

Others merge.  
We haven't  
**SWERVED.**

YOUR TRUSTED PATH SINCE 1935.



**2018** HARVEST REPORT



 **Catalyst**

  
DONMARIO  
SEEDS

  
HOBLIT

  
Hughes

 **POWER  
PLUS**  
Powered by John Deere & Case IH

 **Think  
BURRUS®**

**PLANT YOUR LEGACY.**



# Burrus stands the **TEST OF TIME.**

“

**WE DO NOT SUCCUMB TO ONE TYPE  
OF GENETIC OR TRAIT PLATFORM AND  
SELL YOU WHAT WE HAVE.**



## DEAR GROWER,

The tagline we have used in recent times, **“How we farm has changed. Who we are has not.” still rings true.** Growers have trusted Burrus to fill their seed needs since 1935. From humble beginnings with one acre of hybrid seed in 1935 to the trusted, independent seed supplier in its fourth generation today, Burrus stands the test of time. Growers continue to appreciate the straightforward approach we provide.

Farming has changed. Who could have imagined the changes we have encountered in the last 83 years we have been in business? The yield potential of new hybrids and varieties continues to improve at a steady pace along with the addition of new seed treatments and new traits helping protect yield potential. Research has grown from side-by-side comparisons to encompass more than just yield. We capture all facets of data and fine-tune our choice of hybrids and varieties to place on each respective acre. **We go through painstaking trials to find**

## **which products fit on which acre at the best population and the best management style.**

So yes, how we farm has changed.

Ultimately, who we are as a company has not changed. We are still family owned and fiercely independent just like the many farmer growers we serve. Growers like choice. We provide choices. We do not succumb to one type of genetic or trait platform and “sell you what we have.” We strive to understand each grower’s operation and advocate for the product, technology, or treatment that might best help them with their return on investment. It is not a cookie cutter approach, not every farm is the same. We have not wavered in our commitment to the growers we service. Being independent allows us to provide the upfront answers growers so desperately need.

Our marketing campaign the last few years has been, **Plant Your Legacy.** It is instilled in our own business and our own farm. The fourth generation is proud of the fact that Roy and Wilbur Burrus started

in 1935 with the premise of helping their neighbors raise better corn yields. They planted the legacy that we continue to promote today. **We are pleased with the fact that we are big enough to win yet small enough to care.** That is not always the case in today’s world with the “I’m in it for me” attitude. We will continue to be the independent seed choice that you can trust. No, we cannot win them all, but I guarantee you we are working every day to try!

Do not be afraid to be a leader; often followers get left behind. Be a leader with Burrus in your community knowing you work with a company that has your best interests in mind because ultimately, we are farmers just like you. Go ahead, plant Burrus and Plant Your Legacy.

## SUCCESSFULLY,

Tim Greene





PHOTO COURTESY DAVID NIENHISER, CHAPIN, IL

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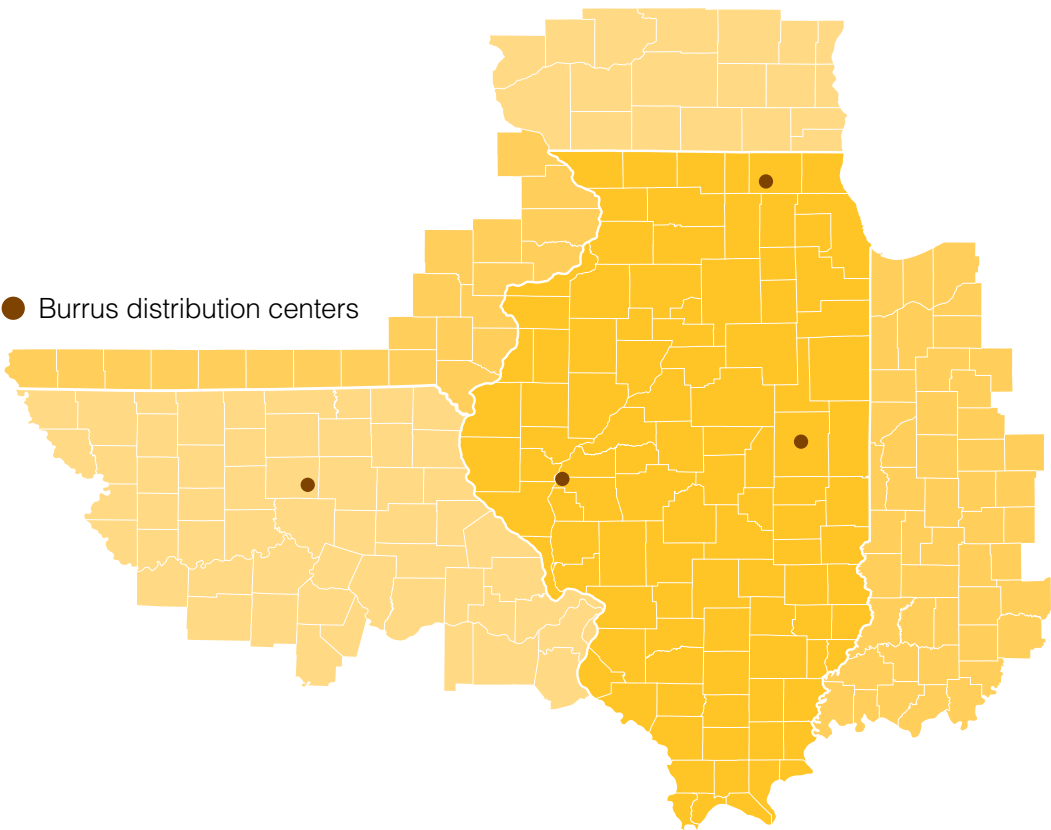
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**WE GO WHERE YOU GROW.**

Our specialty is high-yielding corn and soybeans on your soil types. Burrus Account Managers help growers select the right products for maximum profit across all acres.

FIND YOUR ACCOUNT MANAGER AT  
**BURRUSSEED.COM**



QUESTIONS?  
GIVE US A CALL.

At BURRUS, you can speak DIRECTLY with an OWNER – try doing THAT at a NATIONAL seed company.

# ADAMS

**Power Plus® 7M83AM™\*  
makes 269 bu/a**  
Kent Shriver  
Quincy, IL

**Planted:** April 15 in 30" rows. **Planting Population:** 32,500. **Harvested:** October 2. **Previous Crop:** Soybeans. **Fertilizer:** N: 220, P: 100, K: 100. **Corn Borer Rating:** Light. **Soil Type:** Loam. **Weather:** May-dry, June-dry, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt.	1000 Plants /Acre
POWER PLUS 7M83AM™*	269.4	15.6	100	61.0	29
BURRUS X7L12	253.5	16.9	100	61.2	31
POWER PLUS 6P73AM™*	251.4	15.3	100	58.5	30
BURRUS X6R25	248.4	15.3	100	61.5	30
POWER PLUS 6Z43AM™*	245.6	16.9	100	62.2	29
POWER PLUS 5K33AM™*	243.5	15.1	100	60.0	29
POWER PLUS 4A67AMXT™*	236.9	15.3	100	59.0	28
POWER PLUS 4J93AM™*	222.5	14.7	90	58.0	32
POWER PLUS 4Y34AM™*	201.9	15.1	90	59.5	32
Average	241.4	15.6	98	60.1	30

## Central High School FFA Camp Point, IL

**Planted:** April 30 in 30" rows. **Planting Population:** 32,000. **Harvested:** October 22. **Previous Crop:** Soybeans. **Corn Borer Rating:** Light. **Soil Type:** Medium loam. **Weather:** May-dry, June-dry, July-normal, August-normal. ✓**Check Hybrid:** Pioneer P1197AM.

Brand/Product	Bu. Per Acre	Rank	% Moisture	1000 Plants /Acre
✓CHECK	251.8		15.9	31
Golden Harvest G12W663220E21	215.5	9	15.0	31
FS 66ZV1 RIB	227.9	3	16.3	31
POWER PLUS 6P75AMXT™*	208.0	11	16.1	31
Pioneer P1366AM	230.3	1	15.7	31
Channel 215-75STXRIB	199.3	12	15.5	31
DeKalb DKC62-53	223.0	6	15.5	31
Pioneer P1197AM	227.7	5	15.5	31
Golden Harvest G15L32 3110	229.0	2	16.2	31
FS 67SV1 RIB	227.8	4	16.9	31
POWER PLUS 7M83AM™*	220.1	8	16.3	31
Channel 216-36STXRIB	209.3	10	15.6	31
DeKalb DKC64-35 RIB	221.9	7	16.2	31
✓CHECK	224.5		16.1	31
Average	222.6		15.9	31
Check Average	238.2		16.0	31



This dealer sign has stood tall for years on the Shriver Farm. Long-time Burrus dealer, Ted Shriver passed away this year. His son, Kent will continue to serve growers in Adams Co.

# BOONE

Stan Fowler  
Belvidere, IL

**Planted:** April 27 in 30" rows. **Planting Population:** 35,000. **Harvested:** September 27. **Previous Crop:** Soybeans. **Soil Type:** Heavy loam.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.	1000 Plants /Acre
Dekalb DKC58-06	252.6	18.0	59.2	
Pioneer P1017AMXT	250.9	18.3	59.3	
Pioneer P0825AMXT	249.8	17.2	57.5	
POWER PLUS 2Y06AM™*	245.4	18.0	58.5	
Golden Harvest G11A32 3111	244.5	20.9	58.3	
Pioneer P0574AMXT	243.2	19.0	59.2	
Golden Harvest G08M20 3010	241.7	16.9	58.5	
Pioneer P1093AMXT	241.6	18.9	60.7	
Golden Harvest G06Q68 3220	241.2	18.2	57.1	
Pioneer P0589AMXT	238.7	18.2	59.2	
POWER PLUS 2B77AMXT™*	237.9	17.8	59.0	
POWER PLUS 4Y34AM™*	235.5	17.3	55.8	
POWER PLUS 4A67AMXT™*	234.9	17.4	59.7	
Golden Harvest G05K08 3010	232.4	17.3	57.6	
Golden Harvest G09Y24 3220AEZ	231.5	18.6	57.1	
Pioneer P039AMXT	226.5	18.0	57.5	
Pioneer P0707AMXT	221.9	16.8	60.8	
Golden Harvest G07A24 3010	219.2	17.3	59.6	
Average	238.3	18.0	58.6	



Kent & Michael Shriver saw Power Plus® 7M83AM™\* top 269 bu/a in Adams Co.

# CASS

**Huge Power Plus® &  
Burrus yields**

Brian Burrus  
Arenzville, IL

**Planted:** April 23 in 30" rows. **Harvested:** September 12. **Previous Crop:** Soybeans. **Soil Type:** Medium loam.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt.	1000 Plants /Acre
POWER PLUS 4Y34AM™*	249.7	20.1	100	55.5	34
POWER PLUS 5K33AM™*	244.7	19.5	100	55.9	34
POWER PLUS 4A67AMXT™*	244.2	19.4	100	53.7	34
BURRUS X6R25	240.2	19.0	97	54.7	32
POWER PLUS 6Z43AM™*	237.2	20.3	100	55.0	32
POWER PLUS 7M83AM™*	234.1	18.5	100	53.6	32
POWER PLUS 4J95AMXT™*	229.6	20.0	100	54.0	34
BURRUS X7L12	224.2	18.6	100	55.6	34
POWER PLUS 6P75AMXT™*	220.2	19.4	100	54.2	34
Average	236.0	19.4	100	54.7	33



**STACK**  
the odds  
in your favor.

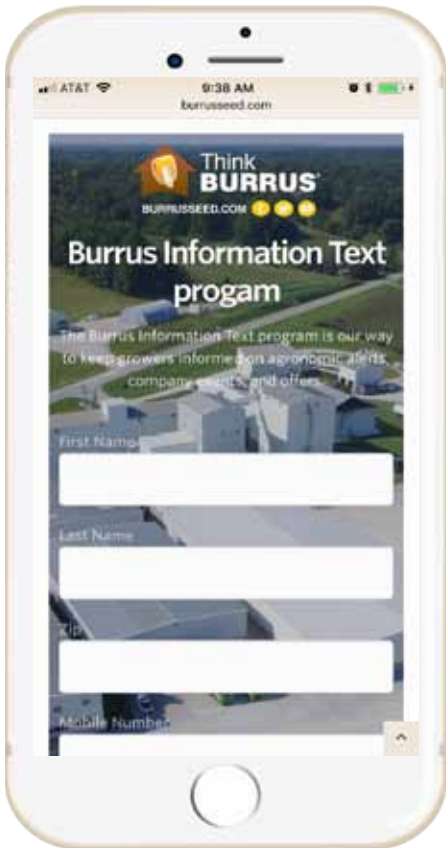


# Text ‘yield’ to 31996 – Join the Burrus information text program

This year, Burrus is offering a new, convenient way for growers to stay up-to-date on important company topics. The Burrus Information Text (BIT) program redefines accessibly communication between our company, staff, and growers. Joining this program is the way to receive Burrus product, program, and event updates first! As our subscriber list grows, we plan on also using the program to send tailored, regional agronomic information, scouting reminders, and pest alerts.

We hope you will join the Burrus Information Text (BIT) program for convenient access to Burrus Seed. To join, text the word ‘yield’ to 31996; you will immediately receive a confirmation message. Complete the subscriber information link and you are on the list! You can also join the BIT through a link on our website homepage.

By texting ‘yield’ to 31996, you agree to join the Burrus Information Text program and receive recurring text messages regarding Burrus Seed sent from 31996 via an automatic texting system to your mobile phone. Message and data rates may apply, number of texts will not exceed six per month.



New Power Plus® 4Y34AM™\* cranked out 249.7 bu/a to win the plot for Brian Burrus in Cass Co.



Todd Burrus' trusty dog, Chester enjoys being in the back of the truck during springtime weather in Cass Co.



CHRISTIAN

Power Plus® 7M80AM™\*  
tops the plot

Danny Cameron  
Pana, IL

Planted: May 1 in 30" rows. Planting Population: 34,000. Harvested: October 18. Previous Crop: Soybeans. Fertilizer: N: 200, sidedress 160 actual, P: 200, K: 200. Herbicide: Corvus. Soil Type: Medium loam. Weather: May-normal, June-normal, July-normal, August-normal. ✓Check Hybrid: Power Plus 6C40™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	Adj. Test Wt.	1000 Plants /Acre
✓CHECK	219.4		17.1	64.3	31
POWER PLUS 7M80AM™*	226.6	1	16.3	62.0	29
BURRUS 6R20	211.1	5	16.2	61.0	31
✓CHECK	229.0		16.6	63.2	31
POWER PLUS 4J90™*	212.8	6	16.5	61.2	31
POWER PLUS 4J95AMX™*	188.9	9	16.2	61.0	26
✓CHECK	235.7		16.6	62.2	31
POWER PLUS 4A67AMXT™*	213.6	7	15.9	60.0	29
POWER PLUS 6P75AMX™*	228.5	3	16.0	59.0	30
✓CHECK	232.2		16.6	62.2	31
BURRUS X6R25	225.9	2	16.1	60.0	28
POWER PLUS 7M83AM™*	219.9	4	16.1	60.0	29
✓CHECK	229.3		16.6	62.2	31
POWER PLUS 6F74AMX™*	204.2	8	16.8	62.2	28
Average	219.8		16.4	61.5	30
Check Average	229.1		16.7	62.8	31



New Power Plus® 6Z43AM™\* won the Clay Co. plot at 241 bu/a for Brian Garrison.

CLAY

Huge yields!

Brian & Levi Garrison  
Louisville, IL

Planted: April 27 in 30" rows. Planting Population: 30,200. Harvested: September 20. Previous Crop: Wheat. Herbicide: Acuron, Aatrex. Insecticide: Baythroid. Soil Type: Light loam. Weather: May-dry, June-wet, July-wet, August-wet.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt.	1000 Plants /Acre
POWER PLUS 6Z43AM™*	241.0	16.5	100	59.2	29
POWER PLUS 7M83AM™*	238.8	17.6	100	58.4	29
POWER PLUS 5K33AM™*	232.7	17.0	65	56.3	24
POWER PLUS 4Y34AM™*	225.4	15.0	90	57.0	30
POWER PLUS 4J93AM™*	220.5	17.2	70	59.3	29
BURRUS X7L12	218.3	19.1	75	59.7	25
POWER PLUS 6P73AM™*	197.0	17.3	100	57.3	29
Average	224.8	17.1	86	58.2	28



At 226.6 bu/a, Power Plus® 7M80AM™\* took first place in Christian Co. for Danny Cameron.

DEWITT

Kevin McMath  
Clinton, IL

Planted: April 22 in 30" rows. Planting Population: 34,000. Harvested: September 11. Previous Crop: Soybeans. Soil Type: Light loam. Weather: May-wet, June-dry, July-dry, August-normal. ✓Check Hybrid: DeKalb 60-67.

Brand/Product	Bu. Per Acre	Rank	% Moisture
POWER PLUS 4A67AMXT™*	275.8	6	20.2
✓CHECK	269.8		20.0
DeKalb DKC60-87RIB	281.3	4	20.2
POWER PLUS 6P75AMX™*	264.7	10	20.7
✓CHECK	274.1		18.3
DeKalb DKC63-21RIB	280.2	3	21.3
POWER PLUS 7V66AMXT™*	264.4	9	21.2
✓CHECK	266.8		20.5
DeKalb DKC64-34RIB	290.1	1	22.6
ProHarvest 8277	280.6	5	22.8
✓CHECK	275.8		19.9
DeKalb DKC66-74RIB	285.8	2	22.1
ProHarvest 8324	271.6	8	22.3
✓CHECK	269.9		20.6
ProHarvest 8404	273.9	7	22.5
Average	275.0		21.0
Check Average	271.3		19.9



Power Plus® 4A67AMXT™\* yielded over 275 bu/a for Kevin McMath of DeWitt Co.

DOUGLAS

Eric Sigler  
Villa Grove, IL

Planted: April 27 in 30" rows. Planting Population: 34,000. Harvested: September 14. Previous Crop: Soybeans. Soil Type: Light loam. Weather: May-wet, June-normal, July-dry, August-normal.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
Golden Harvest G15L32	234.1	17.8	61.2
Golden Harvest G12W66	233.5	17.7	64.4
Golden Harvest G18D87	228.6	20.6	60.6
POWER PLUS 4A67AMXT™*	228.5	16.0	63.4
Pioneer P1197AMXT	226.2	16.0	60.3
Becks 6274X	224.8	16.5	61.1
Pioneer P1366CHR	220.5	16.6	62.6
Golden Harvest G10T63	220.2	18.0	63.2
POWER PLUS 6P75AMX™*	216.9	16.4	61.2
Becks 6365AMX	210.1	17.1	61.4
Average	224.3	17.3	61.9

Burrus Crop Optimization Planner: ag-based, data driven, product selection

Selecting the right products to fit your operation and your management style is essential. It is the first step towards a successful growing season. The key is to capture all the data that is available for specific corn hybrids and soybean varieties, then pair those products to meet your management needs. This is where the Crop Optimization Planner (COP) becomes part of the equation.

Big data is a key buzzword in ag today. Most growers capture data but do not use it to their advantage. What might be worse is some are capturing their data for use by some others.

At Burrus, we believe that your data is just that, your data! By partnering with an independent third party that does not sell seed or other strategic inputs, you can be assured that your field data is safe. Farm and map data stored in MyFarms<sup>SM</sup> means your map, yield, and other operational data will not be shared with anyone else unless you choose to share it. If you are currently using or thinking about using other software solutions, make sure you ask the important questions regarding the ownership and rights of the data you generate using "their" system.

Burrus also starts with the premise that you know your land better than anyone. With the Burrus COP, powered by the MyFarms system, your field knowledge is combined with years of our research data and proprietary product knowledge to create customized planting plans for each of your fields. Our prescription planting plan service can help you maximize every acre.

In tight markets, where management decisions become increasingly important, the Burrus COP delivers. COP is a whole farm management system designed to help you with all your farm planning and recording needs. You can create and share field maps, track rainfall and maturity, and even monitor for risk of disease pressure like gray leaf spot.

Remember, your farm's data is one of the most valuable things you can harvest. Now more than ever, growers need trusted advisors who can show them the way, who know how technologies work together for the benefit of the grower, and who can communicate those strategies in a meaningful way. Talk to your local Burrus Account Manager today to learn how you can take advantage of the MyFarms system and be confident in the confidentiality of your data.



Power Plus® 4A67AMXT™\* topped 228 bu/a in Douglas Co. for Steve & Eric Sigler.



# What to ask before spraying fungicide on corn

Chris Brown, C.C.A.

The 2018 season saw GLS disease pressure early. Industry statistics indicate about 25% of the corn acres had fungicide application. Fall reports have side-by-side comparisons demonstrating as much as 20 – 60 bu/a differences, along with improved stalk integrity.

The real question is how to make the correct decision for 2019 concerning fungicide applications. When trying to maximize profitability of every acre, growers often are left scratching their heads on when fungicide is most warranted. Let us help you evaluate your fungicide decision. The key is to treat when you will experience a return on investment and avoid treating if it will only increase expenses.

Scouting fields to determine the progress of disease in those fields is paramount. Start scouting approximately a week prior to tasseling and focus on the leaves at the ear leaf and above. It has been shown that the leaves above the ear contribute 75-90% of the carbohydrates needed for grain fill. Because of this you may not need to spray a field that disease has not advanced to the ear leaves.

Aside from disease presence in the field there are several other factors that you will want to take note of during this decision-making process.

**Hybrid disease tolerance** – You can access your Burrus hybrids’ disease ratings on our website or in our Product Selection Guide.

**Anticipated environmental conditions** – Environmental factors are key in disease development. Hot, humid weather favors gray leaf spot. Wet, warm conditions favor northern

corn leaf blight, and dry weather slows down the development of most fungal diseases.

**Corn following corn** – Most of the foliar disease pathogens overwinter on corn residue. The residue increases the risk of disease in the following years crop resulting in a higher chance of disease in your corn-on-corn fields.

**Other field stresses** – Although foliar fungicides aren’t effective on other diseases such as stalk rot, the damage caused by foliar diseases can make a crop more susceptible to diseases such as stalk rot. If you had environmental conditions in the spring that favored stalk rot development, you might consider applying a fungicide to minimize stresses to the corn plant that could allow stalk rot to continue to develop and cause standability issues in the fall.

**Spray timing** – It is best to spray fields that have a need for fungicide when the entire field has reached the growth stage VT. This is especially important when using a non-ionic surfactant with your fungicide as it can cause ear development issues if not applied at the correct time.

**Fungicide to be used** – There are several fungicides labeled for foliar application in corn. It is recommended that you utilize a fungicide that contains multiple modes of action to prevent fungicide resistant diseases from developing.

Once you have evaluated your fields and considered the factors listed, you should be more comfortable making the foliar fungicide decision for your fields. Lastly, if you utilize the MyFarms<sup>SM</sup> program offered by Burrus you will have another tool in your belt that will alert you when scouting is recommended.

# Higher populations do not always lead to higher yields

Josh Gunther, C.C.A.

A critical springtime decision is deciding which population to set the planter, a decision that can make a dramatic difference in overall yield and standability. All too often, growers like to set their planter and leave it there while planting all their acres. This action does not optimize the full potential of each seed. As input prices rise, it is more important than ever to do everything possible to make the greatest return on our investment.

Many think increasing planting populations will increase corn yields, but that is not always the case. As corn genetics become more complex, hybrids must be treated differently. Some hybrids have a fixed ear, meaning no matter how good growing conditions are, the ear is not going to be any larger than a predetermined size. Others are considered flex eared, these hybrids can flex the size of the ear to make the most of good weather conditions. Flex hybrids also have the advantage of being able to help compensate for a gapped row or uneven stand. Fixed ear hybrids usually respond better to higher planting populations, whereas a flex hybrid will not. Often, this only increases the plant-to-plant stresses with no added benefit.

Each year, we run a series of population studies replicated 14 times in different environments. In this study, we place our current products as well as promising, experimental products ranging in populations from 21,000 – 46,000 seeds/a. This study, year after year, gives us the best planting rate for each hybrid to help maximize yield, manage risk, and optimize seed cost per acre.

Yield is only one factor when looking at data from this study. Another important component is overall standability. When planting populations are increased, plant-to-plant stresses are also increased making the plant more susceptible to root and stalk

lodging. All these different components are considered when making a planting population recommendation.

Along with product and price, another factor to consider when making your seed selection is seeding rate. In years with tighter margins, growers are starting to make more of their decisions based solely on price. To get the full picture, compare the price of seed on a per acre basis, not per bag. Many of our competitors are recommending populations nearing 40,000. If you must plant at high populations to maximize yields, it makes the seed much more expensive, even if the seed is substantially cheaper per bag. As an example, compare hybrid A which has a recommended planting population of 38,000 seeds/a and is priced at \$260/unit, and hybrid B which has a recommended planting population of 32,000 seeds/a and is priced at \$300/unit. At first glance, a grower could save \$40/unit choosing hybrid A. However, taking the seeding rate into consideration, hybrid A costs \$123.50/a while hybrid B costs \$120.00/a. A savings of \$3.50/a makes hybrid B the better value even though the price per unit is higher. These differences change dramatically depending on cost and planting rates, but it is worth the time to run a cost per acre analysis when making seed decisions.

Essentially, price should not be the only consideration when making seed selections. Every farm should diversify their portfolio with both offensive and defensive products. Our *Corn Planting Rates* chart printed in this publication and available on our website shows the ideal planting rates for each of our hybrids. Each hybrid has been tested in a range of populations, across different soil types, over several years to place them in the correct planting population category. This will not only help reach the highest yields across your farm but will also reduce your risk.

## PROBABILITY OF RESPONSE TO FUNGICIDE

HIGH RESPONSE			
Power Plus® 4J95AMX™*	Power Plus® 4Y34AM™*	Power Plus® 4J93AM™*	Power Plus® 5K33AM™*
Power Plus® 4J90™*			
MODERATE RESPONSE			
Power Plus® 1N07AMXT™*	Power Plus® 1G48AMXT™*	Power Plus® 3H85AMX™*	Power Plus® 4A67AMXT™*
Catalyst 6216 3111A	Burrus 6R25 5222	Power Plus® 6Z57AMXT™*	Power Plus® 6P75AMX™*
Power Plus® 7V66AMXT™*	Power Plus® 7M87AMXT™*	Power Plus® 1G39AM™*	Power Plus® 2Y06AM™*
Power Plus® 6Z43AM™*	Power Plus® 6P73AM™*	Burrus 7L12 3110	Power Plus® 7M83AM™*
Burrus 7L11 GT	Burrus 6R20	Power Plus® 7M80™*	
LOW RESPONSE			
Power Plus® 2F91AMXT™*	Power Plus® 2B77AMXT™*	Power Plus® 6F74AMX™*	Power Plus® 9U13AM™*
Power Plus® 6C41 S™*	Power Plus® 2R67™*	Power Plus® 6C40™*	

Burrus has ranked products noting their potential responsiveness to fungicide. Should a blind application of fungicide be required, this chart should allow the grower to apply fungicide to those products more likely to provide a return (high probability ranking). However, Burrus reminds growers that a fungicide return on investment is best assured by scouting fields for economically significant levels of disease (widespread lesions within proximity ear or above the ear leaf). Repeatedly applying fungicides from the same class can increase the likelihood of resistance development and deregulation.



“If there is one thing a four-row planter teaches you, it’s patience.” – Ted Ballard, Burrus Account Manager.



# Tom Burrus Award

Each year, the Burrus sales team and management team gather for an annual kick-off meeting for the new year. An anticipated part of each year's event are the awards given to Burrus team members for their exceptional achievements. In memory of Tom Burrus, a new award was introduced in 2018 to

recognize the team member who demonstrates outstanding effort to help the customers and company win. Burrus Account Manager, Jordan Watson of Shelbina, MO was awarded the 2018 Tom Burrus Award. A perpetual plaque listing annual winners of the award is on display at the Jacksonville office.



Tim Greene, Maggie & Jordan Watson, Lori Greene, and Marcy Burrus.



# How to maximize corn-on-corn acres

Chris Brown, C.C.A.

As growers continuously look to maximize profitability across acres, many consider shifting to increased corn-on-corn acres. It is important to consider key management factors to maximize the return from corn-on-corn acres.

Managing residue can be one of the most important parts of maximizing your success. Residue can reduce spring soil temperatures, hold in moisture, provide a refuge for disease to overwinter, and soak up the nitrogen that you intend to be utilized by the crop. Options to manage residue include chopping stalks, mixing stalks into the soil as soon as possible in the fall, strip-till in the fall, along with ensuring row cleaners and other residue management devices on the planter are working correctly. With the correct selection of the above options, you can minimize the effect of excessive residue with corn-on-corn production but remember residue management is just the first step.

**Place on your best acres** – The crop will be under stress from all sides in a continuous corn system and you can ease some of the stress by placing it on your most productive farms.

**Consider drainage** – Typically, fields with higher residue levels take longer to dry in the spring and you must remain patient to prevent compaction resulting from rushing into a field that is still wet.

**Focus on soil fertility** – With excessive residue, you will not only be feeding the crop in the ground but also the bacteria that are breaking down the residue. Fertilize the crop at an enhanced level to offset the added users of the nutrients and make up for the credits you

typically count on following soybeans.

**Manage nitrogen** – Ensure you have supplied enough nitrogen for the crop to get started through preplant application. The crop can maximize its yield potential through in-season applications and management of nitrogen.

**Corn rootworm control** – It is recommended to utilize at least two modes of action in these fields to minimize stress on the traits. Consider a hybrid that has multiple below ground insect traits, such as Optimum® AcreMax® XTreme or Agrisure Duracade®. This step should help alleviate the added stress of rootworm.

**Hybrid selection** – Focus on early vigor, disease resistance, stress ratings, and standability when selecting hybrids for continuous corn acres. These qualities allow the hybrid to get off to a good start in the high residue environment of corn-on-corn and allow the crop to thrive throughout the season with the added stress it will be under. To help with the placement of Burrus products on your farm, consult with your Burrus Representative for their best recommendation.

**Continued management** – You may need to focus on the increased needs and stresses of the crop. This could include being more proactive with fungicide and insecticide applications. The higher level of disease and insects that overwinter in corn residue means corn-on-corn fields are the first places that will show symptoms in-season and generally will provide the highest return from these applications.

Focus on these few points when considering corn-on-corn will set you up for success. If you have any further questions on shifting to a corn-on-corn system, please consult your Burrus Representative or Field Agronomist.

## FAYETTE

Power Plus® 7M83AM™\*  
tops plot at 246 bu/a



Adam and Keith Casey  
Bingham, IL

Planted: May 11 in 30" rows. Planting Population: 31,500. Harvested: October 9. Previous Crop: Soybeans. Fertilizer: N: 168, P: 115, K: 150. Herbicide: Halex GT. Corn Borer Rating: Light. Soil Type: Medium Clay. Weather: May-normal, June-dry, July-wet, August-wet. Remarks: Plot on north headland.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre	1000 Plants /Acre
POWER PLUS 7M83AM™*	246.8	16.5	100	61.2	30
FS 643V1	235.0	15.0	100	58.0	31
POWER PLUS 6Z43AM™*	231.7	16.2	100	61.0	29
BURRUS X7L12	225.5	16.5	100	59.2	28
POWER PLUS 4Y34AM™*	220.2	15.5	100	58.0	32
Average	231.8	15.9	100	59.5	30



Keith Casey watched Power Plus® 7M83AM™\* win the Fayette Co. plot at 246.8 bu/a.

Power Plus® 6P73AM™\*  
makes 259 bu/a

Brian Willenborg  
Vandalia, IL

Planted: May 5 in 30" rows. Planting Population: 32,500. Harvested: October 25. Previous Crop: Soybeans. Fertilizer: N: 175, P: VRT, K: VRT. Herbicide: Halex GT, Aatrex. Corn Borer Rating: Light. Soil Type: Medium Clay. Weather: May-dry, June-wet, July-wet, August-wet. ✓Check Hybrid: Power Plus 6P73AM™\*.

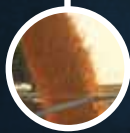
Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	263.7		14.6	100	32
POWER PLUS 4J93AM™*	240.1	5	14.8	95	30
POWER PLUS 6P73AM™*	259.2	1	14.7	100	27
POWER PLUS 7M83AM™*	247.3	4	15.4	100	34
POWER PLUS 4Y34AM™*	255.0	2	14.8	40	32
BURRUS X7L12	239.7	6	16.0	55	30
POWER PLUS 6Z43AM™*	254.5	3	15.3	100	32
✓CHECK	258.1		15.1	100	32
Average	252.2		15.1	86	31
Check Average	260.9		15.0	100	32



Brian Willenborg saw Power Plus® 6P73AM™\* surpass 259 bu/a. The top 3 Power Plus® hybrids all were above 254 bu/a in Fayette Co.



Your path to  
**SUCCESS**  
12 rows at a time.





FORD

Bob Buhs  
Gibson City, IL

Planted: May 1 in 30'' rows. Planting Population: 33,000. Harvested: September 10. Previous Crop: Soybeans. Fertilizer: N: 180, P: 150 , K: 150. Herbicide: Roundup. Corn Borer Rating: Light. Soil Type: Medium Clay. Weather: May-normal, June-normal, July-dry, August-wet.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre	1000 Plants /Acre
POWER PLUS 6P75AMX™*	218.3	22.2	100	62.5	33
BURRUS X6R25	200.6	22.5	100	64.6	33
POWER PLUS 3H85AMX™*	198.5	20.1	100	63.0	33
POWER PLUS 4A67AMXT™*	192.3	21.2	100	63.3	33
POWER PLUS 4J95AMX™*	174.3	20.0	100	62.0	33
Average	196.8	21.2	100	63.1	33



A short pause to review photos during 2018 marketing photo shoot.



Product Lead Josh Gunther applied fungicides for testing. The Burrus research team continues to bring growers reliable information to help their bottomline.



Mike Perrine came to the Burrus office in Jacksonville to interview Tim Greene about planting season.

# Why do I need a check hybrid for my plot?

The best way to present yield data from test plots has been debated for many years. In our Harvest Report publication, we have plots that are regular plots and check plots. Regular plots are plots planted without a check hybrid and they are printed in order from highest to lowest based on number 2 yield. Check hybrid plots are plots that have the same hybrid repeated several times throughout the plot to help identify field variation. At Burrus, we use a formula to adjust the yields for field variations and rank the hybrids from best to least in relation to its two nearest checks. This method helps growers better identify yield comparisons based on field variations since theoretically all the checks should be as similar in yield as possible if all conditions were equal.

Field variation is common in most plots. Differences in drainage, soil texture, soil pH, slope, etc. can make a difference in any given year. Obviously, plots with the least variability are the most uniform and produce the most repeatable data.

Using a check hybrid system and adjusting yields and rank to those checks is the key to accurate testing. It provides a means of comparing hybrid performance without the unpredictable impact of field variability. Basically, it adjusts for “good” or “bad” spots in a field. The plot used in this year’s example varies thus illustrating how yield adjustment procedures work.

First, the check hybrid is adjusted to number 2 corn then, the checks are averaged

(149.1 bu/a). Next, each pair of checks is averaged and their deviation from the overall check average is recorded (either -3.1, -4.7, -10.4, +1 or +13.6 bu/a etc. in the example plot). By adding this figure to the number 2 yield, we can make an adjusted yield for any variation of conditions within a field.

The rank column then shows where the hybrid places after all are adjusted. The highest number 2 yield (Burrus 154622Z @ 163.5 bu/a) is only ranked fourth because of its relationship to the adjacent checks. The highest-ranking hybrid on the adjusted yield column was Burrus X6R25 at 168.8 bu/a.

As you know, some companies publish a + or – the check rating for hybrid performance. Their rank column might give you the same order (largest plus yield will be ranked number 1), but we feel it is easier to follow a rank than search for plus or minus values. Other companies display their adjusted yields. At Burrus, we feel uncomfortable listing Power Plus® 3H85AMX™\* with an adjusted yield of 155.9 bu/a when it actually made 142.3 bu/a.

Consequently, we have chosen to publish the number 2 yields in the order the hybrids were planted. Then, we show the yield rank as adjusted for the check. This gives you the opportunity to look at the variability of the check and the actual yield. Additionally, you will find the hybrids that performed best in relation to the check. But, as this plot shows, the top number 2 yield might not receive the highest ranking.

### Here’s how we do it:

Brand/Hybrid	Check Yield	Avg. 2 Checks	Deviation from Check Avg.	No. 2 Yield	Adj. Yield	Rank
√ Power Plus 4J95AMX™*	158.5					
Power Plus 6P75AMX™*		152.2	-3.1	153.9	150.8	5
Burrus 261821Y		152.2	-3.1	144.3	141.2	8
√ Power Plus 4J95AMX™*	145.8					
Burrus 676044Z		153.8	-4.7	138.4	133.7	9
Power Plus 6Z43AM™*		153.8	-4.7	162.8	158.1	2
√ Power Plus 4J95AMX™*	161.8					
Burrus 154622Z		159.5	-10.4	163.5	153.1	4
Power Plus 7V66AMXT™*		159.5	-10.4	156.3	145.9	6
√ Power Plus 4J95AMX™*	157.2					
Power Plus 4Y34AM™*		148.1	1.0	140.4	141.4	7
Power Plus 4A67AMXT™*		148.1	1.0	118.9	119.9	10
√ Power Plus 4J95AMX™*	138.9					
Burrus X6R25		135.5	13.6	155.2	168.8	1
Power Plus 3H85AMX™*		135.5	13.6	142.3	155.9	3
√ Power Plus 4J95AMX™*	132.0					
Plot Average	148.1					
Check Average	149.1					



HANCOCK

Power Plus® 6P73AM™\*  
tops plot at 254 bu/a

Tim Bolton  
Nauvoo, IL

Planted: April 29 in 30'' rows. Planting Population: 32,000. Harvested: October 27. Previous Crop: Soybeans. Fertilizer: N: 180, P: VRT, K: VRT. Herbicide: Capreno, Atrazine. Insecticide: None. Corn Borer Rating: Heavy. Soil Type: Medium loam. Weather: May-dry, June-dry, July-dry, August-wet. Remarks: Non GMO was hit hard by Corn Borer.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre	1000 Plants /Acre
POWER PLUS 6P73AM™*	254.9	12.6	97	57.0	33
POWER PLUS 6Z43AM™*	253.4	13.1	100	60.0	30
POWER PLUS 7M83AM™*	248.5	12.9	100	60.0	32
POWER PLUS 4Y34AM™*	242.6	12.8	100	57.0	31
POWER PLUS 4J93AM™*	230.7	12.8	95	58.0	32
POWER PLUS 7M80™*	194.8	11.8	80	58.0	31
BURRUS 6R20	191.5	12.6	80	58.0	32
POWER PLUS 4J90™*	187.5	12.8	75	58.0	32
Average	225.5	12.7	91	58.2	32

Power Plus® 6P73AM™\*  
makes 291 bu/a



Planted: May 11 in 30'' rows. Planting Population: 34,000. Harvested: September 17. Previous Crop: Corn. Fertilizer: N: 210, P: 70, K: 90. Herbicide: Corvus. Insecticide: None. Corn Borer Rating: Light. Soil Type: Medium loam. Weather: May-dry, June-dry, July-dry, August-wet. Remarks: No fungicide.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt. /Acre	1000 Plants /Acre
POWER PLUS 6P73AM™*	291.5	24.2	56.6	34
POWER PLUS 4Y34AM™*	276.9	21.9	55.5	33
POWER PLUS 4A67AMXT™*	274.0	22.3	56.2	34
Golden Harvest G13Z50	266.9	27.8	53.8	34
Golden Harvest G10T63	257.3	26.4	55.3	34
Average	273.3	24.5	55.5	34



Michael & Molly McDowell of Hancock Co. saw Power Plus® 6P73AM™\* bust out 291 bu/a to top their plot.



# KANKAKEE

## Power Plus® 5K35AMXT™\* makes 243 bu/a

Jason Zimmer  
Reddick, IL

Planted: April 27 in 30" rows. Planting Population: 28,000. Harvested: September 24. Previous Crop: Soybeans. Herbicide: Harness Xtra. Insecticide: None. Soil Type: Medium loam. Weather: May-normal, June-normal, July-dry, August-dry. ✓Check Hybrid: Power Plus 4J95AMXT™\*.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
POWER PLUS 5K35AMXT™*	243.4	16.0	57.0
POWER PLUS 6P75AMXT™*	232.3	17.0	60.3
POWER PLUS 2B77AMXT™*	232.1	14.5	58.5
POWER PLUS 4A34AMXT™*	231.0	14.9	57.0
POWER PLUS 4A67AMXT™*	226.0	13.6	58.0
BURRUS X6R25	210.6	15.8	58.5
Average	229.2	15.3	58.2



Jason Zimmer's plot averaged 229 bu/a with a package of Burrus products in Kankakee Co.

Dick Moran  
Manteno, IL

Planted: May 8 in 30" rows. Planting Population: 34,000. Harvested: September 21. Previous Crop: Soybeans. Soil Type: Medium loam. Weather: May-normal, June-normal, July-dry, August-dry. ✓Check Hybrid: Power Plus 4J95AMXT™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	Adj. Test Wt.
✓CHECK	158.5		14.6	59.0
POWER PLUS 6P75AMXT™*	153.9	5	15.9	56.5
BURRUS 261821Y	144.3	8	17.6	61.4
✓CHECK	145.8		15.5	56.0
BURRUS 676044Z	138.4	9	16.0	56.0
POWER PLUS 6Z43AMXT™*	162.8	2	17.0	60.3
✓CHECK	161.8		15.8	57.0
BURRUS 154622Z	163.5	4	17.7	57.4
POWER PLUS 7V66AMXT™*	156.3	6	17.0	60.8
✓CHECK	157.2		14.1	57.5
POWER PLUS 4Y34AMXT™*	140.4	7	14.1	59.5
POWER PLUS 4A67AMXT™*	118.9	10	13.4	57.5
✓CHECK	138.9		13.6	59.0
BURRUS X6R25	155.2	1	17.0	58.3
POWER PLUS 3H85AMXT™*	142.3	3	12.9	56.5
✓CHECK	132.0		14.3	56.0
Average	148.1		15.4	58.0
Check Average	149.1		14.6	57.4



New Burrus X6R25 took first for Dick Moran in Kankakee Co. at 155.2 bu/a.

# MyFarms<sup>SM</sup> GLS alert system – how this tool can help you

Josh Gunther, C.C.A.

One tool that Burrus and MyFarms<sup>SM</sup> continues to improve is our gray leaf spot (GLS) alert system. This tool is designed to alert growers to scout for GLS when it is most beneficial. By using this tool, growers can manage their time by scouting the fields that are the most time sensitive.

The GLS alert system categorizes fields into three groups: green, orange, and red. Each field begins the growing season in the green category, which means there is a low level of concern for the development of GLS. A field will move into the orange category when there is a moderate level of concern; and if there is a high level of concern, the field will move into the red category. Once a field moves from orange to red, the grower receives an email to alert them to scout for GLS pressure in those fields. Burrus recommends scouting orange fields at least once a week and red fields at least twice a week.

The GLS alert system utilizes the basic disease triangle. A disease needs three things to thrive: a host, pathogen, and environment. The alert system is designed to look at all three elements to predict where and when growers will see GLS. For the host element, MyFarms uses the GLS rating for each product. The pathogen component is determined by the previous year's crop and amount of residue the can overwinter the fungus. Lastly, the environmental factor considers rainfall totals, humidity levels and temperatures for the field in question. The constant changing of the environmental factor can cause a field to alternate between orange and red categories resulting in multiple emails regarding the same field.

The key to activating the GLS alert system is to convert planting plans into planting

records once the field is planted. Simply find your plan and click the Convert to Record button. The program will present a dialog box to enter your planting date and field conditions, then ask you to confirm that you planted the intended product in that field.

The timing of fungicide application becomes very important to stop the spread of GLS and minimize yield loss. The only way to accurately determine if and when to spray fungicides is to scout your fields. There is no substitution for time spent in fields looking for disease pressure on crops. The GLS alert system is intended to help optimize growers' time spent scouting fields.

When scouting for GLS, remember it appears as rectangular tan to gray lesions starting on the lower leaves and spreading up the plant (see photo). If 50% of the corn plants in the field are showing disease symptoms on the ear leaf or higher around tasselling, you might want to consider a fungicide application.



GLS lesions on corn leaves.

## Using traits as pest control

Todd Burrus

Using conventional traits to manage pests in agriculture is not new, but it sure is effective and convenient. European corn borer and corn rootworm, both northern and western, can be easily managed using BT corn. Historically, these pests robbed American growers of millions of dollars annually by attacking the corn plant and reducing yield.

At Burrus, we are using two different sources of insect traits. Agrisure® traits developed by Syngenta have provided economical insect control. Additionally, Optimum® AcreMax® traits, available in the Power Plus® brand, brought to market by Corteva™ Agriscience, Agriculture Division of DowDuPont, have a history of effective control. We expect wider utilization of Agrisure Viptera® to improve the control of the tougher to control insects like

western bean cutworm and corn earworm.

