequate husk coverage
- Best performance in zone and north

Determinate — Ear type

Medium-Medium High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	6	6	7	5	5	3



64B5™

104 RM

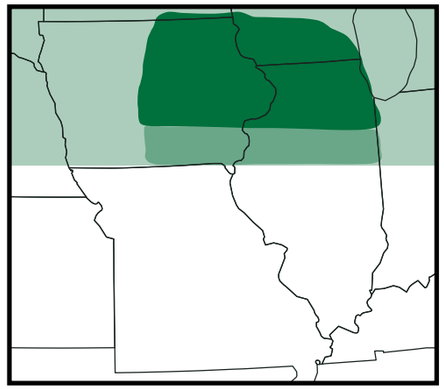
64B5Q™ QROME · AQUAmax · LIBERTY LINK · Roundup Ready CORN 2

- Optimum® AQUAmax® hybrid
- Large area of adaptation with strong southern movement
- Utilize fungicide where GLS is a concern
- Medium-statured plant with medium ear height
- Good stress emergence for cooler soils
- Strong Goss's wilt for corn-on-corn acres

Ear type: Semi-Flex
Population range: Medium-High

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	9	6	5	5	5	6

Recommended · Better · Best fit



64D1™

104 RM

64D1CV™ CV

64D1AM™ AcreMax · AQUAmax · LIBERTY LINK · Roundup Ready CORN 2

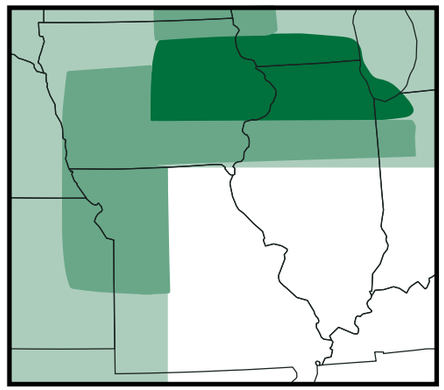
64D1Q™ QROME · AQUAmax · LIBERTY LINK · Roundup Ready CORN 2

- Optimum® AQUAmax® hybrid
- Large area of adaptation
- Consistent tip fill
- Solid plant integrity
- Utilize fungicides where GLS is present
- Top-end yield potential, works on tougher soils

Ear type: Semi-Flex
Population range: Medium-Medium High

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
4	9	6	6	5	6	5

Recommended · Better · Best fit



65A5™ NEW!

105 RM

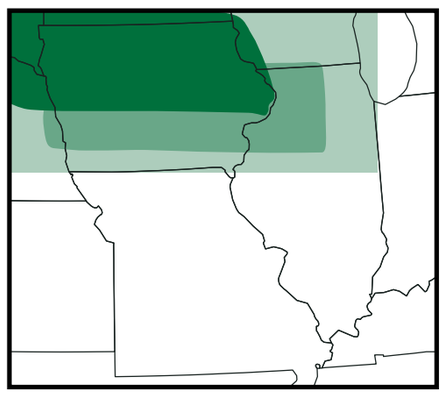
65A5AM™ AcreMax · LIBERTY LINK · Roundup Ready CORN 2

- Strong test weight and grain quality
- Versatile hybrid with very good drought tolerance
- Medium-statured plant with medium ear line
- Strong roots and stalks
- Nice fall appearance with good dry down
- Fungicide candidate where GLS is a concern

Ear type: Semi-Flex
Population range: Medium-Medium High

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
4	7	6	7	5	7	5

Recommended · Better · Best fit



65B2™ NEW!

105 RM

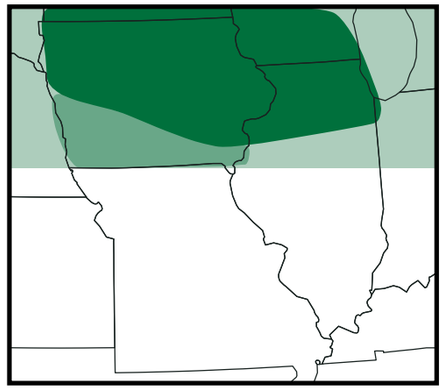
65B2Q™ QROME · AQUAmax · LIBERTY LINK · Roundup Ready CORN 2

- Optimum® AQUAmax® hybrid
- Strong roots and above average stalks
- Very good Goss's wilt combined with above average NCLB
- Versatile product with solid yield potential
- Dual-purpose hybrid for grain and silage
- Fungicide candidate where GLS is a concern

Ear type: Semi-Flex
Population range: Medium-Medium High

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
4	9	6	7	5	5	6

Recommended · Better · Best fit



66C2™

106 RM

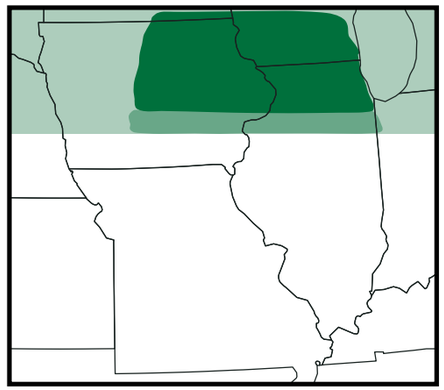
66C2Q™ QROME · LIBERTY LINK · Roundup Ready CORN 2

- Very good drought tolerance for yield stability
- High-yield potential with strong agronomics
- Medium-statured plant with medium ear height
- Best performance when fungicide is used
- Good roots and brittlesnap score
- Good stalks and late-season staygreen

Ear type: Semi-Flex
Population range: Medium-Medium High

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	7	6	6	6	7	6

Recommended · Better · Best fit



308™

108 RM

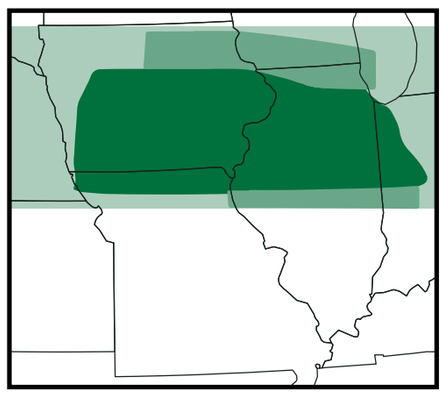
5FB-308AM™ AcreMax · LIBERTY LINK · Roundup Ready CORN 2

- Widely adapted
- Chart-topping performance
- Very good overall disease tolerance
- Medium-statured plant
- Good stalks with good roots
- Highly productive soils maximize yield potential

Ear type: Flex
Population range: Medium-Medium High

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
4	7	6	6	6	6	4

Recommended · Better · Best fit



68A7™

108 RM

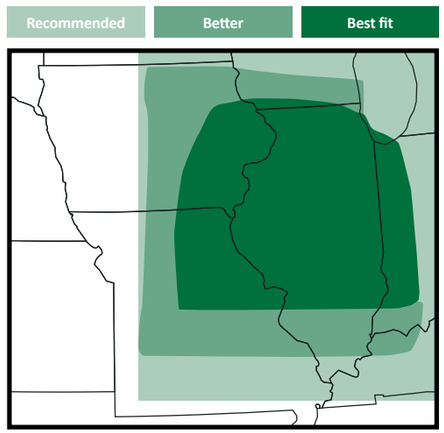
68A7AM™

- Strong emergence for cold, wet soils
- Very competitive roots for variable soils
- Excellent yield potential
- Strongest fit east of Iowa City
- Moderate-statured plant
- Excellent choice for fungicide

Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
7	6	5	6	5	6	4



68A9™ NEW!

108 RM

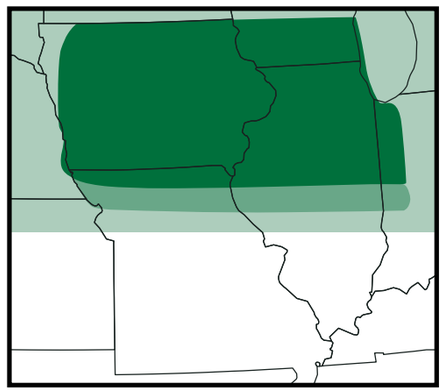
68A9AM™

- High yield potential in 108 day zone
- Above average brittle snap allows western movement
- Strong roots for prairie soils
- Companion with 68A7AM with similar yield potential
- Good stalks and staygreen for an attractive fall appearance
- Dual-purpose hybrid for grain and silage

Semi-Flex — Ear type

Medium-Medium High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
4	5	6	7	6	5	6



68B3™

108 RM

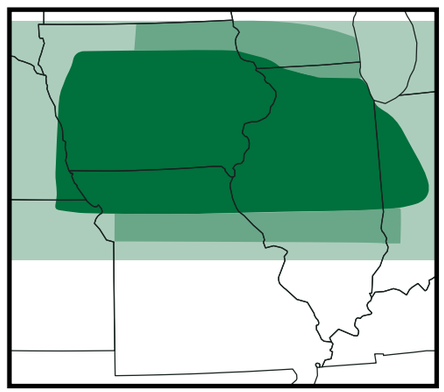
68B3AML™

- Optimum® AcreMax® Leptra® product, offering superior control of above-ground pests
- Very solid agronomics
- Excellent potential on highly productive soils
- Strong companion with 68A7AM and 68A9AM
- Strong roots and staygreen
- Semi-flex ear; responds to higher populations

Semi-Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
5	7	6	7	6	7	5



9909™

109 RM

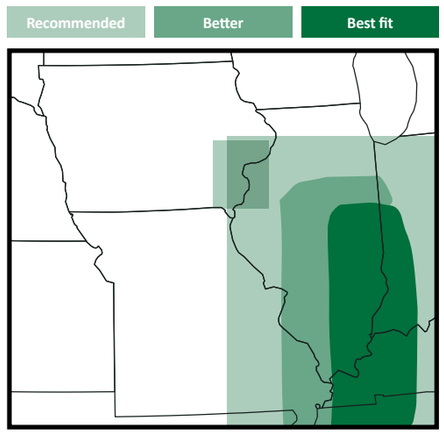
0AN9909™ **CV**

- Best performance in high-yield environments
- Eastern Corn Belt adapted
- Very girthy ear with good flex
- Good harvest standability
- Above-average cold stress emergence
- Dual purpose for silage

Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	7	8	6	6	5	5



69A6™

109 RM

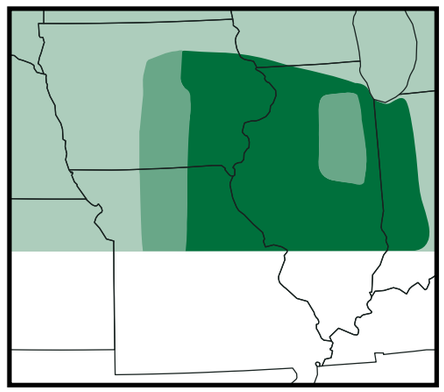
69A6Q™

- Qrome® product with RW protection and high-yield potential
- Good corn-on-corn option
- Best placement is on highly productive soils
- Good ear rot rating
- Shorter-statured plant with attractive earline
- Strong staygreen

Semi-Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	6	6	7	7	6	5



69B9™

109 RM

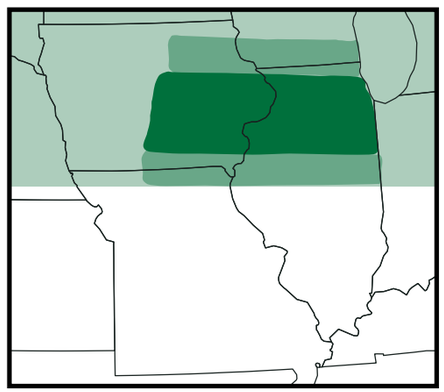
69B9Q™

- Very good roots and stalks
- Strong staygreen and excellent late-season eye appeal
- Later flowering hybrid for its maturity
- Strong Goss's wilt for corn-on-corn acres
- Good stress emergence for cooler soils
- Above average GLS tolerance

Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	6	6	7	7	7	6



CORN BRANDS

70A8™

110 RM

70A8AM™

AcreMax LIBERTY LINK Roundup Ready CORN 2

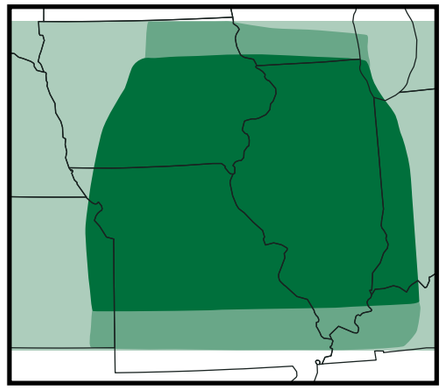
- Very consistent performance across NuTech marketing area
- High-yield potential on highly productive soils
- Medium-short statured plant with medium ear line
- Semi-flex ear responds to a wide range of populations
- Responds well to fungicide application
- Performs well on variable soil types

Semi-Flex — Ear type

Low-Medium High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
5	6	6	7	5	7	4

Recommended | Better | Best fit



70B4™ NEW!

110 RM

70B4AM™

AcreMax LIBERTY LINK Roundup Ready CORN 2

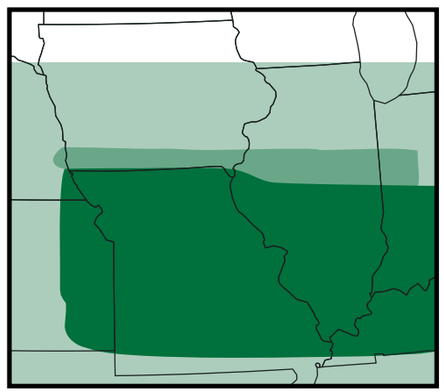
- Yield leader in 110 day maturity
- Very competitive stalks, roots and brittle snap
- Attractive fall appearance with well balanced agronomics
- Above average NCLB and Goss's wilt
- Best fit Central Corn Belt and east with strong southern movement
- Dual-purpose hybrid for grain and silage

Flex — Ear type

Medium-Medium High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
4	6	6	6	6	6	6

Recommended | Better | Best fit



70F2™

110 RM

70F2Q™

QROME LIBERTY LINK Roundup Ready CORN 2

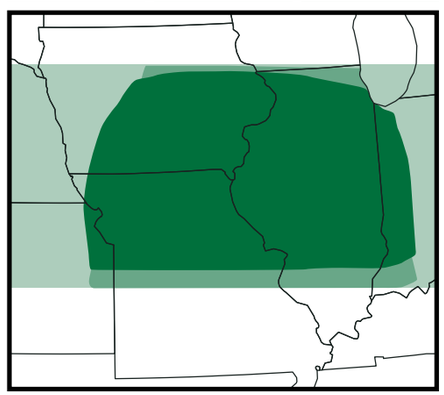
- Good stress emergence
- Fast drydown allows for early harvest
- Strong stalks and staygreen
- Very good test weight
- Wide AoA with strong brittle snap, Goss's wilt and drought tolerance
- Companion with 69A6Q and 72B7Q

Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	6	7	5	7	7	6

Recommended | Better | Best fit



70F6™ NEW!

110 RM

70F6Q™

QROME LIBERTY LINK Roundup Ready CORN 2

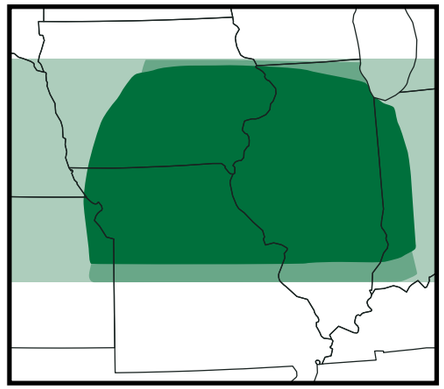
- Tremendous top end yield potential with very good stability
- Moderate plant stature and ear height
- Flowers early for maturity
- Wide area of adaption across the Corn Belt
- Well-balanced agronomics
- Dual-purpose hybrid for grain and silage

Semi-Flex — Ear type

Medium-Medium High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	7	5	6	6	6	5

Recommended | Better | Best fit



72A5™ NEW!