Managing insects with traits can easily be taken for granted. Investment for these conventional traits can come under question, "Are they worth it?" The answer is, "Yes, when the insect pressure exists." The dollars returned to the grower outdistances the cost in most circumstances.

Growers should begin to expect a resurgence of corn rootworm in the next few years. Corn-on-corn needs rootworm protection. Corn following soybeans also needs protection in some areas and is not needed in other locations.

Our encouragement is to stay vigilant. Insect pressures change over time. Insect pressures change over time, realize that traits are insurance policies to help protect yield potential.



Jone Schumacher received 2nd place at the 2018 Illinois State Fair Heirloom Recipe contest with her family's recipe for freezing Burrus Coon's Choice.



Product Lead Josh Gunther organized seed packets for research, show and data plots.



Burrus Seed Mission

The Burrus mission is to provide quality seed, consistent performance, and exceptional value ensuring the ongoing success of our customers.

KNOX

Power Plus® 6Z43AM™\*  
tops plot at 264 bu/a

COMPARE  
! Tim Carlson  
Galesburg, IL

Planted: April 22 in 30" rows. Planting Population: 35,600. Harvested: September 18. Previous Crop: Soybeans. Corn Borer Rating: Light. Soil Type: Heavy loam. Weather: May-normal, June-normal, July-normal, August-normal. ✓Check Hybrid: Power Plus 4J93AM™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	Adj. Test Wt. /Acre	1000 Plants
✓CHECK	257.4		19.2	58.7	35
POWER PLUS 4J93AM™*	254.7	5	18.9	58.7	36
POWER PLUS 4J95AM™*	250.8	7	19.5	57.9	36
✓CHECK	258.9		19.0	58.7	35
POWER PLUS 4A67AMXT™*	251.9	4	19.1	58.7	35
POWER PLUS 4Y34AM™*	265.5	2	17.9	57.5	36
✓CHECK	251.2		19.1	58.7	35
BURRUS X6R25	258.7	3	20.6	58.2	35
POWER PLUS 6Z43AM™*	264.0	1	20.4	59.0	35
✓CHECK	254.9		18.6	58.6	35
BURRUS X7L12	240.4	8	21.0	57.3	34
POWER PLUS 6P75AMX™*	251.3	6	19.7	57.9	35
✓CHECK	260.4		18.6	58.6	34
Average	255.4		19.4	58.3	35
Check Average	256.6		18.9	58.7	34.8



The top three spots went to the new kids on the block. New Power Plus® 6Z43AM™\*, new Power Plus® 4Y34AM™\* & new Burrus X6R25 were all above 258 bu/a in a Knox Co. plot for Tim Carlson.



Power Plus® 4A67AMXT™\* took second out of 45 entries at 266.5 bu/a for Jerrod Secrist & Gene Shores in Knox Co.

Power Plus® 4A67AMXT™\*  
is second

Block Farms  
Gilson, IL

Planted: April 27 in 30" rows. Planting Population: 35,000. Harvested: October 1. Previous Crop: Soybeans. Soil Type: Medium loam. Weather: May-normal, June-dry, July-dry, August-normal. ✓Check Hybrid: AgriGold A6572VT2PRO.

Brand/Product	Bu. Per Acre	Rank	% Moisture
✓CHECK	233.2		17.8
Pioneer P1055AM	263.9	5	16.4
POWER PLUS 2B77AMXT™*	242.4	39	15.9
NuTech 5L-308AMXT	258.2	15	16.2
POWER PLUS 4A67AMXT™*	266.5	2	16.4
Stone 5848RIB	249.4	26	15.7
NuTech 50-709AMXT	258.8	13	16.4
✓CHECK	280.6		17.5
Pioneer P1017AMXT	268.7	38	16.9
NuTech 5FB-9909AM	282.9	16	15.7
Dekalb DKC60-88	274.8	25	16.2
AgriGold AG44-78 STX	261.1	45	16.5
Stone 6188RIB	270.3	35	17.2
Wyffels W6896RIB	262.3	44	16.1
✓CHECK	283.1		17.5
Pioneer P1197AMXT	263.6	43	16.5
AgriGold AG42-59 STX	273.8	24	16.9
POWER PLUS 6Z43AM™*	269.9	33	17.3
Munson 7237VTP	274.1	23	16.8
Dekalb DKC6252RIB	270.0	32	16.5
Pioneer P1298AM	283.6	12	17.0
✓CHECK	278.3		17.8
FS 62ZX1	271.5	27	17.2
Munson M728VT2P	276.6	19	16.8
Stone 6288RIB	273.4	21	17.4
Wyffels W7576VT2	268.1	34	16.7
Golden Harvest G12W66-3000GT	264.3	40	17.1
Pioneer P1311AM	262.0	42	17.4
✓CHECK	279.9		17.7
Munson 7383VT2	262.7	37	16.4
Dekalb DKC6434	279.7	8	17.4
Wyffels W7976	269.3	22	16.7
Stone 6368RIB	282.1	6	17.8
NuTech 5FB-6313AM	270.9	20	17.0
FS 63ZX1	267.0	29	17.8
✓CHECK	270.5		17.9
Wyffels W7696VT	273.7	11	17.3
Dekalb DKC6321	275.4	7	16.4
Pioneer P1366AMXT	282.6	1	16.9
AgriGold A6499 STX	278.3	4	17.8
Munson 7468DGV2P	270.3	17	17.2
FS 64SX1	278.7	3	17.7
✓CHECK	269.9		17.7
AgriGold A6572 VT2	281.5	14	17.6
Stone 6458STX	271.8	28	17.1
Pioneer P1563AM	277.5	18	17.3
Munson M7523VT2	269.8	30	18.1
AgriGold A55779 VT2	283.8	9	17.3
Golden Harvest G15L32-3000GT	269.7	31	18.5
✓CHECK	289.3		17.9
Wyffels W8268STX	265.8	41	17.8
Dekalb DKC6675VT2	284.5	10	17.1
Munson M7507VT2	268.6	36	18.1
✓CHECK	272.4		17.7
Average	270.9		17.1
Check Average	273.0		17.7



Burrus Account Managers Ross Kleinsteinber & Mathias Hoffmann helped plant plots this spring.



Field Agronomist Chris Brown used a drone for scouting a field in Kankakee Co. for Zellhart Farms.

Burrus Seed featured on  
American Farmer

Burrus Seed was featured in a segment for the TV show *American Farmer* this summer. *American Farmer* is a program showcasing the latest advancements in agriculture and farming. It takes viewers on location across the country to the farms that form the backbone of the ever-changing American agriculture industry and can be seen on RFD-TV on Tuesday mornings. The segment featuring Burrus Seed was titled “Family-owned Seed Company Stands the Test of Time.” Founded in 1935 by two brothers who believed in the value of service and integrity, Burrus Seed has been providing growers with quality seed, consistent performance, and exceptional value for over 80 years.

A production team from *American Farmer* traveled to west-central Illinois to explore how our regional seed company can thrive in a land of international giants. “Burrus believes in the independence of the American farmer,” said Jennifer Tierney, producer for the series. Major consolidation in the seed industry is threatening grower choice and making it difficult to find an honest answer. An Illinois corn and soybean grower, Tony Bangert shared, “When the big corporations are tied in with seed and chemicals, they tend to promote the seed that works with their

chemicals...whether it's the best fit for our farm or not.” Bangert added, “We, as farmers, are smart enough to figure out what we want and just where to get it.”

Todd Burrus explained, “Independent seed businesses like Burrus are in the best position to bridge the gap between the American farmer and future innovation and technologies; by better understanding growers’ needs, both today and tomorrow.” Tim Greene spoke of the open dialogue growers have come to appreciate with Burrus. “Listening leads to understanding and that allows us to help growers meet their needs,” said Greene. Ensuring the ongoing success of our customers is a key part of our mission at Burrus.

Burrus’ multi-brand strategy provides growers, who desire a single source for seed, a unique portfolio of genetic traits. This gives growers greater diversity from a trusted source. Tim Carmody, Burrus Sales Manager said “The multi-brand strategy gives growers choices. Growers want and need choices.”

The entire segment can be viewed on our @BurrusSeed YouTube page. The bottom line, at Burrus, we use our family’s passion for American agriculture to fuel our success, always mindful that the growers’ success is the benchmark.



Tim Greene reviewing his interview with the videographers.



The film crew travelled to Arenzville to capture planting footage.



LASALLE

Power Plus® 4A67AMXT™\* makes 249.6 bu/a

Jeff Busch  
Tonica, IL

Planted: April 24 in 30'' rows. Planting Population: 34,000. Harvested: September 12. Previous Crop: Soybeans. Fertilizer: N: 240, P: 150 , K: 150. Herbicide: Pre-Balance Flexx, Atrazine, Post-Liberty. Soil Type: Heavy loam. Weather: May-normal, June-normal, July-dry, August-dry. Remarks: Bad wind storm in June caused all rows to gooseneck in plot and entire field surrounding plot.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre	1000 Plants /Acre
POWER PLUS 4A67AMXT™*	249.6	22.4	100	62.5	34
BURRUS X6R25	238.0	25.4	100	60.3	34
POWER PLUS 2B77AMXT™*	237.5	21.7	100	61.4	30
POWER PLUS 6P75AMXT™*	235.1	25.7	90	60.4	28
POWER PLUS 4J95AMXT™*	231.8	22.4	100	59.5	31
POWER PLUS 3H85AMXT™*	230.6	21.6	100	61.4	32
Average	237.1	23.2	98	60.9	32



The LaSalle Co. plot averaged over 237 bu/a with a variety of Burrus products for Derek, Tina & Jeff Busch.

Dan Schmitt  
Leonore, IL

Planted: April 28 in 30'' rows. Planting Population: 33,500. Harvested: September 23. Previous Crop: Soybeans. Soil Type: Heavy loam. Weather: May-normal, June-normal, July-dry, August-dry.

Brand/Product	Bu. Per Acre	% Moisture
DynaGro 52SS91	261.3	16.0
FS_Invision FS 63ZX1	260.2	14.5
Pioneer 1366 AMXT	257.7	15.2
Dekalb DKC64-34RIB	257.1	15.9
AgriGold A642-59	255.9	14.8
Dekalb DKC64-87RIB	255.1	15.7
DynaGro 52SS63	254.1	15.1
Becks 6368SX	252.2	15.7
Becks 6489SX	251.6	16.0
Becks 6589 VT2	250.4	16.1
AgriGold A6572 STX	250.2	16.0
POWER PLUS 6P75AMXT™*	249.8	16.0
Becks 6274SX	249.5	15.2
Stone 6368 RIB	249.0	15.9
Stone 6188 RIB	248.9	16.1
FS_Invision FS 64SX1	247.7	16.5
Dekalb DKC63-21RIB	247.1	15.1
Dekalb DKC62-52RIB	245.4	15.4
FS_Invision FS 62ZX1	243.5	16.7
AgriGold A6579 STX	242.7	15.9
Pioneer 1422 AMXT	241.5	16.6
Pioneer 1197AMXT	236.7	15.3
GreatLakes GL5824 STX	233.6	13.6
AgriGold A641-78	232.7	13.7
GreatLakes 5824 STX	232.6	13.7
Average	248.3	15.5

Dan Schmitt  
Leonore, IL

Planted: April 28 in 30'' rows. Planting Population: 33,500. Harvested: September 29. Previous Crop: Soybeans. Soil Type: Heavy loam. Weather: May-normal, June-normal, July-dry, August-dry.

Brand/Product	Bu. Per Acre	% Moisture
Stone 5858 RIB	228.7	15.1
Pioneer 1017 AMXT	226.8	16.2
Pioneer 1093 AMXT	224.3	16.3
POWER PLUS 2B77AMXT™*	224.2	15.8
Great Lakes GL5824 STX	224.0	15.0
POWER PLUS 4A67AMXT™*	219.8	15.9
Dekalb DKC60-87RIB	219.2	15.7
Average	223.9	15.7

LOGAN

Kent Kleinschmidt  
Emden, IL

Planted: May 1 in 30'' rows. Planting Population: 34,000. Harvested: September 26. Previous Crop: Soybeans. Fertilizer: N: 210, P: 150, K: 150. Herbicide: Balance Flexx, 2,4-D, Roundup, Callisto, Atrazine. Insecticide: None. Corn Borer Rating: Light. Soil Type: Medium loam. Weather: May-wet, June-normal, July-dry, August-normal. Check Hybrid: Power Plus 4J95AMXT™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	233.1		16.3	100	34
POWER PLUS 4A67AMXT™*	227.3	7	16.7	100	33
BURRUS 261921Y	252.1	3	17.1	90	33
✓CHECK	236.4		16.4	100	32
POWER PLUS 6P75AMXT™*	229.2	8	17.7	100	34
BURRUS 676044Z	244.1	4	17.8	90	34
✓CHECK	238.4		15.7	100	34
POWER PLUS 3H85AMXT™*	232.2	6	16.2	100	33
BURRUS X6R25	254.1	2	17.2	90	32
POWER PLUS 7V66AMXT™*	222.4	9	17.2	85	34
✓CHECK	231.8		17.2	100	34
BURRUS 154622Z	230.3	5	16.9	90	33
POWER PLUS 4Y34AM™*	256.6	1	16.0	85	34
✓CHECK	228.7		16.6	90	34
Average	236.9		16.8	94	33
Check Average	233.7		16.4	98	33.6



New Power Plus® 4Y34AM™\* won first place with 256.6 bu/a for Chad & Kent Kleinschmidt of Logan Co.

Selecting the right tillage for your operation

Chris Brown, C.C.A.

No two operations manage their tillage the same. From timing to types of tools used, every grower has their own preferences and reasons for their tillage practices. Every field has its own unique set of circumstances that make the decisions more challenging when deciding on which type of equipment to utilize or not.

Your cropping system can play a huge part in the decision on whether to utilize no-till, strip-till or conventional tillage. The University of Wisconsin conducted a study that showed significant yield increases caused by conventional tillage in corn on corn fields with the response increasing with the number of years the field was in continuous corn. However, in a corn soybean rotation, they noted no such significant difference. In fact, they noted with the reduced labor, fuel and machinery costs associated with no-till, it is possible to be the more profitable operation in a rotational cropping system.

Along with the effect that rotation can have on yield response to tillage, there are other factors to consider, such as topography, soil type and conservation needs. For some fields there isn't much choice when it comes to tillage options, in the highly erodible areas you will be restricted to no- or stip-till, but on most acres, you have a decision to make. In the last couple years, we have seen more people moving to conservation tillage practices. This has allowed those growers to reduce costs through reduced tillage passes and a reduction in their fleet by getting rid of their high horsepower tillage machines. If you are one of those individuals, you most likely have noticed

that you have been needing to adjust. Be it by adding a burn-down herbicide in the spring or waiting a little longer to get onto the field to plant your crop, you have adjusted and most likely will need to continue implementing that adjustment.

If you have been a consistent no-till operation and you have concerns about disease or are looking to move some acres into a corn on corn rotation, tillage may be something you consider helping you reach your next yield goal. When you have high disease fields you have to remember that the majority of our diseases in corn and soybean production do over-winter on the residue in the field. If you are able to utilize tillage that will help to bury and mix that residue into the soil profile you could reduce the disease population in the fields. If you wish to shift to incorporating more tillage into your practices, you will want to ensure that your timing is correct. It is important first and foremost to only perform tillage when field conditions are favorable, you could be causing more harm than good when tillage is conducted on wet soils that haven't completely dried out. It is also recommended to perform your tillage as soon as possible following the removal of the crop to allow for the remaining soil warmth of the fall to provide the most residue breakdown as possible. With this adjustment to your operation you could exceed your expectations for yield in the next year.

We know that the issue of soil tillage is a debate that has been going on for as long as modern farming has been around, presenting sound agronomic data can help you be successful.



The Burrus team is honored to add DONMARIO soybeans to our Burrus family of brands. DONMARIO is a family-owned & operated brand, brought to market in the US by two established families in the seed business; the Bartolomé family from Argentina who own DONMARIO globally, partnered with the Burrus family. Pictured left to right: Dave Hughes, Martha Krohe, Todd Burrus, Sofi & Ignacio Bartolomé, Tim, Lori & Griffin Greene, Marcy Burrus & Gannon Greene.



# Successfully managing resistant weeds

Chris Brown, C.C.A.

With the spread of herbicide resistant weeds throughout our selling footprint, we continue to field questions on how to best battle these weeds. Unfortunately, there is no easy answer. We have seen a shift in the industry to a system-based weed management plan integrating trait selection, tillage, pre-emergence, and post-emergence herbicides into one coherent plan to manage current weed issues and prevent others from occurring. Let's think about these components in more detail to help make the best plan for the upcoming season.

**Trait selection** – With herbicide resistance becoming more widespread, growers must utilize newer technology that allow them to best control weeds in their given situation. Each of the newest traits has its own merits and Burrus offers a full lineup of commercially available soybean traits to allow growers to pick the trait that best fits their needs. Also, we have positioned ourselves to be at the forefront as newer traits are released to continue to supply the best varieties to our customers.

**Tillage choices** – A key aspect to managing resistant weeds is starting each year with a clean field at planting. A clean field can be achieved in multiple ways including tillage or use of a burndown. Growers need to tailor their weed control system to the method they utilize. The key factor with tillage as a method of starting clean is to properly set-up the equipment to ensure a good kill of the emerged weeds. Keep in mind the weeds injured by tillage that recover can be some of the hardest weeds to control.

**Pre-emergence herbicide** – After making a tillage decision, growers need to select the pre-emergence herbicide that best suits their needs. If utilizing a no- or reduced-tillage system that does not eliminate emerged weeds, a burndown program must be partnered with the pre-emergence herbicide to ensure the field is clean at planting. The best herbicide for a field will be rated to control the specific weeds

of concern and provide the residual control to allow for a timely post-emergent pass.

**Post-emergence herbicide** – The final piece of the weed control system is a post-emergence herbicide. This key pass across the field is when growers apply the selected trait-based herbicide. It is recommended that every post-emergence trip also includes a residual herbicide to extend the window of control later into the season. Timeliness is key, because herbicides are labeled to control weeds less than three inches tall. Coordinate the pre- and post-trips to include herbicides of diverse modes of action to ensure weeds cannot continue to build resistance. After all spraying is finished for the year, growers need to scout, note and remove any weed escapes. As a last resort, it is recommended to pull and remove weeds to prevent resistant seed from persisting in the field.

When growers utilize a system approach to weed control, the first and last step of every year is to plan and review their weed control approach. Through review of the control a grower achieved in a given year, they will be able to adjust the system for the following year and be able to better utilize the new tools that become available to help make weed control possible.



Resistant waterhemp in soybeans.



Ella Ring paused to enjoy the view on her dad, Daniel's farm. Daniel is a third-generation Burrus customer, with hopes of Ella being a fourth generation Burrus grower.

## Do I need corn rootworm protection?

Chris Brown, C.C.A.

As margins have tightened we have noticed an increase in growers asking if corn rootworm protection is needed. Growers want to know if they really need a fully traited rootworm hybrid or if they can select hybrids without below ground protection to help reduce seed costs. Well, there isn't an easy answer to this question. We first need to assess several aspects of the question to decide if you can afford not to have rootworm protection.

There isn't an effective rescue treatment for CRW if they do become an issue once planting is complete. The only effect means of controlling rootworm is to plant a hybrid that has a rootworm trait built in or to apply soil applied insecticide while planting. This means you cannot take the decision to remove rootworm protection from your planting operation lightly.

We recommend rootworm control on corn following corn fields. These fields have the largest amount of pressure year after year and will have the most stress aside from rootworm. Because of the field stresses in corn-on-corn, corn rootworm has a more drastic effect and can cause larger yield reductions if left untreated.

On corn following soybeans, you will want to ask several questions to assess the need for rootworm protection.

- Were beetles present in your soybeans last fall? The University of Illinois recommends placing 12 evenly spaced sticky traps per soybean field and monitor for an economic threshold of 1.5 beetles per trap per day.
- Have you ever experienced corn rootworm injury after soybeans?
- Has anyone in your area experienced injury following soybeans?

If you have answered "yes" to any of these questions you have a larger chance of experiencing damage caused by corn rootworm. Combine this assessment with an evaluation of fields that the added stress due to rootworm feeding will cause the most damage. Think of fields that are under stress already from other sources such as poor drainage, poor fertility and compaction. In these higher stressed fields, a small amount of feeding that would cause small yield loss in low stress environments can turn in to a large yield reduction.

Utilizing these questions and evaluations in your operation will allow you to prioritize where to use rootworm protection and where you can leave it out of your plan. Plain and simple those fields that could have yield effected most by rootworm feeding are where you should be spending the money to protect them. Please don't hesitate to consult with your Burrus Representative on this issue and we would be glad to help you make the best decisions for your operation.



Burrus CSR Judy Hall's grandchildren enjoyed trick or treating. Tucker, Kinsli, Eliot & Cooper bring Judy & her family deep joy.



A 110+ degree day didn't slow field sign installations for Sales Manager Tim Carmody.



# New IT Lead joins Burrus

Brianna Sibley has joined the Burrus Seed team as the new Information Technology Lead. The IT Lead has many responsibilities including overseeing the management and improvement of our software systems MyFarms<sup>SM</sup> and SeedWare, training and providing technical support to employees, and coordinating technology at company and customer events.

Brianna attended Southern Illinois University at Edwardsville and achieved an MBA from Missouri Baptist University. Her education, combined with multiple years' work experience as a Network Analyst, IT Technical Associate, and Information Systems Specialist, make her a perfect fit for the position.

Brianna lives in Kampsville, IL with her husband, Lance and their two sons, Wyatt and Walker. The boys keep their family busy attending sporting events. In their free time, the Sibley family stays active shooting trap and working on their farm.

We are pleased to have Brianna onboard and appreciate the efficiency she has already added to better serve our customers.



Brianna and Lance Sibley with sons Walker and Wyatt.

Tim and Mark Ruschhaupt  
Staunton, IL

**Planted:** May 1 in 30" rows. **Planting Population:** 31,800. **Harvested:** September 27. **Previous Crop:** Soybeans. **Fertilizer:** N: 192, P: 70, K: 90. **Herbicide:** Acuron. **Corn Borer Rating:** Light. **Soil Type:** Medium loam.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt. /Acre	1000 Plants /Acre
POWER PLUS 6Z43AM <sup>TM</sup> *	222.9	15.6	60.9	32
POWER PLUS 4J93AM <sup>TM</sup> *	218.1	14.8	60.5	30
POWER PLUS 7M83AM <sup>TM</sup> *	217.9	16.0	61.8	32
POWER PLUS 4J93AM <sup>TM</sup> *	207.6	14.4	60.5	29
POWER PLUS 5K33AM <sup>TM</sup> *	206.6	15.3	59.9	28
POWER PLUS 4Y34AM <sup>TM</sup> *	201.5	14.3	59.3	29
POWER PLUS 6P73AM <sup>TM</sup> *	199.1	16.1	60.0	30
BURRUS X7L12	193.5	16.1	61.0	29
Average	208.4	15.3	60.5	30

## MADISON

Dale Grotefendt  
Marine, IL

**Planted:** May 10 in 30" rows. **Planting Population:** 30,600. **Harvested:** October 3. **Previous Crop:** Soybeans. **Fertilizer:** N: 175, P: 81, K: 75. **Herbicide:** Roundup. **Corn Borer Rating:** Light. **Soil Type:** Medium loam. **Weather:** May-wet, June-normal, July-dry, August-wet. **✓Check Hybrid:** Pioneer P1257AMXT. **Remarks:** Wind and cattle damage.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	227.1		15.0	90	33
POWER PLUS 4Y34AM <sup>TM</sup> *	216.2	2	14.8	90	33
POWER PLUS 4J93AM <sup>TM</sup> *	204.8	3	14.8	100	33
POWER PLUS 6Z43AM <sup>TM</sup> *	225.8	1	15.5	100	30
POWER PLUS 6P73AM <sup>TM</sup> *	155.6	6	15.0	60	32
BURRUS X7L12	203.6	4	17.0	90	32
POWER PLUS 7M83AM <sup>TM</sup> *	183.3	5	17.0	70	32
✓CHECK	212.6		15.0	100	33
Average	203.6		15.5	88	32
Check Average	219.9		15.0	95	33

## MARSHALL

Mark Monier  
Sparland, IL

**Planted:** May 2 in 30" rows. **Planting Population:** 34,000. **Harvested:** October 3. **Previous Crop:** Soybeans. **Soil Type:** Medium loam. **Weather:** May-normal, June-dry, July-dry, August-dry. **✓Check Hybrid:** Power Plus 5C17AMXT<sup>TM</sup>.\*

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	235.3		17.6	100	32
POWER PLUS 2B77AMXT <sup>TM</sup> *	220.0	5	16.1	90	33
POWER PLUS 3H85AMXT <sup>TM</sup> *	224.9	3	16.7	100	31
POWER PLUS 4A67AMXT <sup>TM</sup> *	235.1	1	17.3	100	35
POWER PLUS 4J95AMXT <sup>TM</sup> *	229.1	2	17.9	100	33
✓CHECK	221.9		18.2	100	31
BURRUS X6R25	229.0	4	18.7	100	32
POWER PLUS 6P75AMXT <sup>TM</sup> *	219.5	6	18.7	100	32
POWER PLUS 7V66AMXT <sup>TM</sup> *	185.4	9	17.9	100	31
POWER PLUS 6Z43AM <sup>TM</sup> *	212.8	7	17.2	100	33
POWER PLUS 7M83AM <sup>TM</sup> *	210.8	8	18.4	90	30
Average	220.4		17.7	98	32
Check Average	228.6		17.9	100	32



Burrus intern Aaron Slack learned how to drive the forklift at the Champaign warehouse.

## MACON

Ellis Buth  
Warrensburg, IL

**Planted:** April 26 in 30" rows. **Planting Population:** 34,000. **Harvested:** April 26. **Previous Crop:** Soybeans. **Soil Type:** Light loam. **Weather:** May-normal, June-normal, July-dry, August-normal.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre
ProHarvest 8147	277.4	12.9	100	59.0
ProHarvest 8312	270.7	14.0	100	59.0
ProHarvest 8052	269.2	12.1	100	61.0
ProHarvest 8404	265.5	15.0	100	61.0
BURRUS X6R25	265.0	13.8	100	59.0
ProHarvest 8277	263.1	13.4	100	60.5
POWER PLUS 4A67AMXT <sup>TM</sup> *	260.3	12.2	100	60.0
ProHarvest 8324	254.5	15.2	100	57.5
POWER PLUS 4J95AMXT <sup>TM</sup> *	242.2	13.7	90	59.0
POWER PLUS 6P75AMXT <sup>TM</sup> *	239.3	14.0	92	59.5
Average	260.7	13.6	98	59.6



New Burrus X6R25 hit 265 bu/a in Macon Co. for Karen & Ellis Buth.



Mike Cole saw his Macoupin Co. plot average over 253 bu/a with Power Plus<sup>®</sup> hybrids.



Brent Angelo & Mark Monier saw Power Plus<sup>®</sup> 4A67AMXT<sup>TM</sup>\* take first place with 235.1 bu/a in Marshall Co.



New Power Plus<sup>®</sup> 6Z43AM<sup>TM</sup>\* brought home 222.9 bu/a for Lawrence, Mark, Lane & Tim Ruschhaupt in Macoupin Co.

## MACOUPIN

**Power Plus<sup>®</sup> 4J93AM<sup>TM</sup>\***  
**makes 264 bu/a!**

Mike Cole  
Palmyra, IL

**Planted:** April 20 in 30" rows. **Harvested:** September 13. **Previous Crop:** Soybeans. **Herbicide:** Acuron. **Weather:** May-dry, June-dry, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
POWER PLUS 4J93AM <sup>TM</sup> *	264.9	15.0
POWER PLUS 4A67AMXT <sup>TM</sup> *	258.0	14.9
POWER PLUS 6P73AM <sup>TM</sup> *	252.0	15.1
POWER PLUS 5K33AM <sup>TM</sup> *	251.5	15.5
POWER PLUS 6P73AM <sup>TM</sup> *	243.1	16.3
Average	253.9	15.4



# Factors leading to stalk rot in corn

Dana Harder

There was plenty of stress during the 2018 growing season for parts of the Burrus footprint. In addition to the hot and dry weather, stalk rots were prevalent. Typically, some source of initial plant stress occurs before stalk rots develop. Plants will prioritize sending carbohydrates to the ear, cannibalizing other plant tissues to do so, resulting in weakened plant health and greater susceptibility to fungal and bacterial infections. Key stresses include:

**Competition:** Higher plant populations can increase the prevalence of stalk rots. When corn plants are crowded, stalks become elongated and spindly weakening their integrity. Increased intra-plant competition occurs for nutrients, water, and sunlight. If the essentials are not in adequate supply, trouble can arise. Poor weed control can lead to similar conditions due to increased inter-plant competition for essential resources.

**Foliar diseases and defoliation:** When foliar diseases comprise a significant portion of the leaf tissue, photosynthesis is reduced. To fill out the ear, the plant will remobilize carbohydrates from the stalk to the ear. Two common diseases in corn are gray leaf spot and northern corn leaf blight. Hail events or insect feeding can also reduce the foliage amount present. In addition, these wounds can act as initial infection sites for fungal pathogens.

**Hybrid selection:** High yielding “racehorse” hybrids tend to be prone to stalk rots due to concentrating their carbohydrates

towards grain fill at the expense of stalk integrity. There are genetic differences in stalk quality among hybrids and growers can make informed decisions based on agronomic needs. Racehorse hybrids can be managed appropriately, especially if growers are willing to harvest early.

**Root growth stresses:** Corn plants are unable to extract enough water and nutrients when root growth is inhibited. Stresses affecting root growth include cold, compacted, drought stricken or water saturated soils. These lead to the plant producing less photosynthate during grain fill.

**Nutrient deficiency:** When a certain nutrient is in short supply it can result in reduced growth since it becomes the limiting factor. In particular, potassium deficiency can reduce stalk strength and quality. High nitrogen rates in combination with limited potassium availability makes the scenario much worse.

It is important to scout fields when corn reaches black layer. Conducting pinch and push tests will help determine if stalk rots are present. Push stalks to a 30-degree angle then release, if the plant does not return upright, it is likely a stalk rot is present. Pinch stalks as well because they will not necessarily give way when pushed. An unhealthy stalk will feel spongy when squeezed. If more than 10% of the plants are compromised, that field should be a harvest priority.

Identifying which stalk rots are prevalent can help manage and prevent them in the future. If stalks rots are suspected, dissect the

plant in half and look for discoloration towards the base. A useful guide from the University of Nebraska is the *Common Stalk Rot Diseases of Corn* to help with identification and prevention. If you have a history of stalk rots, identify and minimize the key stress occurring in those fields. Consult your Burrus Seed Field Agronomist for assistance combatting chronic stalk rot concerns.



Example of Fusarium stalk rot.



Example of charcoal rot.



Burrus CSR, Sara Runyon enjoyed watching her children Brock & Faith play in the yard. One is far more wet than the other!



With soil temperatures at 50 degrees at 4” in DeWitt Co., it was time to plant for McMath Farms.



Local grower, Tony Bangert was filmed for the RFD-TV *American Farmer* segment.

## PLATELESS PLANTERS

SEED SIZE weight per 80,000 kernel unit		SURE DROP 2 under 30#		SURE DROP 3 30-39#		SURE DROP 4 40-49#		SURE DROP 5 50-59#		SURE DROP 6 60-69#		SURE DROP 7 70# and over	
Burrus Xtra seed treatment (Poncho® 500 or Lumivia®)**		BX2		BX3		BX4		BX5		BX6		BX7	
Catalyst® brand		HP2		F1 & R1 HP3		HP4		F2, R1, R3 HP5		HP6		HP7	
High rate Poncho (Poncho® 1250)**													
John Deere/Kinze Finger Pickup *1 *7	Max. Speed *2	66% *3		66-90% *3 *5		100%		100%		100%		100%	
John Deere Vacuum Pickup *6	Disc Size	A43215		A43215		A43215		A50617		A50617		A50617	
	Vacuum Inches	7-13		7-12		10-13		9-13		10-13		13-15	
John Deere ExactEmerg™ Vac Meter *6	Vacuum Inches	Consult manufacturer		4-8		8-10		9-13		13-15		17-20	
Kinze Edge Vac *7	Disc Size	Regular Corn		Regular Corn		Regular Corn		Regular Corn		Regular Corn		Regular Corn	
	Vacuum Inches *8	Not recommended		20		20		20		20		20	
	Singulator *8	Not recommended		8		8		8		8		5	
Case IH and IHC Early Riser	Drum	Popcorn or Corn *5		Popcorn		Corn		Corn		Corn		Corn	
	Hopper Pres. *4	8-9 oz.		10 oz.		9-10 oz.		10-12 oz.		12 oz. max		12 oz. max	
	Brush Setting	1/2 down		Wire down		Up		Down		Remove		Remove	
Case IHC 1200 *7	Disc Size	4845		4845		4855		4855		4855		4855	
New Holland SP Series	Vacuum	20		22		20		20		20		20	
	Singulator	3		3		3		3		3		3	
White Air 6000 and New Idea 9000	Disc Size	852436 or 852437		852436 or 852437		852435 or 852436		852434 or 852435		852434		852434	

\*1 Also for Black Machine, Great Plains, Buffalo Finger Pickup, JD1535 drill.

\*2 For maximum planter speed, multiply the percentage shown times recommended speed range in operator's manual

\*3 Worn ripples on the carrier plate can increase overdrop drastically.

\*4 For IHC Cyclo Air models, deduct 1 ounce of air pressure.

\*5 Recommendation does not fit every weight in this SureDrop size. Consult recommended weight range in your operator's manual.

\*6 Consult operator's manual for talc recommendation. Double recommendation for Poncho treated seed.

\*7 Consult operator's manual for graphite recommendation.

\*8 Check field performance for specific settings.

For other plate planter recommendations, call our office toll free at (877) 4 BURRUS.

BX6's and BX7's will be packaged in 40,000 kernel bags, sold as 80,000 units, so two bags equal one unit when they weigh above 65 lbs/80 M.

**Always use SuperFLOW™ or talc/graphite, etc. according to the label for lubricant to avoid bridging in the planter box.**



Anna James won Grand Champion with her Burrus corn at the Mason Co. Fair.



The Knight Family Farm in Edwards Co. put in a food grade plot.



SEED CORN TECHNOLOGY REVIEW

Technology	Herbicide					Refuge Req.	Different insects controlled by technology						
	ECB Trait	CRW Trait	Broad Lep	RR	LL		ECB	CRW	BCW	FAW	CEW	WBC	SB
Qrome®	◆	●		x	x	5% IR	C	C	C	C	NoA	NoA	C
Optimum® AcreMax® XTreme (AMXT)	■	●		x	x	5% IR	C	C	C	C	NoA	NoA	C
Optimum® Intrasect® XTreme (CYXR)	■	●		x	x	†5%	C	C	C	C	NoA	NoA	C
Optimum® AcreMax® Xtra (AMX)	■	●		x	x	10% IR	C	C	C	C	NoA	NoA	C
Optimum® AcreMax® TRIsect® (AMT)	■	●		x	x	10% IR	C	C*	C	C	NoA	NoA	C
Optimum® AcreMax® (AM)	■			x	x	5% IR	C	NoA	C	C	NoA	NoA	C
Optimum® AcreMax® Leptra® (AML)	■		◆	x	x	5% IR	C	NoA	C	C	C	C	C
Herculex® XTRA/RR (HXX/RR/Q)	■	●		x	x	20%	C	C	C	C	NoA	NoA	C
Herculex® XTRA (HXX)	■	●				20%	C	C	C	C	NoA	NoA	C
Herculex® 1 (HX1/RR/S)	■			x	x	*20%	C	NoA	C	C	NoA	NoA	C
Optimum® AcreMax® 1 (AM1)	■	●		x	x	*20%	C	C	C	C	NoA	NoA	C
Agrisure Duracade® 5222 E-Z Refuge®	■	●	◆	x	*	5% IR	C	C	C	C	C	C	C
Agrisure Duracade® 5122 E-Z Refuge®	■	●		x	*	5% IR	C	C	C	C	NoA	NoA	C
Agrisure® 3122 E-Z Refuge®	■	●		x	*	5% IR	C	C	C	C	NoA	NoA	C
Agrisure Viptera® 3111	■	●	◆	x	x	20%	C	C*	C	C	C	C	C
Agrisure® 3000GT	■	●		x	x	20%	C	C*	NoA	NoA	NoA	NoA	NoA
Agrisure Viptera® 3220 E-Z Refuge®	■		◆	x	*	5% IR	C	NoA	C	C	C	C	C
Agrisure Viptera® 3110	■		◆	x	x	*20%	C	NoA	C	C	C	C	C
Agrisure® 3010	■			x	x	*20%	C	NoA	NoA	NoA	NoA	NoA	NoA
Refuge Advanced® Powered by SmartStax®	■	●		x	x	5% IR	C	C	C	C	C	NoA	C
Genuity® SmartStax® (GENSS)	■	●		x	x	5% IR	C	C	C	C	C	NoA	C
Genuity® VT Triple PRO® (GENVT3P)	■	●		x		10% IR	C	C*	NoA	C	C	NoA	C
YieldGard VT Triple® (VT3)	■	●		x		20%	C	C*	NoA	NoA	NoA	NoA	NoA
Genuity® VT Double PRO® (GENVT2P)	■			x		5% IR	C	NoA	NoA	C	C	NoA	C
PowerCore™ Enlist™**	■			x	x	*5%	C	NoA	C	C	C	NoA	C

EVENT (Protein Expressed, Insect Target)

- TC1507 (Cry1F, ECB)
- MON 810 (Cry1Ab, ECB)
- BT11 (Cry1Ab, ECB)
- MON89034 (Cry1A.105 + Cry2Ab2, Broad Lep)
- DAS-59122-7 (Cry34/Cry35Ab1, CRW)
- MIR604 (mCry3A, CRW)
- MON88017 (Cry3Bb1, CRW)
- Event 5307 (eCry3.1Ab, CRW)
- ◆ MIR162 (Vip3Aa, Broad Lep)
- ◆ DP4114 (Cry1F + Cry1Ab, ECB; Cry34/Cry35Ab1, CRW)

CORN BELT REFUGE GUIDELINES

5% is single bag refuge with refuge blended in the bag, no separate refuge needed  
†5% non-Bt refuge must be within field or directly adjacent  
\*5% non-Bt refuge must be within 1/2 mile of the field  
10% is single bag refuge with refuge blended in the bag, no separate refuge needed  
10% & 20% means 10% of CRW refuge is blended in the bag plus 20% non-Bt refuge for ECB must be within 1/2 mile from the field  
20% non-Bt refuge must be within field or directly adjacent  
\*20% non-Bt refuge must be within 1/2 mile of the field  
\*\*2,4-D and FOP resistance  
\*Refer to bag tag or Burrus Seed Product Selection Guide

- ECB - European corn borer
- CRW - Corn rootworm
- BCW - Black cutworm
- FAW - Fall armyworm
- CEW - Corn earworm
- WBC - Western bean cutworm
- SB - Common stalk borer
- C - Control of the insect
- C\* - Resistance may have been reported
- S - Suppression of the insect
- NoA - No activity on the insect
- x - Includes herbicide tolerance
- RR - Roundup Ready® (glyphosate)
- LL - LibertyLink® (glufosinate)
- IR - Integrated Refuge



Power Plus® 4A67AMXT™\* looked tremendous for Burrus AM Quinn Moller & Tony Lorenzen in Edgar Co.



Field Agronomist Dana Harder inspected soybeans in Missouri.



Burrus CSR, Angie Knapp's grandson, Liam enjoyed Oktoberfest this fall.

MASON

Power Plus® 6P73AM™\*brand

wins competitive plot at 262 bu/a!

COMPARE!

Midwest Central FFA  
Manito, IL

Planted: May 15 in 30'' rows. Planting Population: 35,000. Harvested: October 4. Previous Crop: Corn. ✓Check Hybrid: AgriGold A645-10VT2RIB.

Brand/Product	Bu. Per Acre	Rank	% Moisture
✓CHECK	249.4		17.7
Pfister 71C1PCR	239.8	12	17.0
Pfister 73A1SSR	214.7	20	16.8
Channel 212-09STXRIB	252.9	4	17.2
Channel 217-92STXRIB	246.9	6	17.6
POWER PLUS 6P73AM™*	262.4	1	16.3
POWER PLUS 4A67AMXT™*	230.8	15	16.0
Pioneer P1366AMXT	228.3	16	16.1
Pioneer P1751AMT	258.5	2	18.3
Beck's 6368V2P	242.2	10	16.5
Beck's 6489SX	240.6	11	16.5
✓CHECK	246.5		17.8
AgriGold A642-59STXRIB	243.1	8	16.1
AgriGold A6579STXRIB	250.1	5	16.0
Golden Harvest G12W66-3111	215.7	19	16.9
Golden Harvest G18D87-3111	239.6	14	20.1
Dekalb DKC64-34RIB	239.8	13	17.4
Dekalb DKC66-74RIB	253.9	3	17.9
Wyffels W8268RIB	225.2	18	18.2
Wyffels W7578RIB	246.2	7	17.1
FS FS64SX1RIB	226.4	17	18.4
FS FS62ZX1RIB	242.8	9	16.9
✓CHECK	258.4		17.3
Average	241.5		17.2
Check Average	251.4		17.6

MCDONOUGH

Power Plus® 6Z43AM™\*brand

& Power Plus® 7M83AM™\*brand

go third & fourth

Spangler Grain  
Marietta, IL

Planted: April 25 in 30'' rows. Planting Population: 34,000. Harvested: September 14. Previous Crop: Soybeans. Corn Borer Rating: Light. Soil Type: Heavy loam. Weather: May-normal, June-dry, July-wet, August-wet. Remarks: Fungicide was applied.

Brand/Product	Bu. Per Acre	% Moisture
Wyffels 7456 VT2	306.0	23.3
AgriGold 645-10 VT2	296.7	22.7
POWER PLUS 6Z43AM™*	293.7	22.0
POWER PLUS 7M83AM™*	289.1	22.3
AgriGold 6579 STX	287.2	23.2
Wyffels 7696 VT2	286.7	23.3
AgriGold 642-59 STX	284.2	21.4
Channel 215-75 STX	283.1	23.0
FS 64SX1	281.1	22.0
Golden Harvest G10T63-3120	279.9	23.2
Channel 216.36	278.2	23.6
Golden Harvest G18D87-3111	278.1	25.7
ProHarvest 8324 STX	276.0	23.4
Wyffels 7976 VT2	275.1	21.3
ProHarvest 8277 VT2	274.4	22.6
AgriGold 641-78 STX	267.1	20.9
Golden Harvest G18D87-3111	264.5	26.1
Wyffels 7368 STX	263.3	23.7
Channel 217-92 STX	263.2	23.0
POWER PLUS 4A67AMXT™*	249.3	19.6
Average	278.8	22.8



Power Plus® 7M83AM™\*  
makes 260 bu/a

John Cook  
Sciota, IL

**Planted:** April 23 in 30" rows. **Planting Population:** 34,000. **Harvested:** September 14. **Previous Crop:** Soybeans. **Fertilizer:** N: 170, P: 70 , K: 140. **Herbicide:** Harness Xtra. **Insecticide:** None. **Corn Borer Rating:** Light. **Soil Type:** Medium loam. **Weather:** May-dry, June-dry, July-dry, August-wet. **Remarks:** No fungicide used.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt. /Acre	1000 Plants
POWER PLUS 7M83AM™*	260.7	22.3	57.5	33
POWER PLUS 4Y34AM™*	254.6	17.9	56.5	32
POWER PLUS 6Z43AM™*	252.9	19.8	58.9	34
BURRUS X6R25	249.3	20.3	59.0	32
BURRUS X7L12	234.6	21.7	57.4	33
POWER PLUS 2B77AMXT™*	233.2	15.8	59.0	33
POWER PLUS 4A67AMXT™*	228.3	17.3	58.3	34
POWER PLUS 6P75AMX™*	224.2	19.3	56.7	34
POWER PLUS 6P73AM™*	222.5	19.4	57.7	35
POWER PLUS 4J93AM™*	219.3	16.6	57.2	32
Average	238.0	19.0	57.8	33



New Power Plus® 6Z43AM™\* topped 293 bu/a in McDonough Co. for Bruce & John Spangler.



New hybrids stole the show in McDonough Co. for Clayton, John & Dylan Cook & Jim Lutz. Four of the top five hybrids were all new to the Burrus lineup. The future looks bright.

# Herbicide injury – protect yield potential

Josh Gunther, C.C.A.