112 RM

72A5Q™

QROME LIBERTY LINK Roundup Ready CORN 2

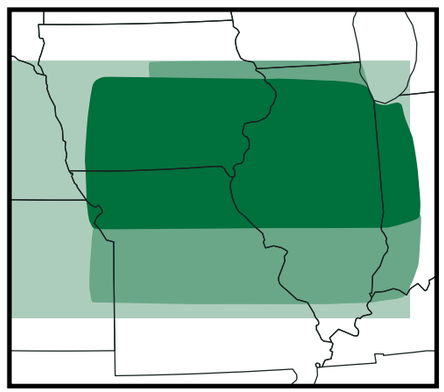
- Moderate-statured plant with high yield potential
- Strong, well-balanced agronomics
- High test weight with excellent fall eye appeal
- Excellent drought tolerance
- Large area of adaption and strong stability
- Dual-purpose hybrid for grain and silage

Semi-Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
5	8	7	6	6	7	5

Recommended | Better | Best fit



72A8™ NEW!

112 RM

72A8AM™

AcreMax LIBERTY LINK Roundup Ready CORN 2

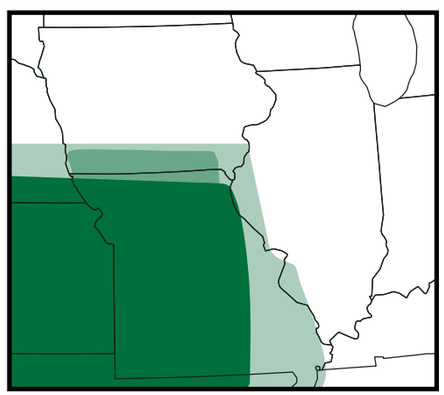
- Western and central adapted hybrid with excellent drought tolerance
- Superior late-season plant health with above average stalks
- Taller plant type that will allow for rolling variable soils
- Best fit in Missouri and southern Iowa
- Utilize a fungicide where NCLB is a concern
- Dual-purpose hybrid for grain and silage

Semi-Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
5	8	6	6	8	6	7

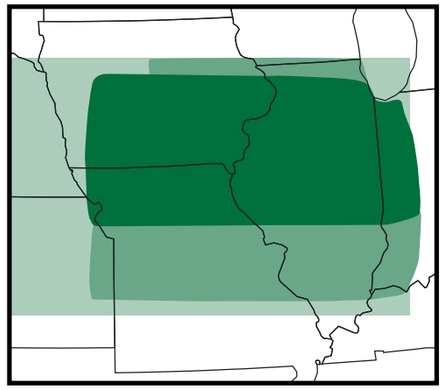
Recommended | Better | Best fit



72B7™

112 RM

Recommended | Better | Best fit



72B7CV™	Optimum AQUAmax CV
72B7AM™	Optimum AcreMax Above, LIBERTY LINK, Roundup Ready Corn 2
72B7Q™	QROME, Optimum AQUAmax, LIBERTY LINK, Roundup Ready Corn 2

- Optimum® AQUAmax® hybrid
- Frito-Lay-approved, Sidney, IL
- Reliable root strength
- Excellent test weight and grain quality
- Widely adapted across most soils
- Responds to fungicide in GLS environments

Flex — Ear type

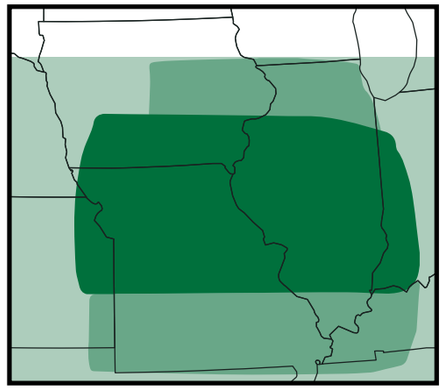
Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
5	9	7	6	6	7	5

2213™

113 RM

Recommended | Better | Best fit



5QB-2213Q™	QROME, LIBERTY LINK, Roundup Ready Corn 2

- Qrome® product with RW protection and high yield potential
- Very competitive agronomics with very good test weight and grain quality
- Medium plant structure
- Excellent staygreen with long grain fill period
- Avoid high Goss's wilt areas
- Frito-Lay-approved, Sidney, IL

Semi-Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	6	5	6	8	7	4

72D4™

112 RM

Recommended | Better | Best fit

72D4AM™	Optimum AcreMax Above, LIBERTY LINK, Roundup Ready Corn 2

- Very high yield potential
- Strong stability for the NuTech marketing area
- Good emergence for high residue fields
- Above-average stalks and excellent staygreen
- Good NCLB and Goss's wilt score
- Responds well to fungicide application

Flex — Ear type

Medium Low-Medium — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	6	6	4	7	6	6

73A6™ NEW!

113 RM

Recommended | Better | Best fit

73A6Q™	QROME, LIBERTY LINK, Roundup Ready Corn 2

- High test weight
- High yield potential with good yield stability
- Good roots best suited for prairie soils
- Best performance with fungicide application
- Beneficial greensnap and drought tolerance for western movement
- Medium-statured plant

Semi-Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
4	6	5	6	4	6	5

72D4™ NEW!

112 RM

Recommended | Better | Best fit

72D4Q™	QROME, LIBERTY LINK, Roundup Ready Corn 2

- Very high yield potential
- Strong stability for the NuTech marketing area
- Good emergence for high-residue fields
- Above-average stalks and excellent staygreen
- Good NCLB and Goss's wilt score
- Responds well to fungicide application

Flex — Ear type

Medium Low-Medium — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	6	6	4	7	6	6

74A9™

114 RM

Recommended | Better | Best fit

74A9AM™	Optimum AcreMax Above, LIBERTY LINK, Roundup Ready Corn 2

- Above-average stalks and excellent staygreen
- Performs well on variable soil types
- Strong emergence for no-till soils
- Medium-statured plant with medium ear height
- Wide area of adaptation
- Very good Goss's wilt and head smut tolerance

Semi-Flex — Ear type

Medium-Medium High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	6	5	6	6	5	5

74B6™

114 RM

74B6AM™

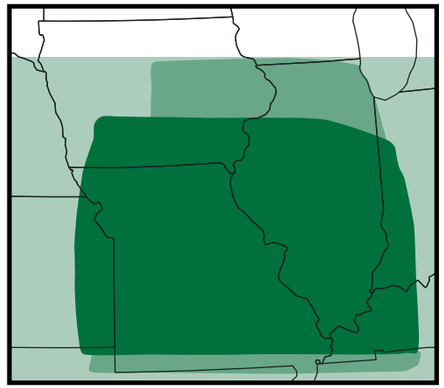
- High yield potential on highly productive soils
- Solid disease protection
- Strong roots and reliable staygreen
- Medium plant stature
- Use moderate populations in stress environments
- Very good test weight

Flex — Ear type

Medium Low-Medium — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
5	6	5	6	6	7	5

Recommended | Better | **Best fit**



74C4™ NEW!

114 RM

74C4AM™

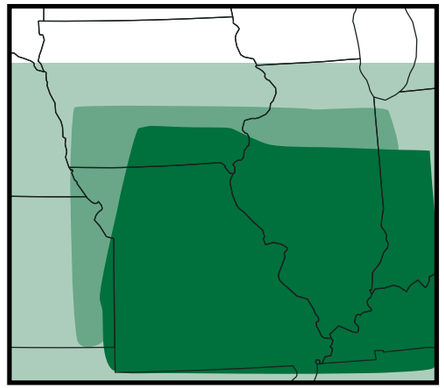
- High-performing hybrid with a lot of ear flex
- High test weight
- Strong stalks and late-season intactness
- Moderate-statured with medium ear placement
- Great late-season eye appeal and harvestability
- Fungicide candidate where GLS and NCLB is a concern

Flex — Ear type

Medium Low-Medium — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
6	6	7	6	6	7	5

Recommended | Better | **Best fit**



75G1™

115 RM

75G1CV™ CV

75G1AM™

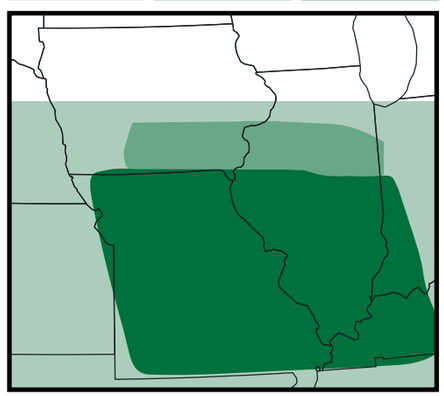
- Top-end yield potential, especially on highly productive soils
- Good grain quality and test weight
- Good northern movement
- Lead product for southern NuTech marketing area
- Big flex ear with good stalk strength
- Taller plant type

Semi-Flex — Ear type

Medium-High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
5	6	6	5	6	7	7

Recommended | Better | **Best fit**



77A5™

117 RM

77A5AM™

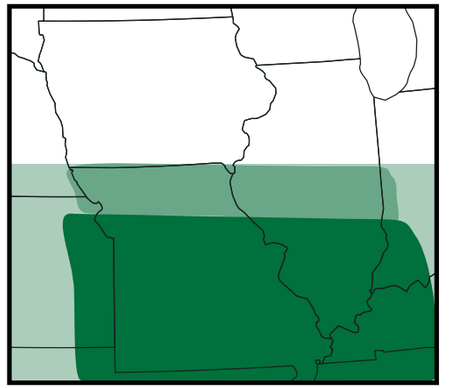
- Full-season leader with exceptional yield potential
- Excellent stalks for strong late-season standability
- Very good roots with above-average brittle snap
- Tall plant with moderate ear height
- Dual-purpose hybrid for grain and silage
- Very good drought tolerance

Semi-Flex — Ear type

Medium-Medium High — Population range

Emergence	Drought Tolerance	Stalk Lodging	Root Lodging	Staygreen	Test Weight	Plant Height
4	7	8	6	6	5	7

Recommended | Better | **Best fit**



Notes:

CORN CHARACTERISTICS

	Family	Product Version	Maturity Central Corn Belt (RM)	Category	Population Range	Response to Fungicide	Stalk Lodging	Root Lodging	Emergence	Heat & Drought Tolerance	Brittle Snap	Staygreen	Test Weight	Plant Height	Ear Height	Ear Type	Kernel Rows	Cob Color		Gray Leaf Spot	Northern Corn Leaf Blight	Southern Corn Leaf Blight	Goss's Wilt	Tar Spot	Diplodia Ear Rot	Southern Rust	GDUs to Pollen	GDUs to Black Layer	Silage Yield	Starch	Crude Protein	Fiber Digestibility	Corn-on-Corn	No-Till	Timber Soil	Poorly Drained	Sandy	Early Planting Date	Late Planting Date	Delayed Harvest	Family
	57A4	CV/AM/Q	97		M-H	HR	5	8	5	6	5	6	6	5	6	SF	14-16	R		4	4	NA	7	6**	NA	NA	1200	2370	8	8	7	7	R	R	NR	R	R	R	R	R	57A4
NEW!	59A1	AM/Q	99		M-H	HR	5	5	5	7	5	5	6	7	6	F	14-16	P		4	6	NA	7	5	NA	NA	1250	2400	9	8	6	6	HR	R	R	R	NR	R	R	R	59A1
	60A2	Q	100		M-H	R	5	6	5	7	7	5	5	6	6	SF	14-16	P		4	5	NA	7	5**	NA	NA	1210	2450	7	6	8	7	HR	R	R	HR	R	R	R	R	60A2
NEW!	60A4	AM	100		M-H	HR	8	5	5	8	7	8	4	5	5	SF	14-16	R		4	5	NA	7	6**	NA	NA	1250	2420	8	8	7	6	HR	R	R	R	NR	R	HR	HR	60A4
	601	CV/AM	101		M-MH	R	5	7	5	9	5	4	6	5	5	SF	16-18	P		4	5	NA	6	6**	4	NA	1280	2470	8	6	7	8	R	R	HR	R	HR	R	R	NR	601
	62A8	Q	102		M-MH	HR	6	7	6	6	6	5	5	3	4	D	16-18	R		5	5	NA	5	6	4	NA	1220	2450	8	9	6	7	HR	R	NR	HR	R	HR	HR	R	62A8
	64B5	Q	104		M-H	HR	6	5	6	9	4	5	5	6	5	SF	16-18	R		4	5	NA	7	5	5	NA	1260	2470	9	8	6	8	HR	R	HR	NR	HR	HR	R	NR	64B5
	64D1	CV/AM/Q	104		M-MH	HR	6	6	4	9	6	5	6	5	6	SF	16-18	P		4	5	NA	7	6**	5	NA	1280	2530	8	8	7	8	R	R	R	R	R	NR	R	R	64D1
NEW!	65A5	AM	105		M-MH	HR	6	7	4	7	7	5	7	5	6	SF	16-18	P		3	5	NA	5	6**	4	NA	1280	2580	8	7	7	7	R	R	HR	R	R	NR	HR	R	65A5
NEW!	65B2	Q	105		M-MH	HR	6	7	4	9	6	5	5	6	6	SF	16-18	P		4	6	NA	7	NA	5	NA	1280	2550	7	8	7	9	HR	R	NR	R	HR	NR	HR	R	65B2
	66C2	Q	106		M-MH	HR	6	6	6	7	6	6	7	6	6	SF	16-18	R		5	5	NA	5	6**	5	NA	1310	2600	8	8	7	8	HR	R	R	R	R	HR	R	R	66C2
	308	AM	108		M-MH	HR	6	6	4	7	7	6	6	4	5	F	18-20	W		4	5	NA	5	NA	NA	NA	1330	2600	8	NA	9	NA	R	R	R	HR	NR	R	R	R	308
	68A7	AM	108		M-H	HR	5	6	7	6	4	5	6	4	5	F	14-16	R		5	4	4	6	5	5	4	1320	2600	8	8	8	8	R	HR	R	R	NR	HR	R	R	68A7
NEW!	68A9	AM	108		M-MH	HR	6	7	4	5	6	6	5	6	5	SF	16-18	P		5	5	4	6	5**	5	5	1360	2730	9	6	7	8	HR	R	R	HR	NR	NR	HR	R	68A9
	68B3	AML	108		M-H	R	6	7	5	7	7	6	7	5	5	SF	16-18	P		5	6	4	7	6**	5	4	1360	2600	7	8	7	8	R	R	HR	R	R	R	R	R	68B3
	9909	CV	109		M-H	R	8	6	6	7	3	6	5	5	6	F	18-20	R		5	5	6	5	NA	6	4	1430	2700	8	6	8	8	R	R	R	R	R	HR	R	R	9909
	69A6	Q	109		M-H	HR	6	7	6	6	6	7	6	5	5	SF	12-14	P		5	4	4	4	6	6	5	1380	2700	8	7	7	8	R	R	NR	HR	NR	HR	R	HR	69A6
	69B9	Q	109		M-H	R	6	7	6	6	6	7	7	6	6	F	18-20	R		6	5	4	7	6**	6	5	1420	2700	8	7	7	8	HR	R	R	HR	NR	HR	R	HR	69B9
	70A8	AM	110		L-MH	HR	6	7	5	6	6	5	7	4	5	SF	16-18	W		4	5	5	5	5	4	4	1310	2630	8	9	7	8	R	R	HR	R	R	R	R	R	70A8
NEW!	70B4	AM	110		M-MH	R	6	6	4	6	6	6	6	6	6	F	14-16	P		5	6	5	6	6**	4	4	1380	2730	NA	8	7	7	R	R	R	HR	R	NR	HR	R	70B4
	70F2	Q	110		M-H	R	7	5	6	6	7	7	7	6	6	F	14-16	P		5	5	5	7	5**	5	4	1390	2730	8	8	8	9	HR	R	R	HR	NR	HR	R	HR	70F2
NEW!	70F6	Q	110		M-MH	R	5	6	6	7	6	6	6	5	5	SF	16-18	R		5	6	5	6	6**	5	5	1340	2600	8	8	8	9	HR	R	R	R	NR	HR	R	R	70F6
NEW!	72A5	Q	112		M-H	R	7	6	5	8	6	6	7	5	5	SF	16-18	W		5	5	5	6	5**	6	4	1430	2700	8	NA	7	8	HR	R	R	R	R	R	R	HR	72A5
NEW!	72A8	AM	112		M-H	HR	6	6	5	8	6	8	6	7	7	SF	14-16	R		6	4	5	7	5**	6	5	1430	2680	8	8	6	8	R	R	R	R	R	R	HR	HR	72A8
	72B7	CV/AM/Q	112		M-H	HR	7	6	5	9	7	6	7	5	6	F	16-18	R		4	5	3	6	5**	4	4	1340	2630	8	8	8	8	HR	R	HR	HR	R	R	R	HR	72B7
	72D4	AM/Q	112		ML-M	R	6	4	6	6	5	7	6	6	6	F	16-18	R		5	6	5	6	5**	6	5	1400	2780	8	7	7	8	R	R	HR	R	NR	HR	R	HR	72D4
	2213	Q	113		M-H	R	5	6	6	6	6	8	7	4	5	SF	16-18	R		5	5	4	4	5**	6	4	1360	2810	8	8	9	8	R	R	R	R	R	R	R	R	2213
NEW!	73A6	Q	113		M-H	HR	5	6	4	6	6	4	6	5	6	SF	14-16	P		5	4	5	5	NA	5	5	1400	2810	8	7	8	8	HR	R	R	R	R	R	R	NR	73A6
	74A9	AM	114		M-MH	HR	5	6	6	6	6	6	5	5	5	SF	16-18	R		5	5	5	7	5**	5	4	1400	2730	7	8	7	8	R	R	NR	R	R	HR	R	R	74A9
	74B6	AM	114		ML-M	R	5	6	5	6	5	6	7	5	6	F	16-18	R		5	5	5	6	6**	5	5	1370	2680	8	8	8	8	R	R	R	R	R	R	R	R	74B6
NEW!	74C4	AM	114		ML-M	R	7	6	6	6	5	6	7	5	5	F	16-18	R		5	5	5	6	6**	5	5	1400	2780	8	7	7	7	R	R	R	HR	NR	HR	R	HR	74C4
	75G1	CV/AM	115		M-H	HR	6	5	5	6	5	6	7	7	6	SF	16-18	R		5	4	5	4	5**	5	5	1370	2680	9	8	7	7	R	R	R	NR	NR	R	NR	R	75G1
	77A5	AM	117		M-MH	R	8	6	4	7	6	6	5	7	6	SF	16-18	R		5	5	6	7	6**	5	4	1450	2830	9	6	6	8	R	R	R	HR	R	NR	NR	R	77A5

Product Versions

AM = Optimum® AcreMax®
AML = Optimum® AcreMax® Leptra®
AMXT = Optimum® AcreMax® XTreme
CV = Conventional
PCR/PWRA = Powercore® Refuge Advanced®
Q = Qrome®
RASS/SSR = SmartStax® Refuge Advanced®

Plant and Ear Height

9 = Very tall plant type
1 = Very short plant type

9 = Very high ear placement
1 = Very low ear placement

Ear Type

F = Flex
SF = Semi-Flex
SD = Semi-Determinate
D = Determinate

Cob Color

R = Red **P** = Pink **W** = White

Ratings

9 = Best **1** = Worst **NA** = Not Available **HR** = Highly Recommended **R**= Recommended **NR** = Not Recommended

See page 56 for refuge requirements.

All hybrids are treated with a fungicide seed treatment and a base rate of a seed-applied insecticide, including either LumiGEN® technologies, Poncho® or CruiserMaxx®. Products may be available with the high rate (1250 rate) seed-applied insecticide as well. Consult package labels for complete treatment details.

Characteristic scores provide key information useful in selecting and managing products in your area. Information and scores are assigned by NuTech Seed and are based on period-of-years testing through 2021 harvest and were the latest available at time of printing. Some scores may change after 2022 harvest. Scores represent an average of performance data across areas of adaptation, multiple growing conditions and a wide range of both climate and soil types and may not predict future results. Individual product responses are variable and subject to a variety of environmental, disease and pest pressures. Please use this information as only one component of your product positioning decision.

** Preliminary score

NuTech 2023 Seed

Built For Success

With Nutech® Seed Brand Corn

	Premium Package	Enhanced Corn Rootworm Package
Fungicide Seed Treatment NEW		
Lumiscend™ Pro (Inpyrfluxam, Ethaboxam, Metalaxyl)	✓	✓
Lumiflex™	✓	✓
L-2012 R biofungicide	✓	✓
Insecticide/Nematicide Seed Treatment		
Lumivia® 250	✓	
Lumisure™ 250	✓	
Lumialza™	✓	✓
Lumisure™ 1250		✓

PREMIUM PACKAGE

LumiGEN® seed treatments for corn protect our elite genetics from early-season disease, insects and nematodes to help maximize yield potential.

- The fungicide seed treatment is the most robust available in the industry providing enhanced protection with a unique multi-mode of action package against Pythium, including resistant species, Fusarium species including head smut, seed-borne diseases, and a powerful new active ingredient against Rhizoctonia (Inpyrfluxam).
- Lumialza™ nematicide seed treatment shields roots with an expanding bio-barrier protecting corn from yield-robbing nematodes for more than 80 days while cooperating with beneficial microorganisms.

PROTECTION

Diseases:
Pythium, Fusarium, Rhizoctonia, Penicillium, Aspergillus, seedborne disease

Insects:
Wireworm, white grub, black cutworm, fall armyworm, seedcorn maggot, billbug and more...

Nematodes:
Sting, needle, lance, stubby-root, root-knot, dagger, lesion and more...

Lumialza™
NEMATICIDE SEED TREATMENT

Advantage Over FST/IST

9.0 bu/A
YIELD ADVANTAGE[1]

in high nematode pressure

3.7 bu/A
YIELD ADVANTAGE[1]

in low nematode pressure

- Shields against harmful nematodes while cooperating with beneficial soil organisms
- 80+ days of root growth protection

Insecticide Seed Treatments Characterization

Pest	Lumivia® 250 + Lumisure™ 250	Lumisure™ 1250	Poncho® Votivo® 500	Cruiser® 250
Corn Nematodes	+++	+++	++	—
Wireworm	+++	++++	+++	++
Cutworm	++++	++	+[1]	+[1]
Fall Armyworm	++++	—	—	—
Seedcorn Maggot	+++	+++	+++	++
White Grub	+++	++++	+++	++
Grape Colaspis	+++	+++	++	++
Billbug	++	+++	—	—
Flea Beetle	++	+++	++	++
Corn Rootworm	—	++	—	—
	LumiGEN® technologies			

— NO control or not labeled + Feeding reduction ++ Average protection +++ Above average protection ++++ Excellent protection [1] labeled for control

The information described is based on a review of product labels and research trials. Theses comparisons include base rates. Additional seed treatment options are available with all brands compared.

ENHANCED CORN ROOTWORM PACKAGE

Brings the same disease and nematode protection as our Premium Package above with Lumisure™ 1250 insecticide seed treatment to provide enhanced yield protection against corn rootworm.

PROTECTION

Insects:
Corn rootworm, wireworm, white grub, black cutworm, seedcorn maggot, billbug and more...

Untreated | LumiGEN® seed treatments

Lumivia® INSECTICIDE SEED TREATMENT
Lumialza™ NEMATICIDE SEED TREATMENT
Lumiflex™ SEED TREATMENT FUNGICIDE
Lumiscend™ Pro FUNGICIDE SEED TREATMENT
Lumisure™ INSECTICIDE SEED TREATMENT

NuTech Seed

[1] Lumialza™ nematicide seed treatment vs. non-nematicide seed treatment utilizing the same insecticide and fungicide recipe in seed applied technology replicated and strip trial data. Yields ranged from 3 to 9 bu/A depending on nematode species and population, in 184 low stress and 54 moderate to high stress locations.

Poncho® and Votivo® are registered trademarks of BASF.

Cruiser® is a registered trademark of Syngenta Group Company.

®™Trademarks of Corteva Agriscience and its affiliated companies.

The foregoing is provided for informational use only. Please contact your Corteva sales professional for information and suggestions specific to your operation. Product performance is variable and depends on many factors such as moisture and heat stress, soil type, management practices and environmental stress as well as disease and pest pressures. Individual results may vary.

Contact your state pesticide regulatory agency to determine if a product is registered for sale or use in your state. Always read and follow label directions.

The information presented here is not an offer for sale. This is not intended as a substitute for the product label for the product(s) referenced herein. The information contained in this technical document is based on the latest to-date technical information available to Corteva Agriscience, and Corteva reserves the right to update the information at any time.

Components of LumiGEN® seed treatments for corn are applied at a Corteva Agriscience production facility, or by an independent sales representative of Corteva Agriscience or its affiliates. Not all sales representatives offer treatment services, and costs and other charges may vary. See your sales representative for details. Seed applied technologies exclusive to Corteva Agriscience and its affiliates.

SOYBEAN NAMING CONVENTION

35N03E™

Relative Maturity:

Add a period between the numbers for relative maturity.

Example: 35 = 3.5 relative maturity

Random Code:

Two random numbers

Trait Code:

E **Enlist E3® soybeans**

CV **Conventional**

Note: All existing products will continue using the existing product name.

Soybean Diseases Key

BSR	Brown Stem Rot	**IDC**	Iron Deficiency Chlorosis	**PRR**	Phytophthora Root Rot
SCN	Soybean Cyst Nematode	**SDS**	Sudden Death Syndrome		

SOYBEAN BRANDS

16N04E™ NEW! 1.6 RM

Enlist E3 SOYBEANS

- Medium plant width on medium-short plant
- Strong emergence
- Rps1k gene for PRR
- Good charcoal rot protection
- Very good standability
- Metribuzin tolerant

Medium-Short	Medium	Purple
Plant Height	Canopy width	Flower color

Light Tawny	Brown	Brown
Pubescence color	Pod color	Hilum color

7	7	7	5	HT	6	Rps1k	PI88788
Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance

19N03E™ NEW! 1.9 RM

Enlist E3 SOYBEANS

- Excellent emergence
- Medium-full canopy
- Rps1k gene for PRR
- Very good standability
- Peking SCN resistance
- Metribuzin tolerant

Medium	Medium-Full	Purple
Plant Height	Canopy width	Flower color

Light Tawny	Brown	Black
Pubescence color	Pod color	Hilum color

8	7	6	5	MT	5	Rps1k	Peking
Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance

21N07E™ NEW! 2.1 RM

Enlist E3 SOYBEANS

- Excellent emergence
- Good IDC score
- Rps1k gene for PRR
- Very good standability
- Peking SCN resistance
- Metribuzin tolerant

Medium	Medium	Purple
Plant Height	Canopy width	Flower color

Light Tawny	Tan	Brown
Pubescence color	Pod color	Hilum color

8	7	5	6	MT	4	Rps1k	Peking
Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance

SOYBEAN BRANDS

22N02E™

2.2 RM | Enlist E3 SOYBEANS

- High tolerance to BSR
- Rps1c & 3a for PRR
- Medium plant height with medium canopy
- Very good emergence and standability
- Metribuzin tolerant
- Saflufenacil & Sulfentrazone tolerant

Plant Height	Canopy width	Flower color
Medium	Medium	Purple

Pubescence color	Pod color	Hilum color
Gray	Brown	Buff

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
7	7	5	4	HT	3	Rps1c,3a	PI88788

26N06E™

2.6 RM | Enlist E3 SOYBEANS

- Very good emergence
- Acceptable SDS tolerance
- Very good yield potential
- Acceptable IDC score
- Very good standability
- Metribuzin tolerant, Saflufenacil & Sulfentrazone tolerant

Plant Height	Canopy width	Flower color
Medium	Medium	White

Pubescence color	Pod color	Hilum color
Gray	Tan	Buff

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
7	7	5	5	HT	3	Rps1k	PI88788

24N04E™

2.4 RM | Enlist E3 SOYBEANS

- Strong emergence
- Strong southern movement in the NuTech marketing area
- Peking SCN resistance
- Good IDC tolerance
- Medium plant height with medium canopy width
- Metribuzin tolerant, Saflufenacil & Sulfentrazone tolerant

Plant Height	Canopy width	Flower color
Medium	Medium	Purple

Pubescence color	Pod color	Hilum color
Gray	Tan	Buff

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
7	7	4	6	MS	3	Rps1k	Peking

27N01CV™

2.7 RM | **CONV**

- Conventional genetics
- Manage populations in high-yield environments
- Highly tolerant to BSR
- Excellent field emergence
- Rps1c gene
- Saflufenacil & Sulfentrazone tolerant

Plant Height	Canopy width	Flower color
Medium	Medium	White

Pubescence color	Pod color	Hilum color
Light Tawny	Brown	Brown

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
8	6	5	4	HT	5	Rps1c	PI88788

25N04E™ NEW!

2.5 RM | Enlist E3 SOYBEANS

- Excellent standability
- Excellent SDS score
- Rps1k gene for PRR
- Good charcoal rot protection
- High tolerance to BSR
- Very good emergence

Plant Height	Canopy width	Flower color
Medium	Medium	Purple

Pubescence color	Pod color	Hilum color
Light Tawny	Brown	Black

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
7	8	8	3	HT	5	Rps1k	PI88788

27N03E™ NEW!

2.7 RM | Enlist E3 SOYBEANS

- Very good charcoal rot protection
- Good emergence and standability
- Rps1k gene for PRR
- Moderate tolerance to BSR
- Peking SCN resistance
- Metribuzin tolerant

Plant Height	Canopy width	Flower color
Medium	Medium	Purple

Pubescence color	Pod color	Hilum color
Light Tawny	Tan	Black

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
6	6	5	5	MT	3	Rps1k	Peking

SOYBEAN BRANDS

29N02E™

2.9 RM

Enlist E3 SOYBEANS

- Best performance in highly productive soils
- Very good emergence
- Excellent frogeye leaf spot tolerance
- Rps1a gene for PRR
- Acceptable SDS score
- Saflufenacil & Sulfentrazone tolerant

Plant Height	Canopy width	Flower color
Medium-Tall	Medium	White

Pubescence color	Pod color	Hilum color
Gray	Brown	Buff

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
7	6	5	3	MS	2	Rps1a	PI88788

34N02E™ NEW!