During tough economic times in agriculture, it is crucial to find ways to maximize profit. To maximize profit, many farmers will aim to maximize their yields and one of the easiest ways to maximize yields is to minimize yield losses. At the start of each season, every field has a maximum yield potential. If everything goes correctly with no stresses on the crop from environmental conditions or management decisions, the yield potential will be met. But, as we all know, no growing season is perfect. Every decision a grower makes alters the yield potential for that field. You can never increase the yield potential. Think of it as slowing the leak on a water tank that can never be stopped. You can add nutrients and spray fungicides, but you are never adding more water to the tank. Each of these actions reduce the potential yield loss from the field or slows the leak in the water tank.

One of the easiest and most effective ways to slow potential yield loss is managing weeds to reduce competition by spraying herbicides. The correct use of herbicides can greatly reduce potential yield loss; however, misused herbicides can injure the crop resulting in lower yields.

Once the seed is planted, how the field is treated has a major impact on how it will yield. Correct and timely applications of herbicides are crucial when trying to capture the maximum yield. Every herbicide has the potential to cause crop injury, however

Roundup® or Liberty® when applied to tolerant crops are much less harmful. Some other post-applied herbicides pose a greater threat to crop injury if not applied in strict compliance with the label. However, if applied correctly, they can result in better overall control with no crop damage. When using these post-applied herbicides, it might be necessary to use multi-pass strategies. The amount of crop injury that can be a result of using certain herbicides varies greatly and is determined by the active ingredient, growth stage, crop stress, weather conditions, hybrid or variety, tank mix partners, and adjuvants. All these things can affect the severity of crop injury.

When choosing a herbicide program, it is important to know the mode of action for the chemical or chemicals being applied. Before selecting herbicides, Burrus strongly recommends referring to our *Chemicals to Avoid* chart printed in this publication and available on our website, to see how each hybrid responds to different modes of action. If you are uncertain of the chemicals you are planning on applying, please contact your Burrus Representative for assistance with herbicide selection.

Herbicides can be one of the most useful tools in a grower's arsenal to minimize yield loss. When herbicides are used at the correct growth stage, under the right weather conditions, on the correct hybrids or varieties, with the appropriate tank mix partners and adjuvants, a field's maximum yield potential is maintained and your bottom line is protected.

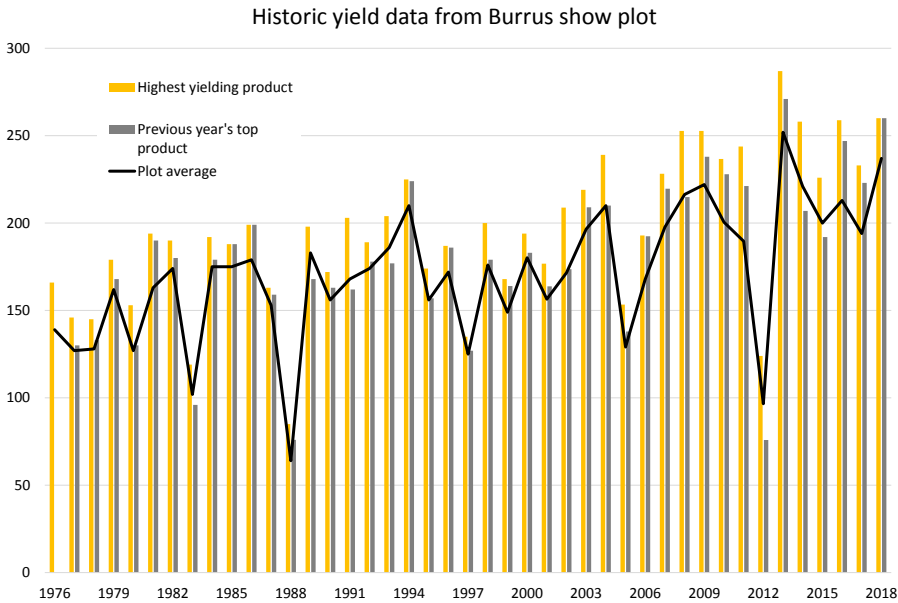
# Power Plus® 7M83AM™\* hits the record book

Power Plus® 7M83AM™\* was the top yielder in both 2017 and 2018. Only three other hybrids have accomplished that during this 42-year study. Power Plus® 7M83AM™\* joins Burrus BX26, Burrus BX39, and Burrus 796T to reach that position.

We have grown a Burrus test plot in the exact same location 43 consecutive years. Obviously, the product lineup has evolved

over time with some new products and some products retiring each season.

A lot can be said and has been said about this study. Statements like, "Plant a package," "Diversity helps," and "Every season is different." The facts say this year's best product has only about a 10% chance of being your best again next year.



# Excel in our field – Burrus internships

Each year, Burrus Seed Sales Managers attend career fairs at colleges and universities across our footprint to meet, interview, and select a group of students for our summer internship program. In 2018, we had six interns join our team for the three-month experience.

There are two paths for our interns, traditional and agronomic. Traditional interns do a wide variety of tasks including attending company meetings, picking up leftover seed and empty pallets and boxes, and making sales calls with sales team members. Agronomic interns work in the field with our Product Lead, Research Lead, and Field Agronomists learning firsthand how to identify and address weed, pest, and disease issues.

The 2018 group of interns was another outstanding group of students who we truly enjoyed having join our team for the summer. For detailed bios on this year's interns, visit our

Think Burrus blog. We take pride in providing an internship experience that offers an honest look at the breadth of our company along with real-world exposure to experts in the field. Our interns are selected in late fall each year, but potential future applicants can find full details and apply online through the Careers page of our website.



2018 Burrus Seed interns Mason Gardner, Justen Woods, Zach Edwards, Aaron Slack, & Wade Prough (not pictured: Nicholas Simpson).



Burrus corn wins big again this year

Corn						
Place	Hybrid/Brand	Yield	Entries	Sponsor	Cooperator	County
1st	6Z43AMXT™*	302.7	51	Independent	Darrell Steele	Washington, IA
1st	1N07AMXT™*	269.6	16	Independent	Andy Upmann	LaFayette, WI
1st	2Y06AMXT™*	264.2	16	Independent	Jerry King	Ogle
1st	6P73AMXT™*	262.4	20	Independent	Midwest Central FFA	Mason
1st	4A67AMXT™*	243.3	24	Independent	Phil Wellnitz	Rock, WI
1st	6Z43AMXT™*	226.5	21	Independent	East Buchanan H.S. FFA	Clinton, MO
1st	7M83AMXT™*	152.1	14	Independent	Greg Bertz	Lafayette, MO
2nd	4A67AMXT™*	266.5	45	Independent	Block Farms	Knox
2nd	2R63R™*	252.4	16	Independent	Andy Upmann	LaFayette, WI
2nd	2B77AMXT™*	244.1	16	Independent	Jerry King	Ogle
2nd	7M83AMXT™*	227.8	9	Independent	Santa Fe Agri Leaders (full)	Lafayette, MO
2nd	4J93AMXT™	210.2	19	Independent	Bret Farmer	Buchanan, MO
3rd	7M83AMXT™*	297.8	51	Independent	Darrell Steele	Washington, IA
3rd	6Z43AMXT™*	293.7	20	Independent	Spangler Grain	McDonough
3rd	2Y06AMXT™*	251.9	16	Independent	Andy Upmann	LaFayette, WI
3rd	4A67AMXT™*	250.6	22	Independent	Jerry King	Stephenson
3rd	4A67AMXT™*	248.2	34	Independent	DJ Farms	McHenry
3rd	1G48AMXT™*	221.1	14	Independent	Clark Farms	Walworth, WI
3rd	X7L12	137.0	14	Independent	Greg Bertz	Lafayette, MO
4th	7M83AMXT™*	289.1	20	Independent	Spangler Grain	McDonough
4th	2Y06AMXT™*	245.4	18	Independent	Stan Fowler	Boone
4th	4A67AMXT™*	228.5	10	Independent	Eric Sigler	Douglas
4th	4Y34AMXT™*	223.6	9	Independent	Santa Fe Agri Leaders (early)	Lafayette, MO
4th	7M83AMXT™*	219.2	21	Independent	East Buchanan H.S. FFA	Clinton, MO
4th	4Y34AMXT™*	198.9	19	Independent	Bret Farmer	Buchanan, MO
4th	7M83AMXT™*	93.9	24	Independent	McCormick Farms	Chariton, MO
5th	4Y34AMXT™*	247.6	16	Independent	Andy Upmann	LaFayette, WI
5th	2B77AMXT™*	214.9	14	Independent	Clark Farms	Walworth, WI
5th	7M83AMXT™*	195.6	19	Independent	Bret Farmer	Buchanan, MO
5th	5K33AMXT™	151.5	14	Independent	Greg Bertz	Lafayette, MO
5th	7M83AMXT™*	108.9	15	Independent	John Cramer	Livingston, MO

Power Plus® 4A67AMXT™\*  
is third in competitive plot



DJ Farms  
Marengo, IL

Planted: April 28 in 30" rows. Planting Population: 30,000. Harvested: October 13. Previous Crop: Corn. Insecticide: Non STX varieties treated with Aztec.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
Wyffels W5518STX	259.7	17.6	60.8
Wyffels W6896 Double Pro RIB	251.9	18.4	60.7
POWER PLUS 4A67AMXT™*	248.2	18.5	59.7
Channel 207-27 Conventional	245.0	19.0	57.9
Channel 207-27STXRIB	244.7	18.9	57.8
Pioneer P0589 Conventional	242.2	17.4	58.2
Wyffels W4196 Double Pro RIB	241.8	16.7	59.8
Pioneer P1197 Conventional	241.3	19.5	58.2
Wyffels W5440	240.9	17.4	60.5
Channel 209-50 Conventional	240.6	19.3	60.0
AgriGold A636-56STXRIB	240.2	17.6	59.6
Dekalb DKC54-36 Conventional	239.0	16.9	59.0
AgriGold A635-54 VT2	238.7	17.0	59.2
AgriGold A6413 Conventional	238.4	17.5	60.2
Channel 209-53STXRIB	237.9	19.1	59.7
POWER PLUS 2Y06AMXT™*	237.1	17.7	58.9
Channel 204-74VT2RIB	236.2	16.7	59.8
Wyffels W108STXRIB	236.1	18.4	59.5
Wyffels W5448STXRIB	235.7	17.9	59.4
Wyffels W7110	235.4	18.2	60.1
Channel 203-01 Conventional	233.3	17.8	55.9
AgriGold A638-94 STX	232.4	17.2	60.4
POWER PLUS 3H85AMXT™*	232.4	17.2	59.1
AgriGold A6413 STX RIB	232.0	18.8	58.3
AgriGold A6413 STX RIB	231.5	17.7	59.7
Pioneer P0589AMXT	230.3	18.5	59.8
Pioneer P0688AM	229.8	18.0	58.7
Channel 210-79STXRIB	227.9	17.3	60.2
Channel 203-01STXRIB	227.5	17.2	54.9
Channel 206-11STXRIB	223.2	17.0	58.0
POWER PLUS 4A34AMXT™*	221.4	17.6	57.8
Yieldirect 4L87RIB	219.7	17.0	60.5
AgriGold A633-94 STX	219.6	16.8	59.7
AgriGold A636-55VT2RIB	216.9	17.0	62.9
Average	235.6	17.8	59.3

MCHENRY

Narrow Way AG  
Hebron, IL

Planted: April 24 in 30" rows. Planting Population: 35,500. Harvested: October 29. Previous Crop: Soybeans. Herbicide: Roundup, Atrazine, Status. Soil Type: Heavy loam.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
Dekalb DKC58-06	286.3	18.7	60.5
POWER PLUS 3H85AMXT™*	284.6	18.8	58.2
Average	585.5	18.8	59.4

Hughes Hybrids  
Woodstock, IL

Planted: April 28 in 30" rows. Harvested: October 9. Previous Crop: Soybeans. Soil Type: Silt loam.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
POWER PLUS 2Y06AMXT™*	268.6	22.3	58.6
POWER PLUS 4Y34AMXT™*	263.9	22.9	57.7
POWER PLUS 2B77AMXT™*	259.8	21.7	59.2
POWER PLUS 3H85AMXT™*	258.2	22.2	58.5
POWER PLUS 4A67AMXT™*	254.9	24.1	57.3
POWER PLUS 1G48AMXT™*	254.8	21.2	59.3
POWER PLUS 6Z43AMXT™*	254.4	25.5	57.7
POWER PLUS 1N07AMXT™*	252.4	20.7	59.1
POWER PLUS 6P73AMXT™*	248.8	26.0	57.2
POWER PLUS 4J95AMXT™*	246.8	24.7	57.4
POWER PLUS 6F74AMXT™*	237.8	25.2	58.2
POWER PLUS 2F91AMXT™*	237.8	23.0	58.2
POWER PLUS 9U13AMXT™*	233.5	21.0	59.9
Average	251.7	23.1	58.3



Burrus AM Randy McCaskill's grandson Tait won Division Champion & Reserve Champion Showmanship with his bred & owned heifer at the IL State Fair.



Jim Hughes put in the first research plot of 2018 in McHenry Co. Our research team never rests!

Power Plus® 3H85AMXT™\*  
wins at 262 bu/a!

Simons Farms  
Marengo, IL

Planted: April 30 in 30" rows. Planting Population: 33,000. Harvested: October 20. Previous Crop: Soybeans. Herbicide: Roundup, Triflex. Soil Type: Heavy loam. ✓Check Hybrid: Power Plus 1G48AMXT™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	Adj. Test Wt.
✓CHECK	241.9		16.3	60.5
POWER PLUS 9U13AMXT™*	237.5	10	15.8	60.0
POWER PLUS 1N07AMXT™*	241.0	9	16.2	61.0
POWER PLUS 1G39AMXT™*	247.7	6	16.3	61.0
✓CHECK	247.4		16.6	61.2
POWER PLUS 2F91AMXT™*	241.1	7	17.6	61.4
✓CHECK	240.7		16.5	61.2
POWER PLUS 2Y06AMXT™*	261.0	2	17.3	60.3
POWER PLUS 2B77AMXT™*	241.4	8	17.5	60.4
POWER PLUS 3H85AMXT™*	262.0	1	16.9	60.2
POWER PLUS 4Y34AMXT™*	249.5	5	16.6	59.2
POWER PLUS 4A67AMXT™*	255.8	3	17.9	60.0
POWER PLUS 4J95AMXT™*	251.0	4	18.3	59.5
✓CHECK	248.0		17.0	60.8
Average	247.9		16.9	60.5
Check Average	244.5		16.6	60.9



Marcy Burrus spent a summer day with her grandkids, Taylor & Pete Mitchell. Pete spent the summer volunteering at their local zoo.



Power Plus® 3H85AMXT™\* rolled out 262 bu/a for Cliff Simons of McHenry Co.



# MERCER

## Power Plus® 7M83AM™\* tops the plot at 292 bu/a

Brant Sell  
Eliza, IL

**Planted:** April 27 in 30" rows. **Planting Population:** 33,600. **Harvested:** October 13. **Previous Crop:** Soybeans. **Corn Borer Rating:** Light. **Soil Type:** Medium loam. **Weather:** May-normal, June-dry, July-dry, August-normal.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.	1000 Plants /Acre
POWER PLUS 7M83AM™*	292.7	17.2	58.3	34
BURRUS X6R25	272.1	17.3	60.3	33
POWER PLUS 6Z43AM™*	271.9	15.5	57.0	33
POWER PLUS 4A67AMXT™*	263.7	15.9	58.0	33
POWER PLUS 2B77AMXT™*	258.7	16.2	59.0	33
POWER PLUS 4J95AMXT™*	253.2	17.1	58.3	32
POWER PLUS 4Y34AM™*	250.7	15.2	60.0	34
POWER PLUS 3H85AMXT™*	220.7	15.6	59.0	34
Average	260.5	16.2	58.7	33



Brant Sell & his father, Richard worked many harvests together. Richard passed away this year before Brant's plot was harvested. Power Plus® 7M83AM™\* yielded over 292 bu/a in Mercer Co.



A crew from the Burrus production facility near Arenzville, IL enjoyed sporting this popular cap.

## A view into our multi-brand strategy

### Todd Burrus

The multi-brand strategy employed by Burrus is used to help with product diversity as well as access to traits and superior genetics. Let's describe each brand to help you understand its unique position within our company. This approach is all about our customers' satisfaction. As an example, think about going to a grocery store that has several ice cream choices that include multiple brands and flavors.



Our flagship brand since 1935 has been Burrus. It is used for products that are accessed using a license arrangement. Currently, this includes some corn hybrids as well as fuller season soybeans using the LibertyLink® GT27™ technology, launching in 2019.



The Hughes brand joined the family in 2010 as we joined forces with Hughes Seed. The Hughes brand is also used for licensed products in northern Illinois and Wisconsin. Currently, it is used for the early maturity soybeans using LibertyLink® and LibertyLink GT27 technologies.



The Power Plus® brand is the result of the distributorship model developed with Burrus and DuPont over 10 years ago. Because of

product performance, this has become our largest volume of corn products. We also use this brand for our glyphosate tolerant soybean portfolio and Roundup Ready 2 Xtend® varieties.



In 2008, the Hoblit brand was purchased and added to the Burrus family of brands. We have used this brand for full season LibertyLink soybean varieties.



DONMARIO™ brand was introduced this summer as a joint venture between two family-owned seed companies using a genetics-first approach to soybean sales. The breeding efforts include Roundup Ready 2 Xtend, conventional, and Enlist E3™ varieties utilizing global resources and genetics. The first class of DONMARIO products distributed by Burrus includes five Roundup Ready 2 Xtend varieties.



Catalyst is the distributorship brand developed between Syngenta and Burrus. It has been used for certain corn products carrying Agrisure® traits.

This multi-brand approach has helped our growers experience the advantages of both trait and genetic diversity that growers are comfortable with and allows them to use one seed source and trusted advisor.

## We learned a lot in the last year

### Todd Burrus

Last year's Harvest Report was a tribute to my brother, Tom. It is easy for me to look back and smile as I think about the times Tom and I enjoyed in our 50 years of working together. Tom was my supervisor my first day of detasselling. It is also easy to reflect back on the whirlwind of the last year and appreciate all that we have learned.

First, I recall sitting down with family members making up our ownership team a week after Tom passed. We wrote on the whiteboard everything we knew he did. As with any family operation, we redistributed the load. Five of us each took our part of the list. I think I can speak for all of us when I say, Tom always had a lot going on and we all miss him! He really did an amazing job helping us to be prepared.

Second, he truly had his house in order. This fact has made it significantly easier on his family. I am told a low percentage of people have an estate plan and have communicated their plan with those close to them. Do your family and yourself a favor, get a plan!

Tim Greene stepped up as President. I can see growth in him and in his confidence to lead. Tim worked side-by-side with Tom for 21 years and learned well. I am proud to be a source of encouragement to him.

This spring helped affirm the value of seed quality and PowerShield® seed treatment. It was one of the lowest replant seasons ever. Growers continue to enjoy the benefits. Post-emerge spray season affirmed off-target chemical drift. It is a continued concern. We are pleased that we not only offer choice but

can truly help growers consider all the factors necessary to make good decisions.

A few days of heat during pollination hurt a few of our seed fields. I suspect it also helped create some surprises for customers. This is continued confirmation that planting a package of Burrus products provides the best tool to manage future weather patterns. Martha thinks I have been a broken record on this topic for at least 40 years and she has not even turned 40 yet!

The opportunity to tell the Burrus story on RFD-TV was an unexpected lift. It was a positive message about the value of independent seed companies. It also provided a chance to see and hear what sets Burrus apart.

The announcement of the DONMARIO™ brand was another big step. This allows us to introduce a global source of soybean genetics to the American farmer. More importantly, it connects two family seed businesses with similar values and goals. Customer reaction has been very positive as they search for a new source that is founded on genetics and not on traits.

The Burrus reputation for seed quality remains. Kevin Burrus has put another high-quality seed crop in the bin. Listening to Burrus harvest successes has been very encouraging. It has also been a privilege to walk alongside the customers who have experienced weather adversity. Knowing your seed supplier knows and cares has value!

Growers put their trust in us, our information, and our products. We take that responsibility seriously. We look forward to serving you for many years to come!



Four generations of the Schultz family were in attendance at a Burrus plot tour. The Schultz family has held a Burrus Seed dealership since 1955. Now, that's how you Plant Your Legacy.



# MORGAN

## Power Plus® 7M83AM™\* tops plot at 260 bu/a!



Burrus Seed Farms  
Arenzville, IL

**Planted:** May 10 in 30" rows. **Planting Population:** 31,000. **Harvested:** September 15. **Previous Crop:** Corn. **Fertilizer:** N: 200, P: VR, K: VR. **Herbicide:** Breakfree ATZ, ArmesonPro, Aatrex, Prowl H2O. **Insecticide:** Aztec. **Soil Type:** Silt loam. **Weather:** May-dry, June-normal, July-normal, August-normal. **Remarks:** Harvested with Burrus Seed Farms research combine.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt. /Acre	1000 Plants /Acre
Power Plus 7M83AM™*	260.5	22.5	59.7	31
Power Plus 6Z57AMXT™*	249.7	19.9	61.0	32
Power Plus 3H85AMXT™*	247.9	18.0	59.9	30
Power Plus 7M87AMXT™*	246.3	21.4	58.7	31
Burrus 7L11GT	246.3	22.4	61.3	32
Power Plus 7M80™*	243.5	21.8	60.3	31
Power Plus 6C40™*	242.5	22.2	57.5	32
Power Plus 6P73AM™*	242.3	20.1	59.0	30
Burrus X7L12	241.4	22.4	59.0	31
Power Plus 6C41 S™*	241.3	23.8	60.8	31
Burrus 6R20	240.9	18.8	59.8	31
Power Plus 6Z43AM™*	240.5	20.0	61.2	32
Power Plus 4J93AM™*	234.7	17.8	60.0	31
Power Plus 4A67AMXT™*	232.2	18.4	59.3	31
Power Plus 4J90™*	232.1	18.8	60.0	29
Power Plus 4Y34AMXT™*	230.3	17.2	60.0	31
Power Plus 4J95AMXT™*	228.7	18.4	55.1	31
Burrus X6R25	228.5	20.1	59.9	32
Power Plus 6P75AMXT™*	227.8	20.6	57.7	32
Catalyst 6216 3111A	226.3	19.0	55.4	31
Power Plus 5K33AM™*	224.4	18.6	60.1	31
Power Plus 6F74AMXT™*	222.7	19.8	61.6	31
Power Plus 7V66AMXT™*	211.2	20.7	60.2	31
Average	236.6	20.1	59.5	31

Ronald Smith  
Ashland, IL

**Planted:** April 23 in 30" rows. **Planting Population:** 36,000. **Harvested:** September 26. **Previous Crop:** Soybeans. **Soil Type:** Medium loam. **Weather:** May-wet, June-dry, July-dry, August-wet. **✓Check Hybrid:** Power Plus 4J95AMXT™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	1000 Plants /Acre
✓CHECK	243.7		14.1	26
POWER PLUS 4Y34AM™*	254.3	2	13.7	29
POWER PLUS 4A67AMXT™*	254.3	3	14.5	29
✓CHECK	245.6		13.7	31
POWER PLUS 5K33AM™*	244.3	6	14.7	29
BURRUS X6R25	252.6	4	14.8	30
POWER PLUS 6P75AMXT™*	260.9	1	14.4	31
BURRUS X7L12	251.5	5	14.9	31
✓CHECK	245.0		14.2	29
Average	250.2		14.3	29
Check Average	244.8		14.0	29



Derick Roberts, Roy R. & Ronald Smith's Morgan Co. plot averaged over 250 bu/a with Power Plus® & Burrus Hybrids.

## Power Plus® 4A67AMXT™\* wins at 237 bu/a

Bob Schafer  
Murrayville, IL

**Planted:** April 27 in 30" rows. **Planting Population:** 31,500. **Harvested:** October 5. **Previous Crop:** Soybeans. **Insecticide:** None. **Soil Type:** Medium Clay. **Weather:** May-dry, June-dry, July-normal, August-wet. **✓Check Hybrid:** Power Plus 6P75AMXT™\*. **Remarks:** There was a low spot that drowned Power Plus 4A67AMXT™\* and Burrus X6R25.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	235.7		13.0	100	31
POWER PLUS 4J95AMXT™*	208.5	7	12.8	99	31
POWER PLUS 4A67AMXT™*	237.9	1	13.8	99	31
BURRUS X6R25	224.7	4	12.4	99	31
✓CHECK	219.3		14.0	99	31
Wyffels W7456RIB	238.5	2	13.9	99	31
Wyffels W7696RIB	237.0	3	12.5	99	31
Wyffels W7976RIB	224.8	5	13.5	99	31
Wyffels W7888RIB	218.9	6	12.9	99	31
✓CHECK	248.1		13.1	99	31
Average	248.1		13.1	99	31
Check Average	234.4		13.4	99.3	31

John Potter  
Jacksonville, IL

**Planted:** April 16 in 30" rows. **Planting Population:** 36,000. **Harvested:** September 14. **Previous Crop:** Soybeans. **Corn Borer Rating:** Moderate. **Soil Type:** Loam. **Weather:** May-normal, June-dry, July-wet, August-wet.

Brand/Product	Bu. Per Acre	% Moisture	1000 Plants /Acre
Stone 6368RIB	306.1	20.7	37
Stone 6288RIB	302.7	17.7	36
Stone 6188RIB	299.1	17.4	36
Stone 6458RIB	296.4	18.9	36
Dekalb DKC64-34RIB	294.9	20.0	36
Stone 6548RIB	294.8	19.8	36
Pioneer P1197	293.8	18.8	35
BURRUS X6R25	291.2	19.4	36
Dekalb DKC63-21RIB	290.6	18.7	36
Stone 6628RIB	290.3	20.5	36
Stone 6298RIB	289.6	17.3	33
Stone 5858RIB	282.5	17.1	36
Stone 5848RIB	275.4	17.4	36
Pioneer P1366	272.2	19.0	35
Golden Harvest G10S30	271.7	19.1	36
Stone 6468RIB	270.2	17.6	35
POWER PLUS 4A67AMXT™*	266.2	16.6	36
Stone 6468 w/ Awaken	265.1	20.1	35
POWER PLUS 6P75AMXT™*	261.4	17.6	35
Average	285.0	18.6	36



Burrus CSR, Deb Hoots' daughter got married this summer. The newlyweds, Nigel & Ashlee Haynes posed for a photo.



Burrus Product Lead Josh Gunther was interviewed by Farm Gate Media's Stu Ellis at the IL Soy Better Beans event.

# Power Plus® brand Qrome® products – A key to unlocking yield potential

Josh Gunther, C.C.A.

There is a definite need for pyramided Bt corn within the seed corn market. Qrome® products from Corteva™ Agriscience, Agriculture Division of DowDuPont, available in the Power Plus® brand are the answer to this demand. Qrome products contain a proprietary transgene event with a molecular stack of proven Bt proteins from the Herculex® 1 and Herculex® RW traits. These advanced technologies are like the proven traits currently represented in Optimum® AcreMax® XTreme (AMXT) products. They provide a dual mode of action for above and below ground insect protection, as well as 5% integrated refuge in the bag. AMXT provides outstanding insect protection for areas with rootworm infestation. However, there are limited genetics that will accept these traits without affecting the agronomics or yield of the plant. Qrome products' new molecular stack allows a broader set of genetics to be available with rootworm and corn borer

protection.

The Burrus research team has evaluated Qrome products with various sources of genetics over the past four years. From our observations, the insertion of Qrome technology has only improved the hybrids. Burrus feels this new trait will bring growers better yield potential by not only improving our current hybrids, but also allowing a more diverse set of germplasm that would not take the Herculex 1 and Herculex RW traits separately. We have not seen any ill side effects with this technology.

Qrome products have received approval in many key import markets including the United States, Canada, Mexico, and Japan. Currently, the wait is for import approval in China. Once Qrome products are cleared in all import markets, growers can expect to see it in the lineup of Power Plus® brand products from Burrus. We have already advanced a Qrome product for 2019 sales and the seed has been grown awaiting approval.



# Corn planting – relying on weather, soil conditions, and lady luck

Dana Harder

It might seem like a long time until the 2019 planting seasons starts, but a common question that often comes up is, “How much more yield will I achieve with an earlier planting date?” During a wet spring the question is often rephrased, “How much yield am I giving up with later planting?” It is impossible to predict what the weather will have in store for us when next spring rolls around. It is hard enough to get an accurate 10-day weather forecast. There are a few key decision points when it comes to corn establishment dates and there are risks associated with the extremes of planting too early or too late.

The decision process to start planting is heavily centered around crop insurance start dates. This date varies based on where you reside, but probably most who participate in the federal crop insurance program know them by heart. By waiting until this date, you are covered should you need to replant due to inclement weather conditions that result in a poor stand. The payout is usually enough to cover the cost of taking your equipment over these acres again. Keep in mind that you are also covered by the Burrus free replant guarantee that dates back to 1935. When you decide to pull the trigger on planting, you can do so with confidence.

Soil conditions are obviously important for establishment. Conducting tillage or planting into wet soils can cause compaction issues that

are unfavorable for root development. These conditions sometimes lead to seed placement in the furrow side wall resulting in weak and uneven stands. Wet and cold soils often lead to increased incidence of damping off from early season diseases. It takes 80-110 growing degree units for the corn plant to emerge from the soil. Taking that into consideration, you should wait to plant until soil temperatures are in the 50s and the 7 to 10-day forecast is favorable to achieve desirable emergence. At cooler air temperatures, it can take 10-15 days for the corn plant to emerge, but at warmer temperatures it might only take half that time.

In 2018, we conducted a trial evaluating 11 hybrids across 5 planting dates ranging from March 22nd to May 30th. This year’s results demonstrated the risks of planting too early since stands were 66% lower with the March 22nd planting. When reviewing the weather during this timeframe, April’s temperatures were on average 7 to 9 degrees cooler than 30-year average in the Midwest. It is also important to note that this planting was snowed on in the spring. Resulting yields were 30% lower and largely attributed to this reduction in stand. The best corn stands were achieved with all three of our May planting dates. Highest yields were observed with mid-April to mid-May planting dates, with yield starting to decline with the late May planting.

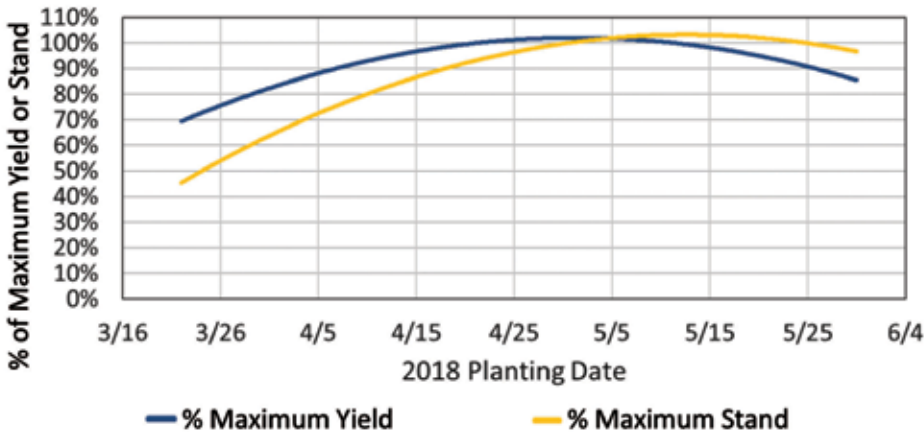
Apart from the March establishment date, our results align very closely to those by Dr. Emerson Nafziger at the University of Illinois

who conducted research from 2007 to 2016 encompassing 22 site years of data. He observed that as planting was delayed to May 30th corn yield was 14% less. Similarly, we observed yields that were 13% less at our May 30th planting date compared to the earlier May planting dates. We did not plant into June, but Nafziger observed a more precipitous drop in yields with up to a 20% decline in yield when planting occurred around June 9th.

It is important to remember that dry down conditions will change as harvest date becomes later with delayed planting. When average daytime temperatures are 80° F, corn will dry down roughly 1 moisture point per day; however, when average day time temperatures are at 60° F it takes twice as long for kernels to dry down. This increases the chance of frost

risk and could lead to reduced yields. Late planted corn also tends to become a magnet for insects and disease and the impact on yield might be greater due to less leaf area present.

I’ve also witnessed higher yields with delayed planting dates, and I attribute this to luck. Sometimes increased rainfall or cooler temperatures during pollination are encountered when the planting date is shifted outside the norm. The likelihood of this happening is greater with earlier planting dates; however, it can occur with later planting dates albeit with lower probability. Therefore, it always best to review planting data over multiple years to understand the long-term yield trends. In general, yields decrease with planting dates later than May 15th.



Influence of 2018 planting date on the percentage of maximum yield and stand averaged across 11 Burrus hybrids.



Interns Zach Edwards & Mason Gardner took stand counts in Shelby Co., MO.



Luke & Christy Turner's daughter Lauren welcomed her baby sister, Clara Grace, on September 24th.



Doug Wilson and Quinn Moller planted Power Plus®4A67™ in McLean Co.



Eric, Deaken & Steve Sigler planted their Burrus hybrids in Champaign Co.

## OGLE

**Power Plus® 2Y06AM™\* & Power Plus® 2B77AMXT™\* top the plot**

Jerry King  
Leaf River, IL

**Planted:** April 25 in 30" rows. **Planting Population:** 34,500. **Harvested:** September 14. **Previous Crop:** Soybeans. **Soil Type:** Medium loam.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
POWER PLUS 2Y06AM™*	264.2	21.1	56.3
POWER PLUS 2B77AMXT™*	244.1	22.7	56.6
Pioneer P0339	243.8	22.0	56.5
Pioneer P0589	241.2	20.6	56.6
Pioneer P0339	240.5	20.5	54.6
Dekalb DKC56-45RIB	235.5	20.3	55.9
POWER PLUS 1G48AMXT™*	234.7	19.3	55.8
Pioneer P0389	233.7	21.3	56.3
DynaGro D45SS65	229.5	18.7	57.6
Wyffels W3488	228.6	19.0	55.5
DynaGro EX1708	227.8	22.2	56.7
DynaGro D43SS81	225.8	19.6	56.8
Wyffels W4196	225.0	20.2	56.4
DynaGro D47SS29	223.6	20.6	57.1
DynaGro EX1880	222.3	21.4	56.1
DynaGro D45SS65	221.0	18.9	56.5
Average	233.8	20.5	56.3

## PEORIA

Peoria County Corn/Soy Promoters  
Peoria, IL

**Planted:** May 1 in 30" rows. **Planting Population:** 35,700. **Harvested:** September 26. **Previous Crop:** Soybeans. **✓Check Hybrid:** Stone 6368RIB.

Brand/Product	Bu. Per Acre	Rank	% Moisture
✓CHECK	265.5		17.8
POWER PLUS 4A67AMXT™*	245.4	13	16.5
NuTech 5FB-9909	270.5	1	15.8
Pfister 71C1PCR	239.8	17	16.0
Pioneer P1197AMT	260.6	2	17.0
Stone 6188RIB	240.4	16	19.5
Beck's 6274SX	250.4	6	18.3
Golden Harvest G12W66-3000GT	248.9	7	19.1
LG LG62C02STX	248.9	9	19.4
Beck's 6368SX	248.9	8	19.6
✓CHECK	259.6		18.9
POWER PLUS 6P75AMXT™*	242.1	15	18.6
NuTech 5FB-6313	245.6	12	18.5
Pfister 73A2SS	239.5	18	19.3
Pioneer P1366AMXT	247.4	10	19.2
Wyffels W7976RIB	251.7	5	18.5
Wyffels W7696RIB	258.1	3	18.9
Stone 6468RIB	252.6	4	18.0
Golden Harvest G15L32-3111	246.7	11	20.0
LG LG5650STXRIB	245.2	14	20.2
✓CHECK	256.5		18.7
Average	250.7		18.5
Check Average	260.5		18.5





New Power Plus® 6Z43AM™\* stole the show at 222.4 bu/a for Ray Lagemann, John Shepherd & Dave Lagemann in Pike Co.

## PIKE

### Power Plus® 6Z43AM™\* tops the plot

Carl Smith  
Nebo, IL

**Planted:** April 26 in 30'' rows. **Planting Population:** 31,500. **Harvested:** September 17. **Previous Crop:** Soybeans. **Fertilizer:** N: 180, P: 150, K: 100. **Corn Borer Rating:** Light. **Soil Type:** Loam. **Weather:** May-dry, June-dry, July-normal, August-normal. **Check Hybrid:** Power Plus 4J95AMX™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	180.1		16.9	100	31
POWER PLUS 5K33AM™*	179.2	4	16.8	100	31
Stone 628RIB	178.6	6	17.9	100	31
POWER PLUS 6Z43AM™*	198.8	1	19.1	100	31
✓CHECK	169.5		16.4	100	30
Stone 6142VT2RIB	171.1	7	17.4	100	30
Stone 6382VT2RIB	188.8	2	18.9	100	30
POWER PLUS 7M83AM™*	173.7	5	19.0	100	31
Stone 5370VTRIB	184.2	3	18.1	100	31
Average	180.5		17.8	100	31
Check Average	174.8		16.6	100	31

Lagemann Bros  
Pearl, IL

**Planted:** April 10 in 30'' rows. **Planting Population:** 30,000. **Harvested:** October 3. **Previous Crop:** Soybeans. **Fertilizer:** N: 160, P: 100, K: 150. **Corn Borer Rating:** Light. **Soil Type:** Loam. **Weather:** May-dry, June-dry, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre	1000 Plants /Acre
POWER PLUS 6Z43AM™*	222.4	15.5	100	61.5	30
POWER PLUS 7M83AM™*	217.3	15.8	100	59.5	30
BURRUS X7L12	215.6	15.9	100	58.5	30
POWER PLUS 5K33AM™*	215.3	15.3	100	60.5	30
POWER PLUS 6P73AM™*	210.3	16.3	100	60.5	30
POWER PLUS 4J93AM™*	206.1	15.9	100	60.0	30
POWER PLUS 4Y34AM™*	191.9	14.9	100	58.5	30
Average	211.3	15.7	100	59.9	30

### Two new experimentals top the plot

Phil Martin  
Fishhook, IL

**Planted:** April 22 in 30'' rows. **Planting Population:** 34,000. **Harvested:** September 28. **Fertilizer:** N: 200, P: 180, K: 180.

Brand/Product	Bu. Per Acre	% Moisture
BURRUS X7L12	224.0	15.4
BURRUS X6R25	202.0	14.6
POWER PLUS 6P75AMX™*	196.0	15.2
POWER PLUS 5K33AM™*	170.0	13.5
POWER PLUS 4Y34AM™*	165.0	13.7
POWER PLUS 4A67AMX™*	164.0	13.7
POWER PLUS 4J95AMX™*	146.0	13.5
Average	181.0	14.2



Jett Page helped his dad, Kyle in Ogle Co.



Kenny Smith of Pike Co. harvested Power Plus® 36A1X.

# Cereal rye use as a cover crop

Dana Harder

Cereal rye is one of the most popular species used as a cover crop. Cereal rye provides many benefits as an efficient scavenger of residual nitrogen, is allelopathic suppressing small seeded weeds, and has a fibrous root system which helps prevent erosion. It is also tolerant of cold temperatures which allows flexibility when it comes to establishment dates in the fall. It can be planted slightly later than other cover crops while still providing a decent stand in the spring. Those with livestock appreciate the ability to graze or wet bale before planting soybeans. There are some caveats to consider when incorporating cereal rye into a traditional row crop rotation.

Establishment dates for cereal rye can be successful into late October, but greatest growth will take place with September seedings. It can be over seeded aerially into standing corn or be broadcasted and incorporated with light tillage. Best results occur when it is drilled or planted. Seeding rates can vary from 40 – 110 lbs. per acre depending on its use and establishment method. If it will be solely used as a cover crop, rates should be towards the lower end. Higher rates should be utilized when it is used as a forage to promote tonnage or with broadcast seeding methods due to the inherent risk for lower stands.

The interval of time between cover crop termination and planting the next crop is important. It is recommended that termination takes place at a minimum of two weeks prior to planting. One reason for doing so is to avoid the potential of cereal rye serving as a “green bridge” to the following crop. Increased

*Pythium* sp. and *Fusarium* sp. infections in corn have been observed. Additionally, true armyworm populations can be much higher in corn fields following cereal rye. Yellow and stunted corn is also commonly reported. This is likely attributed to the dying cereal rye sequestering nitrogen leaving the actively growing corn plant deficient. This nitrogen will become available once the rye residue breaks down. It is recommended that soybean follow cereal rye because of these concerns, but many of these problems can be alleviated when the termination interval is lengthened to two weeks.

A full rate of glyphosate is effective in terminating cereal rye especially before it reaches the boot stage. It is important that day time temperatures be above 55° F and night temperatures be above 40° F to achieve a good kill. Utilizing non-selective herbicides like glufosinate (Liberty®) or paraquat (Gramoxone®) are not preferred since they are heavily dependent on spray coverage. Tillage is also not an effective method for termination and is prone to leave escapes unless deep tillage with multiple passes is utilized.

Cover crops provide a practical approach to conservation by reducing erosion and nutrient loss while improving water quality. They can readily be incorporated into existing cropping rotations. Additionally, there are long term benefits often cited like increased organic carbon that leads to improved soil health and structure. The yield benefits from cereal rye use as a cover crops have been mixed, but many agencies and programs are incentivizing the use of cover crops making it a practice you should consider.



Cereal rye as a cover crop after corn.





SANGAMON

Curtis Biesenthal  
New Berlin, IL

Planted: April 30 in 30'' rows. Planting Population: 34,000. Harvested: September 18. Previous Crop: Soybeans. Fertilizer: N: 183, P: 46 , K: 120. Herbicide: Bicep, Abundit Edge, Halex GT, Aatrex, Brandt. Soil Type: Medium loam. Weather: May-normal, June-normal, July-normal, August-wet. ✓Check Hybrid: Power Plus 6P75AMX™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	230.2		18.1	100	33
POWER PLUS 4A67AMXT™*	235.8	11	17.6	100	32
POWER PLUS 4J95AMXT™*	238.5	8	16.3	100	33
POWER PLUS 5K33AMXT™*	255.1	6	17.1	100	32
Cropland X18111A	257.4	5	19.0	100	30
Stone 6188RIB	261.8	2	18.6	99	31
NK Seeds NK1191-5222	237.8	10	16.9	100	33
BURRUS X6R25	252.6	7	17.9	90	33
POWER PLUS 6F74AMXT™*	238.0	9	17.2	100	32
POWER PLUS 6P75AMXT™*	232.0	12	19.3	100	34
Stone 6368SS	261.6	3	19.6	99	36
Cropland 5335SS/RIB	258.5	4	18.0	99	31
Cropland 5370SS/RIB	265.0	1	17.6	99	30
✓CHECK	220.2		16.8	100	32
✓CHECK	232.3		17.0	100	33
Average	245.1		17.8	99	32
Check Average	227.6		17.3	100	327



Curtis & Dale Biesenthal of Sangamon Co. saw Power Plus® 5K33AMXT™\* yield 255.1 bu/a.



Harvest rolled along for Brent Harrison of Montgomery Co.



Doug Thornton of Greene Co. enjoyed the St. Louis Dealer Kick-Off event.

SHELBY

Power Plus® 6C41 STM\*  
tops plot at 271 bu/a

Ron Schultz  
Stewardson, IL

Planted: April 24 in 30'' rows. Planting Population: 33,400. Harvested: September 28. Previous Crop: Soybeans. Soil Type: Medium loam. Weather: May-dry, June-wet, July-wet, August-dry. ✓Check Hybrid: Power Plus 6P73AMXT™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	274.6		17.8	100	30
BURRUS X7L12	241.7	9	19.7	100	31
POWER PLUS 4J93AMXT™*	257.8	4	18.0	40	33
POWER PLUS 4Y34AMXT™*	256.4	5	16.8	90	30
POWER PLUS 7M83AMXT™*	249.5	8	18.8	95	30
POWER PLUS 6Z43AMXT™*	252.5	7	17.1	100	32
✓CHECK	274.8		18.6	40	32
POWER PLUS 5K33AMXT™*	252.3	6	17.4	50	28
POWER PLUS 6C41 STM*	271.5	1	18.3	30	32
POWER PLUS 6F71 R™*	264.6	3	19.3	30	29
POWER PLUS 6P73AMXT™*	270.2	2	18.9	75	36
✓CHECK	268.4		18.8	50	33
Average	261.2		18.3	67	31
Check Average	272.6		18.4	67	32



Darren Taft with Diana & Marty Fairchild enjoyed a beautiful harvest day in Sangamon Co.

STEPHENSON

COMPARE  
! Mark Horstmeier  
Davis, IL

Planted: April 22 in 30'' rows. Planting Population: 28,500. Harvested: September 23. Previous Crop: Soybeans. Soil Type: Medium loam.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
POWER PLUS 4A67AMXT™*	249.9	21.2	56.8
POWER PLUS 6P75AMXT™*	247.2	23.2	54.4
LG 5499 STX	240.4	19.7	56.7
POWER PLUS 3H85AMXT™*	236.2	20.7	55.8
POWER PLUS 2B77AMXT™*	226.9	21.5	56.3
Channel 207-27STX	219.4	21.9	56.1
POWER PLUS 4J95AMXT™*	211.4	22.1	55.5
Channel 203-01STX	210.5	18.8	55.4
POWER PLUS 1G48AMXT™*	205.9	19.4	55.7
LG 49C99 STX	201.2	18.1	57.9
Average	224.9	20.7	56.1

Jerry King  
Leaf River, IL

Planted: April 28 in 30'' rows. Planting Population: 34,500. Harvested: October 13. Previous Crop: Soybeans. Soil Type: Medium loam. Weather: May-wet, June-wet, July-normal, August-wet.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
Dekalb DKC64-87STX	256.1	18.6	58.0
Dyna-Gro D49SS70RIB	253.4	17.4	58.7
POWER PLUS 4A67AMXT™*	250.6	17.9	57.4
Dekalb DKC62-52STX	249.2	19.1	57.2
Wyffels W5516STX	248.6	17.7	57.8
Pioneer P1017AMXT	247.3	17.9	58.4
Dekalb DKC63-21STX	246.2	17.8	57.3
Dyna-Gro D52SS91RIB (Awake)	243.1	18.3	59.6
Pioneer P1366AMXT	243.1	18.9	58.4
Dekalb DKC58-06STX	242.8	17.8	58.9
Pioneer P1093AMXT	242.5	18.0	60.0
Wyffels W6896STX	240.5	17.8	57.9
Dekalb DKC64-34STX	239.5	18.2	58.7
POWER PLUS 4Y34AMXT™*	239.1	17.6	57.2
Dekalb DKC64-34STX	237.9	17.9	57.7
Dyna-Gro D52SS91RIB	237.5	17.9	58.6
Dyna-Gro D52SS63RIB	236.3	17.9	57.4
Pioneer P0919AM	234.5	17.5	59.5
Dyna-Gro D48SS38RIB	230.6	17.0	58.2
Dyna-Gro D50SS51RIB	230.1	18.0	58.8
Pioneer P1197AMXT	229.8	18.3	59.0
Dekalb DKC60-87STX	220.5	17.2	57.8
Average	240.9	17.9	58.3



Intern Nicholas Simpson posed with his Hughes pick-up.



Power Plus® 7M83AMXT™\* took first place at 187.7 bu/a for Jerald Grimes & Riley Young in Clinton Co., MO.



Power Plus® 7M83AMXT™\* won the plot for Greg Bertz at 152 bu/a after a dry year in Lafayette Co., MO.

TAZEWELL

Tazewell County Corn Growers  
Tremont, IL

Planted: April 28 in 30'' rows. Planting Population: 34,000. Harvested: September 22. Previous Crop: Soybeans. ✓Check Hybrid: Great Lakes 6462 STXRIB.

Brand/Product	Bu. Per Acre	Rank	% Moisture
✓CHECK	252.7		20.1
POWER PLUS 4A67AMXT™*	244.9	37	18.8
Sun Prairie 2785 STXRIB	247.7	34	18.2
✓CHECK	269.9		20.0
Pioneer P1197AMXT	239.5	33	18.1
Pioneer P1138AM	260.6	21	17.9
✓CHECK	252.4		19.7
AgriGold A641-78 STXRIB	256.8	17	18.3
Pfister 71C1 PCR	250.6	26	21.4
✓CHECK	258.1		19.9
Sun Prairie 2708 STXRIB	219.8	38	19.7
AgriGold A642-59 STXRIB	255.0	24	18.9
✓CHECK	258.0		18.9
Croplan 5290 STXRIB	231.2	36	19.8
FS 62ZX1 STXRIB	232.6	35	18.1
✓CHECK	273.9		18.5
Golden Harvest G12W66	253.1	23	18.0
ProHarvest 8277 STXRIB	251.6	25	16.6
✓CHECK	253.2		19.2
DeKalb DKC63-21RIB	269.7	9	18.5
Becks 6368SX	244.5	29	17.8
✓CHECK	257.8		20.0
POWER PLUS 6P73AMXT™*	244.9	28	19.1
Partner Brand 113-05	256.7	19	20.0
✓CHECK	259.4		19.2
Stone 6368 STXRIB	253.7	22	20.8
Wyffels W7696 STXRIB	241.1	30	19.6
✓CHECK	272.5		19.5
Wyffels W7578 STXRIB	249.8	27	17.7
Roeschley RX14-99STX	257.3	16	19.1
✓CHECK	249.9		18.3
ProHarvest 8408 VT2PRO	261.6	2	20.2
DeKalb DKC64-34RIB	256.2	5	17.9
✓CHECK	253.1		19.9
Stone 6458 STXRIB	237.3	20	18.9
FS 64SX1 STXRIB	248.6	12	19.3
✓CHECK	225.6		19.6
Roeschley RX14-70 STX	240.0	11	20.7
Becks 6489SX	232.0	15	19.4
✓CHECK	251.1		19.8
Pfister 75Y1 PCR	255.5	1	21.7
Channel 215-75 STXRIB	239.0	13	18.3
✓CHECK	231.4		18.9
Croplan 5678 STXRIB	256.7	3	20.1
Channel 216-36 STXRIB	237.4	14	19.8
✓CHECK	247.2		19.5
Golden Harvest G18D87	213.2	32	21.0
✓CHECK	236.3		20.2
Average	248.8		19.3
Check Average	249.4		19.4



New Burrus X7L12 won the top spot in Chariton Co., MO for Owen Burris, Todd & David Emmerich of Big Red Farms with 163.9 bu/a.



VERMILION

Burrus X6R25 tops the plot

Dave Johnson  
Hoopeston, IL

Planted: April 30 in 30" rows. Planting Population: 33,000. Harvested: September 18. Previous Crop: Soybeans. Fertilizer: N: 165, P: 0, K: 100. Corn Borer Rating: Light. Soil Type: Light loam. Weather: May-normal, June-normal, July-wet, August-dry.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre	1000 Plants
BURRUS X6R25	202.2	19.5	100	60.9	33
CATALYST 6216 3111A	191.0	18.0	100	60.5	33
POWER PLUS 6P75AMXT™*	190.2	19.6	100	60.9	33
POWER PLUS 4J95AMXT™*	184.5	18.2	100	56.5	33
POWER PLUS 4J90™*	181.6	17.0	100	59.3	33
POWER PLUS 4A67AMXT™*	177.9	18.5	100	59.6	33
POWER PLUS 6F74AMXT™*	177.3	19.8	100	61.9	33
POWER PLUS 3H85AMXT™*	172.9	16.6	100	60.2	33
Average	184.7	18.4	100	60.0	33

Brian Blackford  
Armstrong, IL

Planted: May 14 in 30" rows. Planting Population: 32,500. Harvested: October 24. Previous Crop: Soybeans. Fertilizer: N: 165, P: 250, K: 100. Corn Borer Rating: Light. Soil Type: Heavy Clay. Weather: May-normal, June-normal, July-wet, August-wet.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre	1000 Plants
POWER PLUS 7V66AMXT™*	231.2	14.8	100	59.0	32
POWER PLUS 6P73AMXT™*	215.6	14.1	100	58.0	32
POWER PLUS 4A67AMXT™*	209.8	14.8	100	58.0	32
POWER PLUS 6F74AMXT™*	201.9	15.1	100	62.0	32
Average	214.6	14.7	100	59.2	32



Power Plus® 7V66AMXT™\* topped 231 bu/a for Brenda Blackford & Burrus AM Quinn Moller in Vermilion Co.



Steve Brummel & Erin Holbert planted a data plot in Marion Co.

WHITESIDE

Jeff Merema  
Fulton, IL

Planted: April 26 in 30" rows. Planting Population: 36,000. Harvested: September 26. Previous Crop: Corn. Soil Type: Heavy loam. Weather: May-wet, June-wet, July-normal, August-wet. ✓Check Hybrid: Power Plus 4A67AMXT™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	Adj. Test Wt.
✓CHECK	256.8		19.5	60.3
POWER PLUS 1G48AMXT™*	240.8	9	18.8	60.8
POWER PLUS 2Y06AMXT™*	257.4	4	19.1	59.0
POWER PLUS 2B77AMXT™*	248.2	7	18.9	59.9
Beck's 5765AM	278.1	2	18.6	58.0
POWER PLUS 4Y34AMXT™*	256.9	5	19.2	58.7
✓CHECK	251.7		19.2	59.4
POWER PLUS 4J95AMXT™*	240.8	8	20.3	57.8
Beck's 6274STX	278.7	1	20.3	58.4
POWER PLUS 6P75AMXT™*	249.1	6	22.0	56.7
POWER PLUS 7V66AMXT™*	261.7	3	21.3	58.6
✓CHECK	251.6		19.9	59.2
Average	256.0		19.8	58.9
Check Average	253.4		19.5	59.6

Russ Otten  
Lyndon, IL

Planted: May 1 in 30" rows. Harvested: October 10. Previous Crop: Corn. Soil Type: Heavy loam..

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
POWER PLUS 7V66AMXT™*	228.1	19.8	59.5
POWER PLUS 2Y06AMXT™*	222.8	20.4	56.3
POWER PLUS 4J95AMXT™*	220.1	20.6	56.9
POWER PLUS 4A67AMXT™*	217.3	18.8	58.1
POWER PLUS 3H85AMXT™*	215.6	19.4	57.3
POWER PLUS 4Y34AMXT™*	208.0	19.8	56.3
POWER PLUS 2B77AMXT™*	206.3	18.9	58.2
POWER PLUS 1G48AMXT™*	195.5	19.0	58.0
Average	214.2	19.6	57.6



New Power Plus® 4Y34AMXT™\* won for Nick Rosenbohm of Nodaway Co., MO with 131.8 bu/a under drought conditions.



Burrus Product Lead Josh Gunther & wife Brittany enjoyed a beautiful fall day with their daughters Berkley & Baylor.

Tip back – what caused it?

Josh Gunther, C.C.A.

Many growers this season are seeing tip back in their corn crop. This phenomenon can be seen almost every year in different areas of the corn growing region due to various reasons. Tip back is when grain has not filled all the way to the tip of the ear. Tip back often looks like an empty cob sticking out the tip of the ear without kernels. Occasionally, there will be aborted kernels present on the tip of the cob as well. Tip back can be seen in many different genetics from a diverse set of germplasm and is not specific to any certain hybrid or seed company. There are many several reasons the tips of the ear do not fill completely.

One cause of tip back is stress at pollination. Drought during pollination can delay silk development and in turn, the kernels at the tip of the ear are the last to pollinate. If silks attached to the tip do not emerge to receive the pollen until after pollen shed has ended, tip back will occur. However, this is not the most common reason for tip back this year. Most of the tip back I have seen this summer has aborted kernels on the cob, meaning the plant went through stress after the pollination period. Aborted kernels mean successful pollination occurred, but the plant decided it would not be able to support all the kernels pollinated.

Any stress in the period immediately following pollination can result in aborted kernels. Aborted kernels usually start at the tip and work their way to the base. Final kernel number is determined in the 18-20 days between pollination and the R3 growth stage (milk stage). Any stress limiting the amount of energy the plant can produce can cause kernel abortion. The most common of these stresses is drought. Deficiency of water will limit the amount of transportation and photosynthesis the plant undergoes. Excessive rainfall or irrigation can cause saturated soil which will limit the amount of oxygen available to the

roots which can also cause kernel abortion. Too much or too little water is one reason a plant will abort a portion of its' kernels.

Another reason is high nighttime temperatures. If temperatures do not drop below 70°F, the plant does not have adequate time to recover from high daytime temperatures and respiration rates stay increased throughout the night wasting needed energy for the kernels.

Two other factors that limit the amount of photosynthesis are foliar leaf diseases and cloudy days. If there are heavy foliar diseases present or an extended period without sunshine, plants start aborting kernels because there is not enough photosynthesis transpiring to support all the grain fill needed. Additionally, nutrient deficiencies can cause aborted kernels. If a plant is deficient in any nutrient, it can lead to some kernel abortion.

Finally, one of the most common causes of tip back is uneven emergence. If plants do not emerge evenly, the late emerging plants will continually struggle for sunlight, moisture, and nutrients. The late emerging plants will often have smaller diameter stalks and smaller ears with more tip back.

In summary, any stress during or after pollination can result in tip back. The areas of tip back seem to be widespread this year and are more than likely caused by one or more of the factors above.



Tip back in corn.



Burrus AM Jordan Watson & members of the Sturgeon, MO FFA along with Zach & John Lorentzen harvested the Boone Co., MO plot. Despite dry conditions, Power Plus® 5K33AMXT™\* won first with 151.7 bu/a. The Lorentzen family generously donates the profits from the plot to the Sturgeon FFA.





The Bixenman boys love to be near farm equipment from any era. Colin, Mason & Dylan are the sons of Jeff & Brett of Mason Co., MO.



Zach Whitehill, Daryl Walkup & Jeff Gibson in Buchanan Co., MO watched Power Plus® 7M83AM™\* finish at the top of the plot at 178.2 bu/a.



Burrus intern Mason Gardner prepared field signs to be placed in Burrus fields in MO.



Donnie, Connie, Danny & Dakota McCormick saw Power Plus® 7M83AM™\* yield 93.9 bu/a in a dry year in Chariton Co., MO.



Jillian Monier went home to study for her upcoming University of Illinois finals and got put to work putting Power Plus® hybrids in the ground!



Brandon Snider & Ryan Trasher's Burrus dealership was named the Dealership of the Year for Region 2.



Tom Engemann, Todd Burrus & Mark Engemann spread the Burrus message in Gasconade Co., MO.



Power Plus® 7M83AM™\* yielded 253 bu/a after a dry growing season for Mark Jenkins, Steve Bennett & Ronald & Charlie Jenkins in Carroll Co., MO.

CORN PLANTING RATES

Soil Type	A		B			C	
High organic soils	34 - 40,000		31 - 37,000			28 - 34,000	
Timber soils	31 - 37,000		27 - 33,000			26 - 32,000	
Clay & varied soils	31 - 37,000		27 - 33,000			26 - 32,000	
Sand (dryland)	26 - 32,000		23 - 29,000			21 - 27,000	
Sand (irrigated)	34 - 40,000		31 - 37,000			28 - 34,000	
Brand products	2F91AMXT™* 9U13AM™*	1N07AMXT™* 1G48AMXT™* 2B77AMXT™* 4J95AMX™* 6216 3111A 6R25 5222	6Z57AMXT™* 6F74AMX™* 7M87AMXT™* 1G39AM™* 2Y06AM™*	4Y34AM™* 4J93AM™* 6Z43AM™* 7L12 3110 7M83AM™*	7L11 GT 2R67™* 4J90™* 6R20 7M80™*	3H85AMX™* 4A67AMXT™* 6P75AMX™* 7V66AMXT™*	5K33AM™* 6C41 S™* 6P73AM™* 6C40™*

Best standability is normally achieved at the lowest recommended rates. Allows for a 10% stand loss.

GUIDE TO ACCURATE CORN PLANTING

Use the chart below for setting your planter.

John Deere Finger Pickup Kinze Finger Pickup *1	Reduce speed 10% 35-39# Reduce speed by 33% below 35#
John Deere Vacuum Pickup	A50617 40-88#, A43215 25-50#, H136478 25-35#
Case IH & IHC Early Riser	Corn Drum 30-80#, Popcorn Drum less than 35#, E pocket drum for problem sizes
Case IHC 1200 New Holland SP Series	4855 Disc for 30-70#, 4845 disc below 50#
Ford or White Air 5400	247396B 57-73#, 247454B 42-62#, 247535B 28-50#
White Air 5100	247917B 57-73#, 247707B 42-62#, 248505B 28-50#, 247957B 22-33#
White Air 6000 New Idea 9000	852434 57-73#, 852435 42-62#, 852436 25-50#, 852437 22-33#
Deutz Allis	Seed Disc X Large (585805) 59# & over, Large (586141) 45-60#, Medium (585807) 39-52#, Sm/Medium (1501872) 30-39#, Small (587485) 30# & less



# Agrisure Duracade®

Chris Brown, C.C.A.

Corn rootworm is a constant worry for many growers in our marketing footprint. With the insect population evolving to hatch later, developing resistance to certain BT traits, and modifying its normal life cycle, growers are looking for new ways to combat this costly insect. This is an issue that might not affect everyone’s farm, but we can all empathize and see the need for new and innovative methods for control of rootworm.

Syngenta has developed and released a trait offering called Agrisure Duracade®. This new rootworm technology features a unique mode of action that controls rootworm differently than other traits on the market.

**Agrisure Duracade:**

- Expresses a protein that binds differently in the gut of the rootworm
- Stacked with another rootworm trait to assure it always has two modes of action present in each field
- Provides effective control of western, northern, and Mexican rootworm

With these added benefits, Agrisure Duracade helps to develop healthier, more robust root systems which allow for a healthier more productive corn plant.

Successful corn rootworm management requires a long-term approach to ensure the methods that we use remain viable and effective for years to come. That is why a management approach that utilizes various control measures is recommended. Hybrids that contain Agrisure Duracade act as a foundation for effective control of rootworm and provides multiple modes of action against corn rootworm in one convenient stack. We will be offering the robust Agrisure Duracade® 5222 E-Z Refuge® stack, which combines Agrisure Duracade with Agrisure® RW, Agrisure® CB/LL, Herculex® I,

Agrisure Viptera® and the Agrisure® GT traits. This stack offers industry leading control of rootworm, corn borer, and broad lepidopteran corn pests, utilizing multiple modes of action for rootworm and corn borer. The E-Z Refuge feature provides you with the convenience of an integrated 5% refuge component added into the bag that allows for ease of planting and management of refuge requirements.

Agrisure Duracade is fully approved for cultivation in the United States and Canada, as well as import approval for most global markets. The exception being the European Union which has issued a positive scientific opinion for Agrisure Duracade for food and feed use, allowing for continued progress towards their final approval for import.

Burrus 6R25 5222 is a consistent product that is best placed in rootworm affected areas of central Illinois. Growers who wish to utilize this exciting new trait system will be required to sign a 2019 Grain Use Agreement to use grain and silage produced on-farm or deliver to an accepting location.

RESULTS YOU CAN SEE

FULLER Leaves

THICKER Stalks

STRONGER Root Systems







TNT Farms, Tom & Tami Moore of Winnebago Co. saw Power Plus® 4A67AMXT™\* take first place with 248.6 bu/a.

WWW.BURRUSSEED.COM

## WINNEBAGO

TNT Farms  
Winnebago, IL

Planted: April 28 in 30" rows. Planting Population: 34,000. Harvested: September 21. Previous Crop: Soybeans. Soil Type: Heavy loam. Weather: May-wet, June-wet, July-normal, August-wet. ✓Check Hybrid: Power Plus 3H85AMX™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	Adj. Test Wt.
✓CHECK	197.0		21.4	57.6
POWER PLUS 4J93AM™*	216.2	8	23.2	57.0
POWER PLUS 1N07AMXT™*	192.9	16	19.7	58.8
POWER PLUS 1G39AM™*	194.7	15	20.8	58.4
LG 5499 STX	202.2	12	20.1	57.1
POWER PLUS 1G48AMXT™*	196.6	14	20.4	60.2
Pioneer P0389AMXT	213.9	10	21.0	57.2
POWER PLUS 2F91AMXT™*	209.1	11	20.0	58.3
POWER PLUS 2Y06AM™*	220.7	3	20.4	57.8
✓CHECK	216.0		21.2	56.5
POWER PLUS 2B77AMXT™*	210.8	17	22.5	58.9
Pioneer P0589AMXT	222.2	13	22.0	58.0
POWER PLUS 4Y34AM™*	240.0	5	21.5	55.1

POWER PLUS 4J95AMX™*	238.8	7	21.9	56.4
POWER PLUS 4A67AMXT™*	248.6	1	21.9	57.0
LG 5565 STX	207.4	18	21.3	57.8
POWER PLUS 6P75AMX™*	236.9	9	24.0	56.5
BURRUS X6R25	239.6	6	23.8	58.1
✓CHECK	239.5		22.1	58.1
POWER PLUS 2Y06AM™*	258.2	2	21.1	55.9
POWER PLUS 4Y34AM™*	253.6	4	21.7	56.4
Average	221.7		21.5	57.5
Check Average	217.5		21.6	57.4

 Randy Molander  
Cherry Valley, IL

Planted: April 26 in 38" rows. Planting Population: 26,000. Harvested: October 22. Previous Crop: Corn. Soil Type: Medium loam.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
POWER PLUS 4A67 AMXT™*	215.4	15.9	57.5
Channel 207-27 STX	209.2	16.8	57.7
Average	212.3	16.4	57.6



Jim Gutshall & Burrus AM Riley Young review a pest management chart in northwest MO.



Despite a dry June & July in Atchison Co., MO, Power Plus® 6P73AM™\* hit 262.3 bu/a for Sheldon & Patty Davis.



Jeff Gibson planted his Burrus plot in Clinton Co., MO.



New Power Plus® 6Z43AM™\* topped the Clinton Co., MO plot at 226.5 bu/a for East Buchanan High School FFA.



“At Burrus, we guarantee you  
a growing start.”

Since 1935, we have offered a 100% Free Replant guarantee. The entire Burrus family of products brands qualify for free seed, free seed treatment, if available and free tech fees of equal or less value, if from the same technology family. Ask your Account Manager for full details.



Jeff Merema saw Power Plus® 7V66AMXT™\* top 261 bu/a in Whiteside Co.



Jerry Schuster was bundled up for planting in Cooper Co., MO.



Dave Johnson and Burrus AM Quinn Moller put in a test plot in Vermilion Co.



Griffin & Gannon Greene posed for a picture with their Bubbles, Marcy Burrus, while in Branson, MO for a Burrus Sales training weekend.

ATCHISON

Power Plus® 6P73AM™\*  
makes 262 bu/a!

Sheldon & Derek Davis  
Fairfax, MO

Planted: AApril 27 in 30'' rows. Planting Population: 32,000. Harvested: September 28. Fertilizer: N: 180/25, P: 60, K: 60. Herbicide: Acuron, Atrazine-Glyphosate. Soil Type: Medium loam. Weather: May-normal, June-dry, July-dry, August-wet. ✓Check Hybrid: Power Plus 7M83AM™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	265.5		15.5	100	27
POWER PLUS 4Y34AM™*	255.8	3	15.3	100	28
POWER PLUS 4J93AM™*	249.5	5	15.4	90	28
POWER PLUS 5K33AM™*	254.5	4	15.6	100	28
✓CHECK	254.5		16.7	100	29
POWER PLUS 6Z43AM™*	253.6	2	16.6	80	28
POWER PLUS 6P73AM™*	262.3	1	16.1	100	25
BURRUS X7L12	237.0	6	18.2	90	27
✓CHECK	247.5		16.2	100	29
Average	253.4		16.2	96	28
Check Average	255.8		16.1	100	28

BOONE

John & Zach Lorentzen  
Sturgeon, MO

Planted: April 24 in 30'' rows. Planting Population: 30,000. Harvested: September 14. Previous Crop: Soybeans. Fertilizer: N: 180, P: 60, K: 60. Corn Borer Rating: Light. Soil Type: Medium Clay. Weather: May-dry, June-dry, July-dry, August-wet. Remarks: Great yields for such a tough environment.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt.	1000 Plants /Acre
POWER PLUS 5K33AM™*	151.7	18.7	100	59.1	29
POWER PLUS 6Z43AM™*	146.5	19.0	100	61.7	26
BURRUS X7L12	143.2	19.6	70	59.9	28
POWER PLUS 4J93AM™*	142.9	18.0	70	58.5	28
POWER PLUS 4Y34AM™*	141.9	17.3	100	59.3	28
POWER PLUS 7M83AM™*	136.9	22.1	100	59.5	28
POWER PLUS 6C41 S™*	134.0	18.6	100	58.6	29
POWER PLUS 6P73AM™*	132.5	18.1	100	59.0	27
Average	141.2	18.9	92	59.4	28



BUCHANAN

Bret Farmer  
Gower, MO

Planted: April 6 in 30'' rows. Planting Population: 30,500. Harvested: October 3. Previous Crop: Soybeans. Soil Type: Silt loam.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
Hoegemeyer 8217AM	214.4	14.9	56.2
POWER PLUS 4J93AM™*	210.2	13.3	60.6
Hoegemeyer 8525AM	208.3	14.5	60.9
POWER PLUS 4Y34AM™*	198.9	13.0	54.9
POWER PLUS 7M83AM™*	195.6	13.9	58.7
AgriGold A60-77VT2P	193.7	13.5	60.7
AgriGold A641-06STX	189.5	13.9	60.7
POWER PLUS 5K33AM™*	179.7	14.2	57.6
AgriGold A6572VT2P	175.9	15.4	58.9
AgriGold A646-12STX	174.4	14.1	62.3
AgriGold A6544VT2P	174.1	15.3	52.6
BURRUS X6263	172.6	13.9	57.1
AgriGold A645-10VT2P	164.4	14.3	60.0
DeKalb DKC60-88RIB	154.3	13.3	55.9
POWER PLUS 6P73AM™*	151.5	13.5	56.2
DeKalb DKC62-53RIB	139.4	13.8	58.7
DeKalb DKC64-35RIB	136.8	13.8	56.2
DeKalb DKC63-21RIB	116.9	13.9	59.1
Pioneer P1366AM	113.2	14.6	56.2
Average	171.8	14.1	58.1

Daryl Walkup  
Gower, MO

Planted: April 23 in 30'' rows. Planting Population: 30,000. Harvested: October 5. Previous Crop: Soybeans. Fertilizer: N: 180, P: 60, K: 70. Herbicide: Atrazine, Degree Xtra, Latigo, Roundup. Soil Type: Medium loam. Weather: May-normal, June-dry, July-dry, August-normal. ✓Check Hybrid: Power Plus 4J93AM™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	126.2		15.7	80	28
POWER PLUS 4Y34AM™*	138.0	5	14.8	100	30
POWER PLUS 5K33AM™*	136.3	6	14.4	90	29



David Dobson saw Power Plus® 7M83AM™\* crank out 292.3 bu/a in his Lafayette Co., MO plot.

POWER PLUS 6P73AM™*	140.4	4	14.5	70	26
POWER PLUS 6Z43AM™*	162.9	2	14.1	90	26
POWER PLUS 7M83AM™*	178.2	1	15.0	100	25
BURRUS X7L12	154.6	3	15.3	100	30
✓CHECK	179.4		14.9	80	26
Average	152.0		14.8	89	28
Check Average	152.8		15.3	80	27

CARROLL

Mark and Ronnie Jenkins  
DeWitt, MO

Planted: April 23 in 30'' rows. Planting Population: 34,000. Harvested: October 10. Previous Crop: Soybeans. Fertilizer: N: 200, P: 80, K: 100. Insecticide: None. Corn Borer Rating: Light. Soil Type: Medium loam. Weather: May-dry, June-dry, July-dry, August-dry. ✓Check Hybrid: Power Plus 7M83AM™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	245.4		16.7	100	33
POWER PLUS 4Y34AM™*	241.4	4	16.0	100	33
POWER PLUS 4J93AM™*	223.4	6	16.3	100	32
POWER PLUS 5K33AM™*	222.4	7	16.5	100	33
POWER PLUS 6P73AM™*	246.7	3	16.7	100	33
✓CHECK	253.6		17.0	100	33
POWER PLUS 6Z43AM™*	245.0	2	16.5	100	33
POWER PLUS 7M83AM™*	253.0	1	16.6	100	33
BURRUS X7L12	226.4	5	17.4	100	32
✓CHECK	240.3		16.7	100	32
Average	239.8		16.6	100	33
Check Average	246.4		16.8	100	33

Plant  
Your  
Legacy



CHARITON

Big Red Farms  
Salisbury, MO

Planted: April 22 in 30'' rows. Planting Population: 30,000. Harvested: September 21. Previous Crop: Soybeans. Fertilizer: N: 195-NH3, P: 165, K: 110. Herbicide: Dual, Atrazine. Insecticide: None. Corn Borer Rating: Moderate. Soil Type: Medium loam. Weather: May-dry, June-dry, July-dry, August-dry. ✓Check Hybrid: Power Plus 4J93AM™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	158.9		16.5	100	27
BURRUS 216879Y	166.4	3	20.0	100	29
POWER PLUS 6C41 S™*	141.5	11	21.8	95	30
✓CHECK	157.0		17.5	100	30
BURRUS X7L12	163.9	1	18.9	100	30
POWER PLUS 4Y34AM™*	160.8	2	17.0	100	30
✓CHECK	146.2		17.3	100	29
BURRUS 356778Z	142.6	9	16.1	100	29
POWER PLUS 6Z43AM™*	151.6	5	18.5	100	30
✓CHECK	154.1		17.2	100	30
POWER PLUS 6P73AM™*	149.1	10	18.0	100	30
BURRUS X6R25	152.1	8	19.0	100	30
BURRUS 276365Y	160.5	4	19.6	100	29
✓CHECK	161.4		17.4	100	30
POWER PLUS 5K33AM™*	161.1	7	16.8	100	29
POWER PLUS 7M83AM™*	164.8	6	18.8	100	30
✓CHECK	166.5		17.3	100	30
BURRUS MIX	147.0	12	18.0	100	29
POWER PLUS 4J90™*	142.0	14	17.3	100	30
POWER PLUS 4J90™*	143.7	13	16.3	100	30
Average	154.6		18.0	100	30
Check Average	157.3		17.2	100	29

McCormick Farms  
Sumner, MO

Planted: April 24 in 30'' rows. Planting Population: 31,000. Harvested: September 18. Previous Crop: Soybeans. Fertilizer: N: 150 NH3, P: VRT, K: VRT. Soil Type: Clay loam.

Brand/Product	Bu. Per Acre	% Moisture
Dekalb DKC65-81RIB	102.1	17.6
MorCORN 3617 VT2P	98.6	14.3
MorCORN 3544 VT2P	97.8	14.1
POWER PLUS 7M83AM™*	93.9	15.1
MorCORN 4457 VT2P	92.5	15.5
POWER PLUS 6Z43AM™*	91.7	14.7
Dekalb DKC65-95RIB	90.3	15.6
Dekalb DKC62-53RIB	87.4	15.4
MorCORN 4319 VT2P	86.5	15.8
MorCORN 4180 VT2P	84.6	13.4
Dekalb DKC66-75RIB	83.3	17.0
MorCORN 4750 VT2P	82.5	16.0
POWER PLUS 5K33AM™*	82.4	14.8
MorCORN 4255 VT2P	82.2	14.4
BURRUS X7L12	81.9	15.5
POWER PLUS 4Y34AM™*	80.1	13.9
MorCORN 4178 VT2P	78.9	14.6
MorCORN 4725 VT2P	77.2	19.7
Dekalb DKC62-98RIB	74.0	13.8
POWER PLUS 4J93AM™*	72.2	14.3
Dekalb DKC64-35RIB	69.8	14.9
Dekalb DKC60-55RIB	68.7	13.8
Dekalb DKC60-88RIB	63.5	14.3
POWER PLUS 6P73AM™*	50.9	16.7
Average	82.2	15.2



Hedge against drought with water optimization technologies

Intensive research has introduced an era of unprecedented control over crop production for today's grower. Multiple tools designed to manage pests, weeds, and soil fertility are now readily available. Two production elements that remain outside a grower's control are temperature and rainfall. Portions of the Burrus footprint experienced drought conditions this growing season as well as excessive temperatures during pollination. Drought and elevated temperatures during flowering had a negative impact on yields in these regions. In fact, research shows four days of visible wilting can decrease grain yield by as much as 50% during the most critical pollination period. Researchers have worked to change a corn plant's ability to handle the uncontrollable, developing hybrids that use water more efficiently with greater stress tolerance. Agrisure Artesian® and Optimum® AQUAmax® products are two of these technologies.

Agrisure Artesian® was developed by Syngenta scientists by identifying genes associated with increased drought tolerance. Then, they selected plants containing these genes for use in testing and development. Resulting new hybrids were extensively tested in both water limited environments and under high yielding, low stress conditions. Only hybrids containing the specific gene coding for improved drought tolerance and yielding significantly better than check averages in both low stress and drought environments receive the Artesian™ label.

Optimum® AQUAmax® products, available



Todd Burrus' smile brightens when he is with grandsons Mason & Adam Krohe.

in the Power Plus® brand, are the result of years of research and development by Corteva™ Agriscience, Agriculture Division of DowDuPont. Researchers identify lines which perform well under drought conditions and have desirable agronomic traits. Then, they create a genetic fingerprint of these lines and developed new hybrids, which is called marker assisted breeding. New hybrids are tested to ensure the identified genes were inherited. If a hybrid inherited the genes coding for enhanced stress tolerance, it advances to yield testing under drought conditions and in high yielding environments. Hybrids which exceed check means under drought conditions and equal or exceed check means in high yielding environments are advanced for commercialization.

Neither Agrisure Artesian® nor Optimum® AQUAmax® traits are transgenic. Both were developed utilizing genes native to corn and therefore it is possible to offer conventional hybrids carrying the labels. Both products are available in premier genetic packages, adding yield potential in normal, low stress growing seasons. Additionally, both technologies offer about a 10% increase in yield potential under drought conditions when compared to similar hybrids that do not have water optimization technology as part of their genetic make-up. Through our multi-brand strategy, Burrus can offer growers both Optimum AQUAmax and Agrisure Artesian products to protect your bottom line when it rains and when it doesn't.

CLINTON

Power Plus® 6Z43AM™\* brand is first!

COMPARE East Buchanan High School FFA Gower, MO

Planted: April 12 in 30'' rows. Planting Population: 28,500. Harvested: September 15. Previous Crop: Soybeans. Soil Type: Medium loam. Weather: May-normal, June-dry, July-dry, August-wet. ✓Check Hybrid: AgriGold A6499.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	210.2		16.2	100	28
POWER PLUS 4Y34AM™*	202.6	18	16.8	100	28
Hoegemeyer 7946AM	193.9	20	16.0	100	28
POWER PLUS 4J93AM™*	188.8	21	16.6	100	28
Becks 6082AM	202.2	19	15.6	100	28
POWER PLUS 5K33AM™*	205.6	16	16.4	100	28
✓CHECK	193.4		16.5	100	28
Pioneer P1138	215.9	7	16.2	100	28
Syngenta 12W66	193.1	17	15.7	100	28
AgriGold A642-59	217.9	5	17.0	100	28
Pioneer P1244	202.8	12	17.3	100	28
POWER PLUS 6Z43AM™*	226.5	1	16.9	100	28
AgriGold A6544	211.5	10	16.2	100	28
Becks 6368SX	214.5	9	17.0	100	28
Lewis R1414	222.5	2	17.7	100	28
BURRUS X7L12	200.0	13	15.6	100	28
POWER PLUS 6P73AM™*	196.4	15	16.0	100	28
Golden Harvest 14R38	196.5	14	16.9	100	28
AgriGold A6572	216.7	6	17.1	100	28
Lewis 14DD849	208.1	11	16.7	100	28
AgriGold A6579	215.4	8	16.3	100	28
POWER PLUS 7M83AM™*	219.2	4	16.3	100	28
AgriGold A645-10	221.1	3	17.2	100	28
✓CHECK	186.0		16.0	100	28
Average	206.7		16.5	100	28
Check Average	196.5		16.2	100	28.5

Grimes Farms  
Osborn, MO

Planted: May 1 in 30'' rows. Planting Population: 30,000. Harvested: September 24. Previous Crop: Soybeans. Fertilizer: N: 200, P: 80, K: 80. Soil Type: Medium loam. Weather: May-normal, June-dry, July-dry, August-normal. ✓Check Hybrid: Power Plus 4J93AM™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	158.8		15.8	100	20
BURRUS 676044Z	146.9	10	15.7	60	19
BURRUS 276365Y	171.3	3	15.9	100	24
✓CHECK	170.0		15.7	90	24
BURRUS X6R25	143.5	12	16.0	90	23
POWER PLUS 6P73AM™*	176.1	4	15.4	90	23
POWER PLUS 5K33AM™*	172.8	5	15.2	90	25
✓CHECK	179.9		15.3	80	25
POWER PLUS 7M83AM™*	187.7	1	15.6	100	21
POWER PLUS 6Z43AM™*	163.1	8	15.3	90	22
✓CHECK	168.4		15.6	60	21
POWER PLUS 6C41 S™*	165.7	2	18.0	100	25
BURRUS 356778Z	137.8	11	14.1	60	28
BURRUS 564474Y	147.4	9	14.8	80	25
✓CHECK	148.6		15.0	80	19
BURRUS X7L12	136.7	6	15.0	60	24
BURRUS 216879Y	134.8	7	18.0	70	24
✓CHECK	138.5		14.0	50	22
Average	158.2		15.6	81	23
Check Average	160.7		15.2	77	22





The Mahnken Family dealership was a Break the Bank winner at the Kansas City Dealer Kick-Off. David, Noah, Joel, Becky, Jennifer, Luke & Paul Mahnken were presented the award by Donny Marnin, Burrus AM.

# Seventh generation Hughes family farmer

## Dave Hughes

Last May, Grant Hughes returned to the farm from college to continue in the footsteps of his ancestors in McHenry Co., IL. Grant, eldest son of Don and Kim Hughes, is a 2018 graduate of the University of Illinois with a degree in Crop Science. Grant is currently working at Hughes Seed Farms, northern partner of Burrus Seed Farms. At Woodstock, Burrus early maturity corn and soybean seed is produced, conditioned, and distributed to growers. Grant represents the seventh generation of Hughes family farmers who have farmed

in Hartland township in northeastern Illinois continuously since 1846. The Hughes farm has changed over the years, starting as a small dairy operation, then diversified livestock and crop operation with small grain (oat and barley) production, and transitioning later into a regional seed corn company. In 2010 the Burrus and Hughes families joined their seed companies into one combined entity. We are proud to see Grant join his father, uncles and grandfather and the Burrus family in continuing our family business providing high performance seed products to our customers.



Earl, Don, Jack, & Grant Hughes on Grant's first day back on the farm full-time in Woodstock, IL. Grant and Jack are the 7th generation of Hughes family on the farm.



Hughes Hybrids founder, Earl Hughes circa 1920.

## COOPER

Travis Fenical  
Blackwater, MO

Planted: April 28 in 30" rows. Planting Population: 30,000. Harvested: September 24. Previous Crop: Soybeans. Fertilizer: N: 175-NH3, P: 50, K: 50. Herbicide: Atrazine, Realm Q. Insecticide: None. Corn Borer Rating: Moderate. Soil Type: Light Clay. Weather: May-dry, June-dry, July-dry, August-dry.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre	1000 Plants
POWER PLUS 6Z43AM™*	112.1	15.6	100	59.0	29
POWER PLUS 6P73AM™*	112.1	15.6	100	59.0	29
BURRUS X7L12	111.0	15.8	100	58.0	29
POWER PLUS 5K33AM™*	109.4	14.9	100	58.0	28
Average	111.2	15.5	100	58.5	29

## LAFAYETTE

Power Plus® 7M83AM™\*  
is first at 152 bu/a

COMPARE  
! Greg Bertz  
Mayview, MO

Planted: April 27 in 30" rows. Planting Population: 32,000. Harvested: October 1. Previous Crop: Soybeans. Fertilizer: N: 160-Nh3, P: 103, K: 35-15-1.5. Herbicide: Armeson Pro, Roundup, Atrazine. Insecticide: None. Corn Borer Rating: Light. Soil Type: Medium loam. Weather: May-dry, June-dry, July-dry, August-dry. ✓Check Hybrid: Lewis 16DP887.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	184.9		16.0	100	28
POWER PLUS 4J93AM™*	146.8	7	14.7	100	30
Lewis16DP719	131.6	12	14.2	100	30
POWER PLUS 5K33AM™*	151.5	5	14.6	100	30
Lewis11DP768	156.4	2	14.4	100	30
Lewis1313	135.4	11	14.0	100	30
POWER PLUS 6Z43AM™*	144.9	8	14.5	100	30
✓CHECK	145.8		15.3	100	30
POWER PLUS 6C41 S™*	125.0	10	15.6	100	29
POWER PLUS 6P73AM™*	107.1	13	14.6	100	30
Lewis14DP829	125.9	9	14.2	100	30
Lewis14DP857	132.8	6	14.2	100	30
POWER PLUS 7M83AM™*	152.1	1	14.9	100	30
BURRUS X7L12	137.0	3	15.1	100	30
Lewis15DP899	135.7	4	14.5	100	30
✓CHECK	149.9		14.9	100	30
Lewis18DP929	106.6	14	15.0	100	28
Average	139.4		14.7	100	30
Check Average	160.2		15.4	100	29

Santa Fe Agri Leaders  
Alma, MO

Planted: April 27 in 30" rows. Planting Population: 32,000. Harvested: October 3. Previous Crop: Corn.

Brand/Product	Bu. Per Acre	% Moisture
DeKalb 6595	246.4	14.3
LG 5650STX	230.7	14.5
Mycogen 12G35RA	226.6	14.7
Beck's 6365AM	225.1	13.8
MorCorm MC4457	224.7	14.1
ProHarvest 8312VT	219.0	14.1
Pioneer P1366AM	218.8	13.2

POWER PLUS 6P73AM™*	218.2	13.6
Golden Harvest G11A33	194.3	13.0
Average	222.6	13.9

Power Plus® 7M83AM™\*  
is second

Santa Fe Agri Leaders  
Alma, MO

Planted: April 27 in 30" rows. Planting Population: 32,000. Harvested: October 3. Previous Crop: Corn.

Brand/Product	Bu. Per Acre	% Moisture
LG 68C22VT2	232.1	15.7
POWER PLUS 7M83AM™*	227.8	14.0
DeKalb DKC66-75RB	226.9	13.7
Pioneer P1637AM	225.7	13.6
MorCorm 4725VT2	223.5	15.5
Beck's 6589V2P	219.8	14.4
Mycogen MY13C17	218.4	14.1
ProHarvest 8404VT	215.6	14.4
Golden Harvest G14V04	207.5	14.4
Average	221.9	14.4

Power Plus® 7M83AM™\*  
makes 292 bu/a

David Dobson  
Lexington, MO

Planted: April 18 in 30" rows. Planting Population: 32,500. Harvested: September 12. Previous Crop: Soybeans. Fertilizer: N: 200-NH3, P: VRT, K: VRT. Herbicide: Balance Flexx, Roundup, Atrazine. Corn Borer Rating: Light. Soil Type: Medium loam. Weather: May-normal, June-dry, July-dry, August-dry. ✓Check Hybrid: Power Plus 7M83AM™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
BURRUS X7L12	237.4	10	20.4	100	29
POWER PLUS 6Z43AM™*	276.5	8	18.4	100	29
✓CHECK	292.7		18.8	100	30
POWER PLUS 4Y34AM™*	268.6	7	17.0	100	30
POWER PLUS 4J93AM™*	268.6	6	18.3	100	31
POWER PLUS 5K33AM™*	270.2	5	19.0	100	31
POWER PLUS 6P73AM™*	273.8	3	18.8	100	30
POWER PLUS 6C41 S™*	286.5	2	20.9	100	30
POWER PLUS 6Z43AM™*	270.4	4	18.6	100	30
POWER PLUS 7M83AM™*	292.3	1	18.4	100	30
BURRUS X7L12	242.5	9	21.1	100	31
✓CHECK	267.8		18.7	100	31
Average	270.6		19.0	100	30
Check Average	280.2		18.8	100	305

Santa Fe Agri Leaders  
Alma, MO

Planted: April 27 in 30" rows. Planting Population: 32,000. Harvested: October 3. Remarks: Early season.

Brand/Product	Bu. Per Acre	% Moisture
Pioneer P1197	243.2	14.2
ProHarvest 8277VT	236.0	13.7
Beck's 6274V2P	230.8	14.7
POWER PLUS 4Y34AM™*	223.6	14.1
DeKalb DK64-35	222.0	14.3
MorCorm MC 4319 VT2	219.4	14.5
Mycogen MY10228RA	211.4	13.7
LG 59C41	209.5	13.9
Golden Harvest G07H81	201.0	13.6
Average	221.9	14.1





At 234.8 bu/a, Wayne & Stan Harmsen of Clinton Co, IA saw Power Plus® 4J95AMX™\* take first place.



New Burrus X7L12 cranked out 218.8 bu/a for Kenny & Jeanna Rutter of Shelby Co., MO under dry conditions in May & June.



John Cramer of Livingston Co., MO saw Power Plus® 7M83AM™\* yield 108.9 bu/a under tough drought conditions.



In drought conditions, Power Plus® 6P73AM™\* rolled out 183.5 bu/a to win the plot for Phil & Anthony Henke in Saline Co., MO.