3.4 RM

Enlist E3 SOYBEANS

- Excellent frogeye leaf spot tolerance
- Very good charcoal rot protection
- Rps1k gene for PRR
- Very good emergence and standability
- Peking SCN resistance
- Adapts east to west across NuTech area

Plant Height	Canopy width	Flower color
Medium	Medium	Purple

Pubescence color	Pod color	Hilum color
Light Tawny	Brown	Brown

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
6	6	5	4	MT	2	Rps1k	Peking

30N05E™

3.0 RM

Enlist E3 SOYBEANS

- Strong emergence and standability
- Rps1k gene with good field tolerance
- SCN resistance, good charcoal rot tolerance
- Medium plant height with medium canopy
- Metribuzin tolerant
- Saflufenacil & Sulfentrazone tolerant

Plant Height	Canopy width	Flower color
Medium	Medium	Purple

Pubescence color	Pod color	Hilum color
Gray	Tan	Imp. Black

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
7	7	5	4	HT	4	Rps1k	PI88788

35N03E™

3.5 RM

Enlist E3 SOYBEANS

- High tolerance to BSR
- Rps1k gene with good field tolerance
- Medium plant height with medium canopy
- Excellent emergence and very good standability
- Metribuzin tolerant
- Saflufenacil & Sulfentrazone tolerant

Plant Height	Canopy width	Flower color
Medium	Medium	Purple

Pubescence color	Pod color	Hilum color
Gray	Tan	Imp. Black

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
8	7	5	4	HT	4	Rps1k	PI88788

31N06E™

3.1 RM

Enlist E3 SOYBEANS

- Moderate SDS tolerance
- Good emergence
- E3/STS stacked variety
- Very good stem canker tolerance
- Matures slightly later
- Metribuzin tolerant, Saflufenacil & Sulfentrazone tolerant

Plant Height	Canopy width	Flower color
Medium	Medium	White

Pubescence color	Pod color	Hilum color
Tawny	Brown	Black

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
6	6	5	4	MS	4	NR	PI88788

37N01E™

3.7 RM

Enlist E3 SOYBEANS

- Best performance in Illinois and Eastern Missouri
- Good charcoal rot tolerance
- Excellent emergence and early vigor
- Best performance when used with Corteva Agriscience Lumisena® fungicide seed treatment
- Strong frogeye leaf spot tolerance
- Metribuzin tolerant, Saflufenacil & Sulfentrazone tolerant

Plant Height	Canopy width	Flower color
Medium	Medium	White

Pubescence color	Pod color	Hilum color
Tawny	Brown	Brown

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
8	7	5	4	MS	2	NR	PI88788

37N02CV™

3.7 RM **CONV**

- Conventional genetics
- Rps1k gene with moderate field tolerance
- Highly tolerant to BSR
- Good stem canker tolerance
- Good frogeye leaf spot tolerance
- Metribuzin tolerant, Saflufenacil & Sulfentrazone tolerant

Plant Height	Canopy width	Flower color
Medium	Medium	White

Pubescence color	Pod color	Hilum color
Light Tawny	Brown	Black

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
7	7	6	4	HT	4	Rps1k	PI88788

40N02E™ NEW!

4.0 RM Enlist E3 SOYBEANS

- Very good stem canker score
- Good emergence and standability
- Good SDS protection
- Highly tolerant to BSR
- Good charcoal rot score
- Best performance when used with Corteva Agriscience Lumisena® fungicide seed treatment

Plant Height	Canopy width	Flower color
Medium-Short	Medium	Purple

Pubescence color	Pod color	Hilum color
Light Tawny	Brown	Black

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
6	6	6	3	HT	NR	NR	PI88788

39N04E™

3.9 RM Enlist E3 SOYBEANS

- Wide area of adaptation
- Excellent frogeye leaf spot rating
- Good BSR tolerance
- Very good Phytophthora field tolerance
- Solid stem canker score, moderate SDS tolerance
- Moderate Metribuzin tolerance

Plant Height	Canopy width	Flower color
Medium-Short	Medium	White

Pubescence color	Pod color	Hilum color
Gray	Brown	Buff

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
7	7	5	4	MT	3	NR	PI88788

43N04E™

4.3 RM Enlist E3 SOYBEANS

- Very good emergence
- Good SDS rating
- Best performance when used with Corteva Agriscience Lumisena® fungicide seed treatment
- Excellent stem canker rating
- Metribuzin tolerant
- Saflufenacil & Sulfentrazone tolerant

Plant Height	Canopy width	Flower color
Medium	Medium	White

Pubescence color	Pod color	Hilum color
Tawny	Brown	Brown

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
7	6	5	4	MS	NR	NR	PI88788

39N07E™ NEW!

3.9 RM Enlist E3 SOYBEANS

- Excellent stem canker protection
- Very good emergence and standability
- Rps1k gene for PRR
- Attractive light tawny plant
- Highly tolerant to BSR
- Metribuzin tolerant

Plant Height	Canopy width	Flower color
Medium	Medium-Thin	White

Pubescence color	Pod color	Hilum color
Light Tawny	Brown	Black

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
7	7	5	5	HT	NR	Rps1k	PI88788

45N09E™ NEW!

4.5 RM Enlist E3 SOYBEANS

- Excellent stem canker protection
- Wide adaptability
- Good SDS protection
- Good emergence and standability
- Medium-tall plant
- Best performance when used with Corteva Agriscience Lumisena® fungicide seed treatment

Plant Height	Canopy width	Flower color
Medium-Tall	Medium	White

Pubescence color	Pod color	Hilum color
Light Tawny	Brown	Black

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
6	6	6	4	MS	NR	NR	PI88788

47N04E™ NEW!

4.7 RM

Enlist E3 SOYBEANS

- Excellent frogeye leaf spot protection
- Excellent yield potential
- Excellent stem canker protection
- Good charcoal rot protection
- Very good standability
- Best performance when used with Corteva Agriscience Lumisena® fungicide seed treatment

Plant Height	Canopy width	Flower color
Medium	Medium	White

Pubescence color	Pod color	Hilum color
Light Tawny	Brown	Brown

Emergence	Harvest Standability	Sudden Death Syndrome	Iron Deficiency Chlorosis	Brown Stem Rot	White Mold	Phytophthora Root Rot Resistance	Soybean Cyst Nematode Resistance
6	7	6	3	MS	NR	NR	PI88788

Notes:

SOYBEAN CHARACTERISTICS

	Brand Name	Technology	Relative Maturity	Plant Height	Canopy Width	Flower Color	Pubescence Color	Pod Color	Hilum Color	Emergence	Harvest and Standability	Soybean Cyst Nematode Resistance		Phytophthora Root Rot Resistance	Phytophthora Field Tolerance	Iron Deficiency Chlorosis	Charcoal Rot	Brown Stem Rot	White Mold	Sudden Death Syndrome	Frogeye Leaf Spot	Stem Canker	Herbicide Resistance	Average Seed Size (seeds per pound)	Brand Name
NEW!	16N04E™	E3	1.6	MS	M	P	LT	BR	BR	7	7	PI88788		Rps1k	5	5	6	HT	6	7	NR	NR	E3	3300-3500	16N04E™
NEW!	19N03E™	E3	1.9	M	MF	P	LT	BR	BL	8	7	Peking		Rps1k	4	5	5	MT	5	6	NR	NR	E3	2900-3100	19N03E™
NEW!	21N07E™	E3	2.1	M	M	P	LT	TN	BR	8	7	Peking		Rps1k	4	6	4	MT	4	5	8	NR	E3	3100-3300	21N07E™
	22N02E™	E3	2.2	M	M	P	G	BR	BU	7	7	PI88788		Rps1c,3a	NR	4	6	HT	3	5	NR	NR	E3	1900-2100	22N02E™
	24N04E™	E3	2.4	M	M	P	G	TN	BU	7	7	Peking		Rps1k	6	6	5	MS	3	4	NR	NR	E3	3300-3500	24N04E™
NEW!	25N04E™	E3	2.5	M	M	P	LT	BR	BL	7	8	PI88788		Rps1k	5	3	6	HT	5	8	3	NR	E3	2100-2300	25N04E™
	26N06E™	E3	2.6	M	M	W	G	TN	BU	7	7	PI88788		Rps1k	5	5	5	HT	3	5	7	NR	E3	2500-2700	26N06E™
	27N01CV™	Conv	2.7	M	M	W	LT	BR	BR	8	6	PI88788		Rps1c	3	4	4	HT	5	5	4	NR	Conv	2500-2700	27N01CV™
NEW!	27N03E™	E3	2.7	M	M	P	LT	TN	BL	6	6	Peking		Rps1k	3	5	4	MT	3	5	7	NR	E3	3300-3500	27N03E™
	29N02E™	E3	2.9	MT	M	W	G	BR	BU	7	6	PI88788		Rps1a	5	3	4	MS	2	5	9	NR	E3	2500-2700	29N02E™
	30N05E™	E3	3.0	M	M	P	G	TN	IB	7	7	PI88788		Rps1k	6	4	6	HT	4	5	3	7	E3	2900-3100	30N05E™
	31N06E™	E3	3.1	M	M	W	T	BR	BL	6	6	PI88788		NR	5	4	5	MS	4	5	3	7	E3	2900-3100	31N06E™
NEW!	34N02E™	E3	3.4	M	M	P	LT	BR	BR	6	6	Peking		Rps1k	3	4	7	MT	2	5	8	NR	E3	3100-3300	34N02E™
	35N03E™	E3	3.5	M	M	P	G	TN	IB	8	7	PI88788		Rps1k	6	4	4	HT	4	5	4	7	E3	3100-3300	35N03E™
	37N01E™	E3	3.7	M	M	W	T	BR	BR	8	7	PI88788		NR	5	4	6	MS	2	5	7	7	E3	2700-2900	37N01E™
	37N02CV™	Conv	3.7	M	M	W	LT	BR	BL	7	7	PI88788		Rps1k	5	4	2	HT	4	6	6	6	Conv	2500-2700	37N02CV™
	39N04E™	E3	3.9	MS	M	W	G	BR	BU	7	7	PI88788		NR	7	4	5	MT	3	5	9	6	E3	3100-3300	39N04E™
NEW!	39N07E™	E3	3.9	M	MT	W	LT	BR	BL	7	7	PI88788		Rps1k	5	5	5	HT	NR	5	3	9	E3	2700-2900	39N07E™
NEW!	40N02E™	E3	4.0	MS	M	P	LT	BR	BL	6	6	PI88788		NR	4	3	6	HT	NR	6	5	7	E3	2900-3100	40N02E™
	43N04E™	E3	4.3	M	M	W	T	BR	BR	7	6	PI88788		NR	4	4	4	MS	NR	5	NR	8	E3	3100-3300	43N04E™
NEW!	45N09E™	E3	4.5	MT	M	W	LT	BR	BL	6	6	PI88788		NR	5	4	6	MS	NR	6	5	8	E3	2900-3100	45N09E™
NEW!	47N04E™	E3	4.7	M	M	W	LT	BR	BR	6	7	PI88788		NR	5	3	6	MS	NR	6	8	8	E3	2500-2700	47N04E™

Technology
Conv = Conventional
E3 = Enlist E3® soybeans

Plant Height
T = Tall
M = Medium
MT = Medium-Tall
MS = Medium-Short

Canopy Width
B = Bush
MB = Medium-Bush
MF = Medium-Full
M = Medium
MT = Medium-Thin
T = Thin

Flower Color
W = White
P = Purple

Pubescence Color
G = Gray
T = Tawny
LT = Light Tawny

Hilum Color
BU = Buff
BR = Brown
BL = Black
IB = Imperfect Black

Ratings
9 = Outstanding or Resistant
8 = Excellent
7 = Very Good
6 = Good
5 = Average
4 or less = Poor

NR = Not Rated
HT = Highly Tolerant
MS = Moderately Susceptible
MT = Moderately Tolerant
SEG = Segregating Gene

IMPORTANT: Characteristic scores provide key information useful in selecting and managing products in your area. Information and scores are assigned by NuTech Seed and are based on period-of-years testing through 2021 harvest and were the latest available at time of printing. Some scores may change after 2022 harvest. Scores represent an average of performance data across areas of adaptation, multiple growing conditions and a wide range of both climate and soil types and may not predict future results. Individual product responses are variable and subject to a variety of environmental, disease and pest pressures. Please use this information as only one component of your product positioning decision.

NuTech Seed 2023

Built For Success

With Nutech® Seed Brand Soybean

LumiGEN Seed Treatments

PREMIUM PACKAGE

Our powerful combination of six different modes of action enhanced by Lumisena® fungicide seed treatment leads the industry in yield protection against early-season diseases.

- Lumisena offers best-in-class protection against the number one early-season disease in soybeans, Phytophthora.
- Multiple modes of action against key diseases helps maximize yield potential with healthy, uniform stand establishment.

PROTECTION

Diseases:
Phytophthora, Pythium, Fusarium, Rhizoctonia, Phomopsis

Fungicide Seed Treatment Package
Lumisena® fungicide seed treatment
EverGol® Energy
L-2030 R biofungicide
Insecticide Seed Treatments
Gaucho®
FUNGICIDE/NEMATICIDE SEED TREATMENT
ILEVO® (high rate)

Lumisena®
FUNGICIDE SEED TREATMENT

Advantage Over Industry Standard

Best-in-class protection against Phytophthora

4.0 bu/A YIELD ADVANTAGE[1]
in high stress environments vs. high rate metalaxyl

1.0 bu/A YIELD ADVANTAGE[1]
benefit across the farm vs. high rate metalaxyl

Powerful Protection Against Key Diseases With LumiGEN® Soybean Seed Treatment

Trade Name	Phytophthora	Pythium	Rhizoctonia	Fusarium	Phomopsis
Lumisena® fungicide (Oxathiapiprolin)	•				
EverGol® Energy fungicide (Metalaxyl)		•			
EverGol® Energy fungicide (Penflufen)			•		•
EverGol® Energy fungicide (Prothioconazole)			•	•	
L-2030 R biofungicide			•*	•*	
Modes of Action	1	1	3	2	1

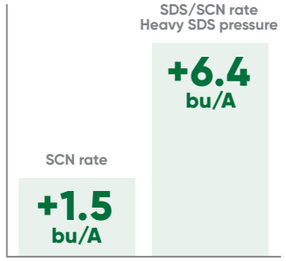
* Labeled suppression

ILEVO® FUNGICIDE/NEMATICIDE SEED TREATMENT

Two rates of extra protection for fields at risk for soybean cyst nematode (SCN) and sudden death syndrome (SDS)

- At lower rate – protection against SCN (third party option)
- At higher rate – protection against SCN and SDS (NuTech premium package)

ILEVO® seed treatment[2]



ADD L-120+ PLUS EXTENDER (THIRD-PARTY OPTION)

- Improves nitrogen fixation
- Helps prolong rhizobia up to 120 days after application

OPTIONAL THIRD PARTY INSECT PACKAGE

Broader than "FST alone" for pest protection, including early season insects.

- Lumiderm® insecticide seed treatment reduces plant stand gaps and controls more than twice as many insects compared to Gaucho® alone. Enhancing protection against insects such as seedcorn maggot, cutworms*, grubs, thrips, wireworms, aphid and bean leaf beetle is key to early-planting and cover-crop practices.[3]
- Two modes of action option available combining Lumiderm with Gaucho®.
- Multi-year research data shows a 1-3 bushel yield improvement by adding Lumiderm.[4]

PROTECTION

Insects:
Bean leaf beetle, early season aphid, seedcorn maggot, cutworms, white grub, wireworm, thrips

Lumiderm®
INSECTICIDE SEED TREATMENT

Protection Against Seedcorn Maggot

Only fungicide seed treatment: injured cotyledon

Lumiderm® insecticide seed treatment 0.57 fl oz/140k: well-protected cotyledons

Lumisena® FUNGICIDE SEED TREATMENT | Lumiderm® INSECTICIDE SEED TREATMENT | ILEVO® Seed Treatment

NuTech Seed®

[1] Data is based on 638 head-to-head comparisons between Lumisena® fungicide seed treatment (0.568 fl oz/cwt) and metataxyl (0.75 fl oz/cwt) in the top 10 soybean-producing states through Dec. 12, 2017, and subsequent replicated trials in 2018, 2019 and 2020. 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.

[2] Data is based on average of comparisons in Corteva Agronomy Science trials from 2012-2015 at 165 locations.

[3] Significant yield improvement and reduction in plant stand gaps based on Corteva Agriscience research data 2018-2019, 73 locations.

[4] Data based on Corteva Agriscience research data 2019-2021, 82 locations.