## LIVINGSTON

John Cramer  
Chillicothe, MO

**Planted:** April 23 in 30" rows. **Planting Population:** 30,000. **Harvested:** September 24. **Previous Crop:** Soybeans. **Fertilizer:** N: 165, P: 50, K: 80. **Herbicide:** Brawl ATZ, Callisto. **Corn Borer Rating:** Light. **Soil Type:** Medium loam. **Weather:** May-normal, June-dry, July-dry, August-dry. **Remarks:** Competitive plot weighed by Pro Harvest.

Brand/Product	Bu. Per Acre	% Moisture
Dekalb DKC62-53RIB	142.8	13.5
Pioneer P1244AM	123.4	14.3
Pro Harvest 8404	119.8	16.7
Pioneer P1138AM	112.5	13.8
POWER PLUS 7M83AM™*	108.9	16.0
POWER PLUS 6Z43AM™*	106.5	14.6
Dekalb DKC62-93RIB	104.5	13.8
Dekalb DKC60-88RIB	103.4	13.1
Pioneer P1197AM	94.8	14.2
BURRUS X7L12	92.7	15.9
Pro Harvest 8015	89.4	13.3
POWER PLUS 6P73AM™*	88.4	13.5
POWER PLUS 5K33AM™*	64.3	13.8
POWER PLUS 4Y34AM™*	53.3	15.6
POWER PLUS 4J93AM™*	49.6	15.4
Average	97.0	14.5

## MACON

Lee Bixenman Farms  
Callao, MO

**Planted:** April 20 in 30" rows. **Planting Population:** 30,000. **Harvested:** September 15. **Previous Crop:** Soybeans. **Fertilizer:** N: 165, P: VRT, K: VRT. **Herbicide:** Charger Max ATZ. **Insecticide:** Pyridine. **Corn Borer Rating:** Light. **Soil Type:** Medium loam. **Weather:** May-dry, June-dry, July-dry, August-dry. **✓Check Hybrid:** Power Plus 6P73AM™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	135.1		22.0	90	26
POWER PLUS 4Y34AM™*	141.5	5	19.1	90	28
POWER PLUS 4J93AM™*	139.1	7	19.3	90	29
POWER PLUS 5K33AM™*	145.1	3	19.2	80	29
✓CHECK	140.8		20.6	90	29
POWER PLUS 6Z43AM™*	154.7	2	20.3	90	30
POWER PLUS 6P73AM™*	143.3	4	20.2	100	29
POWER PLUS 7M83AM™*	159.4	1	20.1	100	28
✓CHECK	142.9		20.2	100	29
Average	144.7		20.1	92	29
Check Average	139.0		21.1	95	275

[WWW.BURRUSSEED.COM](http://WWW.BURRUSSEED.COM)

# Planting a portfolio of products

Josh Gunther, C.C.A.

One of the most important decisions a grower will make every year, is what seed they are going to buy. When growers choose their seed, they are ultimately deciding their success for the coming year. That seems very straight forward, but when you begin to think about all of the different variables that could happen in the coming year, with no way to predict them, it starts to seem like a daunting task. How do you know which products to pick if you don't know what kind of environments they will be exposed to in season?

Don't fret, Burrus has some friendly advice that will help maximize your bottom line no matter what kind of year next year turns out to be. Our main advice would be to plant a portfolio of products. Everyone would like to have the highest yielding hybrid or variety and if you knew which one was going to yield the most on your farm next year you would only plant 1 hybrid and 1 variety. However, there is no way of knowing which product will perform the best next year. Even if you had an on-farm trial to sort out which hybrids performed the best last year on your farm, rarely does the same product win multiple years in a row. In Arenzville every year we plant out entire corn line up in a show plot in the same field as we have for the past 43 years. Out of these 43 years there has only been 3 years where the previous winner won again the next year.

The way around not knowing what product will do the best in the coming year is diversification. If you plant a variety of good products the result will be more profitable year in and year out rather than trying to pick one product that you think will do the best in the coming year.

When trying to pick out a portfolio to plant it is important to keep a few different items in mind. The first is maturity. Every

farm should plant a range in maturities (RM) in both their corn and soybeans. Most years there are certain RM's that perform better in a given year. The issue is this RM changes every year depending on the weather. If you plant a spread of maturities the odds will be in our favor that we have a product out that will perform to its full potential every year and help maximize your profits. Another detail to pay attention to in corn is the silk timing. The short window around silk emergence is a very critical period where many things can go astray. If there are increased stresses during pollination yield can be dramatically decreased. When picking corn hybrids keep silk timing in mind as well as maturity, the two don't always correlate the same across maturities.

When selecting your seed portfolio, another element to keep in mind is stress tolerance. When you are looking at corn hybrids, we know that there are racehorse and workhorse hybrids. We should select a good mix of both when selecting seed. If the ratio is heavy toward racehorse hybrids and the coming year turns out to be a stressful year then we would be losing out on potential yield. It becomes very important to balance our ratio of workhorse and racehorse hybrids.

The last item to keep in mind during your seed selection process is genetic diversity. Burrus, through our multi-brand strategy, is able to bring you a very wide variety of genetically diverse germplasm to be able to diversify your farm while being able to have a one stop shop for your seed needs.

At the end of the day, when selecting seed for the coming year, keep in mind that growers should be planting a broad portfolio to be able to spread their risk and help maximize their profits in the coming years. If you have any questions around how to set up the best portfolio for your farm, please contact your local Burrus Account Manager.

# Wear Burrus and be rewarded

Burrus Dealers Jason and Gary Berg of Fayette Co., IL were featured in an online IL Farm Bureau article on double-crop soybeans. In addition to the article, there were photos of the Berg's in their Burrus caps. They might not have known it at the time, but the photo earned them \$50!

If a photo of you wearing the Burrus, Hoblit, Hughes, or Power Plus® logo on a cap, jacket, or shirt is published in a print or online magazine or newspaper or appears on television, Burrus will send you a check. All you need to do is wear your favorite seed supplier's name and send us the clipping explaining when and where it was published. Sorry, if your photo appears in a Burrus publication, it is not eligible for the reward.

Be sure to wear your favorite Burrus or Burrus family of brands logo every day so you do not miss an opportunity. Your \$50 reward is waiting!



Jason and Gary Berg check a wheat head during harvest in Fayette Co., IL. Photo by Daniel Grant for IL Farm Bureau.





Sales Manager Tom Sandahl took his grandsons Brock & Maddin on their first ice fishing trip.



Power Plus® 7M83AM™\* cranked out 159.4 bu/a despite a very dry growing season for Gail & Jeff Bixenman in Macon Co., MO.



Al Jacob of Warren Co., MO saw new Power Plus® 4Y34AM™\* at the top with 198.1 bu/a.



Greg & Marj Tieman's Saline Co., MO plot averaged 257.1 bu/a after a dry year.

# Hybrid alfalfa... yeah, it's complicated

Dave Hughes

Hughes 388HY brand alfalfa seed with Sunstra® is the most popular line Burrus offers. What is it about this product that growers like? The reason is the msSUNSTRA® hybrid technology that has created a whole new family of alfalfa.

Until the release of hybrid alfalfa, all alfalfas had been open pollinated varieties, similar to corn varieties prior to the 1930s or current soybean varieties. This means once the original cross is made by the breeder, each subsequent generation used to increase seed volume up to production quantities is open pollinated and loses heterosis or "hybrid vigor." This loss has led to a much slower improvement of yield and agronomic traits in alfalfa than in corn hybrids over the same time period.

Hybrid alfalfa uses crossing in seed fields similar in concept to hybrid seed corn production to retain heterosis and eliminate inbreeding. Conventional alfalfa tends to be two to four generations of crosses beyond the original cross before growers receive the seed. To produce hybrid alfalfa seed, three parents are used: female, maintainer, and restorer. The female parent is sterile, meaning the flowers shed no pollen. The maintainer parent is crossed to the female parent during seed increase and maintains the sterility of the seed.

The final cross at commercial volumes in seed fields crosses this seed to the restorer parent, which restores fertility to the hybrid that will be grown in farmers' fields.

The benefits of this complex and costly seed production process are many. The most important result is improved forage yield. Other benefits of maintaining hybrid vigor are improved winter survival and stand persistence as well as better regrowth and faster initial stand establishment. The hybrid system allows for faster integration of disease, insect, and nematode resistance traits into a variety and a higher rate of retention of these qualities throughout the seed increase process. More hybrid vigor tends to provide a stronger, higher yielding plant than conventionally produced seed.

The hybrid seed production process leads to increased seed cost over conventional varieties due to the extra time, labor, and field complexity. However, with increased speed of establishment and greater yield, that extra cost is repaid during year one in the life of the field.

Customer product satisfaction has been excellent with our hybrid alfalfa products and we are now in our third generation of varieties produced with the technology. Plant Hughes 388HY the next time you seed alfalfa and you will be able to see the difference in the field.



Hybrid alfalfa seed is produced under cage isolation to ensure genetic purity.

## MORGAN

El-Par-Farms  
Versailles, MO

**Planted:** April 27 in 30" rows. **Planting Population:** 26,000. **Harvested:** September 17. **Previous Crop:** Soybeans. **Fertilizer:** N: 50-N 40-N with planter 50-SD, P: 40, K: 90. **Herbicide:** Atrazine, 2,4-D with Roundup. **Insecticide:** None. **Corn Borer Rating:** Moderate. **Soil Type:** Light loam. **Weather:** May-dry, June-dry, July-dry, August-dry. **Remarks:** RedTail 6T21 was a popup trial. Power Plus 4J93AM was a strip trial.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre	1000 Plants /Acre
POWER PLUS 6Z43AM™*	176.5	15.5	100	59.0	26
POWER PLUS 4Y34AM™*	170.8	14.1	100	58.0	25
POWER PLUS 7M83AM™*	168.4	15.5	100	59.0	25
POWER PLUS 5K33AM™*	164.2	15.1	100	58.5	26
POWER PLUS 7V66AMXT™*	161.0	15.8	100	60.0	25
BURRUS X7L12	160.2	15.2	100	58.0	25
POWER PLUS 4J93AM™*	156.6	15.0	100	59.0	25
POWER PLUS 4J99 R™*	156.3	14.0	100	59.0	25
POWER PLUS 6P73AM™*	152.7	14.3	100	58.0	25
POWER PLUS 4J93AM™*	152.1	14.1	100	59.0	25
POWER PLUS 4J93AM™*	150.3	14.2	100	59.0	28
POWER PLUS 4J93AM™*	142.8	14.2	100	59.0	26
POWER PLUS 6P73AM™*	141.6	14.0	100	59.0	25
POWER PLUS 6F74AMXT™*	139.4	16.5	100	62.2	26
Red Tail RT 67T21 GT W/O	138.6	16.1	100	60.5	25
Masters Choice MC5661 GT	135.9	14.0	100	58.0	25
Red Tail RT 67T21 with popup	132.9	15.9	100	59.5	25
Average	153.0	14.9	100	59.1	25

## NODAWAY

Kevin Rosenbohm  
Graham, MO

**Planted:** April 24 in 30" rows. **Planting Population:** 30,000. **Harvested:** September 20. **Previous Crop:** Soybeans. **Soil Type:** Medium loam. **Weather:** May-normal, June-dry, July-dry, August-dry. **Remarks:** Extreme drought, only 6 inch total rainfall for the season.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre	1000 Plants /Acre
POWER PLUS 4Y34AM™*	131.8	14.9	80	57.3	28
POWER PLUS 6Z43AM™*	125.8	16.1	100	59.9	26
POWER PLUS 5K33AM™*	123.3	14.9	90	58.5	29
BURRUS X7L12	116.6	16.6	50	59.0	24
POWER PLUS 6P73AM™*	107.9	16.2	90	58.9	25
POWER PLUS 7M83AM™*	102.8	17.1	90	59.2	30
Average	118.1	16.0	83	58.6	27

## SALINE

Power Plus® 6P73AM™\*  
makes 264 bu/a

Greg Tieman  
Blackburn, MO

**Planted:** April 28 in 30" rows. **Planting Population:** 32,000. **Harvested:** September 25. **Previous Crop:** Soybeans. **Fertilizer:** N: 200-NH3, P: VRT, K: VRT. **Herbicide:** Acuron, Halex GT. **Insecticide:** None. **Corn Borer Rating:** Light. **Soil Type:** Medium loam. **Weather:** May-dry, June-dry, July-dry, August-dry. **Check Hybrid:** Power Plus 7M83AM™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	254.5		16.6	100	31
POWER PLUS 4Y34AM™*	258.4	4	15.0	100	31
POWER PLUS 4J93AM™*	250.6	6	15.3	100	31
POWER PLUS 5K33AM™*	253.2	5	16.3	100	30
✓CHECK	260.6		17.0	100	31
POWER PLUS 6P73AM™*	264.8	1	16.6	100	30
POWER PLUS 6Z43AM™*	262.5	2	16.3	100	31
POWER PLUS 7M83AM™*	261.6	3	16.8	100	31
BURRUS X7L12	248.7	7	17.8	100	31
✓CHECK	255.9		17.0	100	31
Average	257.1		16.5	100	31
Check Average	257.0		16.9	100	31

Phil Henke  
Gilliam, MO

**Planted:** April 21 in 30" rows. **Planting Population:** 30,000. **Harvested:** September 17. **Previous Crop:** Soybeans. **Fertilizer:** N: 190 NH3, P: manure, K: manure. **Herbicide:** Surestart, Roundup. **Insecticide:** None. **Corn Borer Rating:** Light. **Soil Type:** Light loam. **Weather:** May-dry, June-dry, July-dry, August-dry. **Check Hybrid:** Power Plus 7M83AM™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	148.6		16.6	100	28
POWER PLUS 4Y34AM™*	148.9	7	14.5	100	28
POWER PLUS 4J93AM™*	164.0	5	14.8	100	28
POWER PLUS 5K33AM™*	175.4	2	14.9	100	30
POWER PLUS 6P73AM™*	183.5	1	15.7	100	30
✓CHECK	204.3		16.8	100	30
POWER PLUS 6Z43AM™*	191.0	4	16.4	100	30
POWER PLUS 7M83AM™*	193.9	3	16.9	100	30
BURRUS X7L12	172.1	6	17.6	100	30
✓CHECK	189.8		16.7	100	30
Average	177.1		16.1	100	29
Check Average	180.9		16.7	100	29



# Will herbicide carryover be a concern for 2019?

Dana Harder

In 2018, there were dry areas in certain parts of the Burrus footprint. Dryness has immediate implications of reduced yields, but it can also cause unintended herbicide carryover into the next growing cycle. This often occurs during growing seasons with below normal rainfall exacerbated by cold, dry winters. Many crucial factors for plant growth are also key for the micro-organisms that break down herbicides.

The chemical and physical properties of a herbicide play a vital role in its ability to persist in the soil and how it reacts under certain environmental conditions. Many herbicides are bound by soil organic matter or particulates. Moisture is often needed to unbind the herbicide molecule so that microbial break down occurs. Herbicide persistence will also increase in soils with higher clay and organic matter content.

Fomesafen (Flexstar®, Reflex®, Prefix®) is the most common soybean herbicide to carryover into corn. Symptoms of herbicide carryover in corn are distinct, with veinal chlorosis being the primary visual cue. The leaf midrib may kink and become reddish brown in color. Chlorimuron (Classic®) is in many pre-mixes and causes bottle brushed roots in corn, along with yellowing and stunting. In severe cases, it causes reddening and gives corn a purple appearance.

In corn, atrazine along with HPPD herbicides (Callisto®, Impact®, Laudis®) can be prone to carryover into soybeans. Atrazine carryover can cause soybeans to have chlorosis near the leaf edges with more concentration in new growth while lower leaves turn necrotic. HPPD herbicide breakdown due to microbial degradation can be tightly adsorbed to soil

particles when it is dry. Soybean leaves will appear bleached and chlorotic on leaf margins.

Management tips to help mitigate and manage herbicide carryover include:

**Review herbicide labels and application timings** – This helps determine herbicide cutoff dates based on when you typically plant the next crop. It also establishes maximum rate limits for single applications and the annual total. It is also important to verify application dates and determine when it is safe to plant. If the previous growing season was dry, it is best to delay planting to avoid injury. Also, the guidelines for rate and frequency of application can change as you progress north. This is common with many herbicide labels, so make sure to review these factors in detail.

**Maintain proper soil pH** – A proper soil pH is important to promote herbicide breakdown. Herbicides containing Classic® or atrazine break down better under acidic conditions due to soil hydrolysis. This process is halted under alkaline conditions allowing them to persist longer in soil. However, imidazolinone (Pursuit®, Scepter®) herbicides can be tightly adsorbed to soil organic matter at low pH and persist in soil much longer. By maintaining a pH near 6.5, it promotes nutrient availability and ensures herbicide decomposition.

**Conduct a bioassay** – This is a simple test of collecting field soil and potting it. The crop species you plan to rotate to can be planted and compared to untreated soil to determine if emergence is inhibited and if crop injury is observed.

**Consider tillage** – By mixing the soil, you can incorporate the herbicide zone deeper into the soil profile. It will also place the herbicide molecule in contact with soil moisture. Overall soil temperatures will warm promoting more microbial activity along with improved

aeration. Photodecomposition will also occur as some soil will be brought to the surface and have direct contact with sunlight.

Only time will tell what the spring of 2019 will have in store. It will be important to pay attention to cumulative rainfall totals and know the physical properties of your soils. If you're concerned about herbicide carryover and want help conducting a bioassay contact your Burrus Field Agronomist for assistance.



Atrazine carryover into soybeans. Photo courtesy of Purdue University.



Fomesafen carryover into corn. Photo courtesy of Purdue University.

## SALINE

### Power Plus® 6Z43AM™\* wins at 235 bu/a

Kurtis Gregory  
Marshall, MO

**Planted:** April 28 in 30" rows. **Planting Population:** 34,000. **Harvested:** September 24. **Previous Crop:** Soybeans. **Fertilizer:** N: cow/hog manure, P: hog manure, K: hog manure. **Herbicide:** Halex GT. **Insecticide:** None. **Corn Borer Rating:** Light. **Soil Type:** Medium loam. **Weather:** May-dry, June-dry, July-dry, August-dry. **✓Check Hybrid:** Channel 213-19RIB.

Brand/Product	Bu. Per Acre	Rank	% Moisture	% Erect	1000 Plants /Acre
✓CHECK	230.3		15.3	100	33
Channel 213-19RIBTNT	231.7	5	15.3	100	33
POWER PLUS 4Y34AM™*	229.8	6	14.6	100	32
POWER PLUS 4J93AM™*	203.5	9	15.0	100	32
POWER PLUS 5K33AM™*	219.3	8	15.3	100	33
POWER PLUS 6P73AM™*	199.8	10	15.0	100	32
POWER PLUS 6Z43AM™*	235.2	1	15.0	100	32
POWER PLUS 7M83AM™*	234.9	2	15.4	100	33
BURRUS X7L12	225.9	7	15.6	100	33
POWER PLUS 6Z43AM™*	232.0	4	15.0	100	33
✓Check	211.6		15.1	100	33
Becks 6589STXRIB	223.9	3	17.0	100	33
Average	223.2		15.3	100	33
Check Average	220.9		15.2	100	33

Marshall & Fenner Farms  
Malta Bend, MO

**Planted:** April 25 in 30" rows. **Planting Population:** 33,000. **Harvested:** September 18. **Soil Type:** Medium loam.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
MorCorn 4319	273.8	15.8	58.0
ProHarvest 8404	267.3	16.7	60.2
ProHarvest 8277	266.0	15.0	58.0
Lewis RB115	260.5	17.0	60.3
Mycogen MY12G35	257.1	16.5	57.2
LG 5663	256.8	16.3	60.0
Pioneer 1197AM	256.7	14.9	59.0
POWER PLUS 6P73AM™*	255.4	14.9	58.0
DeKalb DK60-88	254.6	14.3	58.0
MorCorn 4457	253.6	15.0	60.0
POWER PLUS 7M83AM™*	253.5	15.8	59.0
LG 5643	253.5	15.0	58.0
Pioneer 1366AM	253.1	14.5	59.0
Mycogen MY14H95	253.1	17.7	56.4
Becks 6774	252.5	16.6	61.2
Becks 6589	251.4	16.9	60.2
Pioneer 1555CHR	250.6	16.2	59.0
POWER PLUS 6Z43AM™*	247.1	14.5	60.0
Becks 6622AM	246.4	16.0	60.0
Lewis 14DP857	245.2	15.2	58.0
DeKalb DKC64-35	243.6	14.6	59.5
DeKalb DK60-88	243.6	14.2	58.0
LG 68C88	243.4	16.0	61.0
POWER PLUS 4Y34AM™*	242.5	13.8	57.0
Pioneer 1316AM	242.3	14.6	58.0
Mycogen 13C17	241.1	15.8	55.0
Becks 6365	241.0	15.0	58.0
Pioneer 1870AM	239.7	15.2	60.0
LG 59C41	238.7	14.5	59.0
ProHarvest 8312	237.9	15.0	58.0
Pioneer 2089AM	234.8	15.8	58.5
LG 5618	232.3	14.7	61.0
MorCorn 4725	226.1	16.1	62.0
Mycogen MY16M16	207.3	15.9	60.0
Average	247.7	15.5	59.0

## 2019 NUMBERING SYSTEM

The Burrus numbering system indicates the maturity with the first digit. Multiply the first digit by two then add 100 for the maturity day rating. For example, for Power Plus® 4J95 AMX™ brand, multiply the first digit by 2 = 8 then add 100. This depicts the maturity range as 108 - 109 days. The third character identifies whether the hybrid falls on the low end (1 - 4) or high end (5 - 9) of the maturity range. When the first two characters are the same, it indicates a similar family, e.g., Power Plus® 6C40™ and Power Plus® 6C41 S™. The last letter(s) is silent and helps indicate the technology included in that product. The chart below explains what each means.

Product	Maturity	Group	Technology	Designation	RR	LL	Resistance or Control
Power Plus® 5B67 Q™	111	Above/ Below Ground Insect Control	Qrome®	Q	x	x	Herculex® XTRA, Agrisure® RW, YieldGard® Corn Borer
Power Plus® 4A67AMXT™	109		Optimum® AcreMax® XTreme	AMXT	x	x	Herculex® XTRA, Agrisure® RW, YieldGard® Corn Borer
Burrus 6R25 5222	112		Agrisure Duracade® 5222 E-Z Refuge®	5222	x	x	Agrisure Viptera®, Agrisure Duracade®, Agrisure® RW, Agrisure® GT/CB/LL, Herculex® I Corn Borer
Power Plus® 6F75AMX™	113		Optimum® AcreMax® Xtra	AMX	x	x	Herculex® XTRA, YieldGard® Corn Borer
Catalyst® 6216 3111A	111		Agrisure Viptera® 3111A	3111A	x	x	Agrisure Viptera®, Agrisure® RW, Agrisure® CB/LL, Agrisure Artesian®
Power Plus® 4J93AM™	109	Above Ground Insect Control	Optimum® AcreMax®	AM	x	x	Herculex® I Corn Borer, YieldGard® Corn Borer
Burrus 7L12 3110	114		Agrisure Viptera® 3110	3110	x	x	Agrisure® GT/CB/LL, Agrisure Viptera®
Power Plus® 6C41 S™	112		Stacked, Herculex® I	S	x	x	Herculex® I Corn Borer
Burrus 7L11 GT	114	Glyphosate Resistant	Agrisure® GT	GT	x		Glyphosate tolerant
Burrus 6R20	112	Conventional	Conventional	No letters			No traits



# How does your starting five look?

Josh Gunther, C.C.A.

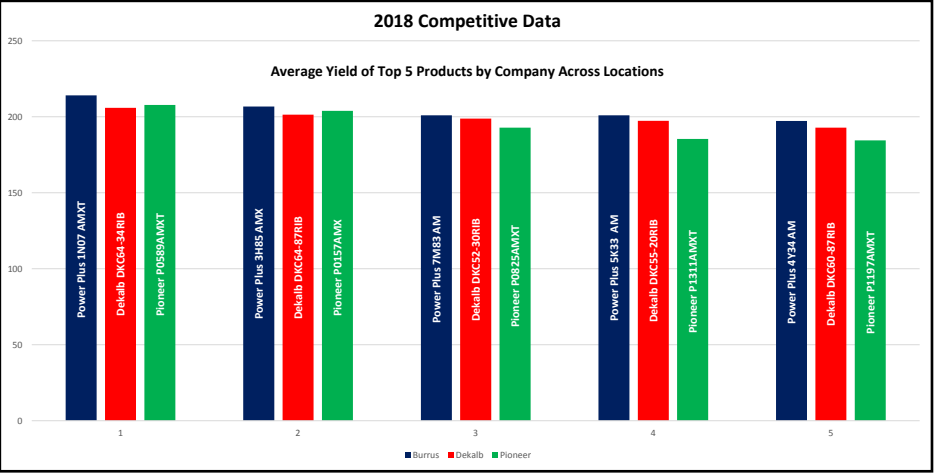
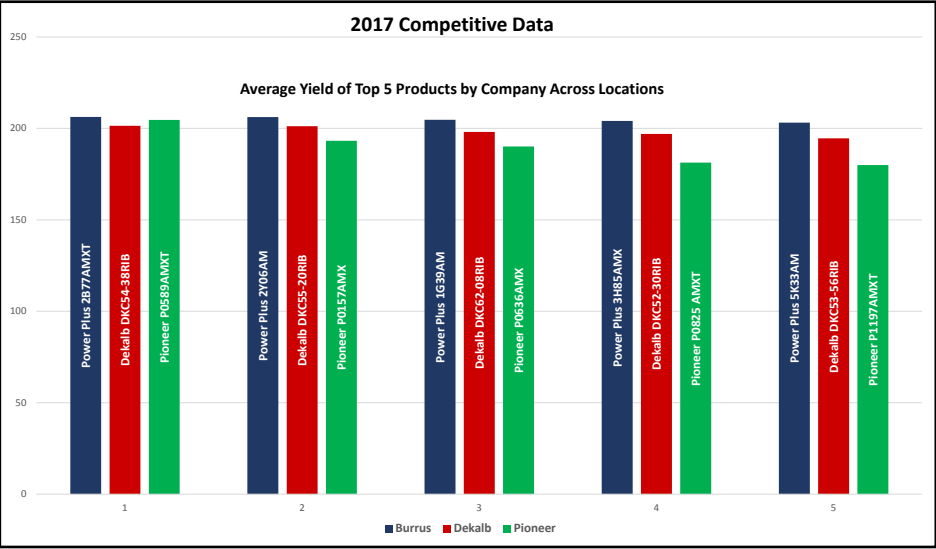
When growers make their seed selection for the next growing season, there are many variables to consider. It is easy to look at yield data and just pick the highest yielding hybrid to plant on your farm. But in these tough financial times in the agriculture sector, farmers have hedged their bets in the best way they can. For instance, planting one hybrid that won yield trials last year would be a risky bet. Rarely do hybrids top trials two years in a row. It is a better practice to plant your farm to a wide variety of hybrids from both a maturity and genetic perspective. Some growers choose to get their genetic differences by buying from more than one seed supplier, but this can be problematic by losing out on money saving volume discounts provided by many seed suppliers.

Burrus growers get the best of both worlds. Burrus offers a wide selection of unique genetics under one company with our multi-brand strategy. Burrus currently offers three brands, of corn products (Power Plus®, Burrus, and Catalyst). With the choice of 3 brands growers can diversify their portfolio while keeping the much-needed bulk and loyalty discounts. Two of these brands are distribution models set up with Corteva and Syngenta. Often, we get questions on how can Burrus be competitive with the national companies from whom we access genetics. It comes down to regional fit. When Pioneer, Golden Harvest, or DeKalb are selecting products to advance they must meet a different criterion than when Burrus

advances a product. These national brands must have a product that will work from coast to coast, where Burrus is just interested in how the product performs in our region. It much easier to find products that fit a smaller footprint with a more competitive yield level than one that will work from coast to coast. Add the facts of superior seed production and effective product placement and the result is success for our customers.

In a multi-year study, Burrus has looked at how competitive it is with the national brands. In this study we looked at our top 5 products compared to the top 5 products of both Pioneer and DeKalb. We all know that growers need more than one hybrid to plant on their farm and looking at the top 5 products is a way to look at the overall competitiveness of each company. In both 2017 & 2018, Burrus’ top 5 products have out yielded both Pioneer and DeKalb’s top 5 products in our footprint. This yield data was taken from 30 research plots throughout of footprint.

These charts speak to the benefit of a regional seed company bringing products that fit on our local farms. The answer to growers’ questions around seed selection point them toward Burrus. In these tough financial times growers need all the discounts they can get on their seed price but more than anything, they need products that put bushels in the bin. Burrus follows through with both, in addition to our professional agronomic advice, free replant guarantee, and professional service.



WWW.BURRUSSEED.COM

## SHELBY

### Experimental Burrus X7L12 tops the plot

Rutter Farms  
Shelbina, MO

**Planted:** April 28 in 30" rows. **Planting Population:** 30,000. **Harvested:** September 30. **Previous Crop:** Wheat. **Fertilizer:** N: 173, P: 40, K: 120. **Soil Type:** Heavy loam. **Weather:** May-dry, June-dry, July-normal, August-wet.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre	1000 Plants
BURRUS X7L12	218.8	16.4	90	61.0	28
POWER PLUS 4Y34AM™*	215.2	14.9	100	57.5	29
POWER PLUS 6Z43AM™*	208.3	15.4	100	60.0	29
POWER PLUS 4J93AM™*	206.5	14.6	80	59.5	30
POWER PLUS 5K33AM™*	205.2	15.9	100	61.0	30
POWER PLUS 6C41 S™*	198.8	17.8	100	60.5	27
POWER PLUS 6P73AM™*	197.1	16.2	80	59.0	27
POWER PLUS 7M83AM™*	193.3	17.0	100	62.3	30
POWER PLUS 2Y06AM™*	191.0	15.6	90	57.0	28
Average	203.8	16.0	93	59.8	29

### Experimental Burrus X7L12 wins at 216 bu/a

Joe Snider  
Lakenan, MO

**Planted:** April 22 in 30" rows. **Planting Population:** 30,000. **Harvested:** October 5. **Previous Crop:** Soybeans. **Fertilizer:** N: 160, P: 80, K: 90. **Soil Type:** Heavy loam. **Weather:** May-normal, June-dry, July-dry, August-wet. **Remarks:** Power Plus 6Z43AM™\* missing 1/3 of 1 row.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	Adj. Test Wt. /Acre	1000 Plants
BURRUS X7L12	216.3	16.1	95	61.0	29
POWER PLUS 7M83AM™*	213.7	15.1	95	61.5	28
POWER PLUS 5K33AM™*	211.1	15.1	90	59.0	30
POWER PLUS 6P73AM™*	209.1	15.9	80	60.0	27
POWER PLUS 6C41 S™*	205.9	17.7	90	62.4	31
POWER PLUS 4Y34AM™*	202.8	15.3	100	59.0	30
POWER PLUS 4J93AM™*	201.5	14.2	80	58.0	29
POWER PLUS 6Z43AM™*	196.4	15.3	90	59.5	28
Average	207.1	15.6	90	60.1	29



Burrus AM Jordan Watson taught intern Zach Edwards how to take stand counts using a hula hoop.





# BURRUS HYBRID COMPARISON

GENERAL CHARACTERISTICS							PLANTING INFORMATION			RESPONSE TO ENVIRONMENTAL CONDITIONS			PROTECTION FROM PESTS		
Brand	Days to maturity	Roundup Ready®	Liberty Link®	Plant height	Ear height	Ear type	Speed of emergence	Corn on corn	Refuge requirement	Drought tolerance	Water optimization	Greensnap	Nematode	Corn borer	Corn rootworm
ABOVE / BELOW GROUND INSECT CONTROL															
Power Plus® 1N07AMXT™*	100	Yes	Yes	6	6	Flex	8	Good	Integrated refuge	10	Optimum® AQUAmax®	7	Yes	Yes	Yes
Power Plus® 1G48AMXT™*	102	Yes	Yes	6	7	Intermediate	7	Excellent	Integrated refuge	8	None	6	No	Yes	Yes
Power Plus® 2F91AMXT™*	103	Yes	Yes	8	7	Fixed	8	Good	Integrated refuge	8	None	9	Yes	Yes	Yes
Power Plus® 2B77AMXT™*	105	Yes	Yes	6	7	Intermediate	8	Excellent	Integrated refuge	8	None	8	No	Yes	Yes
Power Plus® 3H85AMX™*	107	Yes	Yes	7	7	Flex	8	Good	Integrated refuge	7	None	9	No	Yes	Yes
Power Plus® 4A67AMXT™*	109	Yes	Yes	7	6	Flex	6	Good	Integrated refuge	7	None	6	No	Yes	Yes
Power Plus® 4J95AMX™*	109	Yes	Yes	6	6	Intermediate	7	Good	Integrated refuge	10	Optimum® AQUAmax®	8	No	Yes	Yes
Catalyst 6216 3111A	111	Yes	Yes	6	6	Intermediate	7	Good	20% structured refuge	10	Agrisure Artesian®	8	Yes	Yes	Yes
Burrus 6R25 5222	112	Yes	Yes	9	8	Intermediate	7	Excellent	Integrated refuge	8	None	7	No	Yes	Yes
Power Plus® 6Z57AMXT™*	113	Yes	Yes	5	6	Intermediate	8	Good	Integrated refuge	8	None	8	Yes	Yes	Yes
Power Plus® 6F74AMX™*	113	Yes	Yes	7	7	Intermediate	8	Excellent	Integrated refuge	9	None	8	No	Yes	Yes
Power Plus® 6P75AMX™*	113	Yes	Yes	8	7	Flex	7	Good	Integrated refuge	7	None	6	No	Yes	Yes
Power Plus® 7V66AMXT™*	115	Yes	Yes	8	8	Flex	7	Good	Integrated refuge	7	None	7	No	Yes	Yes
Power Plus® 7M87AMXT™*	115	Yes	Yes	7	6	Intermediate	8	Suitable	Integrated refuge	8	None	6	Yes	Yes	Yes
ABOVE GROUND INSECT CONTROL															
Power Plus® 9U13AM™*	98	Yes	Yes	8	9	Fixed	7	Excellent	Integrated refuge	8	None	8	Yes	Yes	No
Power Plus® 1G39AM™*	101	Yes	Yes	6	7	Intermediate	7	Excellent	Integrated refuge	8	None	6	No	Yes	No
Power Plus® 2Y06AM™*	104	Yes	Yes	8	6	Intermediate	7	Good	Integrated refuge	8	None	6	No	Yes	No
Power Plus® 4Y34AM™*	108	Yes	Yes	7	7	Intermediate	7	Suitable	Integrated refuge	8	None	7	Yes	Yes	No
Power Plus® 4J93AM™*	109	Yes	Yes	6	6	Intermediate	7	Good	Integrated refuge	10	Optimum® AQUAmax®	8	No	Yes	No
Power Plus® 5K33AM™*	110	Yes	Yes	7	7	Flex	6	Good	Integrated refuge	8	None	6	No	Yes	No
Power Plus® 6C41 S™*	112	Yes	Yes	9	8	Flex	9	Good	20% structured refuge	8	None	7	No	Yes	No
Power Plus® 6Z43AM™*	112	Yes	Yes	5	6	Intermediate	8	Good	Integrated refuge	8	None	8	Yes	Yes	No
Power Plus® 6P73AM™*	113	Yes	Yes	8	7	Flex	7	Good	Integrated refuge	7	None	6	No	Yes	No
Burrus 7L12 3110	114	Yes	Yes	8	7	Intermediate	7	Good	20% structured refuge	8	None	6	Yes	Yes	No
Power Plus® 7M83AM™*	115	Yes	Yes	7	6	Intermediate	8	Suitable	Integrated refuge	8	None	6	No	Yes	No
GLYPHOSATE RESISTANT															
Burrus 7L11 GT	114	Yes	No	8	7	Intermediate	7	Good	None needed	8	None	6	Yes	No	No
CONVENTIONAL															
Power Plus® 2R67™*	105	No	No	7	7	Intermediate	8	Excellent	None needed	9	None	7	No	No	No
Power Plus® 4J90™*	109	No	No	6	6	Intermediate	7	Good	None needed	10	Optimum® AQUAmax®	8	No	No	No
Burrus 6R20	112	No	No	9	8	Intermediate	7	Good	None needed	8	None	7	No	No	No
Power Plus® 6C40™*	112	No	No	9	8	Flex	9	Good	None needed	8	None	7	No	No	No
Power Plus® 7M80™*	115	No	No	7	6	Intermediate	8	Suitable	None needed	8	None	6	No	No	No

General rating scale: 10 = Outstanding 5 = Average 1 = Poor  
(1)–Besides their insecticidal properties, hybrids treated with Poncho Xtra emerge more rapidly and establish more stand.

R is Roundup Ready Corn 2 (NK603) or glyphosate tolerance, Agrisure GT  
S is Herculex I/RR2

AM is Optimum® AcreMax®  
AMX is Optimum® AcreMax® Xtra  
AMXT is Optimum® AcreMax® XTreme

BL is Agrisure CB/LL and Liberty resistance  
Q is Herculex XTRA and Roundup  
3110 is Agrisure CB/LL and GA21 glyphosate tolerance  
3111A is Agrisure CB/LL, RW, Viptera, Artesian and GA21 glyphosate tolerance





ADAPTABILITY									PROTECTION FROM DISEASES				HARVEST DESCRIPTION											
mm	Western bean cutworm	Wireworm	High organic soils	Timber soils	Clay and varied soils	Wet soils	Sand irrigated	Sand dryland	Northern leaf blight	Gray leaf spot	Goss's wilt	Diplodia ear rot	Stalks	Roots	Drydown	Ear retention	Grain quality	Test weight	High tonnage silage	Harvest residue	Brand			
ABOVE / BELOW GROUND INSECT CONTROL																								
	0	Yes	8	10	10	8	10	10	7	6	8	NR	7	9	7	9	8	8	8	8	Power Plus® 1N07AMXT™			
	0	Yes	9	9	9	8	8	7	8	7	8	8	9	9	8	8	8	8	7	7	Power Plus® 1G48AMXT™			
	0	Yes	9	9	9	8	9	8	8	7	9	NR	9	7	7	8	10	10	6	7	Power Plus® 2F91AMXT™			
	0	Yes	9	9	8	8	9	7	8	7	9	7	9	9	8	8	8	8	7	8	Power Plus® 2B77AMXT™			
	0	Yes	10	8	7	6	7	6	7	7	8	6	7	8	8	8	7	7	9	6	Power Plus® 3H85AMXT™			
	0	Yes	10	7	7	8	9	6	8	7	7	7	8	8	7	8	8	7	9	9	Power Plus® 4A67AMXT™			
	0	Yes	9	9	9	8	9	8	8	5	8	5	8	8	8	9	8	7	5	6	Power Plus® 4J95AMXT™			
	9	Yes	9	9	8	8	10	8	7	6	7	NR	8	9	7	8	7	6	6	6	Catalyst 6216 3111A			
	9	Yes	10	7	8	7	9	6	7	7	NR	7	8	8	8	8	7	7	10	9	Burrus 6R25 5222			
	0	Yes	10	10	10	8	8	8	7	7	6	8	8	7	7	8	8*	8	8	8	Power Plus® 6Z57AMXT™			
	0	Yes	8	9	9	6	7	9	7	7	8	7	9	8	8	9	8*	8	9	9	Power Plus® 6F74AMXT™			
	0	Yes	10	7	7	8	10	6	8	7	8	7	8	7	7	7	7	7	9	8	Power Plus® 6P75AMXT™			
	0	Yes	10	7	7	8	9	6	7	7	8	7	9	8	7	6	9*	8	10	10	Power Plus® 7V66AMXT™			
	0	Yes	9	9	9	7	9	7	7	7	8	8	8	8	6	8	8	8	10	10	Power Plus® 7M87AMXT™			
ABOVE GROUND INSECT CONTROL																								
	0	Yes	10	10	9	9	9	8	8	8	9	NR	9	7	7	8	9	9	9	8	Power Plus® 9U13AMXT™			
	0	Yes	9	9	9	8	8	7	8	7	8	8	9	9	8	8	8	8	7	7	Power Plus® 1G39AMXT™			
	0	Yes	9	9	9	8	9	7	7	8	8	8	7	8	8	8	7	7	8	8	Power Plus® 2Y06AMXT™			
	0	Yes	10	9	10	7	9	7	7	5	7	8	8	7	8	8	7	7	8	9	Power Plus® 4Y34AMXT™			
	0	Yes	9	9	9	8	9	8	8	5	8	5	8	8	8	9	8	7	5	6	Power Plus® 4J93AMXT™			
	0	Yes	9	8	8	8	9	7	7	6	8	6	8	6	7	7	8	7	9	7	Power Plus® 5K33AMXT™			
	0	Yes	9	9	8	8	9	8	6	8	8	6	8	6	8	8	10*	10	8	9	Power Plus® 6C41 S™			
	0	Yes	10	10	10	8	8	8	7	7	6	8	8	7	7	8	8*	8	8	8	Power Plus® 6Z43AMXT™			
	0	Yes	10	7	7	8	10	6	8	7	8	7	8	7	7	7	7	7	9	8	Power Plus® 6P73AMXT™			
	9	Yes	9	9	9	9	9	7	7	7	8	7	8	8	8	9	7	7	9	8	Burrus 7L12 3110			
	0	Yes	9	9	9	7	9	7	7	7	8	8	8	8	6	8	8	8	10	10	Power Plus® 7M83AMXT™			
GLYPHOSATE RESISTANT																								
	0	Yes	9	9	9	9	9	7	7	7	8	7	8	8	8	9	6	7	9	8	Burrus 7L11 GT			
CONVENTIONAL																								
	0	Yes	9	9	8	8	8	7	9	8	9	6	8	8	8	7	7	7	8	7	Power Plus® 2R67™			
	0	Yes	9	9	9	8	9	8	8	5	8	5	8	8	8	9	8	7	5	6	Power Plus® 4J90™			
	0	Yes	10	7	8	7	9	6	7	7	NR	7	8	8	8	8	7	7	10	9	Burrus 6R20			
	0	Yes	9	9	8	8	9	8	6	8	8	6	8	6	8	8	10*	10	8	9	Power Plus® 6C40™			
	0	Yes	9	9	9	7	9	7	7	7	8	8	8	8	6	8	8	8	10	10	Power Plus® 7M80™			

The information and recommendations contained in this chart are produced for comparison purposes only and are not guarantees as to the results, since those results may vary. They are provided to assist in the selection of the hybrid which will best suit your needs. No warranties either expressed or implied are intended by this chart.

\*Grain quality – possible food grade in some markets



# We tailor our communication to you!

# Are you beginning to think about sulfur and zinc?

Our success as a company is measured by your success as a grower. We work hard to provide our customers information and advice year-round on all aspects of their operation. We also understand people like to access that information differently.

In addition to our responsive, evolving website, we also regularly post on Facebook and Twitter using @BurrusSeed. Our home office, sales team, and agronomic staff use social media to share news, photos, and information with our growers. We use these platforms to share relevant articles, updates, and available offers. We also have a YouTube page with marketing and agronomic videos, as well as footage from our company events. Search Burrus Seed to see our entire library of YouTube videos, which are also accessible

through our website, under the Media tab.

If you haven't already, subscribe to our Think Burrus blog. Written by our agronomy team, articles center on relevant agronomic topics they encounter on their constant travels across the Burrus footprint. Use the comment section to interact with the research team and get answers to questions of your own.

Also, we encourage you to sign up for our Burrus Buzz electronic newsletter. We deliver timely agronomic articles, directly to your inbox, twice a month! You can subscribe on our website or by sending an email request to [burrus.seed@burrusseed.com](mailto:burrus.seed@burrusseed.com)

Links to each of our social media sites are conveniently located on our website at [www.burrusseed.com](http://www.burrusseed.com). Use #ThinkBurrus to join the conversation today!

**Josh Gunther, C.C.A.**

A hot button topic lately in corn production has been the use of sulfur and zinc fertilizers. There has been a lot of debate lately on whether most growers would see an economical yield increase from adding sulfur or zinc fertilizers. When looking at sulfur, zinc, or any other micronutrient for that matter the answer doesn't seem as straight forward.

In recent years there has been an increase in the amount of research put out toward micronutrient research. Dr. Fred Below, University of Illinois Professor has stated, "Many farmers don't fertilize for sulfur and zinc," and "I am also convinced that at yields above 200 bu/a there are many cases where yields are being limited by sulfur and zinc."

From the University of Minnesota, researcher George Rehm investigated crop response from sulfur and zinc fertilizer. Rehm's findings have been interesting but it has been difficult to find any one-size fits all program to manage sulfur and zinc.

Sulfur is defined as a secondary macro nutrient, which means it is vital for optimal plant growth. It is considered a secondary nutrient because usually enough sulfur can be found in most soils from the slow decomposition of soil organic matter. In recent years, no-till and minimum till cropping systems have decreased the soil incorporation of organic matter slowly lowering the already slow rate of organic matter decomposition which leads to the mineralization of sulfate-sulfur (SO4-S) which is the sulfur available for the plant.

The problem with knowing when a sulfur application would show an economical return is that there is no good soil test to make a reliable fertilizer recommendation. The most common soil test procedure is an extraction with calcium phosphate. However, this analytical procedure has been proven to be unreliable to determine if sulfur could be a limiting nutrient. A more reliable metric to go by is soil composition and percent organic matter. Rehm's research

found that soils with organic matter less than 1% showed increased yields with added sulfur fertilizers. Typically, 90-95% of the total sulfur needed by a crop is found in the soil organic matter (OM). However, if we are lowering OM by minimum tillage practices then more soils would benefit from a sulfur application in the future. If you are uncertain if your crop is lacking sulfur, it is best to take regular soil tests to watch your OM level, closely observe your crop for signs of sulfur deficiency and if you are noting symptoms that look like sulfur deficiency contact your Burrus Field Agronomist to submit a leaf tissue analysis. The leaf tissue analysis is something that will need to be regularly submitted to track the amount of available sulfur within the plant to get a true read on the availability. Taking one sample will rarely be able to give you the full picture of sulfur availability.

The second hot button nutrient this year is zinc. Zinc is a little more reliable to predict. There are some solid soil analysis tests to predict a projected need for this micronutrient. If your soil tests come back that your crop will need added zinc, keep in mind that with micronutrients a very small amount can greatly change the outcome. In an extreme scenario, Rehm was able to apply 0.1 lb Zn/a and was able to double corn yields in a field that was greatly deficient in zinc. Typically, zinc can be applied as a liquid below the seed. Rehm tested two different application rates below the seed and saw no emergence response. However, it is not suggested to place zinc fertilizer on top of the seed in soils with a loamy sand or sandy loam texture due to decreased emergence rates.

When looking at sulfur or zinc fertilizers for your corn crop, it is best to analyze soil tests and determine if your crop will be deficient in these nutrients. If there is still doubt, run an on-farm trial to see if there is a crop response on your acreage. For help setting up an on-farm trial, please contact your Burrus Account Manager or your Burrus Field Agronomist to help with trial design.



Power Plus® 2Y06AM™\* reached 275 bu/a in Walworth Co., WI for Monica & Dale Albrecht.



Lacey Whitehill helped her husband Zach haul seed and SuperFLOW during planting season 2018 in western MO.



Power Plus® hybrids took first & third out of 51 entries in Washington Co., IA for Darrell & Carmen Steele. New Power Plus® 6Z43AM™\* cranked out 302.7 bu/a!

## SHELBY

**Jerry Broughton**  
Emden, MO

**Planted:** April 27 in 30" rows. **Planting Population:** 28,500. **Harvested:** September 27. **Previous Crop:** Soybeans. **Soil Type:** Heavy loam. **Weather:** May-normal, June-normal, July-normal, August-wet.

Brand/Product	Bu. Per Acre	% Moisture
POWER PLUS 6Z43AM™*	235.3	18.7
POWER PLUS 7M83AM™*	232.5	20.3
POWER PLUS 5K33AM™*	231.4	19.4
POWER PLUS 4Y34AM™*	227.0	17.3
Average	231.6	18.9

## WARREN

**Power Plus® 4Y34AM™\* makes 198 bu/a corn-on-corn plot**

**Albert Jacob**  
Marthasville, MO

**Planted:** May 14 in 30" rows. **Planting Population:** 32,000. **Harvested:** September 24. **Previous Crop:** Corn. **Herbicide:** Corvus, Atrazine. **Soil Type:** Medium loam. **Weather:** May-normal, June-dry, July-dry, August-dry.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
POWER PLUS 4Y34AM™*	198.1	16.5	58.2
POWER PLUS 6P73AM™*	192.1	18.5	59.6
BURRUS X7L12	187.1	19.5	58.9
POWER PLUS 5K33AM™*	183.9	18.3	59.5
POWER PLUS 6Z43AM™*	157.1	18.5	61.6
POWER PLUS 4J93AM™*	155.9	17.0	58.3
POWER PLUS 7M83AM™*	147.3	19.5	59.9
POWER PLUS 6F74AM™*	137.1	18.2	62.5
Average	169.8	18.3	58.8



Carrie Gill with her 1st place corn plant. She won at Section 5 FFA fair with Power Plus® 6P75AMX™\* in Marshall Co.



Harvest 2018 rolled along on the Schuster farm in Cooper Co., MO.



# Nematodes: A silent yield robber

Dana Harder

There are many different types of nematodes present in the soil. A portion of the nematode community is beneficial to the soil since they help with nutrient cycling while feeding on bacteria, fungi, and microorganisms. Growers are most concerned about the parasitic group of nematodes that feed and develop on crop roots. They tend to be more problematic in soils that are coarser in texture since they can move freely in the soil profile. Since Burrus is an independent company we are not tied to a single platform and can select the best seed treatment technologies to help you be successful on your farm. We offer technologies that control and prevent nematodes from damaging your corn or soybean crop.

Most producers are familiar and perhaps have experienced soybean cyst nematode (SCN). SCN causes more yield loss in soybeans than any other pest and is present across all geographies. This nematode punctures the root with its stylet in order to feed. This injury can act as a vector site for sudden death syndrome (SDS) and fusarium root rot. These two pathogens are detrimental to soybeans and ILeVO® can help prevent them from taking hold. ILeVO compliments the genetic sources of nematode resistance that are available. It is important to note however, that some populations of nematodes have developed resistance to PI 88788 and can reproduce on this genetic source making ILeVO a vital component for enhanced control. Many years of university and industry research have shown a 2 to 10 bushel increase with ILeVO under varying environments. When you order PowerShield® SDS (PS SDS) from Burrus, ILeVO is included.

Regarding corn, Burrus includes a biological nematicide as part of its standard seed treatment. It is included on all new products for 2019, including: Power Plus® 1N07AMXT™\*, Power Plus® 9U13AMXT™\*,

Power Plus® 4Y34AMXT™\*, Power Plus® 6Z43AMXT™\*, Power Plus® 6Z57AMXT™\*, Burrus 7L11 GT, Burrus 7L12 3110, and Power Plus® 7M87AMXT™\*. The biological nematicide helps colonize the roots providing control of 11 different nematodes that can be problematic in corn. PowerShield HP provides enhanced nematode control with Poncho VOTiVO®. An average 5.3 bu/a yield advantage was observed with Poncho VOTiVO® when compared to low rate Poncho across 861 trials with varying nematode pressure.

If you noticed stunted plant growth or yellowing in patches it could be a sign that corn nematodes are present. Roots that appear stubby or discolored can also be another indication that there is a problem. Soil applied organophosphate (Lorsban®) and carbamate (Furadan®) insecticides that were historically used to control corn rootworm also provided nematode control. The shift to neonicotinoid (Cruiser®, Poncho VOTiVO®) insecticides, while better for overall human safety, have again made corn nematodes a concern. Corn-on-corn rotations and the adoption of no-till promote nematode populations that are detrimental to corn. Various grasses can serve as a host and they can readily be found in undisturbed grasslands.

Burrus is proud to offer seed treatment solutions that help growers be profitable with a goal for each producer to realize a three-to-one return on your investment. You can rest assured that with our free replant guarantee on PowerShield treated products it is a wise investment and that you can plant in early spring with confidence. We are continuously evaluating new products on the market to determine which components provide the maximum plant protection while minimizing cost to you. If you have questions about our seed treatments and how they can improve your bottom line, contact your Burrus Representative.

# High-performance alfalfa forage solutions

Corn and soybeans aren't all we offer at Burrus Seed. We also have three high-performance alfalfa varieties. Designed for growers in search of high forage yielding options, we have three distinct products to fit your needs.

## 388HY Hybrid Alfalfa

This product represents an improvement in hybrid alfalfa utilizing patented msSunstra® technology!

This product has familiar hybrid characteristics like dense stands with fine-stemmed herbage and fast recovery, but 388HY comes with an exceptional boost in yield. The fine stem attribute makes a dense, attractive alfalfa bale.

For the highest yields of consistently high-quality forage, 388HY is the variety of choice.



AGRONOMIC SUMMARY	388HY
Bacterial Wilt	HR
Fusarium Wilt	HR
Phytophthora Root Rot	HR
Verticillium Wilt	HR
Anthracnose (Race 1)	HR
Aphanomyces Root Rot (Race 1)	HR
Aphanomyces Root Rot (Race 2)	MR
DRI	33/35
Stem Nematode	HR
Northern Root-knot Nematode	HR
Winter Survival	1.8**
Root Type	TAP
Fall Dormancy	4.0
Crown Depth	AVE
Fitness of Stem	Fine

## 344EQ Alfalfa

344EQ (Extended Quality) provides superior forage quality with an extended harvest window for growers.

This product features high TTNDFD and NDGD48 forage quality scores. A reduced lignin content further improves the digestibility and quality of 344EQ.

Outstanding yield, coupled with a reliable disease package, creates a well-rounded product. 344EQ belongs on farms intending to produce high yields of consistent quality forage.

AGRONOMIC SUMMARY	344EQ
Bacterial Wilt	HR
Fusarium Wilt	HR
Phytophthora Root Rot	HR
Verticillium Wilt	HR
Anthracnose (Race 1)	HR
Aphanomyces Root Rot (Race 1)	HR
Aphanomyces Root Rot (Race 2)	MR
DRI	33/35
Winter Survival	1.9**
Fall Dormancy	4.2
Root Type	TAP
Crown Depth	AVE
Cutting Recovery	8.2*
Forage Yield Level	8.9*
Forage Quality	9.0*

\*Rated 1 - 10 (1 = poorest, 10 = best):  
\*\*Rated 1 - 6 (1 = most winter hardy, 6 = least winter hardy)  
HR = High resistance  
MR = Medium resistance  
R = Resistant



# CLINTON

Wayne Harmsen  
Clinton, IA

Planted: April 27 in 30" rows. Planting Population: 36,000. Harvested: September 24. Previous Crop: Corn. Soil Type: Medium Clay. Weather: May-wet, June-wet, July-wet, August-wet. Remarks: 33% hail damage in July.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt. /Acre	1000 Plants /Acre
POWER PLUS 4J95AMXT™*	234.8	18.7	57.9	33

POWER PLUS 4J95AMXT™*	229.1	19.3	57.3	36
POWER PLUS 4A67AMXT™*	227.8	19.2	57.0	33
POWER PLUS 3H85AMXT™*	223.3	19.0	58.9	36
POWER PLUS 2B77AMXT™*	216.1	19.3	56.3	36
POWER PLUS 3H85AMXT™*	212.9	18.5	59.3	33
POWER PLUS 2B77AMXT™*	205.8	18.7	56.7	33
POWER PLUS 4A67AMXT™*	199.6	20.4	57.8	36
POWER PLUS 6P75AMXT™*	195.0	21.3	56.2	33
POWER PLUS 7V66AMXT™*	185.8	21.4	56.2	33
POWER PLUS 7V66AMXT™*	166.1	21.4	57.0	36
POWER PLUS 6P75AMXT™*	154.6	22.1	54.6	36
Average	204.2	19.9	57.1	34



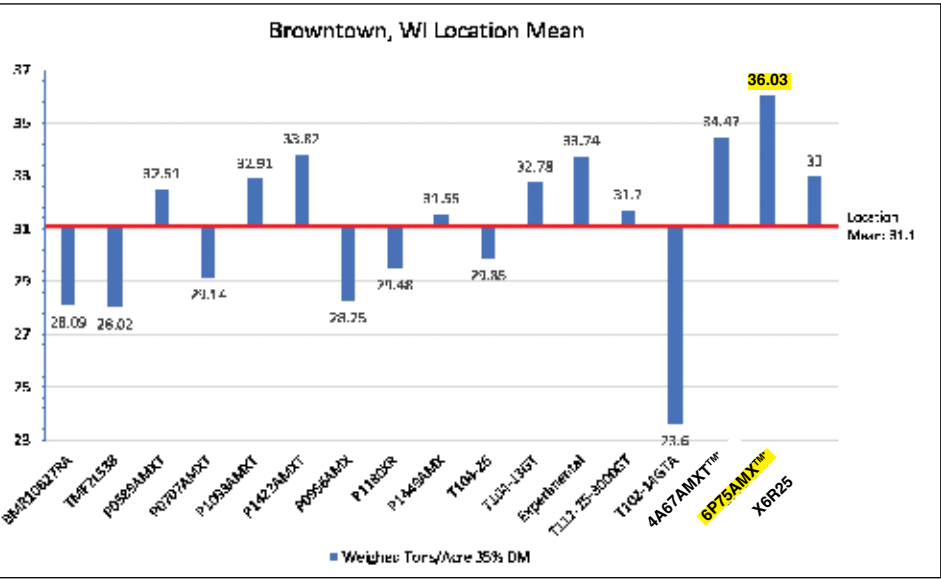
Western IL/MO team members Rob Church, Donny Marnin & Randy McCaskill tasked together at an Ag Business training.



Break the Bank winners - dealers Jeff Gibson and Owen Bender.



Burrus products perform in silage plot



Power Plus® 6P75AMXT™ won a silage plot at 36.03 tons/a in Green Co., WI.

Craig Edler, Green Co., WI. Planted: May 1. Harvested: September 14. Previous Crop: Corn silage.

Brand	Hybrid	% DM	Tons/Acre 35% DM (t/a)	% Strch	% Sug	% NDF (pct)	% Fib Dig (24-hr) (pct)	% uNDF (pct)	% CP	Lbs Beef/ Acre (lb/a)	Lbs Beef/ Ton (lb/t)	Lbs Milk/ Acre (lb/a)
Mycogen	BMR10B27RA	43.2	28.09	37.0	2.6	39.91	53.07	10.98	6.0	3,952	402	36,002
Mycogen	TMF2L538	51.1	28.02	32.5	1.9	46.42	44.96	14.44	5.1	3,175	324	31,707
Pioneer	P0589AMXT	44.9	32.51	41.9	3.5	34.10	44.75	10.89	6.7	4,291	377	40,873
Pioneer	P0707AMXT	44.4	29.14	40.1	2.4	36.21	44.79	11.63	6.3	3,771	370	36,116
Pioneer	P1093AMXT	42.1	32.91	39.2	2.6	37.61	46.66	11.54	5.9	4,281	372	40,703
Pioneer	P1422AMXT	40.0	33.82	39.2	1.3	39.68	42.14	13.43	6.5	4,006	338	39,804
Pioneer	P0956AMX	41.5	28.25	38.8	4.1	37.68	53.29	9.42	7.1	3,969	401	36,244
Pioneer	P1180XR	41.9	29.48	37.9	3.8	37.85	58.18	8.61	7.1	4,342	421	38,646
Pioneer	P1449AMX	38.4	31.55	36.5	4.0	38.16	52.41	11.29	6.7	4,383	397	40,217
Tracys	T104-26	46.7	29.85	40.6	3.8	36.43	47.32	11.33	5.5	3,935	377	37,226
Tracys	T104-13GT	49.4	32.78	43.8	2.5	34.85	42.01	11.92	5.4	4,146	361	40,268
Tracys	Experimental	43.4	33.74	37.4	2.8	39.75	40.93	14.29	5.8	3,879	329	39,106
Tracys	T112-25- 3000GT	40.8	31.70	39.5	3.1	36.91	45.79	12.67	6.2	4,086	368	39,066
Tracys	T102- 14GTA	48.0	23.60	44.1	3.9	32.08	44.36	11.58	7.2	3,160	383	30,007
POWER PLUS	4A67AMXT™	41.1	34.47	42.6	2.3	34.62	43.36	11.93	6.3	4,340	360	42,071
POWER PLUS	6P75AMXT™	39.9	36.03	43.8	1.3	33.72	47.69	10.72	6.8	4,861	385	45,702
BURRUS	X6R25	38.7	33.00	43.1	2.0	35.35	42.86	14.20	5.8	4,208	364	40,686

Dyna-Gro 44VC40 AW	242.5	15.8
Wyffels W3076VT2	241.6	16.5
LG LG5525	239.9	17.1
Wyffels W4796VT2	238.0	17.6
LG LG5606	226.5	20.1
LG LG5505	224.4	16.3
LG LG5465	223.7	16.2
Average	243.1	17.5

Power Plus® 4A67AMXT™\* makes 256 bu/a

COMPARE

Bill Smith  
Darlington, WI

CORN ON CORN

Planted: April 26 in 30'' rows. Planting Population: 34,000. Harvested: September 29. Previous Crop: Corn. Soil Type: Medium loam. Weather: May-normal, June-normal, July-normal, August-wet.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
POWER PLUS 4A67AMXT™*	256.4	25.4	57.5
POWER PLUS 3H85AMXT™*	252.7	24.7	58.4
POWER PLUS 2Y06AMXT™*	251.9	22.2	57.4
POWER PLUS 4J95AMXT™*	250.1	26.3	57.5
Golden Harvest G03C84	249.5	26.1	56.0
POWER PLUS 1G48AMXT™*	247.5	23.2	57.1
POWER PLUS 2B77AMXT™*	243.7	24.8	57.2
POWER PLUS 1N07AMXT™*	242.9	22.0	57.4
Golden Harvest G00H12	242.5	21.8	57.7
POWER PLUS 6P75AMXT™*	242.4	28.4	56.3
Golden Harvest G06Z97	239.3	25.5	57.5
POWER PLUS 4Y34AMXT™*	233.8	27.1	56.6
POWER PLUS 1G39AMXT™*	230.3	23.0	57.4
POWER PLUS 2F91AMXT™*	226.9	21.8	56.9
BURRUS X6R25	226.5	28.9	55.3
Golden Harvest G10T63	222.9	30.7	58.5
Average	241.2	25.1	57.2

ROCK

Power Plus® 4A67AMXT™\* is first at 243 bu/a

COMPARE

Phil Wellnitz  
Orfordville, WI

CORN ON CORN

Planted: May 2 in 30'' rows. Harvested: September 25. Previous Crop: Corn. Soil Type: Medium loam.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
POWER PLUS 4A67AMXT™*	243.3	19.1	53.7
Dekalb DKC58-06	236.0	20.1	57.0
Jung 56SS538	226.7	21.5	55.4
Latham Hi-Tech LH 5249 SS	213.1	18.9	55.7
Renk RK779SSTX	213.1	20.3	56.0
Renk RK810SSTX	210.6	19.9	54.9
Renk RK8108SSTX	210.2	19.5	56.9
Pioneer P0589AMXT	207.0	21.8	55.4
FS FS 577X1	206.9	19.6	54.9
Latham Hi-Tech LH 5379 SS	206.8	18.8	54.7
Renk RK7819SSTX	203.2	20.1	55.0
Jung 7S761	194.1	20.3	55.0
Renk RK792SSTX	194.0	18.9	55.7
Dekalb DKC56-45	191.4	19.7	54.9
Jung 585SS537	188.3	20.6	55.2
Renk RK717SSTX	186.9	19.0	54.7
Jung 58SS529	184.3	21.0	52.3
POWER PLUS 2B77AMXT™*	182.1	20.6	56.2
FS FS 55TX1	180.5	17.8	55.5
Latham Hi-Tech LH 5819 SS	180.4	20.4	54.0
POWER PLUS 3H85AMXT™*	176.5	21.1	54.3
Jung 57SS519	174.6	22.3	55.0
Renk RK8110SSTX	172.0	20.8	56.2
Renk RK776SSTX	149.2	20.6	55.2
Average	197.1	20.1	55.2

WASHINGTON

Power Plus® 6Z43AM™\* makes 302 bu/a!

COMPARE

Darrell Steele  
Washington, IA

CORN ON CORN

Planted: April 29 in 30'' rows. Planting Population: 35,500. Harvested: September 14. Previous Crop: Soybeans. Fertilizer: N: 240, P: 10 , K: 60. Herbicide: Gramoxone, Atrazine, Dual, Callisto. Insecticide: None.

Brand/Product	Bu. Per Acre	% Moisture
POWER PLUS 6Z43AM™*	302.7	23.0
Wyffels W7696RIB	301.7	23.8
POWER PLUS 7M83AM™*	297.8	23.5
Pioneer P1353AM	297.2	22.0
Federal 6290	293.9	21.7
Midwest 15-65	293.2	23.1
Federal 6280	293.0	21.4
Midwest 12-218	292.9	21.2
Midwest 13-04	292.9	22.6
NuTech 5FB-6313	291.6	22.3
Midwest 11-15	291.5	21.8
Wyffels W5626	291.4	19.9
DeKalb 62-20RIB	291.3	20.2

NuTech 5FB-9909	291.1	20.7
Pioneer P1138AM	289.8	20.5
DeKalb 62-53RIB	288.4	21.2
Wyffels W7576RIB	288.0	21.0
LG 5618STXRIB	287.8	22.8
Midwest 13-20	287.7	20.4
DeKalb 64-35RIB	287.5	21.8
Pioneer P1197AM	287.3	20.5
Federal 6280	287.3	21.4
Wyffels W6956	285.0	21.7
Pioneer P1366AM	284.4	20.8
Federal 6280	283.8	21.8
Pioneer P1093AMxt	283.1	20.7
LG 5606STXRIB	281.0	21.4
Federal 6390	281.0	22.2
Federal 6280	280.8	21.3
Wyffels W7456RIB	279.9	21.1
Wyffels W7368	278.8	22.8
Wyffels W7976RIB	278.8	23.2
Golden Harvest 09Y24	277.5	20.6
Golden Harvest 15L32	276.6	22.8
DeKalb 63-21RIB	276.5	20.9
Pioneer P0997	276.2	20.4
Rob-See-Co IC6260	275.7	22.5
Federal 6490	275.7	21.6
Midwest 14-44	274.8	23.1
Midwest 12-02	274.6	21.1
Pioneer P1563AM	274.1	22.9
DeKalb 60-88RIB	273.7	20.4
Golden Harvest 13Z50	273.7	22.5
DeKalb 58-35	273.5	20.0
Rob-See-Co IC5819	272.9	20.1
NuTech E5WA209	267.1	20.3

LG 59C66	266.0	20.2
LG 59C10	264.0	20.0
POWER PLUS 4A67AMXT™*	262.9	21.0
Federal 6280	254.8	20.8
DeKalb 59-50RIB	177.4	20.0
Average	280.6	21.5

LAFAYETTE

Power Plus® 1N07AMXT™\* tops plot at 269 bu/a

COMPARE

Andy Upmann  
Shullsburg, WI

CORN ON CORN

Planted: April 27 in 30'' rows. Planting Population: 36,500. Harvested: September 24. Previous Crop: Soybeans. Soil Type: Silt loam.

Brand/Product	Bu. Per Acre	% Moisture
POWER PLUS 1N07AMXT™*	269.6	18.0
POWER PLUS 2R63 R™*	252.4	19.7
POWER PLUS 2Y06AMXT™*	251.9	17.9
LG LG5470	251.2	16.3
POWER PLUS 4Y34AMXT™*	247.6	18.0
POWER PLUS 9U13AMXT™*	246.7	19.3
Wyffels W4196VT2	246.1	17.7
LG LG5565	244.3	18.4
LG LG5530	243.0	14.4



WALWORTH

Clark Farms  
Elkhorn, WI

Planted: May 24 in 30" rows. Planting Population: 34,000. Harvested: October 23. Previous Crop: Soybeans. Herbicide: Resicore, Roundup, Credit Xtreme. Soil Type: Heavy loam.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
Channel 199-11VTPRIB	222.8	21.4	57.8
Pioneer P0574	221.5	25.7	57.9
POWER PLUS 1G48AMXT™*	221.1	22.8	58.6
Channel 206-11STXRIB	216.6	23.6	57.4
POWER PLUS 2B77AMXT™*	214.9	24.4	58.5
POWER PLUS 1G39AMXT™*	213.6	22.7	59.1
Channel 205-04STX	213.4	23.6	58.4
Pioneer P0157	210.8	22.9	59.1
POWER PLUS 2Y06AMXT™*	208.7	22.6	57.6
Curry 824-37AMX	206.9	24.1	57.0
Channel 207-27STXRIB	206.1	24.5	57.2
Curry 826-64AMX	205.4	25.2	57.3
POWER PLUS 3H85AMXT™*	204.5	24.4	57.0
Channel 204-74VTRIB	201.3	20.4	57.0
Average	212.0	23.4	57.8

Dale Albrecht  
Sharon, WI

Planted: May 1 in 30" rows. Planting Population: 32,000. Harvested: October 12. Previous Crop: Soybeans. Herbicide: SureStart. Soil Type: Heavy loam. ✓Check Hybrid: Power Plus 2B77AMXT™\*.

Brand/Product	Bu. Per Acre	Rank	% Moisture	Adj. Test Wt.
✓CHECK	253.4		21.1	58.3
POWER PLUS 9U13AMXT™*	254.9	7	19.4	58.7
POWER PLUS 1N07AMXT™*	259.8	4	19.7	58.9
POWER PLUS 1G39AMXT™*	259.5	5	19.2	58.7
POWER PLUS 1G48AMXT™*	245.1	10	20.7	59.2
POWER PLUS 2F91AMXT™*	250.8	9	20.4	60.0
✓CHECK	251.1		22.4	60.5
POWER PLUS 2Y06AMXT™*	275.0	1	20.9	58.2
✓CHECK	249.8		22.2	58.5
POWER PLUS 3H85AMXT™*	244.2	8	21.6	59.4
POWER PLUS 4Y34AMXT™*	263.4	2	21.8	59.4
POWER PLUS 4A67AMXT™*	252.3	6	22.3	58.5
POWER PLUS 4J95AMXT™*	256.7	3	22.4	58.5
✓CHECK	241.1		22.3	58.5
Average	254.1		21.2	59.0
Check Average	248.8		22.0	58.9



Intern Mason Gardner posed with a newly installed field sign in Missouri.

Avoid herbicide injury.  
Flag your fields.

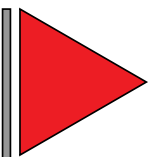
Avoid herbicide-related problems this year with a simple flag! Introduced by the University of Arkansas, the Flag the Technology program aims to reduce chemical misapplications and avoidable crop injury. During busy seasons, a lot of information can be miscommunicated between a grower and their chemical company. A color-coded flag at the primary entrance of a field provides a failsafe for the grower and applicator while also notifying surrounding growers of the crop system being used.

Flag the Technology has a simple color coding system associated with each herbicide trait. By utilizing the flagging system, the applicator can confirm the product in the tank matches the trait in the field. Burrus Seed has employed the system

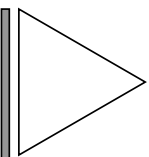
for the past few years with great success and we encourage our growers to adopt the system as well.

Flags are available through multiple online retailers. For your convenience, flags are also available for purchase from Burrus Seed. Ask your Account Manager for details. Reduce herbicide application errors and encourage responsible neighbor relationships with the Flag the Technology program.

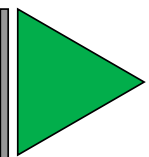
In the event of new stacked herbicide options, two or more flags may be jointly installed to distinguish herbicide tolerance. For example, to mark a field of LibertyLink® GT27™ soybeans, both a white (glyphosate tolerant) and a green (glufosinate tolerant) flag would be used.



Conventional:  
no herbicide tolerance

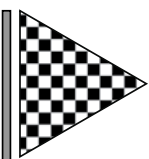


Roundup Ready®:  
glyphosate tolerance

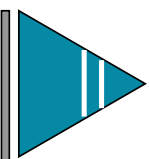


LibertyLink®:  
glufosinate tolerance

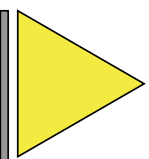
FLAG THE TECHNOLOGY



Roundup Ready® 2  
Xtend®: dicamba tolerance



Enlist™: 2,4-D tolerance



STS®: ALS tolerance

Burrus welcomes new  
field agronomists

In August, two new Field Agronomists, Chris Brown and Dana Harder, joined the Burrus team. Field Agronomist responsibilities include agronomic training of the sales staff, customer service for Burrus growers across our selling footprint, and product testing and research.

Chris Brown joins the team with a solid agronomic background in both product development and sales. In addition, Chris holds a Certified Crop Advisor license. A Southern Illinois University-Carbondale graduate, Chris now resides in Lacon, IL with his wife Tina, and their two children Chase and Cade. Chris serves the northeast region of our selling footprint.

Dana Harder brings both practical and research experience to Burrus Seed. Dana especially enjoys helping growers set-up and analyze their own on-farm testing. After graduating from the University of Missouri with a bachelor's degree, Dana received a master's from Michigan State University. Edina, MO is home for Dana, his wife Candi, and their three children. Dana serves growers in southern Illinois and Missouri.

We are pleased to add such well-respected agronomists who possess hands-on experience to the Burrus team. Please feel free to contact them with your corn and soybean growing questions. Contact information for Chris and Dana can be found in this publication and on our website.



Chase, Tina, Cade & Chris Brown.



Candi and Dana Harder with son Owen and daughters Madison & Cambell.



# Stewarded Soybean Plots

## CASS

Power Plus® 38K6™\*  
took first at 69 bu/a

Hamman Bros.  
Arenzville, IL

Planted: May 11 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 19. **Previous Crop:** Corn. **Herbicide:** Zidua Pro. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
POWER PLUS 38K6™*	69.5	13.2
HOBLIT 384LL	67.8	13.1
HOBLIT 457LL	67.5	13.4
EXP 39	64.8	13.3
HOBLIT 418LL	62.9	13.3
EXP 43	62.7	13.3
EXP 38C	62.7	13.1
BURRUS 404S	61.6	13.3
Credenz CZ3945LL	56.8	13.2
Pioneer P41T79L	53.7	13.3
Credenz CZ3841LL	53.1	13.3
Average	62.1	13.3

Hamman Bros.  
Arenzville, IL

Planted: May 11 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 19. **Previous Crop:** Corn. **Herbicide:** Zidua Pro. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
POWER PLUS 38K6™*	69.5	13.2
HOBLIT 368LL	69.4	13.2
EXP 37	68.0	13.2
HOBLIT 384LL	67.8	13.1
Pioneer P37T09L	67.6	13.2
EXP 36C	64.5	13.3
EXP 38C	62.7	13.1
Credenz CZ3841LL	53.1	13.3
Average	65.3	13.2

New DONMARIO 37M3X  
tops 70 bu/a

Hamman Bros.  
Arenzville, IL

Planted: May 11 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 19. **Previous Crop:** Corn. **Herbicide:** Zidua Pro. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
Asgrow AG42X6	74.7	13.2
DONMARIO 37M3X	70.3	13.3
POWER PLUS 36A1X™*	68.6	13.2
DONMARIO 41P2X	67.9	13.4
Asgrow AG36X6	66.9	13.2
Asgrow AG39X7	66.7	13.2
Pioneer P40T84X	64.9	13.3
Pioneer P36T36X	60.7	13.2
Average	67.6	13.2

Hamman Bros.  
Arenzville, IL

Planted: May 11 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 19. **Previous Crop:** Corn. **Herbicide:** Zidua Pro. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
Asgrow AG33X8	69.5	13.3
DONMARIO 28J9X	69.0	13.1
POWER PLUS 36A1X™*	68.6	13.2
Asgrow AG36X6	66.9	13.2
DONMARIO 34C4X	64.0	13.2
Pioneer P36T36X	60.7	13.2
Pioneer P24T84X	60.7	13.1
Pioneer P24T84X	55.3	13.2
Average	64.3	13.2

Hamman Bros.  
Arenzville, IL

Planted: May 11 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 19. **Previous Crop:** Corn. **Herbicide:** Zidua Pro. **Soil Type:** Silt loam. **Weather:** May-normal, June-

normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
BURRUS 335S	69.6	13.2
HOBLIT 368LL	69.4	13.2
HOBLIT 298LL	67.5	13.2
EXP 25	65.2	13.3
EXP 36C	64.5	13.3
EXP 34	63.8	13.2
Average	66.7	13.2

## GREENE

Schutz Farms  
Hillview, IL

Planted: May 14 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 22. **Previous Crop:** Corn. **Herbicide:** Matador, Gramoxone, Zidua Pro. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-dry, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
BURRUS 335S	59.0	12.1
Asgrow AG33X8	57.0	12.1

HOBLIT 368LL	52.0	12.0
EXP 34	52.0	12.1
HOBLIT 298LL	51.0	12.1
EXP 36C	50.0	12.1
EXP 25	48.0	12.0
Average	52.7	12.1

 Schutz Farms  
Hillview, IL

Planted: May 14 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 22. **Previous Crop:** Corn. **Herbicide:** Matador, Gramoxone, Zidua Pro. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-dry, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
DONMARIO 41P2X	61.0	12.2
POWER PLUS 36A1X™*	55.0	12.1
Asgrow AG42X6	54.0	12.2
DONMARIO 37M3X	54.0	12.1
Asgrow AG36X6	54.0	12.1
Pioneer P36T36X	51.0	11.9
Asgrow AG39X7	50.0	12.1
Pioneer P40T84X	48.0	12.2
Average	53.4	12.1

## Soybean Ratings and Characteristics

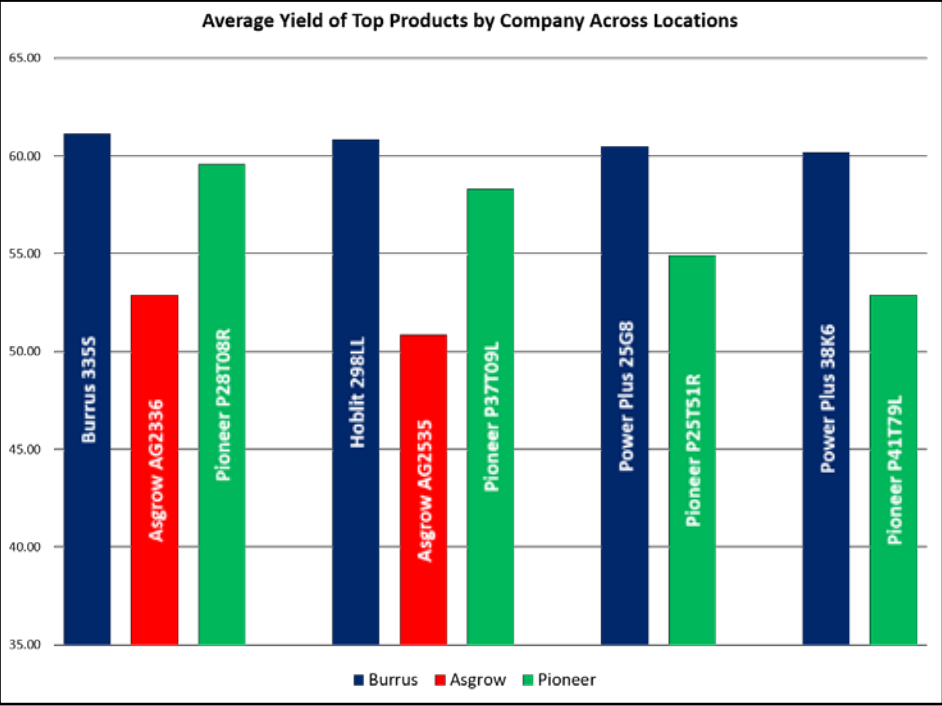
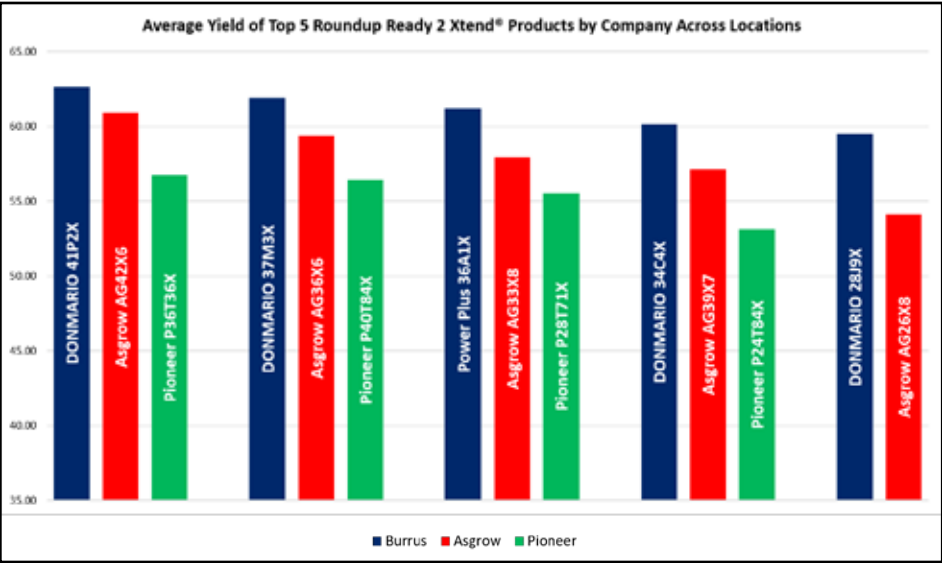
Brand	Maturity	Soybean Cyst Nematode	Emergence	Standability	Shattering Score	Phytophthora (PRR)	Brown Stem Rot (BSR)	Sudden Death (SDS) Tolerance	Frogeye Leaf Spot Tolerance	White Mold	Iron Chlorosis	Canopy Width	Plant Height	Light Soils	Pubescence
ROUNDUP READY 2 XTEND®															
DONMARIO 25C7X	2.5	PI88788	7	8	NR	7	10	7	NR	NR	NR	8	8	8	L. Tawny
DONMARIO 28J9X	2.8	PI88788	8	8	NR	8	8	7	NR	6	7	7	8	8	Gray
DONMARIO 34C4X	3.4	PI88788	8	9	NR	8	7	5	NR	7	6	7	7	8	Gray
Power Plus® 36A1X™*	3.6	PI88788	8	8	8	5	9	6	5	NR	5	7	7	7	Gray
DONMARIO 37M3X	3.7	PI88788	7	7	NR	7	NR	5	NR	6	6	8	8	7	L. Tawny
DONMARIO 41P2X	4.1	PI88788	7	7	NR	7	NR	7	5	NR	NR	8	7	8	Gray
LIBERTYLINK® GT27™															
Hughes 258S	2.5	Peking	8	9	NR	8	NR	6	NR	6	8	7	7	NR	L. Tawny
Hughes 277S	2.7	PI88788	9	6	NR	8	NR	6	NR	6	7	7	7	NR	L. Tawny
Burrus 316S	3.1	PI88788	9	7	NR	6	8	7	NR	5	8	8	8	NR	L. Tawny
Burrus 335S	3.3	PI88788	8	6	NR	6	NR	7	8	NR	8	8	7	NR	L. Tawny
Burrus 404S	4.0	PI88788	9	8	NR	8	NR	7	8	NR	8	7	7	NR	L. Tawny
LIBERTYLINK®															
Hughes 236LL	2.3	PI88788	9	8	9	6	7	6	NR	6	8	7	7	7	L. Tawny
Hughes 266LL	2.6	PI88788	9	9	9	6	8	7	NR	6	6	7	7	7	L. Tawny
Hoblit 298LL	2.9	PI88788	10	6	9	8	8	7	8	7	8	7	9	7	Gray
Hoblit 368LL	3.6	PI88788	9	9	9	8	8	6	6	7	7	7	7	7	L. Tawny
Hoblit 384LL	3.8	PI88788	10	8	9	8	8	5	6	7	7	8	6	7	L. Tawny
Hoblit 418LL	4.1	PI88788	10	8	9	8	8	7	7	6	7	6	7	7	L. Tawny
Hoblit 457LL	4.5	PI88788	10	9	9	8	8	8	6	NR	NR	7	6	8	L. Tawny
GLYPHOSATE TOLERANT*															
Power Plus® 20B7™*	2.0	Peking	7	9	8	5	8	7	9	6	5	5	7	6	L. Tawny
Power Plus® 25G8™*	2.5	Peking	8	9	6	5	7	8	9	6	5	7	6	6	L. Tawny
Power Plus® 28Q8™*	2.8	PI88788	7	9	8	5	9	6	5	6	5	6	7	7	L. Tawny
Power Plus® 38K6™*	3.8	PI88788	8	8	NR	5	9	7	5	5	5	7	8	9	L. Tawny
RATINGS: 10 = BEST, 1 = POOREST, NR = NOT RATED															

Hoblit® and Hughes® are registered trademarks of Burrus®. Power Plus® brand seed is distributed by Burrus. Power Plus® is a registered trademark of Pioneer Hi-Bred. DONMARIO™ brand seed is distributed by Burrus. DONMARIO™ is a trademark of Asociados Don Mario S.A.

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

**IMPORTANT:** Characteristic scores provide key information useful in selecting and managing products in your area. Information and ratings are based on comparisons with other products sold by Burrus. Information and scores are assigned by Burrus and are based on period-of-years testing through 2018 harvest and were the latest available at time of printing. Some scores may change after 2018 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.





Schutz Farms  
Hillview, IL

Planted: May 14 in 30" rows. Planting Population: 150,000. Harvested: October 22. Previous Crop: Corn. Herbicide: Matador, Gramoxone, Zidua Pro. Soil Type: Silt loam. Weather: May-normal, June-normal, July-dry, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
EXP 37	59.0	12.1
POWER PLUS 38K6™*	58.0	12.1
Pioneer P37T09L	56.0	12.0
HOBILIT 368LL	52.0	12.0
HOBILIT 384LL	51.0	12.1
EXP 38C	51.0	12.0
EXP 36C	50.0	12.1
Credenz CZ3841LL	49.0	12.2
Average	53.2	12.1



Planted: May 14 in 30" rows. Planting Population: 150,000. Harvested: October 22. Previous Crop: Corn. Herbicide: Matador, Gramoxone, Zidua Pro. Soil Type: Silt loam. Weather: May-normal, June-normal, July-dry, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
POWER PLUS 36A1X™*	55.0	12.1
Asgrow AG36X6	54.0	12.1
DONMARIO 28J9X	54.0	11.9
DONMARIO 34C4X	53.0	12.0
Pioneer P36T36X	51.0	11.9
Pioneer P28T71X	45.0	11.9
Pioneer P24T84X	42.0	11.9
Average	50.6	12.0

Schutz Farms  
Hillview, IL

Planted: May 14 in 30" rows. Planting Population: 150,000. Harvested: October 22. Previous Crop: Corn. Herbicide: Matador, Gramoxone, Zidua Pro. Soil Type: Silt loam. Weather: May-normal, June-normal, July-dry, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
EXP 39	59.0	12.2
POWER PLUS 38K6™*	58.0	12.1
Credenz CZ3945LL	54.0	12.1
EXP 38C	51.0	12.0
HOBILIT 457LL	51.0	12.2
HOBILIT 384LL	51.0	12.1
HOBILIT 418LL	50.0	12.1
BURRUS 404S	50.0	12.1
Credenz CZ3841LL	49.0	12.2
EXP 43	44.0	12.1
Pioneer P41T79L	41.0	12.3
Average	50.7	12.1



New DONMARIO 41P2X  
tops plot at 71 bu/a



Planted: May 12 in 30" rows. Planting Population: 150,000. Harvested: October 21. Previous Crop: Corn. Herbicide: Zidua Pro, Clethodim, Pursuit, Brawl II. Soil Type: Silt loam. Weather: May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
DONMARIO 41P2X	71.0	13.6
POWER PLUS 36A1X™*	69.0	13.9
Asgrow AG39X7	68.0	13.6
DONMARIO 37M3X	68.0	13.9
Asgrow AG42X6	65.0	13.8
Pioneer P36T36X	64.0	13.8
Pioneer P40T84X	63.0	13.9
Asgrow AG36X6	60.0	13.8
Average	66.0	13.8

Roegge Farms  
Jacksonville, IL

Planted: May 12 in 30" rows. Planting Population: 150,000. Harvested: October 21. Previous Crop: Corn. Herbicide: Zidua Pro, Clethodim, Pursuit, Brawl II. Soil Type: Silt loam. Weather: May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
Dyna Gro S38LL54	69.0	13.7
HOBILIT 384LL	68.0	13.9
HOBILIT 418LL	67.0	13.9
Credenz CZ3945LL	67.0	13.9
EXP 39	66.0	13.7
POWER PLUS 38K6™*	66.0	13.8
Credenz CZ3841LL	61.0	14.0
HOBILIT 457LL	60.0	13.5
Pioneer P41T79L	60.0	13.9
BURRUS 404S	59.0	13.9
EXP 43	54.0	13.9
Average	63.4	13.8



We keep you on the  
**STRAIGHT & NARROW.**





# Stewarded Soybean Plots

## MORGAN

New DONMARIO 28J9X makes 72 bu/a

COMPARE

!