REFUGE REQUIREMENTS

				Product Refuge Requirements			Herbicide Resistance				Corn Belt–Separate Refuge	
ID	Product Name	Technology Description		Description	Integrated Components	Structured	Glyphosate	Liberty®	Enlist®	Insect Protection	Refuge Size Requirement	Refuge Distance Requirement
Q	QROME	Qrome® technology is the most advanced technology for above- and below-ground insect protection. It is a single-bag integrated product with a 95/5 blend of two hybrids. The first contains a unique molecular stack of the proven *Bt* proteins from the Herculex® I and Herculex® RW traits, Agrisure® RW, YGCB, LL and RR2 traits. The second contains the LL and RR2 traits.		Single-bag product with integrated corn borer and corn rootworm refuge. In EPA-designated cotton counties, additional 20% corn borer refuge is required.	95% RW, YGCB, HXX, LL, RR2 5% LL, RR2	✓	✓	✓		Above Below	0% CORN BELT REFUGE	None
SXRA/SSR	SmartStax REFUGE ADVANCED	SmartStax® trait technology uses multiple modes of action for control of above- and below-ground insects to cover a broad spectrum of insect threats and defend your yield. Conveniently packaged as a single-bag solution with no separate structured refuge required for planting in the Corn Belt.		Single-bag product with integrated corn borer and corn rootworm refuge. In EPA-designated cotton counties, additional 20% corn borer refuge is required.	95% VT2, HX1, VT3, HXRW, LL, RR2 5% RR2, LL		✓	✓		Above Below	0% CORN BELT REFUGE	None
SXE/SE	SmartStax + Enlist CORN	SmartStax® trait technology uses multiple modes of action for control of above- and below-ground insects to cover a broad spectrum of insect threats and defend your yield. The Enlist® corn trait adds advanced herbicide-tolerant technology, with tolerances to 2,4-D choline, glyphosate and FOP herbicides such as quizalofop.		Trusted traits, 5% Corn Belt, 20% corn borer in cotton counties.	100% VT2, HX1, VT3, HXRW, LL, RR2, Enlist	✓	✓	✓	✓	Above Below	5% CORN BELT REFUGE	Within or adjacent
SX/SS	SmartStax REFUGE ADVANCED	SmartStax® trait technology uses multiple modes of action for control of above- and below-ground insects to cover a broad spectrum of insect threats and defend your yield.		Trusted traits, 5% Corn Belt, 20% corn borer in cotton counties.	100% VT2, HX1, VT3, HXRW, LL, RR2	✓	✓	✓		Above Below	5% CORN BELT REFUGE	Within or adjacent
AMXT	Optimum AcreMax XTreme	Optimum® AcreMax® XTreme insect protection is a single-bag, integrated corn borer and corn rootworm product featuring multiple modes of insect protection through a 95/5 blend of two hybrids. The first contains the Agrisure® RW, YGCB, HXX, LL and RR2 traits. The second contains the RR2 and LL traits.		Single-bag product with integrated corn borer and corn rootworm refuge. In EPA-designated cotton counties, additional 20% corn borer refuge is required.	95% RW, YGCB, HXX, LL, RR2 5% RR2, LL		✓	✓		Above Below	0% CORN BELT REFUGE	None
PWRA/PCR	POWERCORE REFUGE ADVANCED	PowerCore® trait technology is a combination of three modes of action to provide superior control of above-ground insects. This focused insect control is specialized for areas with minimal rootworm pressure, conveniently packaged as a single-bag solution with no separate structured refuge required for planting in the Corn Belt.		Single-bag product with integrated corn borer refuge. In EPA-designated cotton counties, additional 20% corn borer refuge is required.	95% VT2, HX1, LL, RR2 5% RR2, LL		✓	✓		Above	0% CORN BELT REFUGE	None
PWE/PE	POWERCORE Enlist	PowerCore® trait technology is a combination of three modes of action to provide superior control of above-ground insects. This focused insect control is specialized for areas with minimal rootworm pressure. The Enlist® corn trait adds advanced herbicide-tolerant technology, with tolerances to 2,4-D choline, glyphosate and FOP herbicides such as quizalofop.		Trusted traits, 5% Corn Belt, 20% corn borer in cotton counties.	100% VT2, HX1, LL, RR2, Enlist	✓	✓	✓	✓	Above	5% CORN BELT REFUGE	Within, adjacent or up to a half mile
PW	POWERCORE	PowerCore® trait technology is a combination of three modes of action to provide superior control of above-ground insects. This focused insect control is specialized for areas with minimal rootworm pressure.		Trusted traits, 5% Corn Belt, 20% corn borer in cotton counties.	100% VT2, HX1, LL, RR2	✓	✓	✓		Above	5% CORN BELT REFUGE	Within, adjacent or up to a half mile
AML	Optimum AcreMax Leptra	Optimum® AcreMax® Leptra® insect protection is a single-bag, integrated corn borer refuge product. It features a 95/5 blend of two hybrids: one containing the AVBL, YGCB, HX1, LL and RR2 traits and the other containing the RR2 and LL traits.		Single-bag product with integrated corn borer refuge. In EPA-designated cotton counties, additional 20% corn borer refuge is required.	95% AVBL, YGCB, HX1, LL, RR2 5% RR2, LL		✓	✓		Above	0% CORN BELT REFUGE	None
AM	Optimum AcreMax	Optimum® AcreMax® insect protection is a single-bag, integrated corn borer refuge product. It features a 95/5 blend of two hybrids: one containing the YGCB, HX1, LL and RR2 traits and the other containing the RR2 and LL traits.		5% LL, RR2	95% YGCB, HX1, LL, RR2 5% RR2, LL		✓	✓		Above	0% CORN BELT REFUGE	None
GT3	Agrisure 3000GT	The Agrisure® 3000GT trait stack offers better control of corn borer and corn rootworm, as well as herbicide flexibility with both glyphosate and glufosinate tolerance.		Trusted traits, 20% Corn Belt, 20% corn borer in cotton counties.	100% GT, CB, RW, LL	✓	✓	✓		Above Below	20% CORN BELT REFUGE	Within or adjacent
VYHR	Optimum Leptra	Optimum® Leptra® hybrids offer superior control of above-ground pests. These hybrids contain HX1, YGCB, AVBL, LL and RR2 traits.		Trusted traits, 20% Corn Belt, 20% corn borer in cotton counties.	100% AVBL, YGCB, HX1, LL, RR2	✓	✓	✓		Above	20% CORN BELT REFUGE	Within or adjacent
5FN/YHR	Optimum Intrasect	Optimum® Intrasect® insect protection is a reduced-refuge product with multiple modes of above-ground insect protection. These hybrids contain the YGCB, HX1, LL and RR2 traits. This product has both glyphosate and glufosinate tolerance.		Trusted traits, 20% Corn Belt, 20% corn borer in cotton counties.	100% YGCB, HX1, LL, RR2	✓	✓	✓		Above	20% CORN BELT REFUGE	Within or adjacent
5KN/CYXR	Optimum Intrasect XTreme	Optimum® Intrasect® XTreme insect protection is a single-bag, integrated corn borer and corn rootworm product featuring multiple modes of insect protection. These hybrids contain the Agrisure® RW, YGCB, HXX, LL and RR2 traits.		Trusted traits, 5% Corn Belt, 20% corn borer in cotton counties.	100% RW, YGCB, HXX, LL, RR2	✓	✓	✓		Above Below	5% CORN BELT REFUGE	Within or adjacent
5DN/YXR	Optimum Intrasect Xtra	Optimum® Intrasect® Xtra insect protection offers multiple modes of insect protection including above- and below-ground traits. These hybrids contain the YGCB, HXX, LL and RR2 traits. This product has both glyphosate and glufosinate tolerance.		Trusted traits, 20% Corn Belt, 20% corn borer in cotton counties.	100% YGCB, HXX, LL, RR2	✓	✓	✓		Above Below	20% CORN BELT REFUGE	Within or adjacent
5R	Optimum TRIsect	Optimum® TRIsect® hybrids contain a unique mode of action against corn rootworm pests, along with providing protection against above-ground insects. These hybrids contain the Agrisure® RW, HX1, LL and RR2 traits.		An additional high-performance choice for above- and below-ground insect protection, 20% Corn Belt, 50% corn borer in cotton counties.	100% RW, HX1, LL, RR2	✓	✓	✓		Above Below	20% CORN BELT REFUGE	Within or adjacent
CYFR	CYFR	This product contains a unique molecular stack of the proven *Bt* proteins from the Herculex® I and Herculex® RW traits, Agrisure® RW, YGCB, LL and RR2 traits.		Trusted traits, 5% Corn Belt, 20% corn borer in cotton counties.	100% RW, YGCB, HXX, LL, RR2 (matches the 95% portion of Qrome)	✓	✓	✓		Above Below	5% CORN BELT REFUGE	Within or adjacent

5% refuge equals 5 acres of non-*Bt* corn for every 95 acres of *Bt* corn planted. 20% refuge equals 20 acres of non-*Bt* corn for every 80 acres of *Bt* corn planted. 50% refuge equals 50 acres of non-*Bt* corn for every 50 acres of *Bt* corn planted. Agrisure Viptera® 3220 requires a 5% refuge in the Corn Belt and a 20% refuge in the Cotton Belt. Refuge requirements refer to the Corn Belt only. For Cotton Belt refuge requirements, consult Corn Product Use Guide.

Integrated Corn Refuge Products: = Major Component = Minor Component

Insect Resistance Management (IRM) for *Bt* Corn

Following an insect resistance management (IRM) program is an essential part of good stewardship. The aim of an IRM program is to reduce the probability of target insects developing increased tolerance to the insecticidal *Bt* proteins, thus maximizing the longevity and effectiveness of these valuable traits in an environmentally conscious way. Sustainable preservation of this technology places individual responsibility on everyone in the seed distribution system, from the seed supplier to the grower planting the seed. Additionally, IRM is a legal obligation, as requirements have been incorporated into the registrations granted by the EPA for all *Bt* corn products.

Insect Resistance Management
Planting Refuges, Preserving Technology

A decrease in susceptibility or field-evolved resistance of some insect populations to certain technology traits in corn has been observed in different geographies and may result in lower-than-expected efficacy. To help extend durability of this technology, we recommend you implement Integrated Pest Management (IPM) practices such as crop rotation, cultural and biological control tactics (including rotating sources of *Bt*-protected corn traits), pest scouting and appropriate use of pest thresholds when employing management practices such as insecticide application. You must also plant the required refuge when using this technology. Please contact your sales professional or consult with your local university extension for more information regarding insect resistance management guidelines, best management practices and to understand whether there has been a shift in susceptibility or insect resistance documented in your area.

If you have questions after reviewing this document, or if you wish to register a tip or complaint about a grower who may not be following the IRM refuge requirements, please contact your sales professional or call toll free at 1-800-323-6103.

IRM Requirements

IRM programs address: (1) the amount of refuge, (2) the required proximity of hybrids with the *Bt* traits to the refuge, (3) the use of insecticides in the refuge and (4) the design and management of the refuge.

What is a Refuge?

A refuge is a block or strip of corn that does not contain a *Bt* trait for controlling corn pests. The purpose of this refuge is to maintain a population of corn pests that is susceptible to *Bt* proteins. Potentially resistant insects emerging from *Bt* fields can mate with susceptible insects from the refuge resulting in *Bt*-susceptible offspring.

There are two types of refuge for products with the *Bt* trait: integrated and structured. Some *Bt* products have an integrated refuge with refuge seed blended in the bag, while other *Bt* products require a structured refuge. A structured refuge requires a grower to plant a portion of a field with another product that does not contain the insect-control traits of the *Bt* product. Grower-blended seed mixtures are not approved for use with any *Bt* hybrids to satisfy grower refuge requirements. Refuge requirements vary by product type and EPA-designated non-cotton and southern corn/cotton growing regions.

IRM Compliance Assurance Program (CAP)

We require all growers purchasing hybrids with a *Bt* trait to sign a *Technology Use Agreement*. By signing, the grower agrees to implement an IRM program—including planting a corn refuge and following EPA-mandated use requirements—as outlined in the Product Use Guide. Failure to follow these IRM requirements can result in the grower losing access to structured refuge products.

The EPA requires *Bt* corn seed providers to conduct on-farm visits as part of a comprehensive Compliance Assurance Program (CAP) to assess whether growers are following the IRM requirements. These on-farm assessments are conducted by an independent third party and directed toward areas at high risk of insect resistance based on pest pressure, *Bt* corn market penetration or insufficient refuge seed purchase.

The CAP also outlines consistent standards developed by the EPA and *Bt* corn registrants for responding to growers who have not followed the IRM requirements to bring them into full compliance. These responses include:

- Notifying the grower by letter of IRM compliance deviations.
- Conducting a compliance assistance visit with the grower prior to planting to assist the grower in planning and implementing a proper IRM program.
- Conducting a compliance assessment visit with the grower the following growing season to assess IRM compliance.
- Providing the grower additional IRM educational materials.
- A grower found with a second incident of non-compliance with refuge requirements within a five-year period will be denied access the next year to the registrant's structured refuge *Bt* corn products.

Structured Refuge Requirements

In **non-cotton** growing areas, the structured refuge requirements are 5% or 20% of corn acres planted for corn borer-protected products and 20% for corn rootworm-protected products. In **cotton** growing areas, the structured refuge requirements are 20% or 50% of corn acres planted for corn borer-protected products and 20% for corn rootworm-protected products.

Structured Refuge Planting Options for Above-Ground, Below-Ground and Above- + Below-Ground Products

A **single-trait refuge** is one that can be used for corn rootworms or corn borers, but not both. A **common refuge** is a single field that serves as a refuge for both corn borers and corn rootworms simultaneously. A **separate refuge** is a refuge designed exclusively for corn borers or exclusively for corn rootworms—i.e., a stacked *Bt* product can require two separate refuges.

Select Similar Hybrid for Structured Refuge

One key to establishing an effective refuge is selecting an appropriate hybrid—one that is agronomically similar to the *Bt* hybrid. This helps ensure that the refuge hybrid has the same likelihood of attracting adult insects as the *Bt* field. The refuge hybrid should match the *Bt* hybrid in maturity, early vigor and plant height.

Refuge Management

Management practices in the refuge acres and *Bt* corn acres must be as similar as possible to promote parallel hybrid development.

- To be effective, the refuge must be the correct size and distance from the *Bt* field, and be planted with a similar hybrid under similar management practices.
- Plant the refuge at the same time as the *Bt* hybrid.
- Fertility programs, including starter and sidedress, should be similar.
- Use the same tillage system in the *Bt* field and the refuge. Different tillage operations may result in dissimilar residue levels on the soil surface. Soil temperature differences could then lead to dramatic early development differences between the *Bt* field and the refuge.
- Reducing inputs on the refuge or planting it on marginal land also decreases the effectiveness of the refuge.
- If the refuge is planted on rotated ground, the trait corn must also be planted on rotated ground. If the refuge is planted on continuous corn ground, the trait corn may be planted on either continuous corn ground or rotated ground. It is also recommended that growers planting continuous corn plant the refuge in the same location each year.
- Practice Integrated Pest Management (IPM) to preserve the natural enemies of corn borer, corn rootworm and other insect pests. Natural predators such as ground beetles and ants can help reduce corn rootworm larvae populations. *Bt* corn insect protection aids IPM, because it affects only target insects and allows beneficial insects to thrive.
- Popcorn can be used as a refuge option, but sweet corn and/or silage corn cannot.

Crop and Grain Marketing Stewardship

Corteva Agriscience is a member of Excellence Through Stewardship® (ETS). Corteva products are commercialized in accordance with ETS Product Launch Stewardship Guidance and in compliance with the Corteva policies regarding stewardship of those products. Crops and materials containing biotech traits may only be exported to or used, processed or sold in jurisdictions where all necessary regulatory approvals have been granted for those crops and materials. It is a violation of national and international laws to move materials containing biotech traits across borders into jurisdictions where their import is not permitted. Growers should discuss these issues with their purchaser or grain handler to confirm the purchaser or handler's position on products being purchased. Excellence Through Stewardship® is a registered trademark of Excellence Through Stewardship.

Refuge Calculator

The National Corn Growers Association (NCGA), in collaboration with the industry, has developed a web-based calculator to help growers calculate the minimum refuge requirements for each of the *Bt* products on their farm. This calculator can be accessed at refuge.irmcalculator.com.

Field Monitoring

Monitoring *Bt* fields for insect resistance development is an integral part of an IRM plan. If resistant populations are detected early, alternative control measures can be quickly implemented to reduce the population and halt the spread of resistance. Because of its importance in maintaining the effectiveness of *Bt* technology, the EPA mandates activity monitoring as a condition of registration of *Bt* products. We require customers to monitor *Bt* fields for unexpected levels of insect damage and report any high level of suspected insect damage to a sales professional for further investigation. Acres planted with *Bt* hybrids should be correctly marked at planting to prevent confusion when monitoring.

Structured Refuge Configuration

Because *Bt* corn growers use different management practices, considerable flexibility is allowed in laying out the refuge. Several of these refuge patterns are described below.

Surveys indicate that most farmers plant the refuge within the *Bt* field. This closer proximity increases refuge effectiveness and maximizes *Bt* acreage in the field.

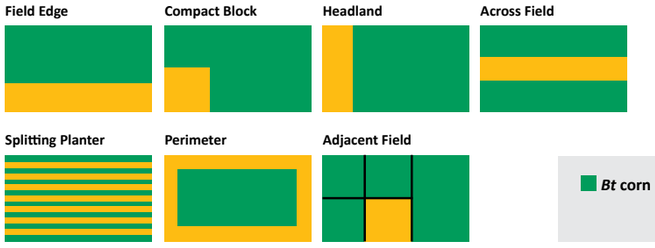
Refuge Within the *Bt* Field:

- Block
- Perimeter or Border
- Split Planter

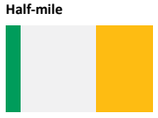
Separate-Field Refuge Distance Requirements:

- Appropriate refuges must be planted on every farm with a field that contains *Bt* corn—i.e., you cannot use a neighbor's field to satisfy the refuge requirements.
- For corn borer-*Bt* products, refuge must be planted within a 1/2 mile of each *Bt* corn field.
- For corn rootworm-*Bt* products, refuge must be planted adjacent to *Bt* hybrids; it can be separated by a ditch or a road, but not by another field.

Common refuge options



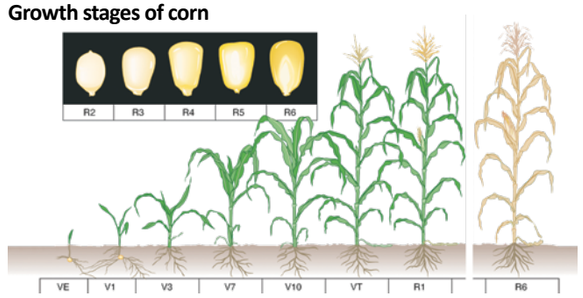
Additional refuge options for PowerCore®



Illustrations are not a representation of refuge size requirements. Please see "Refuge Distance Requirement" section on page 59 for minimum refuge requirements by product.

Notes:

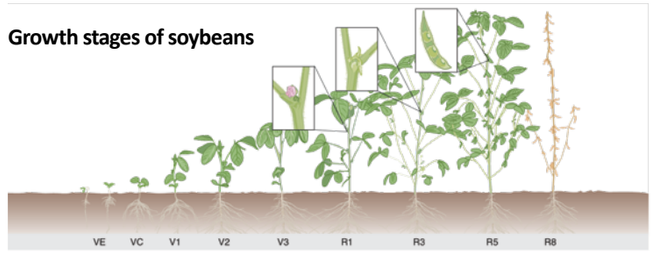
Growth stages of corn



Reprinted with permission from *Pocket Guide to Crop Development* (www.pubsplus.uiuc.edu/C1389.htm). ©2003. Board of Trustees, University of Illinois.

Growth Stage		Diagnostic Characteristic	Approximate Time After Emergence From the Soil
0	Pre-emergence	Seed planted	
VE	Emergence	Coleoptile above soil	0
V2	Two-leaved	2 leaves fully open	1 week
V4-V6	Early whorl	4 to 6 leaves fully emerged	2 to 3 weeks
V8-V10	Mid-whorl	8 to 10 leaves fully emerged	4 to 5 weeks
V12-V14	Late whorl	12 to 14 leaves fully emerged	6 to 7 weeks
VT	Tassel	16 to 18 leaves fully emerged	8 weeks
R1	Silk	Silks emerging, pollen shedding, kernel fertilization	9 weeks
R2	Blister	Brown silk, cob is nearly full sized, kernels like "water blisters"	12 days after silking
R3	Milk	Kernels large, cob full sized, content "milky," "roasting ear"	18 days after silking
R4	Dough	Kernels progress from "soft dough" to "hard dough" as starch increases	24 days after silking
R5	Early dent	Kernels form "dents" on crown, embryos developed	36 days after silking
	Late dent	All kernels with dents, all kernels firm, "milk line" visible	48 days after silking
R6	Maturity	Grain mature and drying, "black layer" at tip of kernel	55 to 60 days after silking

Growth stages of soybeans



Reprinted with permission from *Pocket Guide to Crop Development* (www.pubsplus.uiuc.edu/C1389.htm). ©2003. Board of Trustees, University of Illinois.

Growth Stage		Diagnostic Characteristic
VE	Emergence	Cotyledons above soil surface
VC	Cotyledon	Cotyledons fully expanded, unifoliate leaves unfolded
V1	2nd node	1 node on main stem with fully developed trifoliates
V2	3rd node	3 nodes on main stem with 2 fully developed trifoliates, nodules begin forming on roots
V3	4th node	4 nodes on main stem with 3 fully developed trifoliates, increased lateral root growth, branching may begin at first node
V5/V6	6th/7th node	Number of nodes plant may produce is set, cotyledons have fallen off, branching begins, increased lateral root expansion
R1	Beginning bloom	1 open flower at any node on main stem, usually occurs at V7 to V10
R2	Full bloom	Large number of nodules present on roots, 1 open flower at 1 of upper 2 nodes on main stem
R3	Beginning pod	Pod 0.5 cm long at 1 of 4 upper-most nodes on main stem, flowers appear rapidly
R4	Full pod	Pod 2 cm long, rapid pod growth, beginning of seed development, flowering at 1 of 4 upper-most nodes, plants very sensitive to stress
R5	Beginning seed	Seed 0.3 cm long inside pod at 1 of 4 upper-most nodes, pod number set, seed number determined
R6	Full seed	Seed fills pod cavity at 1 of 4 upper-most nodes, seed weight approaches maximum, leaves begin to turn yellow
R7	Beginning maturity	1 pod on main stem has reached mature color, seed size is set, most seeds mature, 50% of leaves yellow
R8	Full maturity	95% of pods are mature color, leaves have dropped off, 5 to 10 days before harvest-ripe

FOR MORE INFORMATION, VISIT WWW.NUTECHSEED.COM.

NuTech Seed reserves the right to substitute product at its discretion in the event of crop or allocation shortages. The Buyer may accept or reject the substitute product at the point of offer. NuTech Seed shall not be liable for any breach of warranty or breach of contract claims in connection with unavailable product.

NuTech Seed warrants that seed sold by it conforms to the label description on the seed packaging within tolerances established or permitted by law. NUTECH SEED MAKES NO OTHER WARRANTIES,

EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. It is expressly agreed that NuTech Seed's liability for any loss or damage arising out of or relating to the purchase or use of its products, including, but not limited to, liability arising out of breach of contract, breach of warranty or negligence, shall be limited, at the sole discretion of NuTech Seed, to comparable product or to refund of the amount of the purchase price for the seed. This remedy is exclusive. In no event shall NuTech Seed be liable for any incidental or consequential damages, including loss of profits.

NuTech Seed utilizes isolation and purity measures in the production of its seed products. Because of factors beyond its control, NuTech Seed does not represent or warrant that any NuTech Seed products are free of any genetically modified materials or organisms.

These terms and conditions of sale are in addition to those contained in NuTech Seed sale documents (e.g., order forms) and on NuTech Seed product packaging and labeling.

PRODUCT NOTES:

Qrome® products are approved for cultivation in the U.S. and Canada. They have also received approval in a number of importing countries, most recently China. For additional information about the status of regulatory authorizations, visit http://www.biotradestatus.com/ or visit https://seedinnovation.ca/hybrid/ to review the EU approval status for specific hybrids marketed in Canada.

Components of LumiGEN® seed treatments are applied at a Corteva Agriscience production facility, or by an independent sales representative of Corteva Agriscience or its affiliates. Not all sales representatives offer treatment services, and costs and other charges may vary. See your sales representative for details. Seed applied technologies exclusive to Corteva Agriscience and its affiliates.

AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. **AML** - Optimum® AcreMax® Leptra® products with AVBL, YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. **AMX** - Optimum® AcreMax® Xtra Insect Protection system with YGCB, HXX, LL, RR2. Contains a single-bag integrated refuge solution for above- and below-ground insects. **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. **YGCB, HXX, LL, RR2** (Optimum® Intrasect® Xtra) - Contains a Bt trait and the Herculex XTRA genes for resistance to corn borer and corn rootworm. **YGCB,HX1,LL,RR2** (Optimum® Intrasect®) - Contains a Bt trait and Herculex® I gene for resistance to corn borer. **RW,HX1,LL,RR2** (Optimum® TRIsect®) – Contains the Herculex I gene for above-ground pests and the Agrisure® RW trait for resistance to corn rootworm. **RW,YGCB,HXX,LL,RR2** (Optimum® Intrasect® XTreme) - Contains the Agrisure® RW trait, a Bt trait, and the Herculex®XTRA genes for resistance to corn borer and corn rootworm. Optimum Intrasect XTreme will be the major component of Optimum AcreMax XTreme.

Agrisure® technology incorporated into these seeds is commercialized under a license from Syngenta Crop Protection AG.

SmartStax® and PowerCore® multi-event technology developed by Corteva Agriscience and Monsanto.

The transgenic soybean event in Enlist E3® soybeans is jointly developed and owned by Corteva Agriscience and M.S. Technologies L.L.C. Enlist Duo® and Enlist One® herbicides are not registered for sale or use in all states or counties. Contact your state pesticide regulatory agency to determine if a product is registered for sale or use in your area. Enlist Duo and Enlist One are the only 2,4-D products authorized for use with Enlist crops. Consult Enlist herbicide labels for weed species controlled. Always read and follow label directions.

Always follow IRM, grain marketing and all other stewardship practices and pesticide label directions. B.t. products may not yet be registered in all states. Check with your seed representative for the registration status in your state.

TRADEMARK OWNERSHIP:

™ ® Trademarks of Corteva Agriscience and its affiliated companies.

Roundup Ready® is a registered trademark used under license from Monsanto Company.

Liberty®, LibertyLink® and the Water Droplet Design are trademarks of BASF.

® PowerCore is a registered trademark of Bayer Group. Always follow IRM, grain marketing and all other stewardship practices and pesticide label directions. SmartStax® multi-event technology developed by Corteva Agriscience and Monsanto Company. ®SmartStax and the SmartStax Logo are registered trademarks of Bayer Group.

Agrisure® and Agrisure Viptera® are registered trademarks of, and used under license from, a Syngenta Group Company.

®Respect the Refuge Logo is a trademark of the National Corn Growers Association.

SOYBEANS PIRACY STATEMENT

Not only can it be illegal to save and replant patented seed, but, as a grower, you need to consider the yield results and profitability. NuTech Seed offers no quality guarantee for bin-run seed. Growers also incur extra costs like cleaning, storage, handling and germination testing for such endeavors.

BENEFITS OF NEW SEED:

- Meets quality standards of seed company
  - Professionally handled and rigorously tested
    - › Dramatically reduces splits and foreign matter
    - › Ensures varietal purity
  - Germination tests for peace of mind
  - Weed-free
- Access to the most elite germplasm
- Average loss of approximately 10% to 15% cleanout at harvest for bin-run seed
- New seed yields an average of 1.8 bushels per acre more than bin-run seed (university yield trials range from 1.2 to 5.9 bushels per acre)
- Dealer agronomic support before and after the sale
- Royalties provide research and development of new traits and higher-yielding germplasm
- New trait introductions
  - Seven to nine years for commercialization
  - $50 million to $100 million in total costs for a new biotech trait

Notes:

NuTech Seed
201 Knollwood Drive
Suite A
Champaign, IL 61820

1-888-647-3478
info@nutechseed.com

2023 NuTech Getaway | February 20-25

HELLO, MEXICO!

Marriott Puerto Vallarta Resort & Spa

Come join us on the 2023 NuTech Getaway to the magnificent Marriott Puerto Vallarta Resort & Spa. This beautiful beachfront resort on the Banderas Bay offers incredible views, fabulous dining and cocktails (which NuTech negotiated as all-inclusive), an on-site spa and more. Plus, it's close to the many attractions of Puerto Vallarta, from natural wonders to nightlife.

Talk to your NuTech representative about qualifying information and look for more details coming soon.

NuTech Seed®

Technology & Agronomy

News & Notes

The only constant in farming is change. There's a lot to keep up with here at NuTech and across the industry. In this section, we've gathered timely stories about new advances and useful agronomy updates. These stories come right from experts here at NuTech and Corteva Agriscience and are designed to help you think through your options this season and explore the possibilities that are around the corner.

In this month's issue, we'll talk about:

Vorceed™ Enlist® corn: A new trait technology for corn rootworm protection coming soon to our lineup.

Next-generation Enlist E3® soybeans: What's new in our portfolio this year, and what are we working on to keep a pipeline of great performance coming your way?

Nitrogen utilization: Everyone is looking to get more out of what they put down this season. We have some thoughts.

Tar spot: We're continuing to keep an eye on this disease and have advice on what to watch and manage for this season.

Drones and crop research: We pay a visit to the Corteva research station in Princeton, Illinois, and learn how they're using a view from the sky to improve breeding processes.

TECHNOLOGY & AGRONOMY

Introducing Vorceed™ Enlist® corn

Ryan Booton
NuTech Sales Agronomist, Certified Crop Advisor

Ryan Booton sat down to answer 5 questions about the newest trait technology in the NuTech corn lineup.

1. What is Vorceed™ Enlist® corn?

Vorceed™ technology is the next generation of traited corn rootworm (CRW) protection from Corteva Agriscience. It's been paired with Enlist® trait technology to provide superior CRW protection and weed control. This technology was introduced in March of 2022 with limited, small quantity offerings.

2. What are the benefits of bringing these two trait technologies together?

Let's start with the insect protection features of Vorceed technology. Vorceed technology is the newest CRW event on the market. It provides six modes of action against CRW, including RNAi action. It also works on lepidopteran species that typically come later in the season. And then, of course, the Enlist trait provides four herbicide tolerances: 2,4-D choline in Enlist® herbicides, glyphosate, glufosinate and FOPs. You bring these two technologies together, you've got lots of protection and lots of modes of action, which is great for resistance management and a program approach.

3. How is this different from PowerCore® Enlist® corn?

PowerCore® Enlist® corn features above-ground insect protection and is specifically for areas with little to no below-ground insect pressure. Vorceed Enlist corn offers both above- and below-ground protection, and it's really going to protect those roots. In the NuTech footprint, Vorceed Enlist corn will likely find a home in the northern half of Illinois and eastern half of Iowa. These are areas where below-ground pressures tend to be the highest and there are also a lot of corn-on-corn acres.