Roegge Farms  
Jacksonville, IL

**Planted:** May 12 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 21. **Previous Crop:** Corn. **Herbicide:** Zidua Pro, Clethodim, Pursuit, Brawl II. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
DONMARIO 28J9X	72.0	13.3
DONMARIO 34C4X	71.0	13.6
POWER PLUS 36A1X™*	69.0	13.9
Pioneer P36T36X	64.0	13.8
Asgrow AG33X8	63.0	13.6
Asgrow AG36X8	60.0	13.8
Pioneer P24T84X	59.0	13.4
Pioneer P28T71X	52.0	13.9
Average	63.8	13.7

Roegge Farms  
Jacksonville, IL

**Planted:** May 12 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 21. **Previous Crop:** Corn. **Herbicide:** Zidua Pro, Clethodim, Pursuit, Brawl II. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
EXP 38C	72.0	13.8
EXP 36C	71.0	13.9
HOBLIT 368LL	70.0	14.0
Dnya Gro S38LL54	69.0	13.7
HOBLIT 384LL	68.0	13.9
POWER PLUS 38K6™*	66.0	13.8
EXP 37	66.0	13.8
Pioneer P37T09L	66.0	13.8
Credenz CZ3841LL	61.0	14.0
Average	67.7	13.9



### GUIDE TO ACCURATE SOYBEAN PLANTING

SMALL TO NORMAL SEED SIZE		LARGE SEED SIZE	
2500 seeds per pound or greater, 56 lbs. or less per 140k unit		2500 seeds per pound or less (1800 to 2500), 56 lbs. per 140k unit or more	
John Deere Non-Vac (Finger Pickup Type Corn Planters) *1 *4 *5	Using Kinze Brush Meters – (2200 seeds/lb or more) Black Brush Type 60 Cell Seed Metering Plate Using Radial Metering Bean Plate – (3700 - 4500 seeds/lb) setting “A”, (2800 - 3700 seeds/lb) setting “B”	Using Kinze Brush Meters – (2200 seeds/lb or less) Blue Brush Type 48 Cell Seed Metering Plate Using Radial Metering Bean Plate – (2000 - 2800 seeds/lb) setting “C”	
Kinze Non-Vac *2 *1 *5	(2200 seeds/lb or more) Black Brush Type 60 Cell Seed Metering Plate	(2200 seeds/lb or less) Blue Brush Type 48 Cell Seed Metering Plate	
John Deere Vac Planters *3 *1 *5	Only one disc option – Vacuum setting at 8	Only one disc option – Vacuum setting at 9 (test and adjust accordingly) If feeding problems persist – remove the elbow from the hose feeding the hopper	
John Deere ExactEmerge™ Meter *1 *8 Vacuum Level (in oz. water)	(3300-3100 seeds/lb) 8-10 (2900-2700 seeds/lb) 14-16	(3100-2900 seeds/lb) 10-14 (2700-2500 seeds/lb) 16-18	(2500-2300 seeds/lb) 18-19 (2300-2100 seeds/lb) 19-21
Kinze Vac Planters *2 *1 *5	Use 60 cell plate – Singular setting at 5 – Vacuum setting at 10	Use 60 cell plate – Singular setting of 5 – Start vacuum setting at 10 (Test and adjust accordingly)	
Case IH Vac Planters *6 *1 *5	(2600-3500 seeds/lb) 193017A1 disc – Singulator setting at 8 – Vacuum at 15-17” (3500-4500 seeds/lb) 87420630 disc or comparable – Singulator setting at 8 – Vacuum at 15-17” (2500-3500 seeds/lb) 87698875 disc or comparable – Singulator setting at 8 – Vacuum at 15-17”	(2000-3500 seeds/lb) 87698875 disc or comparable – Singulator setting at 8 – Vacuum at 15-17”	
White Vac Planters *7 *1 *5	(3000-4500 seeds/lb) Use 7000722513 (120 cell) disc – Air pressure at 1-3” (2000-3500 seeds/lb) Use 852432 (120 cell) disc of 30” rows – Air pressure at 2-2.5” (2000-3500 seeds/lb) Use 852433 (60 cell) disc of 15” rows – Air pressure at 2-2.5”	(2000-3500 seeds/lb) Use 852432 (120 cell) disc for 30” rows – Air pressure at 2-2.5” (2000-3500 seeds/lb) Use 852433 (60 cell) disc for 15” rows – Air pressure at 2-2.5” (Test and adjust accordingly)	

- \*1 Consult the operator's manual for additional talc/graphite recommendations

\*2 One TBSP of graphite per hopper for a standard 2 bu hopper and 1-1.5 lbs of graphite per 50 unit container

\*3 For central fill planters, use a 1/2 rate of talc for untreated beans and a full rate (corn rate) of talc with treated beans

\*4 Add 3/8 TBSP of graphite per hopper

\*5 Adjust speed as directed in the operator's manual
- \*6 Consult the operator's manual for seed disc RPM recommendations

\*7 Do not exceed 35 RPM on seed disc

\*8 Some seed sizes, shapes, and planting speed and seeding rate require vacuum levels be adjusted slightly

**Always check the operator's manual.**  
**Always use SuperFLOW™ or talc/graphite, etc. according to the label for lubricant to avoid bridging in the planter box.**

Roegge Farms  
Jacksonville, IL

**Planted:** May 12 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 21. **Previous Crop:** Corn. **Herbicide:** Zidua Pro, Clethodim, Pursuit, Brawl II. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
EXP 38C	72.0	13.8
EXP 36C	71.0	13.9
BURRUS 335S	71.0	13.8
EXP 25	71.0	14.0
HOBLIT 368LL	70.0	14.0
EXP 34	68.0	13.7
HOBLIT 298LL	66.0	14.0
BURRUS 316S	51.0	13.9
Average	67.5	13.9

## PEORIA

New DONMARIO 41P2X tops the plot at 63 bu/a

COMPARE

!

Gill Farms  
Princeville, IL

**Planted:** May 19 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 23. **Previous Crop:** Corn. **Herbicide:** Sonic, Zidua, Thunder. **Soil Type:** Silty clay loam. **Weather:** May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
DONMARIO 41P2X	63.0	11.6
Asgrow AG36X6	63.0	11.7
Asgrow AG42X6	62.0	11.6
DONMARIO 37M3X	62.0	11.7
POWER PLUS 36A1X™*	61.0	11.4
Pioneer P36T36X	59.0	11.6
Pioneer P40T84X	56.0	11.6
Asgrow AG39X7	55.0	11.6
Average	60.1	11.6

Hoblit 384LL makes 64 bu/a

Gill Farms  
Princeville, IL

**Planted:** May 19 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 23. **Previous Crop:** Corn. **Herbicide:** Sonic, Zidua, Thunder. **Soil Type:** Silty clay loam. **Weather:**

May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
HOBLIT 384LL	64.0	11.6
EXP 37	64.0	11.7
HOBLIT 368LL	63.0	11.7
EXP 38C	61.0	11.5
Dyna Gro S38LL54	61.0	11.6
Pioneer P37T09L	61.0	11.6
Credenz CZ3841LL	57.0	11.6
EXP 36C	57.0	11.6
POWER PLUS 38K6™*	56.0	11.5
Average	60.4	11.6

Hoblit 418LL tops the plot at 65 bu/a

Gill Farms  
Princeville, IL

**Planted:** May 19 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 23. **Previous Crop:** Corn. **Herbicide:** Sonic, Zidua, Thunder. **Soil Type:** Silty clay loam. **Weather:** May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
HOBLIT 418LL	65.0	11.8
HOBLIT 384LL	64.0	11.6
Pioneer P41T79L	63.0	11.6
EXP 38C	61.0	11.5
Dyna Gro S38LL54	61.0	11.6
HOBLIT 457LL	59.0	11.6
EXP 39	58.0	11.6
Credenz CZ3945LL	58.0	11.7
EXP 43	57.0	11.6
BURRUS 404S	57.0	11.6
Credenz CZ3841LL	57.0	11.6
POWER PLUS 38K6™*	56.0	11.5
Average	59.7	11.6



COMPARE

!

**Gill Farms**  
**Princeville, IL**

**Planted:** May 19 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 23. **Previous Crop:** Corn. **Herbicide:** Sonic, Zidua, Thunder. **Soil Type:** Silty clay loam. **Weather:** May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
Asgrow AG36X6	63.0	11.7
<b>POWER PLUS 36A1X™*</b>	<b>61.0</b>	<b>11.4</b>
Pioneer P28T71X	61.0	11.7
<b>DONMARIO 28J9X</b>	<b>61.0</b>	<b>11.5</b>
Pioneer P24T84X	61.0	11.5
<b>DONMARIO 34C4X</b>	<b>60.0</b>	<b>11.7</b>
Pioneer P36T36X	59.0	11.6
Asgrow AG33X8	57.0	11.5
Average	60.4	11.6

COMPARE

!

**Gill Farms**  
**Princeville, IL**

**Planted:** May 19 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 23. **Previous Crop:** Corn. **Herbicide:** Sonic, Zidua, Thunder. **Soil Type:** Silty clay loam. **Weather:** May-normal, June-normal, July-normal, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
EXP 34	66.0	11.5
<b>BURRUS 316S</b>	<b>64.0</b>	<b>11.7</b>
EXP 25	64.0	11.7
<b>HOBLIT 368LL</b>	<b>63.0</b>	<b>11.7</b>
<b>HOBLIT 298LL</b>	<b>63.0</b>	<b>11.7</b>
<b>BURRUS 335S</b>	<b>62.0</b>	<b>11.7</b>
EXP 36C	57.0	11.6
Average	62.7	11.7

# LIVINGSTON

COMPARE

!

**John Cramer**  
**Chillicothe, MO**

**Planted:** May 18 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 26. **Previous Crop:** Soybeans. **Herbicide:** Raptor, Warrant, Clethodim. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-dry, August-dry.

Brand/Product	Bu. Per Acre	% Moisture
<b>DONMARIO 37M3X</b>	<b>58.0</b>	<b>13.3</b>
<b>DONMARIO 41P2X</b>	<b>55.0</b>	<b>13.2</b>
<b>POWER PLUS 36A1X™*</b>	<b>55.0</b>	<b>13.3</b>
Asgrow AG36X6	52.0	13.3
Asgrow AG39X7	51.0	13.3
Pioneer P40T84X	50.0	13.3
Asgrow AG42X6	49.0	13.1
Pioneer P36T36X	49.0	13.2
Average	52.4	13.2

COMPARE

!

**John Cramer**  
**Chillicothe, MO**

**Planted:** May 18 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 26. **Previous Crop:** Soybeans. **Herbicide:** Raptor, Warrant, Clethodim. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-dry, August-dry.

Brand/Product	Bu. Per Acre	% Moisture
<b>POWER PLUS 36A1X™*</b>	<b>55.0</b>	<b>13.3</b>
<b>DONMARIO 34C4X</b>	<b>54.0</b>	<b>13.3</b>
Asgrow AG36X6	52.0	13.3
Pioneer P36T36X	49.0	13.2
Asgrow AG33X8	48.0	13.3
<b>DONMARIO 28J9X</b>	<b>48.0</b>	<b>13.4</b>
Pioneer P28T71X	47.0	13.6
Pioneer P24T84X	42.0	13.6
Average	49.4	13.4

After 12 years of extensive research in the US, Burrus is pleased to bring a new class of superior soybean genetics to our growers through the DONMARIO brand.

COMPARE

!

**John Cramer**  
**Chillicothe, MO**

**Planted:** May 18 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 26. **Previous Crop:** Soybeans. **Herbicide:** Raptor, Warrant, Clethodim. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-dry, August-dry.

Brand/Product	Bu. Per Acre	% Moisture
<b>HOBLIT 457LL</b>	<b>59.0</b>	<b>13.3</b>
<b>POWER PLUS 38K6™*</b>	<b>57.0</b>	<b>13.1</b>
EXP 39	54.0	13.3
<b>HOBLIT 418LL</b>	<b>53.0</b>	<b>13.3</b>
EXP 43	50.0	13.2
Pioneer P41T79L	49.0	13.3
Credenz CZ3841LL	49.0	13.8
<b>BURRUS 404S</b>	<b>48.0</b>	<b>13.3</b>
<b>HOBLIT 384LL</b>	<b>48.0</b>	<b>13.3</b>
Credenz CZ3945LL	47.0	13.3
EXP 38C	45.0	13.2
Average	50.8	13.3

COMPARE

!

**John Cramer**  
**Chillicothe, MO**

**Planted:** May 18 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 26. **Previous Crop:** Soybeans. **Herbicide:** Raptor, Warrant, Clethodim. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-dry, August-dry.

Brand/Product	Bu. Per Acre	% Moisture
EXP 34	56.0	13.3
EXP 36C	55.0	13.3
<b>BURRUS 335S</b>	<b>51.0</b>	<b>14.0</b>
<b>HOBLIT 298LL</b>	<b>46.0</b>	<b>16.0</b>
<b>HOBLIT 368LL</b>	<b>45.0</b>	<b>13.3</b>
EXP 25	44.0	14.8
Average	49.5	14.1

COMPARE

!

**John Cramer**  
**Chillicothe, MO**

**Planted:** May 18 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 26. **Previous Crop:** Soybeans. **Herbicide:** Raptor, Warrant, Clethodim. **Soil Type:** Silt loam. **Weather:** May-normal, June-normal, July-dry, August-dry.

Brand/Product	Bu. Per Acre	% Moisture
<b>POWER PLUS 38K6™*</b>	<b>57.0</b>	<b>13.1</b>
EXP 36C	55.0	13.3
EXP 37	54.0	13.2
Credenz CZ3841LL	49.0	13.8
<b>HOBLIT 384LL</b>	<b>48.0</b>	<b>13.3</b>
Pioneer P37T09L	46.0	13.3
EXP 38C	45.0	13.2
<b>HOBLIT 368LL</b>	<b>45.0</b>	<b>13.3</b>
Average	49.9	13.3

# SHELBY

COMPARE

!

**Brian Threlkeld**  
**Clarence, MO**

**Planted:** May 23 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 24. **Previous Crop:** Corn. **Herbicide:** Zidua Pro, Brawl II, Raptor, Warrant, Clethodim. **Soil Type:** Silt loam.

Brand/Product	Bu. Per Acre	% Moisture
<b>DONMARIO 34C4X</b>	<b>59.0</b>	<b>12.6</b>
<b>POWER PLUS 36A1X™*</b>	<b>59.0</b>	<b>12.8</b>
Asgrow AG36X6	59.0	12.7
Pioneer P36T36X	57.0	12.3
<b>DONMARIO 28J9X</b>	<b>55.0</b>	<b>12.3</b>
Asgrow AG33X8	53.0	12.8
Pioneer P28T71X	52.0	12.3
Pioneer P24T84X	43.0	12.6
Average	54.6	12.5

COMPARE

!

**Brian Threlkeld**  
**Clarence, MO**

**Planted:** May 23 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 24. **Previous Crop:** Corn. **Herbicide:** Zidua Pro, Brawl II, Raptor, Warrant, Clethodim. **Soil Type:** Silt loam.

Brand/Product	Bu. Per Acre	% Moisture
<b>POWER PLUS 38K6™*</b>	<b>61.0</b>	<b>12.5</b>
<b>HOBLIT 457LL</b>	<b>57.0</b>	<b>13.0</b>
EXP 38C	57.0	12.4
EXP 39	56.0	12.3
<b>HOBLIT 418LL</b>	<b>55.0</b>	<b>12.9</b>
<b>HOBLIT 384LL</b>	<b>55.0</b>	<b>12.8</b>
EXP 43	54.0	12.5
<b>BURRUS 404S</b>	<b>53.0</b>	<b>12.2</b>
Credenz CZ3945LL	53.0	12.8
Pioneer P41T79L	51.0	12.9
Dyna Gro S38LL54	51.0	12.8
Credenz CZ3841LL	51.0	13.1
Average	54.5	12.7

COMPARE

!

**Brian Threlkeld**  
**Clarence, MO**

**Planted:** May 23 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 24. **Previous Crop:** Corn. **Herbicide:** Zidua Pro, Brawl II, Raptor, Warrant, Clethodim. **Soil Type:** Silt loam.

Brand/Product	Bu. Per Acre	% Moisture
Asgrow AG42X6	61.0	12.9
Asgrow AG36X6	59.0	12.7
<b>DONMARIO 37M3X</b>	<b>59.0</b>	<b>12.7</b>
<b>POWER PLUS 36A1X™*</b>	<b>59.0</b>	<b>12.8</b>
<b>DONMARIO 41P2X</b>	<b>58.0</b>	<b>13.0</b>
Pioneer P40T84X	58.0	12.9
Pioneer P36T36X	57.0	12.3
Asgrow AG39X7	52.0	13.0
Average	57.9	12.8

COMPARE

!

**Brian Threlkeld**  
**Clarence, MO**

**Planted:** May 23 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 24. **Previous Crop:** Corn. **Herbicide:** Zidua Pro, Brawl II, Raptor, Warrant, Clethodim. **Soil Type:** Silt loam.

Brand/Product	Bu. Per Acre	% Moisture
<b>POWER PLUS 38K6™*</b>	<b>61.0</b>	<b>12.5</b>
EXP 36C	61.0	13.1
EXP 37	59.0	12.3
EXP 38C	57.0	12.4
<b>HOBLIT 384LL</b>	<b>55.0</b>	<b>12.8</b>
Pioneer P37T09L	53.0	12.8
<b>HOBLIT 368LL</b>	<b>52.0</b>	<b>13.1</b>
Dyna Gro S38LL54	51.0	12.8
Credenz CZ3841LL	51.0	13.1
Average	55.6	12.8

COMPARE

!

**Brian Threlkeld**  
**Clarence, MO**

**Planted:** May 23 in 30'' rows. **Planting Population:** 150,000. **Harvested:** October 24. **Previous Crop:** Corn. **Herbicide:** Zidua Pro, Brawl II, Raptor, Warrant, Clethodim. **Soil Type:** Silt loam.

Brand/Product	Bu. Per Acre	% Moisture
EXP 36C	61.0	13.1
<b>BURRUS 335S</b>	<b>59.0</b>	<b>12.7</b>
EXP 34	58.0	12.8
<b>HOBLIT 298LL</b>	<b>53.0</b>	<b>12.8</b>
<b>HOBLIT 368LL</b>	<b>52.0</b>	<b>13.1</b>
EXP 25	49.0	13.1
Average	55.3	12.9

The Burrus Buzz - agronomic advice direct to your inbox!

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# DONMARIO™ & Burrus: A shared vision for moving soybeans ahead

**Todd Burrus: Tell us about yourself.**

**Ignacio Bartolomé:** I'm Ignacio Bartolomé, I grew up in a small town in the Buenos Aires province in Argentina considered to be the Argentinean equivalent of the U.S. Midwest or Corn Belt (Soybean Belt!!). I grew up in a family with 5 children, 4 girls and myself. I went to college to pursue a degree in business management and information technology. I am married to Sofi and we are expecting our first child in March 2019! I currently live in Chicago and work out of our U.S headquarters in Gibson City, IL.

**TB: Share the history of DONMARIO™.**

**IB:** DONMARIO started in 1982 in Chacabuco, Buenos Aires province in the Argentinean pampa. At that time, soybeans were not a major crop in Argentina and there was a lack of genetic supply and research. Gerardo Bartolomé, my father and DONMARIO founder, was a young agronomist interested in the crop. He identified the lack of focus on soybean genetics and that the main maturity groups (MG) being used were later groups 5 and 6 which had a more defensive package and problems with white mold. Gerardo had the idea to plant earlier maturity group (MG) soybean genetics as is done in the U.S. Midwest region because of the similar latitude which gave a solution to the white mold problem as well as greater yield potential. This worked very well and the company started being recognized as a soybean-focused company with extensive knowledge in genetic and agronomic management.

In the 90s, the company started its own breeding program with the arrival of Roundup Ready® 1 and varieties better adapted to the region. The local research focus pushed the company's growth to become one of Argentina's leading seed companies.

In the 2000s, DONMARIO started their regional expansion first to Uruguay, then to Bolivia and Paraguay, and finally to Brazil where again due to research and local breeding efforts pushed for a change on paradigms from late determinate varieties to earlier (5, 6, 7) indeterminate varieties with a much more offensive package and VERY high yield potential. These new products pushed growth in Brazil to the point of having 60% market share of southern Brazil only four years after the initial launch.

Today, the company is the main genetics supplier of South America (150 million acres of soybeans) with over 40% market share.

In 2006, the company started its expansion outside of the region to start research activities in the U.S., after 12 years of intensive research and product development we feel confident it's time to bring products to the American grower!

Also, in the 2010s the company expanded into Europe and South Africa.

**TB: What are your goals in the USA?**

**IB:** The goal is to become one of the major genetics suppliers, offering a broad portfolio of varieties with the highest yielding potential. We are a multi-platform company that believes in choices and we wish to become a new choice for the American grower, always putting genetics and yield first. We believe the grower should choose the best trait platform to protect their yield and our job is to bring the highest yielding genetics!

**TB: How long have you been doing breeding and research in the USA?**

**IB:** We started in 2006. So, it's been 12 years of research and we keep expanding operations, growing investment and geographic expansion at a rate of 70-100% year over year.

**TB: Why did you choose Burrus?**

**IB:** We met with the Burrus team over 18 months ago and have been developing our relationship for all this time. We found along this journey that our companies share the same values. Independence first, honesty, transparency, and the goal of bringing to the farmer profitable and adapted solutions to help them thrive.

Both companies want to keep providing independent options to growers with a multi-platform approach. We saw in the Burrus Seed company and family the perfect partner to put our genetics and soybean knowledge with their knowledge about the American grower and the agronomic positioning of seed in the local region to bring the grower a powerful solution to add value to their farming operations.

**TB: Tell us about the new brand, how will it be positioned in the market place?**

**IB:** DONMARIO is focused on creating value for their customers. The foundation is superior genetics creating quality seed carrying leading traits. Agronomic studies to enhance performance will expand significantly with a goal of helping our customers' bottom line.

The growers who are serious about their soybean production are likely to be among the early adopters.

**TB: What is your highest yielding soybean plot to date?**

**IB:** A plot in Venado Tuerto, Argentina yielded 146 bu/a. The 4.2 maturity variety was a glyphosate tolerant product without any treatment, fertilizer, or irrigation.

**TB: What technologies are you currently channeling your breeding efforts towards?**

**IB:** Roundup Ready 2 Xtend®, conventional, Enlist E3™, XtendFlex® and new HPPD's solutions as well as proprietary developed technologies using gene editing and genomics.

**TB: What has been the initial response by Burrus customers?**

**IB:** EXCELLENT! There has been strong interest in trying a new option with an independent mindset, family owned business and a big focus on genetics and research.

**TB: What has interested you while interacting with Burrus growers?**

**IB:** The passion for work; farming is not a job it is a lifestyle! Respect for independence and value. Curiosity to try new things and keep progressing with new technologies as well as a high focused on quality and value-added products.

**TB: What has been the biggest hurdle to bringing DONMARIO beans to market here?**

**IB:** Being able to have a product that competes with the current U.S. suppliers, and that's why we have waited 12 years until we felt the time was right. We wanted to be sure we have products that will help the U.S. farmers bring more bushels to their farms.



Todd Burrus with Ignacio Bartolomé.

## CLAY

### Hoblit 368LL PS SDS tops plot at 76 bu/a

Brian and Levi Garrison  
Louisville, IL

**Planted:** April 29 in 30" rows. **Planting Population:** 121,000. **Harvested:** October 22. **Previous Crop:** Corn. **Herbicide:** Liberty Link. **Soil Type:** Light loam. **Weather:** May-dry, June-wet, July-wet, August-wet.

Brand/Product	Bu. Per Acre	% Moisture
HOBLIT 368LL PS SDS	76.0	11.9
HOBLIT 384LL	71.3	11.6
HOBLIT 384LL PS SDS	71.2	11.7
HOBLIT 368LL	68.6	11.9
HOBLIT 457LL PS SDS	67.4	11.9
HOBLIT 418LL	64.8	12.1
Average	69.9	11.9

## LASALLE

Jeff Busch  
Tonica, IL

**Planted:** May 1 in 30" rows. **Planting Population:** 140,000. **Harvested:** October 17. **Previous Crop:** Corn. **Herbicide:** Liberty. **Soil Type:** Heavy loam. **Weather:** May-normal, June-normal, July-dry, August-dry.

Brand/Product	Bu. Per Acre	% Moisture
HUGHES 266LL	78.4	14.5
HOBLIT 298LL	74.2	14.1
HOBLIT 298LL PS SDS	73.6	13.8
HOBLIT 355LL	71.7	14.9
HOBLIT 368LL	71.3	15.4
HOBLIT 368LL PS SDS	69.7	15.2
Average	73.1	14.6

## MACOUPIN

### Hoblit 384LL is top at 85 bu/a soybeans

Mike Cole  
Palmyra, IL

**Planted:** May 2 in 30" rows. **Harvested:** October 2. **Previous Crop:** Corn. **Herbicide:** Valor, Liberty.

Brand/Product	Bu. Per Acre	% Moisture
HOBLIT 384LL	85.3	12.7
HOBLIT 418LL	82.8	12.8
HOBLIT 405LL	78.8	13.0
Average	82.3	12.8

## SOYBEAN PLANTING RATES

Row width	7.5 inch	15 inch	30 inch
Untreated	180 - 190	160 - 170	140 - 150
PowerShield® (fully treated)	165 - 175	145 - 155	125 - 135
PowerShield® SDS (ILeVO®)	165 - 175	145 - 155	125 - 135

### 1,000 SEEDS PER ACRE

Use higher end of range in less than ideal conditions.  
Great Plains Fluted-Feed Drills: to get the most accurate seed spacing, lower the gate setting and increase the drive speed.







Tina & Jeff Busch saw Hughes 266LL yield over 78 bu/a in LaSalle Co.



Hughes 236LL started strong for the Prien Bros. in Green Co., WI.

# MCHENRY

## New soybean variety Power Plus® 25G8™\* PS SDS is third

DJ Farms  
Marengo, IL

**Planted:** May 2 in 30'' rows. **Planting Population:** 140,000. **Harvested:** September 20. **Previous Crop:** Corn. **Herbicide:** Roundup.

Brand/Product	Bu. Per Acre	% Moisture
Channel 27192RX Treated	74.6	17.0
Pioneer P24A80X Treated	67.6	12.2
<b>POWER PLUS 25G8™* PS SDS</b>	<b>66.6</b>	<b>12.7</b>
Walter 2417RX	63.4	11.4
Channel 2418R2X	61.6	11.1
<b>POWER PLUS 25G8™*</b>	<b>61.3</b>	<b>10.1</b>
Channel 2617R2X	60.2	11.1
Pioneer P25A7 0	59.6	10.9
Walter 2517GTS	58.5	9.6
Walter 2413RR2	55.9	10.1
Walter 2115R	54.8	9.9
<b>POWER PLUS 20B7™* PS SDS</b>	<b>53.4</b>	<b>9.9</b>
Pioneer P22T24X	51.8	11.1
Channel 2108R2	51.7	9.4
Walter 2115R	51.6	9.8
Average	59.5	11.1



# Tips for successful double-crop soybeans

Dana Harder

A successful double-crop soybean system has the potential to generate more annual revenue than a single cropping system. The timeframe to complete wheat harvest and plant soybeans is compressed with multiple environmental risks. Management of double-crop soybeans is different than those typically spring-planted. Below are some factors to consider for optimal success.

**Planting decision and date:** Soil moisture at the time of planting is the most crucial factor when debating whether to plant double-crop soybeans. If late-June has been dry and the next 7-10 day forecast is void of rainfall events after wheat harvest, it might be best to not plant soybeans. Conditions will likely be sub-optimal for germination leading to uneven and reduced stands. The window for planting double-crop soybeans is compressed; and as you progress north, the recommended planting cutoff date becomes earlier due to freeze risk. As a rule of thumb, subtract 90 days from your typical freeze date to determine a planting cutoff date. Earlier planting dates increase the chance for success due to a longer growing season and adequate soil moisture levels. It is key to plant immediately after harvest or baling straw. The ground can dry out and become hard in a brief period. This makes it difficult to place seed into moisture because of limited planter down pressure.

**Row spacing:** Narrow rows should be utilized to increase plant height and allow for rapid canopy closure. Row spacings narrower than 15" should be utilized. The growing season is much shorter and there is a need to capture as much sunlight as possible to maximize yield. Canopy closure is unlikely to occur in 30" rows because late planted soybeans do not branch and grow as tall.

**Populations:** Planting populations should be much higher than those utilized in spring planted soybean. In 15" rows,

planting populations should be 200,000 – 220,000 seeds/a. In drilled soybeans, planting populations should be 220,000 – 240,000 seeds/a. Plants will elongate due to intra-plant competition resulting in taller plants and higher pod placement compared to lower planting populations.

**Variety selection:** Select a variety on the later side of your typical maturity. Soybeans are daylight sensitive, which is what triggers flowering. A slightly later maturity promotes more vegetative growth before flowering takes place. The key is to balance maximum vegetative growth before encountering a freeze. Early maturity soybeans will result in short plants that develop pods low to the ground. Keep in mind, soybeans need about two weeks to dry down after reaching physiological maturity. Regarding plant structure, it is best to select a bushier soybean to promote rapid canopy development.

**Residue management:** Moisture conservation is key due to the likelihood of high temperatures and dry weather. No-till is recommended and the most utilized in double-crop soybeans. Wheat stubble should be less than 12" in height before planting. This height provides enough shading to help conserve moisture and also helps elongate the plant. Stubble that is taller will elongate the plant too much and cause it to lodge. If planting directly after harvest, the combine should chop and spread the residue uniformly. Clumps of straw will hamper the planting process and can result in poor plant emergence by preventing sunlight from reaching the soil surface. It can also block and bind with pre-emergent herbicide applications making them less effective. The use of non-selective herbicides along with a residual product is recommended for burndown and weed control. Make sure to review herbicide application cutoff dates and rotation intervals to avoid carryover to next year's crop.

**Enlist**  
Weed Control System

**AVAILABLE SOON**

### Exceptional weed control. Ease of use. Excellent yield.

Don't let tough weeds keep you from reaching your full yield potential. The Enlist™ weed control system from Dow AgroSciences builds on the current glyphosate and glufosinate systems to advance herbicide and trait technology. Now you can take weed control to a whole new level.

**Enlist E3™ Trait**  
Gives soybeans robust tolerance to new 2,4-D choline, glyphosate and glufosinate.

**Enlist Duo® Herbicide**  
Combines new 2,4-D choline and glyphosate to take care of tough weeds.

**Enlist One™ Herbicide**  
Enlist One™ is a straight-goods 2,4-D choline with additional tank-mix flexibility.

**Enlist Ahead**  
Get the most from the Enlist system. The Enlist Ahead management resource will help you get the best results from the Enlist system—today and for the future. From management recommendations to technology advancements, Enlist Ahead is designed to help growers make on-target applications and responsibly manage resistance in the field. To find out more, go to [Enlist.com/EnlistAhead](http://Enlist.com/EnlistAhead).

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# Identifying key soybean diseases

Chris Brown, C.C.A.

With an increased focus on soybean production and management in recent years, you need to be able to identify diseases that are affecting your soybeans to make the correct management decision in years to come.

Key diseases causing the largest yield reductions across our footprint:

**Brown stem rot (BSR)** – Brown stem rot overwinters in soybean residue left on the surface and symptoms are most pronounced when fields are wet during flowering growth stages. Hot weather limits disease development. Symptoms include browning on leaves between veins and on the interior portion of the stem when split. Leaf symptoms can easily be confused with SDS symptoms. Managing the soybean variety, tillage, and crop rotation based on field history can reduce incidence and severity of BSR.

**Sudden death syndrome (SDS)** – SDS infects roots early in the season; rarely do leaf symptoms appear before mid to late July. Irregular shaped spots and green around the veins of the leaves give SDS its characteristic appearance. Tissue between the veins will continue to brown, leaving only the mid-vein and major lateral veins green. Infected plants have rotted roots with deteriorated tap roots. Management options include utilizing resistant varieties, extending rotation back to soybeans for at least two years, reducing SCN in a field, and seed treatments such as PowerShield® with ILeVO® (PS SDS). If a field has a history of SDS, treating the seed with PS SDS is a recommended management practice.

**White mold** – White mold is more common in cooler growing regions and can cause significant yield loss, most noted during wet growing seasons. The disease is identified by

white, fluffy growth on plant stems. Symptoms become visible in the R3-R6 growth stages as gray lesions appear at the nodes. Foliar symptoms include tissue between the veins taking on a gray appearance. The leaves eventually turn brown and dry while remaining attached to the stem. The fungus survives in the soil for several years as sclerotia. Rain, cool temperatures, and moist soil below the canopy will favor infection of the plants. Management of the disease can be achieved by selecting resistant varieties, rotating from soybeans for 2-3 years, and tillage. Fungicides can be effective in managing white mold, but timing is key. To be most effective, fungicide with activity on white mold needs to be applied just prior to infection. This requires growers to take note of weather conditions that favor white mold and make preventative applications when they exist.

**Charcoal rot** – Charcoal rot can be an important yield robbing disease under hot, dry conditions. Symptoms of charcoal rot appear after flowering. The first signs of charcoal rot are patches of stunted, wilting plants. Leaves will remain attached after plant death. The lower stem and roots will be discolored light gray. When stems are split, there is black streaking in the woody part of the stem. Rotation to small grains, such as wheat will reduce inoculum in the soil. Avoid excessive seeding rates so plants do not compete for moisture, which will increase risk during a dry season.

These are just a few of the diseases that affect soybeans, but they are the diseases which can cause significant yield reductions and require advance management to minimize their effects. For help diagnosing diseases in your fields contact your Burrus Representative or Field Agronomist.



Brown stem rot.



Charcoal rot.



Sudden death syndrome.



White mold.

## New LibertyLink® GT27™ products for 2019

LibertyLink® GT27™ is a new soybean trait that has met full grain approval. Created with high-yielding, elite genetics, the LibertyLink GT27 system offers exceptional performance coupled with outstanding weed control. LibertyLink GT27 soybeans are the first soybean technology enabling both Liberty® and glyphosate use over the top. This stacked technology gives growers added flexibility when managing weed pressure.

There are three ways to think about the products using LibertyLink GT27 traits. First, consider growers who desire the ability to use both herbicides sequentially. These growers can select varieties from the LibertyLink GT27 products, shown in the middle column of the chart.

A second utilization is for growers planning to use the Liberty herbicide program. The

LibertyLink GT27 products expand our LibertyLink portfolio by adding new, high yielding options across maturities. Optional varieties for these growers are encompassed in the blue circle on the chart.

The third strategy is for growers wanting to use a glyphosate herbicide program that is safer to apply than some alternatives. Once again, the new LibertyLink GT27 products increase the options available for these growers, shown in the red circle of the chart.

Tim Greene summarizes the position of this technology by saying, “Burrus is excited to bring our growers the in-field flexibility of the LibertyLink GT27 trait package. Growers will now have the ability to adapt their weed control strategy in-season to best manage weed pressure.”



**KEVIN BURRUS**  
ARENZVILLE

For Kevin Burrus, farmer and production manager with Burrus Seed near Arenzville, participating in his first Yield Challenge competition helped change his mindset.

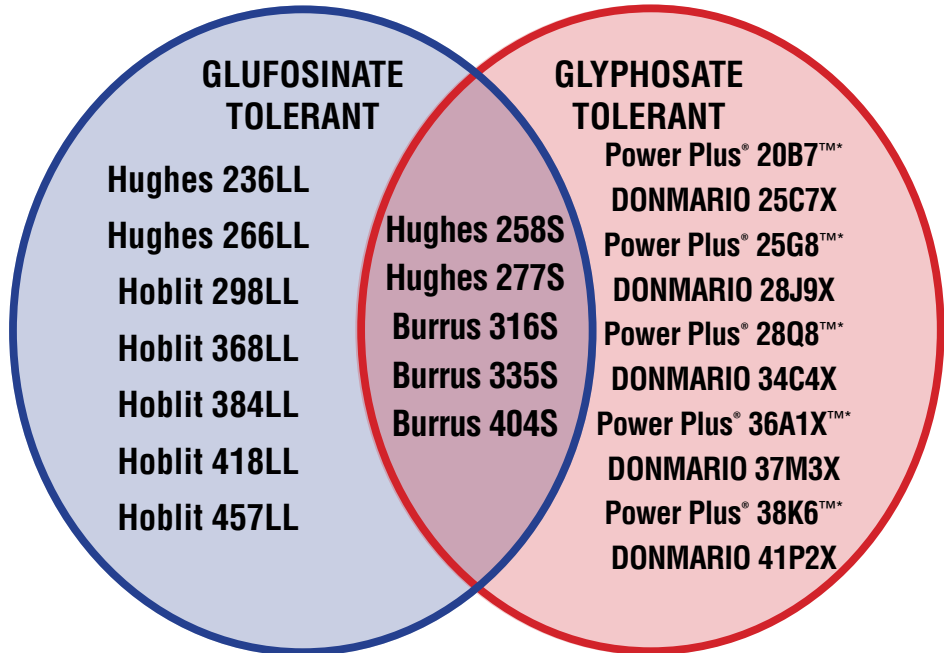
“The Yield Challenge convinced me into thinking about my soybeans more regularly. I spent more time in the fields, looking at the beans and asking questions about how to get more in that plot,” he says. “I learned we don’t have it all figured out yet. We got the basics, right, mostly—it’s the ‘what’s next?’ that gets more complicated.”

“No one person is smart enough to figure it all out, so we work with our retailers to look at what’s new and what might work for us. We look closely at field conditions, fertility, disease pressure and field history before choosing the right variety for each field,” he says.

Kevin Burrus was featured in the January edition of *IL Field & Bean* in an article titled “Yield Champions Weigh in on 6 Secrets of Soybean Success.”



Lacey & Burrus AM Zach Whitehill celebrated the end of planting season by competing in a Warrior Dash together.





MERCER

Power Plus® 36A1X™\*  
PS SDS makes 81 bu/a  
Scott Olson  
Joy, IL

Planted: May 8 in 30" rows. Planting Population: 120,000. Harvested: October 23. Previous Crop: Corn. Soil Type: Medium loam. Weather: May-wet, June-normal, July-dry, August-dry. Remarks:

Population study done on Power Plus 28Q8™\*.

Brand/Product	Bu. Per Acre	% Moisture	1000 Plants /Acre
POWER PLUS 36A1X™* PS SDS	81.5	12.7	120
POWER PLUS 36A1X™*	74.6	13.0	120
POWER PLUS 25G8™*	74.0	13.3	120
POWER PLUS 28Q8™*	72.1	12.8	120
POWER PLUS 28Q8™*	71.1	12.8	100
POWER PLUS 28Q8™*	68.1	12.8	80
POWER PLUS 38K6™*	66.6	12.6	120
POWER PLUS 28Q8™*	66.1	12.8	60
Average	71.8	12.8	105

Soybean cyst nematode management on a budget

Chris Brown, C.C.A.

Soybean cyst nematode (SCN) continues to be a consistent pest in soybean production. SCN has been found across most of the grain belt of the United states and can cause significant yield reductions and contribute to the proliferation of other soybean diseases if not properly managed. One of the most difficult parts of SCN management is that there is very little that can be done during the season to manage the population. We need to be able to identify fields in which there are problems and make the appropriate plans during the off-season to manage SCN populations in the field.

The first step in managing SCN is to determine if there is a problem. The difficulty with identifying fields with high SCN populations is there are rarely visual symptoms associated with SCN infestation and damage can occur without the visual cues of plant stunting, leaf yellowing, and wilting. To adequately assess a field, growers need to sample for SCN every 3-4 years as close to soybean harvest as possible.

The sampling process includes:

- Pull twenty 6-8' core samples per each 5 acres
- Mix samples and fill plastic sample bag with the required amount of soil and label bag
- Store in a cool place out of sunlight and avoid drying of the sample
- Take samples in field in locations of different soil types and cropping histories
- Some labs might require root samples
- Ship to nearest SCN sampling facility

This is a general description of SCN sample procedure. Contact your local SCN lab for more specific instructions.

Once it is determined if elevated SCN counts are present, growers need to act and the single most effective way to reduce SCN populations is to not grow soybeans. We understand this is not an option for most of you, so let's modify that statement a little bit. Rotate your soybeans with non-host crops such as corn and wheat. In fields that have

extremely high numbers of SCN populations, you might have to use extended rotations away from soybeans for multiple years. This might be required specifically in coarse soils such as sand that typically have higher SCN populations.

Rotating soybeans that contain SCN resistance is helpful. Placing soybean varieties that contain a SCN resistant cultivar into rotation in a corn/soybean rotation will help to significantly reduce SCN counts and allow growers to plant varieties without resistance every few years.

For an additional method of SCN control, utilize chemical seed treatments such as ILeVO®. ILeVO is proven to be another method of nematode protection. It does this by acting as a nematicide in the seed zone, providing suppression of SCN. For the best control of SCN, it is recommended to plant a SCN resistant variety combined with ILeVO seed treatment. Burrus has added ILeVO to our PowerShield® SDS seed treatment to give growers the best option to help control the yield effects of SCN and sudden death syndrome.

Lastly, it is also recommended to rotate the type of resistant cultivar. For instance, if a soybean variety that contains the most common source of resistance (PI 887880) is planted, it is recommended to shift to a variety that derives its source of resistance from another method such as Peking. Growers will want to rotate the sources of resistance because SCN has shown the ability to adapt and form an ability to reproduce on resistant cultivars through race shifts. This has required growers to take this further step in managing SCN populations.

In addition to managing SCN populations to minimize their effects on soybean yield, there are cultural practices that can help. They include maintaining soil fertility, adequate seedbed preparation, avoiding drought stress when possible, and controlling weeds that might be alternate hosts such as henbit. Taking these few steps to manage SCN populations can lead to higher productivity in your fields with minimal added cost.

PEORIA

Peoria County Corn/Soy Promoters  
Brimfield, IL

Planted: May 11 in 30" rows. Planting Population: 140,000. Harvested: October 18. Previous Crop: Corn. ✓Check Hybrid: Stone 2RX3628.

Brand/Product	Bu. Per Acre	Rank	% Moisture
✓CHECK	72.0		12.9
Beck's 2899X2	69.4	5	12.9
Stone 2RX2918	66.7	11	12.8
Golden Harvest GH3088X	68.2	8	12.4
Monier M3240RX	62.9	14	12.7
Monier M3457RX	67.1	10	12.7
Golden Harvest GH3546X	68.1	9	12.6
LG C3550RX	69.2	7	12.5
✓CHECK	70.2		12.6
NuTech 7352X	68.4	2	12.7
Stone 2RX3527	68.4	3	12.7
POWER PLUS 36A1X™*	67.0	6	12.8
LG 3777RX	73.7	1	12.5
POWER PLUS 38K6™*	62.0	13	12.3
NuTech 7387X	67.5	4	12.5
Beck's 3999X2	62.5	12	12.3
✓CHECK	67.3		12.3
Average	67.7		12.6
Check Average	69.8		12.6

SANGAMON

Power Plus® 38K6™\*  
makes 90 bu/a beans

Curtis Biesenthal  
New Berlin, IL

Planted: April 28 in 30" rows. Planting Population: 140,000. Harvested: October 4. Previous Crop: Corn. Fertilizer: N: 18, P: 46, K: 120. Herbicide: Flexstar GT 3.5. Soil Type: Medium loam. Weather: May-normal, June-normal, July-normal, August-wet.

Brand/Product	Bu. Per Acre	% Moisture
Stone 2RX3628	94.5	10.7
POWER PLUS 38K6™*	90.6	10.7
Stone 2RX3827	90.5	10.2
POWER PLUS 38K6™* PS SDS	90.4	11.1
POWER PLUS 36A1X™*	89.3	10.6
POWER PLUS 36A1X™* PS SDS	87.8	10.7
Croplan RX3500	87.0	10.6
NK S35-K9X	85.9	10.7
Croplan RX4150S	85.8	11.0
Croplan RX3750	83.6	10.9
NK S37-H5X	81.9	10.7
NK S41-A1X	76.3	11.2
Average	87.0	10.8

The time is now for Burrus brand soybeans!

Tim Greene

Yes, the time is now to unveil the new Burrus brand soybeans. Since we began offering soybeans in 2009, growers have continued to ask when we would have a Burrus branded soybean. Because soybeans have been such a prominent part of our seed offering and the technology choices continue to expand, we felt now is the time to add our flagship brand to the mix.

There are several new technology platforms entering the pipeline for soybean growers. As we look toward the future, the Burrus brand will be available to carry all the technologies as we see fit. Our focus will be on providing the quality seed and trait packages that growers strive for when planting the Burrus family of brands.

Growers should choose the trait right for their operation and management style. We believe we need all the various technologies available to combat resistant weed issues. What might be right for you, might not be right for your neighbor or the grower in the next county. Growers need choice! Also, all our varieties will be available with our PowerShield® SDS seed treatment in EZ Load boxes and a select set of products will be available with PowerShield SDS treatment in individual unit bags. These

specialty treated units will be marked with our PowerShield SDS logo. The PowerShield SDS treatment contains ILeVO® to protect against yield robbing problems like sudden death syndrome and soybean cyst nematodes resulting in healthier plants and higher yields.

Talk to your local Burrus Representative to find the soybean varieties and treatment options that work best for you and your management style.