4. What kinds of results have been observed so far with Vorceed Enlist corn?

This technology just launched in March, but the teams at Corteva have been doing trials and observations ahead of bringing it to market. In those trials, they've seen a 99% reduction in adult emergence of Western and Northern CRW.[1] The robust pest and weed control is leading to a serious yield advantage as well—6-8 bu/A better than Qrome® products, which is really saying something.

Here at NuTech, we had access to some limited introductory supply, so this will be our first year really seeing Vorceed Enlist corn in our territory. We'll be observing it closely, looking at the base agronomics of the hybrids that carry these traits, watching for herbicide performance and, starting in late June and July, we'll be out in the field digging roots to check for feeding. Everything we learn will help us continue to dial in recommendations as this technology is incorporated into more of our lineup.

5. How can customers learn more?

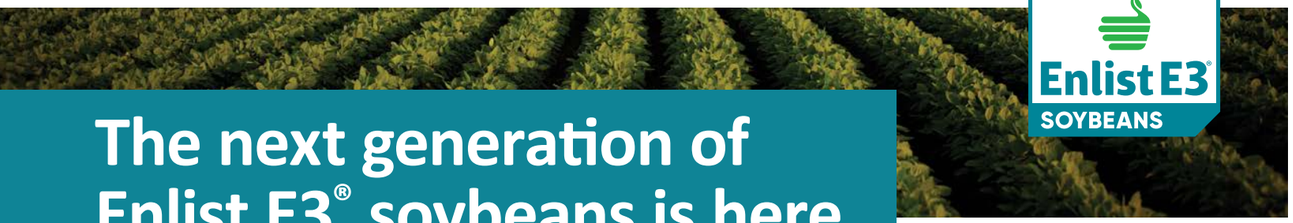
Corteva has helpful background information available on their website. Of course, you can talk to your NuTech representative or agronomist, but most importantly, we hope you'll join us for our field days this summer! We're really excited to be back together with customers for these events, and we'll have plenty to say about Vorceed Enlist corn.

[1] 2020 Corteva Agriscience Tent Emergence trials. 6 locations.

The Vorceed™ Enlist® trait will not be offered for sale or distribution until completion of field testing and applicable regulatory reviews.

VORCEED Enlist™

6 insect protection modes of action
+
4 herbicide tolerance modes of action
+
ENHANCED
yield potential and agronomics
through broad germplasm compatibility



The next generation of Enlist E3® soybeans is here

6 reasons you'll want to learn more about our new Enlist E3 soybean varieties

Brad Johnson
NuTech Lead Agronomist, Certified Crop Advisor

If you're already planting Enlist E3® soybeans, you'll find a lot of new choices in this year's seed guide. If you haven't tried Enlist E3 soybeans yet, now's the time: Our latest lineup features more agronomic options than ever before.

Over the past few seasons, you've heard us talking about how the Enlist E3 soybeans lineup here at NuTech would be expanding. I've summarized six reasons to consider these varieties, but there's more to explore inside the seed guide. And of course, your NuTech representative and agronomy team are here to answer any questions about fitting these new choices with your fields.

Reason 1: New Peking varieties

We're introducing four new Peking varieties for 2023. The Peking event is more effective against soybean cyst nematodes than PI88788, so these are great options for areas with SCN pressure. We're especially excited to bring growers a Group 3 Peking option with 34N02E™ BRAND.

19N03E™ NEW! **1.9 RM**

- Excellent emergence
- Medium full canopy
- Rps1k gene for PRR
- Excellent emergence and very good standability
- Peking SCN resistance
- Metribuzin tolerant

21N07E™ NEW! **2.1 RM**

- Excellent emergence
- Good IDC score
- Rps1k gene for PRR
- Very good standability
- Peking SCN resistance
- Metribuzin tolerant

27N03E™ NEW! **2.7 RM**

- Very good charcoal rot protection
- Good emergence and standability
- Rps1k gene for PRR
- Moderate tolerance to BSR
- Peking SCN resistance
- Metribuzin tolerant

34N02E™ NEW! **3.4 RM**

- Excellent frogeye leaf spot tolerance
- Very good charcoal rot protection
- Rps1k gene for PRR
- Very good emergence and standability
- Peking SCN resistance
- Adapts east to west across NuTech area

Reason 2: Improved disease tolerance

These new varieties also offer better defense against some of the costliest soybean diseases out there. In this year's lineup, you'll see higher resistance to sudden death syndrome, white mold and Phytophthora–the number one disease in soybeans. Performance for Enlist E3 soybeans from NuTech has been really outstanding these past few seasons, and with these agronomic improvements, I think our customers will continue to be pleased by the bushels they bring in.

Reason 3: Earlier maturity options

Our previous lineup was pretty robust in maturity options, but our new lineup fills out the choices a little more, with maturity ranging from 1.6 to 4.7. A slightly earlier-maturing option (our earliest one last season was a 1.8) is great if you're looking to maximize yields with an early planting strategy. Don't forget: Our Enlist E3 soybean seed is also protected by proprietary LumiGEN® seed treatments from Corteva Agriscience to help get seed off to a great start, even in early planting.

Reason 4: Experience

Three years ago, NuTech committed to converting all of our traited soybean varieties to Enlist® technology and we haven't looked back. We're able to draw on the diverse genetic pool at Corteva to identify varieties with the right balance of performance characteristics for yield and defensive traits for consistency across the acre. You won't find a seed company in this area with more historical experience or insight into making Enlist E3 soybeans a success on Central Corn Belt farms, and every year, our knowledge builds.

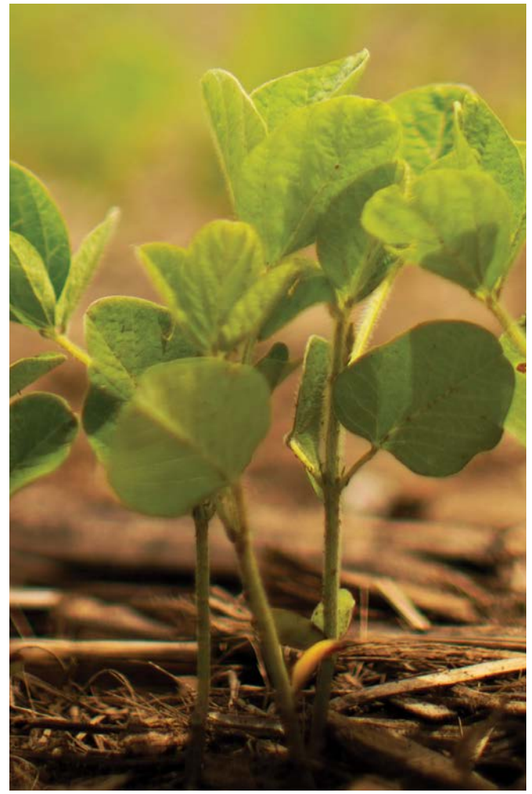
Reason 5: Beautiful aesthetics

I like to think all of our varieties are beauties when it comes to the yield counter, but let's face it, some varieties just have a little more curb appeal than others. This year, our lineup expands with slightly taller varieties and choices in tawny and light tawny. These beans are beautiful and I think a few of our customers will be puffing their chests out a little more than usual at the sight of their fields.

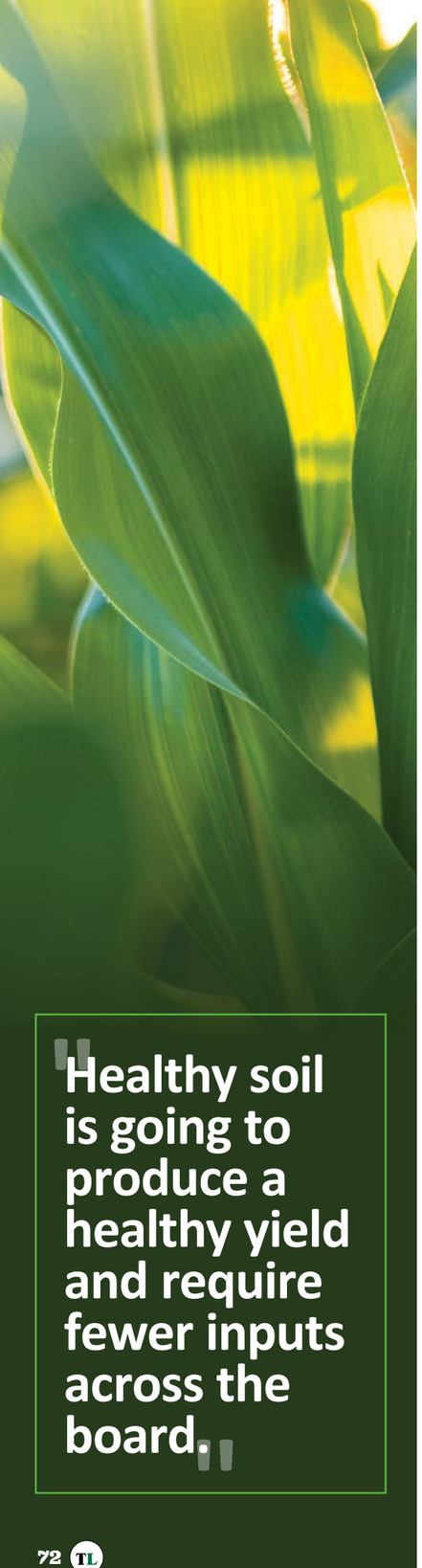
Reason 6: We're just getting started

We're already looking ahead to 2024, when we plan to introduce more than a dozen new Enlist E3 varieties. Some of these will be available in limited quantities for 2023, so if you're interested in trying some limited release varieties, talk to your NuTech representative. (We do expect them to go fast!) Looking even farther ahead, this past January, the EPA issued seven-year registrations for Enlist One® and Enlist Duo® herbicides, so the future for this technology system not only looks bright, it's stable. That means you'll continue to have access to technology that works and is easy to use. In a business as unpredictable as farming, the reliability of the Enlist® weed control system is something a lot of our customers can appreciate.

I hope to see many of you at our field days this summer where I'll be glad to tell you more about my impressions of this new lineup and what it can bring to your fields.



Our expanded lineup of Enlist E3 soybeans for 2023 includes varieties with the Peking event for SCN, improved disease tolerance and earlier maturity options.



MAKING THE MOST OF NITROGEN INPUTS THIS SEASON

Keith Niemeier
Nutech Sales Agronomist, Certified Crop Advisor

It's all over the news and top-of-mind for farmers everywhere: Fertilizer costs are up (way up) and, in some cases, supplies are down. NuTech Sales Agronomist Keith Niemeier offers his advice on maximizing nitrogen for your corn this year.

Consider your yield history

No question, corn needs lots of nitrogen, and although fertilizer costs are worse this year, it's always the most expensive input for corn. The rule of thumb is that one bushel of yield takes one pound of nitrogen. So, if you're looking to produce 250 bu/A corn, you need 250 pounds of nitrogen. Luckily, commodity prices are strong, and that offsets some of the fertilizer cost increases. Even so, my first piece of advice is to put your fertilizer investment into fields that can benefit the most.

If you have an area that over the past 3-5 years has consistently yielded around 220 bushels, you're not likely to hit 250 bu/A no matter how much fertilizer you put on. Instead, fertilize according to the track record of the field. Save higher application levels for fields with a history of higher yields.

I also recommend taking a late-season tissue sample of your corn for nitrogen testing, so you know your crop's limiting factor for next year. Again, this is a way to make sure you're applying nitrogen where you can get the most bang for your buck.

Time application to minimize nitrogen loss

Corn is going to use most of its nitrogen from V6 to V18, where it may use up to 8 pounds of nitrogen per day. A common practice is to apply about two-thirds of your nitrogen before planting, then sidedress with more when the corn gets bigger. At this stage, you shouldn't have to apply as much nitrogen, because the corn will grab it really quickly. However, I also want growers to consider three passes as an option. A little fall anhydrous ammonia application, then a little more in spring and then maybe another pass at sidedress might allow you to use less fertilizer, even if you're making an additional trip through the field.

Know your soil

If testing your soil for nitrogen is a little more complicated than what you'd care to get into, you'll still want to know the cation capacity of your soil and stay on top of pH levels. If your soil has a low cation capacity, it will not hold onto the nitrogen, especially if you apply the bulk of your nitrogen source early in the season. Keep your corn soils at the ideal pH, 6 to 6.5. That not only optimizes nitrogen uptake but improves uptake of all the micronutrients your crop needs.

Corn uses about 1 pound of nitrogen for every bushel of yield. During the V6-V18 stages, corn can use as much as 8 pounds of nitrogen per day.

> "Healthy soil is going to produce a healthy yield and require fewer inputs across the board."

Consider stabilizers and other inputs

At current fertilizer prices, nitrogen stabilizers are an especially smart investment. Corteva Agriscience offers N-Serve® nitrogen stabilizer for use with anhydrous ammonia and Instinct NXTGEN® nitrogen stabilizer, which works with UAN, urea and liquid manure. Both can be used within a season. So, if you're applying anhydrous in the fall, add N-Serve, then you can use Instinct NXTGEN with your UAN sidedress.

Another product we're really excited about is Utrisha™ N nutrient efficiency optimizer. This is a new biological product from Corteva and it's pretty amazing. Utrisha N takes nitrogen from the air and converts it into ammonium for the plant to use. It's typically applied along with sidedress and it can be combined with a herbicide application, so there's no need for an extra trip through the field. It also doesn't leach. Our crop protection team gave us some samples of Utrisha N to test with customers last year and the response was very positive. I think a lot of our farmers are going to like what it brings to the table, especially with the current fertilizer prices.

Finally, we're also seeing some customers supplement their nitrogen with sulfur. Interestingly, as our air is getting cleaner (no complaints!) there's actually less sulfur for corn to grab from the atmosphere. Supplementing with sulfur isn't cheap, but in some fields, it's showing a good response. Sulfur doesn't allow you to use less nitrogen, but it does bump up what you get out of the nitrogen you apply.

Consider your crop rotation

There's a bit of a split on whether it makes sense to rotate to soybeans based on nitrogen source costs. Some ag economists are saying there's still plenty of money to be made in corn, with the market prices offsetting fertilizer expenses. However, I've also got some growers who have opted to go all-in with soybeans because of rising input costs.

As an agronomist, I believe in rotating crops in any case. The more different crops you can plant, the more benefits there are in lots of factors, not just nitrogen use, like less disease pressure and easier weed control. And, when you follow soybeans with corn, you can even pick up some nitrogen from the previous year's crop. In the long run, the best thing you can do for nitrogen utilization—and your farm—is to take care of your soil. Healthy soil is going to produce a healthy yield and require fewer inputs across the board.

If you have questions about maximizing your nitrogen utilization this season, reach out to the NuTech agronomy team.

Additional inputs to maximize your nitrogen investment

N-Serve®
Optinyte™ technology
NITROGEN STABILIZER

- Inhibits nitrification in the root zone
- Apply with anhydrous ammonia

Instinct NXTGEN™
Optinyte™ technology
NITROGEN STABILIZER

- Extends nitrogen availability during key growth phases
- Use with UAN, urea and liquid manure

Utrisha™ N
NUTRIENT EFFICIENCY OPTIMIZER

- New biological product
- Fixes nitrogen from atmosphere for plant use

SULFUR

- Helps increase nitrogen efficiency and fixation
- Apply along with fertilizer

Be ready for tar spot

Tar spot continues be a concern across the Corn Belt this summer. We'll share why it's so important to have a plan—if and when it shows up in your fields.

By: **Chris Adams**
NuTech Sales Agronomist,
Certified Crop Advisor

Unfortunately, tar spot looks like it's here to stay in NuTech territory—and across the U.S. Although this year's tar spot severity will depend a lot on weather, there's plenty you can do besides keeping your fingers crossed for a warmer, drier summer. Having a plan in place can help ensure you won't be caught flat-footed when it comes to this potentially devastating disease.

Step 1: Get to know the enemy

Understanding tar spot is important to formulating a good plan to mitigate it. Tar spot has actually been around for more than a hundred years but used to be relegated to Mexico and Central and South America. It showed up in NuTech country in 2017 and made a major impact across the Midwest in 2018.

Tar spot overwinters in the soil, so if you've already had it on your fields, it's still there. When conditions are favorable, it will "wake up" and start producing spores. Those spores travel in the air, allowing the disease to quickly spread across a wide area.

Tar spot appears as raised black lesions, sometimes with a halo around them (called a fisheye lesion). The lesions don't rub off like fungi or fly specks. Keep in mind that a plant can be infected for up to 10 days before lesions even appear. Last year, I saw some fields go from healthy and green to melted from tar spot in just one week.

Tar spot can be easily confused with other diseases. This leaf shows tar spot, gray leaf spot and saprophytic fungi. Tar spot is characterized by raised pustules that don't rub off. (Photo credit: Chris Adams)

Step 2: Select the right hybrids

Right now, hybrid selection is your best weapon against tar spot. Because this disease is so new in the U.S., there aren't specific tar spot-resistant hybrids available yet. (Corteva Agriscience is working on it, though!) However, several NuTech hybrids already exhibit good tar spot tolerance. We've been observing these products under tar spot pressure over the last few seasons, and in this year's seed guide and tech sheets, you'll notice we've added a tar spot rating. These products are an especially good choice for lower lying areas that are likely to be more humid and for corn-on-corn acres, since tar spot likes to hang around on residue. Be sure to talk to your NuTech representative or agronomist for recommendations for your farm.

Step 3: Watch the weather

Tar spot favors cooler conditions with high humidity and prolonged leaf wetness (7 hours or more). Watch for week-long cloudy weather, or 10-20 days of cloud cover within a month, which will tend to promote fog and humidity. You may also want to try out the new, free Tarspotter app from the University of Wisconsin. Tarspotter uses GPS coordinates and weather data to predict favorable conditions for tar spot. We'll be trying out the app ourselves across the NuTech footprint to help forecast conditions and keep an eye on how hybrids perform at various threat levels. If you're interested, you can learn more about the app at https://ipcm.wisc.edu/apps/tarspotter/, and you can download it from the Apple or Android app store.

Favorable conditions for tar spot

- **Moderate temperatures**
  60°-70° (and sometimes even the low 70's)
- **High relative humidity**
- **Prolonged leaf wetness**
  (7+ hours)
- **Tip:**
  Avoid frequent and light irrigation

Step 4: Be ready to apply fungicide

The economic impact of tar spot can be pretty severe if it strikes at the right time. A lot of growers are going ahead with fungicide application just in case tar spot-favorable conditions appear. If you prefer a wait-and-see approach, keep an eye on the 7-10-day weather forecast. If conditions are cool, cloudy and humid between the VT and R2 stages, you'll want to apply a fungicide to protect your yield. Make sure you choose a fungicide with demonstrated effectiveness against tar spot—visit cropprotectionnetwork.org and search "fungicide efficacy for control of corn diseases" for a list. We've seen good success with application of Aproach® Prima fungicide followed by 2-4 oz. more of Aproach® fungicide. It's an economical option and lengthens the time the fungicide is active in the plant.

Even if your corn is at half milk line, yield losses from tar spot can be as high as 40%, so a fungicide application can be well worth the investment. Stay on top of fungicide timing as well. An application will only be good for about 3-4 weeks, so if conditions turn favorable later on, you'll want to make another pass.

Step 5: Reach out if we can help

It's definitely a challenge to navigate a new disease, so let us know how we can help! We're always glad to put boots on the ground to look at risk factors and help diagnose tar spot if you're not sure. We're also happy to help you with hybrid placement based on tar spot risks.

The sky's the limit

At the Corteva Agriscience research station in Princeton, Illinois, you'll find some pretty exciting crop advances happening on the ground – and a surprising amount of that work is supported by technology in the air.

With 600 acres of land to attend to, Isaac Vohland has his hands full as Research Operations Lead at the Princeton Research Station. On the day we spoke, he had just come in from repairing a planter—one of the many logistical tasks he oversees in the spring, as seed goes into some of the hundreds of thousands of test plots at the station. Vohland has worked at Princeton for more than 14 years now, and one gets the impression it's a pretty exciting place to be, with something new always going on.

The Princeton location is part of a large, global network of testing sites where Corteva evaluates seed products. "Each station across North America has an area of focus," Vohland explained. "Ours is a really high-yielding environment that allows us to make sure the hybrids and varieties we're producing have the high-end yield potential customers need."

"Anything that's going to be sold in this part of the state, we've tested for at least three years," he continued. "If it was a hybrid or inbred parent developed at our center, we've been testing it for up to six years."

Testing takes many forms at the research station. "We look at whatever challenges we've been presented with in the last few years," Vohland said. "Sometimes there are new challenges, like tar spot, and last year, we saw some willowing in corn." Willowing, Vohland said, is a result of wind and causes corn to lean, but not at the roots or from the stalks. "We're working on characterizing that now so we can screen for it along with brittle snap, root lodging and other issues," he said.

Elevating technology, data and possibilities

When you flip through the seed guide included with this issue and look at all the characteristics for hybrids and varieties, you get some idea of the number of variables the team at Princeton has to evaluate. In years past, evaluation relied solely on people walking acres and acres of corn and soybeans to gather observations and scores. Today, the station's researchers are able to gather more information, and do it more accurately, with the use of drones.

Vohland explained that drones are used to count plants, measure ear height in corn, quantify canopy width in soybeans, determine soy maturity and conduct assessments of various traits. "Drones are really nice because they remove the element of human error. Staygreen is a great example." Vohland explained, "It's a very subjective trait, and the drones remove that subjectivity."

Drones are also incredibly efficient. "Measuring the plant height of every plant in the field would have taken huge numbers of crews and days and days of work in the past," Vohland said. "Now, a drone can count every plant in a 25-acre corn plot in 2-3 hours, including crunching the data."

Drone technology also lets researchers screen hybrids at earlier stages and in more locations. With more accurate data, the researchers can make more informed decisions to advance hybrids. These advances improve genetic gain and can help products get to customers a little faster, although that doesn't mean rushing to market either. "Our rate of genetic gain has increased," Vohland said, "But we still take the time to really test our hybrids and varieties in a range of environments."

The researchers at Princeton are also looking for ways to advance their work with drones. In the near future, that includes trying out some new sensing technology, as well as different drone platforms. "There's a lot of potential and it's really exciting to see where it goes in the next few years," Vohland said.

Local research for local success

Whether the station is using drones, sensors or boreas machines that mimic wind stresses, the bottom line at Princeton is identifying the right hybrids for growers in the Central Corn Belt. "Growers want better roots, good agronomics, newer traits to fend off pests, plus high yield," Vohland said. "That's what we're focused on and that's why we take so much data and screen so many lines—to get the balance between high yield and agronomics. And we're really trying to do this in a localized fashion. That's a big advantage for Corteva in the industry. We're testing in the same environments where our customers have their farms to help make the best corn hybrids and soybean varieties we can for them."

It's easy to feel the pride Vohland and his colleagues at the station take in this work. "My dad and brother farm, so this is a way for me to contribute to their success," Vohland said. "I know they grow varieties that were produced right at this station. That's one reason why I enjoy it so much."

Plot tours are back! NuTech will be hosting dealers at the Princeton Research Center on August 9th. Don't miss this opportunity to see our latest products in the field and speak with corn and soybean breeders from Corteva.

Look for these products in the NuTech seed guide, all proudly developed at the Corteva Princeton Research Station:

Corn

- 68A7™ BRAND
- 70B4™ BRAND
- 72B7™ BRAND

Soybeans

- 29N02E™ BRAND
- 25N04E™ BRAND

Planting Enlist E3® soybeans and living the life:

One NuTech dealer reflects on how the Enlist® weed control system delivers plenty of performance and a lot less worry, for a more enjoyable summer.

For NuTech dealer Katie Dowson, choosing Enlist E3® soybeans "feels like a no-brainer for ease of use" because they're simply so convenient.

Katie's company, Seed Life, is located just south of Springfield, Illinois, and sells NuTech® brand seed in the central and southern areas of the state. As the company name suggests—and like NuTech—Seed Life recognizes that farming is all about living a special kind of lifestyle. "We say, 'Seed brought us together and life keeps us there,'" Katie explained. "What are we working so hard for if we didn't make some memories and have fun along the way?"

To Katie, this is the value Enlist E3 soybeans and the Enlist® weed control system bring to her customers. "They can spray multiple herbicides [2,4-D choline in Enlist herbicides, glyphosate and glufosinate] and get out and enjoy life this summer without having to worry about the neighbors," Katie said, referencing the near-zero volatility and reduced physical drift potential of Enlist® herbicides.

This season, Seed Life is planting various test plots of Enlist E3 soybeans and evaluating different seed treatment options. When we spoke in early June, she reported that the Enlist E3 soybeans, "Have shot out of the ground really well." This aligns with the dealership's past experience as well. In their own comparative trials last year, Enlist E3 soybeans were very comparable in yield versus competing traited soybeans.

"Overall, Enlist E3 soybeans are just a solid, easy to handle soybean," Katie said. And in Katie's (and her customers') experience, there's no sacrifice in performance for the added convenience of working with the Enlist weed control system. In Katie's assessment, "It's not worth the hassle and headache" to work with other traited soybean weed control systems. "Farming is crazy and busy enough year-round that if we have a time where we don't have to constantly worry, that's great," Katie said.

NuTech dealer Katie Dowson preparing for Enlist E3 soybeans planting this spring.

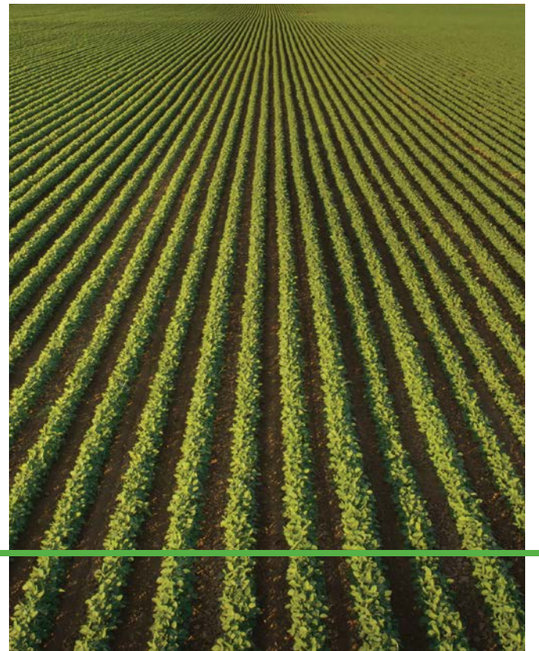
A family of Seed Life customers from Roser Farms walk their field. NuTech dealer Katie Dowson finds that with the Enlist weed control system, customers can worry less and enjoy their summer more.

Katie also appreciates how the Enlist E3 soybean lineup is growing. "We serve such a big area that we love that we have so many options in our lineup," she explained. "Between southern Illinois and central Illinois, there are extremely different soil types. They need later maturing soybeans in the south, but in the central area, they like to plant early and harvest early. It's exciting to know that they keep advancing the lineup."

Katie also sees a lot of value in the singular focus on the Enlist weed control system from NuTech and Corteva Agriscience. "I like the idea of being really good at one thing," she said, "Instead of saying, 'Here's a bunch of different types of products, but they're all average.' Agriculture is always advancing and that's amazing to me. Who knows what these soybeans will be able to do in the next few years?"

> **"Enlist E3 soybeans are just a solid, easy to handle soybean."**

For now, though, Katie hopes that the reduced worry from planting Enlist E3 soybeans gives her more opportunities to enjoy the summer with customers. "We're big promoters of having fun," she said, adding they like to get customers out for boating, baseball games (Go Cards!) and other activities. "If there's one less pressure this summer, that's more they can enjoy."



Can you spot the NuTech signs in your area?

Advanced Ag Services
70A8AM TM BRAND

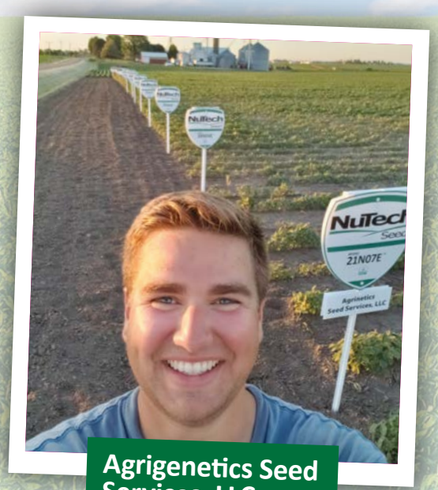
Wittwer Brothers

County Line Seed
66C2Q TM BRAND

Josey Breymeyer

D&M Seeds

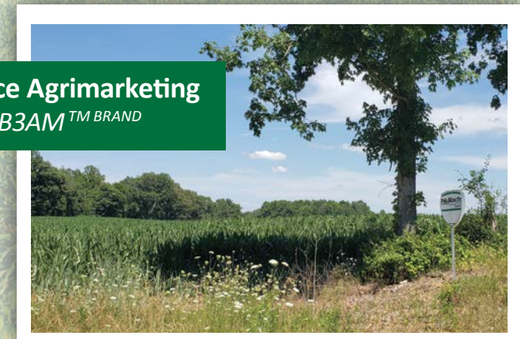
Layne Hoff
70A8 TM BRAND



Agrigenetics Seed Services, LLC

Seed Life
39N07E TM BRAND

Meyer Seed
28N02E TM BRAND



Rice Agrimarketing
68B3AM TM BRAND

NuTech Summer Gear

We've updated our selections at the NuTech promo store!
Check out these cool items perfect for hot days.

Gildan SoftStyle Tee

Show your love
for the Lifestyle.

Carter Quilted Cooler Bag

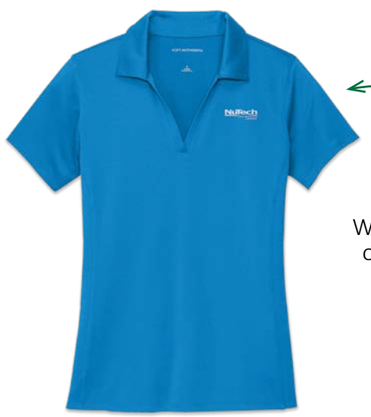
Keeps lunch at the ready for long days
in the tractor or combine.

Patch Mesh Back Cap

Stylish, cool and comfortable.

Electric Candle Lighter

This flame-less, rechargeable lighter is portable and
perfect for hard-to-reach spots on BBQs and stoves.



Ladies Performance Staff Polo

Wicks away the humidity
of a Corn Belt summer.

Silicone Bomber Glass

Safe for the microwave, dishwasher,
freezer and more. Made of 100%
food-grade, platinum-cured silicone that's
durable and will never wear out.

Check out all the latest merch at **nutechseed.corpmerchandise.com**

Save 20% with code NUTECH20
August 31 through September 7, 2022

*Code may only be used one time per person.

Enlist E3 SOYBEANS | Enlist Duo COLEX-D technology HERBICIDE | Enlist One COLEX-D technology HERBICIDE | VORCEED Enlist | POWERCORE Enlist | QROME | LumiGEN Seed Treatments

N-Serve Optinyte technology NITROGEN STABILIZER | Utrisha N NUTRIENT EFFICIENCY OPTIMIZER | Instinct NXTGEN Optinyte technology NITROGEN STABILIZER | Aproach Prima FUNGICIDE | LIBERTY LINK | Roundup Ready CORN 2 | AgrisureRW

CORTEVA™ agriscience