# Keeping dicamba on your side of the fence

**Dana Harder**

The adoption of Roundup Ready 2 Xtend® soybeans varies greatly by region across the Midwest. In 2018, the use of Xtend varieties has grown overall, but the reported incidences of associated drift have decreased compared to 2017. This decline is largely attributed to more stringent application and training requirements largely implemented at the state level. The decision on whether to renew this technology is up for EPA review in November. Label changes are being considered. Weeds have developed resistance to many different modes of action, and it is important that we have a new weapon for growers to use.

Dicamba has been utilized for quite some time in corn, but only certain products containing dicamba can be used on Xtend beans. Currently, labeled products include Engenia®, FeXapan™, and XtendiMax®. It is important to review labels routinely as updates can occur. Here are some of the guidelines in place, remember these vary depending on the state where you reside.

Individual states have taken different approaches to reduce off-target movement of dicamba. Missouri implemented some of the most restrictive requirements for the 2018 growing season. Mandatory training was required to purchase and apply dicamba. In northern Missouri, the cutoff date for application was July 15<sup>th</sup>. A notice of application needed to be filed with the Department of Agriculture before dicamba could be applied, with applications only allowed between 7:30 am and 5:30 pm. Many states have provided expanded applicator training to educate users on how to best apply these herbicides.

To avoid particle drift, there are many guidelines to follow on product labels. Coarse spray droplets help ensure that the herbicide reaches the appropriate target. Approved nozzles and associated operating pressures are clearly outlined on each label. Boom height is recommended to be within 24" of the crop

canopy. Application ground speed should be no greater than 15 mph and windspeed should be less than 10 mph. These tips prevent spray droplets from becoming airborne and moving off-target.

Temperature inversions are another way off-target movement can occur and this mechanism pertains more to growth regulator herbicides. Temperature inversions occur when warm air traps cold air next to the ground surface. Inversions are common during the morning and evening hours when there is little to no air movement. Dicamba particles can become suspended and move laterally until they settle out or the inversion terminates. Therefore, it is required that windspeeds be above 3 mph and applications restricted to daytime hours.

It takes very little dicamba to cause significant injury to non-dicamba tolerant soybeans. It is recommended to avoid letting the sprayer sit overnight or dry out before cleaning. The pores in rubber hoses can harbor dry dicamba particles making it more difficult to thoroughly clean the sprayer. It is best to triple rinse the sprayer with the first rinse consisting of just water filling up at least half the tank. The second rinse should include a cleaning agent and cycle throughout the sprayer for 15 min. The third and final rinse should be just water. Also, clean all strainers, screens, and nozzles. It is prudent to rinse the sprayer to remove dust and boom buildup because dicamba can easily attach to dust particles.

It is important to become the best stewards we can of this technology. In July of 2018, it was estimated that 1.1 million acres of soybeans were injured by dicamba. This off-target movement happened despite their requirements and training implemented this last growing season. There have been calls for dicamba applications to be limited to pre-plant applications to minimize off-target movement. We will know shortly what the EPA has in store for the Xtend system and how we should adapt going forward.

# Enlist E3™ soybeans coming soon!

**Todd Burrus**

Burrus expects rapid adoption of the Enlist E3™ soybeans and Enlist™ weed control system. Enlist E3 soybeans allow post-emergence application of three herbicides: glyphosate, glufosinate, and 2,4-D choline. Enlist Duo® herbicide is a convenient, proprietary blend of glyphosate and 2,4-D choline. New Enlist One™ herbicide is a straight-goods 2,4-D choline that offers additional tank-mix flexibility. Enlist One can be tank-mixed with glufosinate, residual herbicides and other qualified tank-mix partners listed on EnlistTankMix.com for a customized weed control program that fits your farm.

We believe growers will like three key elements of the Enlist system. First, Enlist E3 soybeans yield well. 2018 performance affirms for the third consecutive year that soybeans carrying this technology yield competitively with all other varieties and technologies on the market.

Second, the Enlist herbicide system effectively controls weeds. Successful soybean

production is dependent upon potent weed control. Burrus' three years of experience with this herbicide system has achieved 100% satisfaction. Greater flexibility in application timing is a significant advantage of the system.

Third, the Enlist herbicide system is safe to apply. Less volatility with 2,4-D choline spells lower risk of off-target issues. Recognize plant growth regulators have application risk, but less than the older 2,4-D formulations. We expect growers will go back to using their own sprayers to reduce application charges.

At the time of this publication, Enlist E3 soybeans have U.S. grain and herbicide application approval. Burrus plans to offer Enlist E3 soybeans once the trait receives complete export approval.

Customer satisfaction can be the best measure of product success. Field Forward™ program participants and seed bean growers have experienced the Enlist system and its clear-cut advantages. Each individual who has experience with the system has expressed desire for Enlist soybeans.



Growers were able to get an up close look at Enlist E3 varieties at Tim Carmody's plot tour in Hardin, IL.



Jim Hughes, Tom Corbin & Josh Gunther study a soybean research plot near Woodstock, IL.



Ted Ballard represents Burrus at a career fair for college students looking for internships. Burrus offers tremendous opportunities for those interested.



Hoblitt 368LL rolled out 87 bu/a in Shelby Co. for Ron Schultz and his great grandson, Kase.



Agronomists Josh Gunther & Chip Turner evaluate soybean plot.



SHELBY

Three of top four are Hoblit

Ron Schultz  
Stewardson, IL

Planted: May 10 in 30'' rows. Planting Population: 164,500. Harvested: October 2. Previous Crop: Corn. Herbicide: LibertyLink. Soil Type: Medium loam. Weather: May-dry, June-wet, July-wet, August-dry. Remarks: Drainage ditch runs through Hoblit 457LL and Hoblit 418LL.

Brand/Product	Bu. Per Acre	% Moisture
HiSoy 41L42 Accelron	87.7	14.1
HOBKIT 368LL PS SDS	87.0	15.4
HOBKIT 368LL	86.8	14.4
HOBKIT 384LL PS SDS	85.6	13.8
Beck's 394LL	84.9	13.9
HOBKIT 384LL	84.1	14.0
Beck's 394LL	83.1	13.8
HOBKIT 457LL PS SDS	77.8	14.2
HOBKIT 418LL PS SDS	76.8	15.9
Average	83.8	14.4

WINNEBAGO

Power Plus® 28Q8™\*brand  
beans make 95 bu/a

Scott Burkhart  
Winnebago, IL

Planted: May 5 in 30'' rows. Harvested: October 23. Previous Crop: Corn.

Brand/Product	Bu. Per Acre	% Moisture
POWER PLUS 28Q8™*	95.7	10.6
Pioneer 31A22X	90.1	11.1
Average	92.9	10.8

WOODFORD

Dean Wragge  
Roanoke, IL

Planted: May 1 in 30'' rows. Planting Population: 140,000. Harvested: September 28. Previous Crop: Corn. Herbicide: Liberty. Soil Type: Medium loam. Weather: May-normal, June-normal, July-dry, August-dry. Remarks: This is a Golden Harvest plot and weighed by Golden Harvest Rep.

Brand/Product	Bu. Per Acre	% Moisture
Golden Harvest GH2847L	80.8	12.1
Golden Harvest GH2478L	79.8	12.3
HOBKIT 298LL PS SDS	77.7	11.7
Golden Harvest GH3216L	76.8	11.9
HOBKIT 368LL PS SDS	76.5	11.6
Golden Harvest GH3902L	75.2	11.6
Golden Harvest GH3625L	75.0	11.7
Golden Harvest GH3455L	73.5	12.0
Average	76.9	11.9

Capture the benefits of our PowerShield® seed treatment

“I use treated soybeans,” is a term often used by growers. The term implies that treatment on soybean seed is generic or all the same. The truth is, seed treatments are different and so are the results. Dan Meeker of Manito, IL experienced the difference in results this year. He saw the difference that PowerShield® offers. Even some of his neighbors commented, “Wow, that field of Burrus beans look great.” Meeker said, “The PowerShield seed treatment was clearly a cut above the alternatives. It was obvious all season long.” Honestly, both Burrus and Dan Meeker enjoy the benefits of a better-looking crop.

Three keys that bring our PowerShield seed treatment to a performance advantage over competitors’ seed treatment options:

1. **Right Recipe** – The main question is what chemicals belong in the recipe to maximize stand establishment, early plant vigor, and ultimately, yield? At Burrus, we invest time and research dollars to accurately answer this question. The fungicides used must effectively control the disease that can inhibit reaching these three goals. No one fungicide will fully control Phytophthora, Pythium, Fusarium, and Rhizoctonia, along with some other diseases. We look for multiple components to effectively manage the full disease spectrum. Insecticide components are also used to manage the major pests. Multiple locations are planted at different dates to identify small but significant differences to deliver the best seed experiences. The independent position of Burrus gives us freedom to choose the best when developing our recipe.

2. **Right Rate** – The most effective rate is prescribed and delivered on each seed. The correct rate is critical to getting maximum performance. Realize low rate application can enhance cost cutting goals. At Burrus, trained professionals are one of the keys to the PowerShield reputation.

3. **Right Return** – PowerShield treatments are designed to give the best return available on your investment.

- Value and return on investment can help growers have confidence. We understand every input choice you make must be a wise decision. The fact that PowerShield leads to better stand establishment allows us to guarantee our products with a 100% Free Replant policy.
- PS SDS, PowerShield with ILeVO® added, gives enhanced return by managing both soybean cyst nematode and sudden death syndrome. Return on investment has been significant when those issues are prevalent. A modest return was realized in 2017 when pressure was low. We continue to believe this is both a great tool to manage risk and an excellent return on investment for the serious soybean grower. Please look at the charts to better understand the diseases and insects managed with our PowerShield treatment.

For soybeans, PowerShield includes 4 active ingredients for fungicide plus insecticide.

PEST	CONTROL
Bean Leaf Beetle	Yes
Aphid	Yes
Soybean Cyst Nematode	PS SDS
Enhanced Vigor	Yes
Phytophthora	Yes
Pythium	Yes
Rhizoctonia	Yes
Fusarium	Yes
Sudden Death Syndrome	PS SDS

For corn, PowerShield includes 5 active ingredients for fungicide and 2 active ingredients for insect control.

PEST	CONTROL
Fusarium	Yes
Rhizoctonia	Yes
Pythium	Yes
Anthrachnose	Yes
Head Smut	Yes
Diplodia	Yes
Charcoal Rot	Yes
Aspergillus SPP.	Yes
Penicillium SPP.	Yes
Nematodes	Yes
Wireworm	Yes
White Grub	Yes
Grape Colaspis	Yes
Black Cutworm	Yes
Seed Corn Maggot	Yes
Fall Army Worm (early sea-son)	Yes
Flea Beetle	Yes
Corn Rootworm	No (HP)

The right questions to ask when considering seed treatments are:

- What recipe are you using for your seed treatment?
  - What test(s) did you run to make your choice?
  - What is the goal for your seed treating operation?
- The PowerShield seed treatment is designed to enhance our seed and make a great return on your investment.

Hoblit 298LL makes 83 bu/a

John Rokey Jr  
Eureka, IL

Planted: May 7 in 30'' rows. Planting Population: 140,000. Harvested: October 3. Previous Crop: Corn. Herbicide: Liberty. Weather: May-normal, June-normal, July-dry, August-dry.

Brand/Product	Bu. Per Acre	% Moisture
Merschman 1626 LL	83.9	11.3
HOBKIT 298LL	83.0	11.2
HUGHES 266LL	82.5	11.7
HOBKIT 298LL PS SDS	82.1	13.3
Beck's 264L4	82.0	13.1
Beck's 366L4	82.0	11.3
Croplan 2470	80.7	14.0
Sun Prairie SP324NLL	80.2	13.7
HOBKIT 368LL PS SDS	79.4	13.7
HOBKIT 368LL	79.0	13.6
Croplan 2586	78.3	12.8
HOBKIT 384LL PS SDS	76.2	13.7
Average	80.8	12.8

Jim Zoss  
Lowpoint, IL

Planted: May 1 in 30'' rows. Planting Population: 145,000. Harvested: September 27. Previous Crop: Corn. Fertilizer: N: 13, P: 60, K: 180. Herbicide: Roundup, Engenia. Insecticide: Tempest. ✓Check Variety: Channel 3417R2X.

Brand/Product	Bu. Per Acre	Rank	% Moisture
Channel 2918R2X	85.8	4	13.2
Pioneer P29A25	77.8	25	12.9
✓CHECK	79.9		13.2
Becks 2899X2	79.9	23	12.7
Asgrow AG29X8	83.0	15	13.0
Stone 2RX2929	82.4	19	12.7
Channel 3119R2X	85.1	8	12.4
✓CHECK	81.2		12.9
Pioneer P31A22X	88.8	2	13.1
FS 32X70	78.2	26	12.4
Channel 3318R2X	84.3	14	12.7
LG C3333RX	85.4	10	12.6
✓CHECK	82.2		12.9

Asgrow AG33X8	84.4	21	12.1
LG 3411RX	87.5	7	12.4
Stone 2RX3449	86.2	11	12.3
FS HS34X60	86.7	9	12.2
Becks 3559X2	87.6	6	12.1
✓CHECK	83.1		12.4
Channel 3519R2X	82.5	24	12.0
Sun Prairie 35RX6	88.9	5	12.0
LG C3550RX	85.5	16	12.0
POWER PLUS 36A1X™*	86.1	13	11.9
Stone 2RX3628	85.1	17	11.9
✓CHECK	83.3		12.2
Pioneer P36A18X	83.6	22	12.4
Asgrow AG36X6	84.7	20	12.3
Channel 3718R2X	92.5	1	11.9
Sun Prairie 38RX7	86.3	12	12.6
Becks 3999X2	89.2	3	12.2
Becks 3353X2	84.8	17	12.2
✓CHECK	82.4		12.7
Average	84.5		12.5
Check Average	82.0		12.7



# A systems approach to weed control in soybeans for 2019

Dana Harder

There are many new herbicide technology systems on the market. Burrus is an independent company and therefore, we are not tied to a single platform and can offer growers the technology that best fits their farm. We will be offering four different weed control platforms in 2019 including: dicamba tolerant (soybeans with Roundup Ready 2 Xtend® technology), varieties with the Glyphosate Tolerant trait, LibertyLink® GT27™, and LibertyLink®. We are also prepared to offer Enlist E3™ soybeans, pending approval.

### LibertyLink

This system has proven to be effective in controlling broadleaf weeds postemergence, especially glyphosate resistant waterhemp and marestail. Under typical weather conditions, glufosinate is not prone to drift. There are a few tips to keep in mind to ensure success. Spray coverage is critical to controlling weeds and it is recommended that a carrier volume of 20 gallons per acre be used. Spray nozzles that promote medium to coarse droplets with superior coverage are suggested (i.e. twin jet fans). Glufosinate controls both grass and broadleaf weeds at smaller heights; however, it can have difficulty controlling taller grass weeds. Tank mixing a grass herbicide like clethodim or quizalafop can improve grass control. Proven genetics and an effective herbicide program are the keys to continued customer satisfaction with this system.

### Glyphosate tolerant

Soybeans with the Glyphosate Tolerant trait offer growers an affordable way to help control weeds. The price of glyphosate is relatively low and the soybeans are attractively priced.

This system is relatively easy to use and helps provides control across a wide spectrum of weeds. Heavy reliance on glyphosate has resulted in the development of herbicide resistant weeds, specifically waterhemp and marestail. Additional herbicide modes of action need to be incorporated into this weed management system, especially when it comes to preemergence applications and rotating to corn. When considering glyphosate tolerant soybeans from our lineup, think proven genetics and an economical choice.

### LibertyLink GT27

LibertyLink GT27 traited soybeans will be available for 2019. This herbicide trait stack will allow growers to apply both glufosinate (Liberty®) and glyphosate (Roundup®) postemergence on soybean. This allows growers to apply two separate, non-selective modes of action in soybeans to increase control across a broad spectrum of weeds. This system allows growers flexibility for postemergence weed control especially against glyphosate resistant weeds. Certain Group 27 herbicides might become labeled in the future. Growers should not experiment with these herbicides prior to label approval. Growers will like the yield performance of these soybeans and the flexible, safe herbicide program.

### Enlist E3

The Enlist E3™ soybean is tolerant to three different herbicide modes of action, creating a powerful tool for weed control. This system will allow for applications of glyphosate, glufosinate, or 2-4,D choline to soybeans up to full bloom (R2). Two products are on the market that can be utilized in this system. Enlist Duo® includes a mix of glyphosate and 2-4,D choline. Enlist One™ is a standalone

2-4,D choline product that can be tank mixed with other approved products. The newer choline formulation provides low volatility in comparison to traditional 2-4,D formulations. It is important to always read and follow the product label. For more information regarding proper application of Enlist herbicides, please visit the resources section of [www.enlist.com](http://www.enlist.com).

### Roundup Ready 2 Xtend® Technology

Soybeans with Roundup Ready 2 Xtend® Technology are tolerant to postemergence applications of dicamba and glyphosate. Dicamba is effective at providing broadleaf control against glyphosate resistant weeds. Current products approved for application in this system are Engenia® herbicide, XtendiMax® herbicide, and DuPont™ FeXapan™ herbicide®. Glyphosate needs to be tank mixed with these products to provide postemergence grass control because they only contain dicamba. The EPA renewal for this system is up for review in November 2018. Many states imposed their own certification, training, and restrictions to minimize off-target movement making it critical to review the requirements for the state where you reside. It is also important to frequently review herbicide labels as updates can occur throughout the year. Off-target movement remains a concern despite the many restrictions that are in place. The addition of DONMARIO™ products have helped fill out our Roundup Ready 2 Xtend product offerings.

The development of these platforms represents an exciting time for weed control in soybeans. It is important to practice good stewardship to avoid future weed resistance and preserve the technologies in place. For help deciding which technology is best for your farm, consult your Burrus Field Agronomist.

## BOONE

John Lorentzen  
Sturgeon, MO

Planted: May 16 in 30" rows. Harvested: October 21. Previous Crop: Corn.

Brand/Product	Bu. Per Acre	% Moisture
HOB LIT 457LL PS SDS	64.1	13.2
HOB LIT 418LL PS SDS	58.6	12.8
HOB LIT 368LL PS SDS	49.1	13.1
HOB LIT 384LL PS SDS	41.0	13.0
HOB LIT 384LL	38.8	12.8
HOB LIT 368LL	32.4	13.3
Average	47.3	13.0

## CHARITON

Hoblit 368LL PS SDS  
tops plot at 73 bu/a

McCormick Farms  
Sumner, MO

Planted: May 31 in 15" rows. Planting Population: 150,000. Harvested: October 23. Previous Crop: Corn. Fertilizer: N: VRT, P: VRT, K: VRT. Herbicide: Liberty. Soil Type: Medium loam. Weather: May-normal, June-dry, July-dry, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
HOB LIT 384LL PS SDS	73.1	11.5
HOB LIT 368LL PS SDS	73.1	11.5
MorSoy 3973LL	72.1	11.5
HOB LIT 384LL	71.7	11.5
HOB LIT 368LL	71.5	11.4
HOB LIT 457LL PS SDS	70.4	11.5
HOB LIT 418LL PS SDS	68.7	11.5
MorSoy 4197LL	68.2	11.2
MorSoy 3944LL	63.5	11.1
MorSoy 3759LL	59.1	11.5
Average	69.1	11.4



Sylvia & Rob Church with Kaiser & Zeus pose for a quick photo.



John & Zach Lorentzen saw Hoblit 457LL PS SDS roll out 64.1 bu/a in Boone Co., MO.



Hoblit 418LL hit 77.5 bu/a in Shelby Co., MO for Kenny Rutter & his grandson Brock Watson.



Hoblit 418LL PS SDS hit 73 bu/a in Lafayette Co., MO for Jim Frederick & David Dobson.



Alex Emmerich stayed busy helping his grandpa David Emmerich of Big Red Farms plant in Chariton Co., MO.





# IL Soy better beans event

Josh Gunther, C.C.A.

In February, the Illinois Soybean Association hosted the Better Beans series of seminars held throughout the state. Burrus was honored to be asked to co-host the event held in Jacksonville, IL. Well-known industry speakers Dr. Fred Below, University of Illinois and Ron Krausz, Southern Illinois University Farm Manager, presented to soybean producers from Illinois and Missouri. The event created the opportunity for soybean producers to gather and hear new research and management strategies for soybean production as well as new soybean technologies coming to market. The event concluded with a roundtable discussion with regional Illinois soybean producers.

Ron Krausz presented New Soybean Herbicide Technologies: Cure or Curse? Krausz discussed the differences between Roundup Ready 2 Xtend®, Enlist®, and LibertyLink® GT27™ technologies. Krausz presented new EPA guidelines around dicamba application including new recordkeeping requirements. Enlist application requirements were also discussed. The presentation concluded by emphasizing we need every tool available to fight the war against weed resistance and every tool must be preserved to use in the future. No single herbicide trait should be used on every acre and we should rotate through the traits available to keep them all viable in the future.

A highlight of the event was Dr. Fred Below's presentation on his Six Secrets of Soybean Success. Dr. Below went into detail about each of the 6 factors that contribute to soybean yield:

1. Weather
2. Fertility
3. Genetics/Variety
4. Foliar Protection

5. Seed Treatment
6. Row Spacing

Dr. Below listed weather as the number one yield-adding factor of soybean production and it is the one that we can not change. However, the other five we can change for the better. The data presented argued that with proper phosphorus management, a 4.7 bu/a advantage was observed over traditional practices. These results change depending on year and current condition of the field. He also saw increased yields with the use of post-applied fungicide and insecticide as well as enhanced seed treatment technologies. Dr. Below also observed an added yield benefit when switching from 30-inch to 20-inch rows. In conclusion, Dr. Below explained, "Each of the six secrets can increase yield and when combined into a system they can act synergistically."

The event concluded with a roundtable discussion led by two Illinois soybean producers who are achieving yield success in very different ways. One grower focused on Roundup Ready 2 Xtend soybeans while the second grew LibertyLink® soybeans. Both noted pros and cons of their system of choice, but each concluded that the genetics behind the trait were more important than the trait itself. In other words, they acknowledged their soybean crop would only be as successful as the genetics behind it.

Burrus is in the unique position to offer American farmers the option of DONMARIO™ brand soybeans. These soybeans are unique to the marketplace, bred and developed in the US using a new source of genetics, creating a game changing choice for growers. For questions on our DONMARIO soybean line-up, please contact your Burrus Representative.

Make your first  
**BIG DECISION**  
the right one.



## LAFAYETTE

David Dobson  
Lexington, MO

**Planted:** May 8 in 30" rows. **Planting Population:** 150,000. **Harvested:** October 23. **Previous Crop:** Corn. **Fertilizer:** N: VRT, P: VRT, K: VRT. **Herbicide:** Matador, Liberty. **Soil Type:** Medium loam. **Weather:** May-normal, June-dry, July-dry, August-normal.

Brand/Product	Bu. Per Acre	% Moisture
HOBLIT 418LL PS SDS	73.0	13.0
HOBLIT 384LL PS SDS	68.3	13.0
HOBLIT 384LL	66.6	13.0
HOBLIT 384LL PS SDS	63.5	13.0
HOBLIT 384LL PS SDS	61.1	13.0
HOBLIT 457LL PS SDS	61.1	13.0
HOBLIT 368LL PS SDS	59.5	13.0
HOBLIT 368LL	54.0	13.0
Average	63.4	13.0

## NODAWAY

Kevin Rosenbohm  
Graham, MO

**Planted:** May 10 in 30" rows. **Planting Population:** 160,000. **Harvested:** October 29. **Previous Crop:** Corn. **Soil Type:** Medium loam. **Weather:** May-normal, June-dry, July-dry, August-dry. **Remarks:** Extreme drought conditions with 6" total rainfall for the growing season.

Brand/Product	Bu. Per Acre	% Moisture
HOBLIT 418LL PS SDS	40.2	12.7
HOBLIT 457LL PS SDS	39.9	13.6
HOBLIT 384LL PS SDS	33.8	12.7
HOBLIT 368LL	33.2	12.8
HOBLIT 368LL PS SDS	31.6	13.1
HOBLIT 384LL	30.9	12.9
HOBLIT 298LL PS SDS	29.0	12.5
Average	34.1	12.9

## SALINE

Heath and Jared Meyer  
Gilliam, MO

**Planted:** May 8 in 30" rows. **Planting Population:** 153,000. **Harvested:** October 30. **Previous Crop:** Corn. **Fertilizer:** N: VRT, P: VRT, K: VRT. **Herbicide:** Liberty. **Soil Type:** Medium loam. **Weather:** May-dry, June-dry, July-dry, August-dry.

Brand/Product	Bu. Per Acre	% Moisture
HOBLIT 368LL PS SDS	48.3	11.4
HOBLIT 368LL	45.5	11.4
HOBLIT 418LL PS SDS	43.0	12.0
HOBLIT 457LL PS SDS	41.4	12.0
HOBLIT 384LL PS SDS	40.0	11.4
HOBLIT 405LL	38.9	11.4
Average	42.9	11.6

## SHELBY

Rutter Farm  
Shelbina, MO

**Planted:** April 28 in 15" rows. **Planting Population:** 140,000. **Harvested:** October 3. **Previous Crop:** Wheat. **Fertilizer:** N: 13, P: 40, K: 120. **Herbicide:** Liberty. **Soil Type:** Medium loam.

Brand/Product	Bu. Per Acre	% Moisture
HOBLIT 418LL	77.5	12.9
HOBLIT 384LL PS SDS	69.6	12.9
HOBLIT 384LL	67.2	12.6
HOBLIT 457LL	66.0	13.0
HOBLIT 368LL	65.0	12.0
Average	69.1	12.7

## WALWORTH

**Power Plus® 25G8™\***  
makes 86 bu/a

Clark Farms  
Elkhorn, WI

**Planted:** May 1 in 30" rows. **Planting Population:** 152,000. **Harvested:** October 18. **Previous Crop:** Corn. **Herbicide:** Roundup, Volunteer. **Soil Type:** Heavy loam.

Brand/Product	Bu. Per Acre	% Moisture
POWER PLUS 25G8™*	86.9	14.0
Channel 2119RX2	85.3	13.6
Channel 2418RX2	84.8	13.6
Channel 2519RX2	82.8	13.7
Channel 2719RX2	82.7	13.8
POWER PLUS 20B7™*	79.0	13.8
POWER PLUS 28Q8™*	74.0	14.1
Average	82.2	13.8



Todd Duncan enjoys growing big pumpkins and big Burrus yields in Henderson Co!



Chemicals to Avoid

Group	Brand	ALS Sulfonylureas (Group 2)	Plant Growth Regulators (Group 4)	HPPD Inhibitors (Group 27)	Glyphosate (Group 9)	Glufosinate (Group 10)	PPO Inhibitors (Group 14)
Above / Below Ground Insect Control	Power Plus® 1N07AMXT™*	▼	●	●	●	●	●
	Power Plus® 1G48AMXT™*	▼	▼	●	●	●	▼
	Power Plus® 2F91AMXT™*	■	▼	●	●	●	▼
	Power Plus® 2B77AMXT™*	▼	■	▼	●	●	●
	Power Plus® 3H85AMX™*	▼	■	●	●	●	▼
	Power Plus® 4A67AMXT™*	■	■	●	●	●	●
	Power Plus® 4J95AMXT™*	■	▼	●	●	●	●
	Catalyst 6216 3111A	▼	▼	●	●	●	●
	Burrus 6R25 5222	▼	▼	●	●	●	●
	Power Plus® 6Z57AMXT™*	▼	▼	●	●	●	▼
	Power Plus® 6F74AMXT™*	▼	■	●	●	●	NA*
	Power Plus® 6P75AMXT™*	■	■	▼	●	●	●
	Power Plus® 7V66AMXT™*	■	■	●	●	●	●
	Power Plus® 7M87AMXT™*	▼	▼	▼	●	●	●
	Power Plus® 9U13AM™*	▼	■	●	●	●	▼
Above Ground Insect Control	Power Plus® 1G39AM™*	▼	▼	●	●	●	▼
	Power Plus® 2Y06AM™*	▼	●	▼	●	●	▼
	Power Plus® 4Y34AM™*	■	▼	●	●	●	●
	Power Plus® 4J93AM™*	■	▼	●	●	●	●
	Power Plus® 5K33AM™*	■	▼	▼	●	●	▼
	Power Plus® 6C41 S™*	▼	▼	●	●	●	●
	Power Plus® 6Z43AM™*	▼	▼	●	●	●	▼
	Power Plus® 6P73AM™*	■	■	▼	●	●	●
	Burrus 7L12 3010	■	▼	▼	●	●	●
	Power Plus® 7M83AM™*	▼	▼	▼	●	●	●
Glyphosate Resistant	Burrus 7L11 GT	■	▼	▼	●	■	●
Conventional	Power Plus® 2R67™*	▼	■	●	■	■	NA*
	Power Plus® 4J90™*	■	▼	●	■	■	●
	Burrus 6R20	▼	▼	●	■	■	●
	Power Plus® 6C40™*	▼	●	●	■	■	●
	Power Plus® 7M80™*	▼	▼	▼	■	■	●

**GROUP NUMBER - TRADENAME**

2 - Accent® Q

2, 4 - Horner® WDG

4 - 2,4-D

4, 19 - Status®

14 - Aim®

27 - Balance Flexx®

2 - Basis®

2, 27 - Capreno®

4 - Clarity®

5, 15, 27 - Acuron®

14 - Sharpen® (Kixor)

27 - Callisto®

2 - Permit®

2, 27 - Corvus®

4 - Engenia®

9 - Generic glyphosate

14, 15 - Verdict®

27 - Impact®

2 - Resolve®

27 - Corvus®

4 - FeXapan™

9 - Roundup®

15, 27, 4 - Resicore®

27 - Laudis®

2 - Steadfast® Q

4 - Stinger®

10 - Liberty®

4 - XtendiMax®

**HERBICIDE CLASSIFICATION BY GROUP NUMBER - SITE OF ACTION**

1 - ACC-ase (lipid synthesis)

7 - Photosystem II (different than 5 and 6)

15 - Long-chain fatty acid (seedling shoot growth)

2 - ALS (amino acid synthesis)

9 - EPSP synthase (amino acid synthesis)

19 - Auxin transport (growth regulator)

3 - Microtubule (seedling root growth)

10 - Glutamine synthetase (nitrogen metabolism)

22 - Photosystem I (cell membrane disruptor)

4 - Synthetic auxins (growth regulators)

13 - DOXP synthase (pigment)

27 - HPPD (pigment)

5 - Photosystem II (different than 6 and 7)

14 - PPO (cell membrane disruptor)

6 - Photosystem II (different than 5 and 7)

**KEY**

● Use

▼ Use with caution

■ Do not use

\*Always follow the label. Consult with your Account Manager regarding herbicide sensitivity.





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**Optimum AQUAmax® product performance in water-limited environments is variable and depends on many factors such as the severity and timing of moisture deficiency, heat stress, soil type, management practices and environmental stress as well as disease and pest pressures. All hybrids may exhibit reduced yield under water and heat stress. Individual results may vary.**

Seeds containing the LibertyLink® trait may be protected under one or more U.S. patents and may be planted only to produce one (1) commercial crop in a single season, and only after signing a BASF Grower Technology Agreement. It is illegal to save seeds containing the LibertyLink trait for use as planting seed or for transfer to others for use as planting seed.

LibertyLink® GT27™ soybeans offer triple stack tolerance to Liberty, glyphosate, and, pending EPA approval, the first HPPD based herbicide for soybeans. LibertyLink GT27 is not tolerant to all HPPD herbicides. HPPD herbicides currently on the market are prohibited for use with LibertyLink GT27 soybeans and may result in significant crop injury.

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**Important: Always read and follow label and bag tag instructions; only those labeled as tolerant to glufosinate may be sprayed with glufosinate ammonium based herbicides.**

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Always follow grain marketing, stewardship practices and pesticide label directions. Roundup Ready® crops contain genes that confer tolerance to glyphosate, the active ingredient in Roundup® brand agricultural herbicides. Roundup® brand agricultural herbicides will kill crops that are not tolerant to glyphosate.

Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator

of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

**ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.**

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ABOVE / BELOW GROUND INSECT CONTROL



NEW

# 1N07AMXT™

Brand

100 Day Maturity



- High yield potential with stability
- Optimum® AQUAmax® technology for tough environments
- Strong, flex-eared hybrid with quality grain
- Great roots
- Short stature

Early hybrid that tackles stress.

Corn/Corn				Drought Tolerance					
Early Vigor				Stalk Strength					
Population (group)				Root Strength					
				Not Advised	Suitable	Good	Excellent		
								1	10

GLYPHOSATE



Liberty®



1



# 1G48AMXT™

Brand

102 Day Maturity



- Versatile high yield potential
- Strong late season stalks
- Great health package for zone
- Strong roots
- Moderate stature and ear height

Early genetics with full-season performance.

Corn/Corn				Drought Tolerance					
Early Vigor				Stalk Strength					
Population (group)				Root Strength					
				Not Advised	Suitable	Good	Excellent		
								1	10

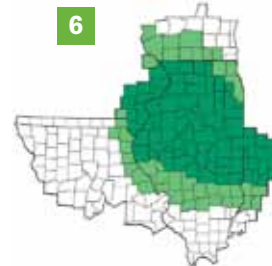
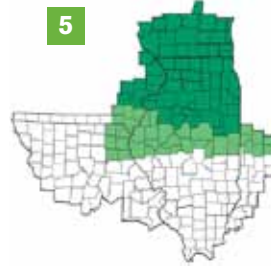
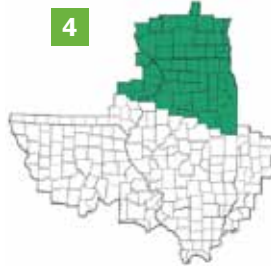
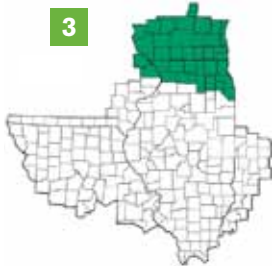
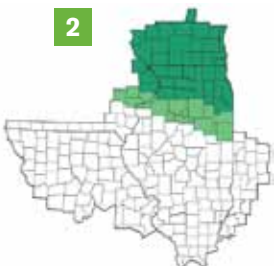
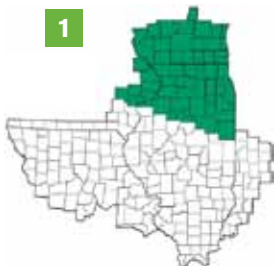
GLYPHOSATE



Liberty®



2





2F91AMXT™★  
Brand

103 Day Maturity

Optimum™  
AcreMax™  
ABOVE/BELOW Xtreme

- Good health and agronomic package
- Fixed ears with good test weight
- Very early flowering
- High pops needed for high yield potential
- Strong emergence

Dependable early performance.

Corn/Corn

Early Vigor

Population (group)

C

B

A

Not Advised

Suitable

Good

Excellent

Drought Tolerance

Stalk Strength

Root Strength

1

2

3

4

5

6


7

8

9

10

GLYPHOSATE



Liberty®

LIBERTY LINK

3

2B77AMXT™★  
Brand

105 Day Maturity

Optimum™  
AcreMax™  
ABOVE/BELOW Xtreme

- Mid-maturity high yield potential
- Shorter stature
- Excellent quality grain
- Outstanding late season stalks
- Very good standability

The mid-maturity leader.

Corn/Corn

Early Vigor

Population (group)

C

A

B

Not Advised

Suitable

Good

Excellent

Drought Tolerance

Stalk Strength

Root Strength

1

2

3

4

5

6


7

8

9

10

GLYPHOSATE



Liberty®

LIBERTY LINK

4

3H85AMX™★  
Brand

107 Day Maturity

Optimum™  
AcreMax™  
ABOVE/BELOW Xtra

- Tremendous top end yield potential
- Great roots
- Fits best in northern IL and southern WI
- Performs well at lower pops and good soils
- Will look weathered in the fall

High yield potential flex hybrid.

Corn/Corn

Early Vigor

Population (group)

A

B

C

Not Advised

Suitable

Good

Excellent

Drought Tolerance

Stalk Strength

Root Strength

1

2

3

4

5

6


7

8

9

10

GLYPHOSATE



Liberty®

LIBERTY LINK

5

4A67AMXT™★  
Brand

109 Day Maturity

Optimum™  
AcreMax™  
ABOVE/BELOW Xtreme

- Hard to beat on your best soils
- Strong roots
- Very good grain quality
- Deep kernels, flex ears
- Results oriented

Put your foot in the door for high yield potential.

Corn/Corn

Early Vigor

Population (group)

A

B

C

Not Advised

Suitable

Good

Excellent

Drought Tolerance

Stalk Strength

Root Strength

1

2

3

4

5

6


7

8

9

10

GLYPHOSATE



Liberty®

LIBERTY LINK

6

55





ABOVE / BELOW GROUND INSECT CONTROL

4J95AMX<sup>TM</sup>★  
Brand

109 Day Maturity

Optimum<sup>®</sup>  
AcreMax<sup>®</sup>  
ABOVE/BELow

Optimum<sup>®</sup>  
AQUAmax<sup>®</sup>

- Adapts very well across geography and soil types
- Good agronomics and responds favorably to fungicide management
- Optimum<sup>®</sup> AQUAmax<sup>®</sup> hybrid with great drought tolerance

POWER PLUS

The standard for yield potential with no refuge needed.

Corn/Corn			
Early Vigor			
Population (group)	C	A	B
	Not Advised	Suitable	Good
			Excellent

Drought Tolerance	Optimum <sup>®</sup> AQUAmax <sup>®</sup>
Stalk Strength	
Root Strength	

1 2 3 4 5 6 7 8 9 10

GLYPHOSATE

Liberty<sup>®</sup>

LIBERTY LINK

7

6216 3111A  
Brand

111 Day Maturity

Agrisure  
Viptera<sup>®</sup>  
3111A

- Agrisure Artesian<sup>®</sup> water optimization
- Strong stalks and roots
- Good stay green ratings
- Versatility across soil types

Catalyst<sup>®</sup>

Versatility, yield, and great fall intactness.

Corn/Corn			
Early Vigor			
Population (group)	C	A	B
	Not Advised	Suitable	Good
			Excellent

Drought Tolerance	Agrisure Artesian <sup>®</sup>
Stalk Strength	
Root Strength	

1 2 3 4 5 6 7 8 9 10

GLYPHOSATE

Liberty<sup>®</sup>

LIBERTY LINK

8

NEW

6R25 5222  
Brand

112 Day Maturity

Agrisure  
Duracade<sup>®</sup>  
5222 E-Z Refuge<sup>®</sup>

- Great choice for better soils
- Beautiful fall appearance
- Long ear, high end of medium population
- 2 rootworm, 2 broad lep and 2 corn borer traits
- Sign grain use agreement prior to purchase
- Contact Gavilon Grain to find an accepting elevator near you

Think BURRUS<sup>®</sup>

High yield and low drama with Agrisure Duracade<sup>®</sup>.

Corn/Corn			
Early Vigor			
Population (group)	C	A	B
	Not Advised	Suitable	Good
			Excellent

Drought Tolerance	
Stalk Strength	
Root Strength	

1 2 3 4 5 6 7 8 9 10

GLYPHOSATE

Liberty<sup>®</sup>

LIBERTY LINK

9

NEW

6Z57AMXT<sup>TM</sup>★  
Brand

113 Day Maturity

Optimum<sup>®</sup>  
AcreMax<sup>®</sup>  
ABOVE/BELow XTreme

- Works across soil types
- Consistent ears
- Short stature
- Integrated refuge above and below ground
- Good fall appearance

POWER PLUS

May become our most popular hybrid.

Corn/Corn			
Early Vigor			
Population (group)	A	C	B
	Not Advised	Suitable	Good
			Excellent

Drought Tolerance	
Stalk Strength	
Root Strength	

1 2 3 4 5 6 7 8 9 10

GLYPHOSATE

Liberty<sup>®</sup>

LIBERTY LINK

10

7

8

9

10

56

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PHOTO COURTESY DAVID NIENHISER, CHAPIN, IL

6F74AMX<sup>TM</sup>★

Brand

113 Day Maturity

optimum<sup>®</sup>

AcreMax<sup>®</sup>

ABOVE/BELOW

Xtra

- No separate refuge needed in the corn belt
- Good drought tolerance as it prefers well drained soils
- Very good leaf disease and ear rot tolerances
- Huge root system

Corn/Corn

Early Vigor

Population (group)

C

A

B

CORN ON CORN

Not Advised

Suitable

Good

Excellent

Drought Tolerance

Stalk Strength

Root Strength

1

2

3

4

5

6

7

8

9

10

GLYPHOSATE

Liberty<sup>®</sup>

LIBERTY LINK

11

6P75AMX<sup>TM</sup>★

Brand

113 Day Maturity

optimum<sup>®</sup>

AcreMax<sup>®</sup>

ABOVE/BELOW

Xtra

- Performs best on high productivity soils
- Good disease package
- Tall plants with high ear placement
- Great in zones 6, 7, and 8

Corn/Corn

Early Vigor

Population (group)

A

B

C

Not Advised

Suitable

Good

Excellent

Drought Tolerance

Stalk Strength

Root Strength

1

2

3

4

5

6

7

8

9

10

GLYPHOSATE

Liberty<sup>®</sup>

LIBERTY LINK

12

7V66AMXT<sup>TM</sup>★

Brand

115 Day Maturity

optimum<sup>®</sup>

AcreMax<sup>®</sup>

ABOVE/BELOW

XTreme

- High yield potential
- Awesome grain quality and strong stalks
- Moderate response to fungicide
- Great fall appearance
- Girthy ear with deep kernels
- Hard endo candidate

Corn/Corn

Early Vigor

Population (group)

A

B

C

Not Advised

Suitable

Good

Excellent

Drought Tolerance

Stalk Strength

Root Strength

1

2

3

4

5

6

7

8

9

10

GLYPHOSATE

Liberty<sup>®</sup>

LIBERTY LINK

13

7M87AMXT<sup>TM</sup>★

Brand

115 Day Maturity

optimum<sup>®</sup>

AcreMax<sup>®</sup>

ABOVE/BELOW

XTreme

- Good yield potential in high yield circumstances
- Consistent performance in tough environments
- Large, girthy ears with very deep kernels
- Heavy test weight

Corn/Corn

Early Vigor

Population (group)

A

C

B

Not Advised

Suitable

Good

Excellent

Drought Tolerance

Stalk Strength

Root Strength

1

2

3

4

5

6

7

8

9

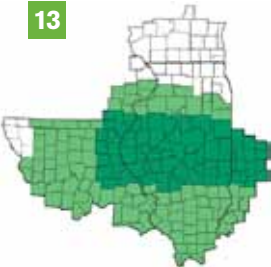
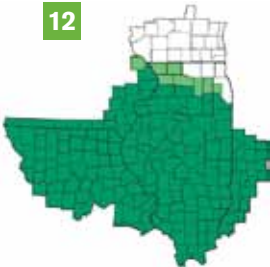
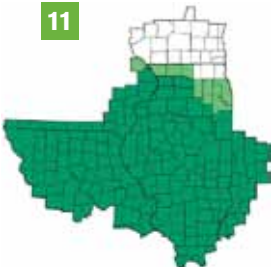
10

GLYPHOSATE

Liberty<sup>®</sup>

LIBERTY LINK

14







NEW

**9U13AM**<sup>TM\*</sup>  
Brand

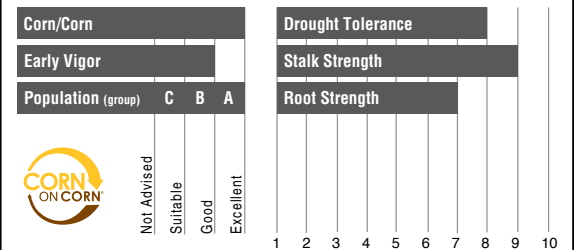


**98 Day Maturity**



**Nice balance of performance and agronomics.**

- High yield potential will respond to population input
- Excellent health package
- Widely adapted early platform
- Early to flower
- Quality grain



GLYPHOSATE



Liberty®



15

**1G39AM**<sup>TM\*</sup>  
Brand

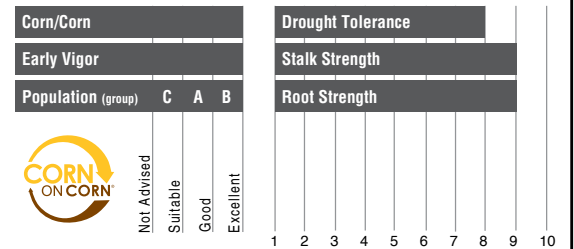


**101 Day Maturity**



**Full-season performance from early genetics.**

- Versatile high yield potential
- Strong late season stalk
- Great health package for zone where this maturity is used
- Strong roots
- Moderate stature and ear height



GLYPHOSATE



Liberty®



16

**2Y06AM**<sup>TM\*</sup>  
Brand

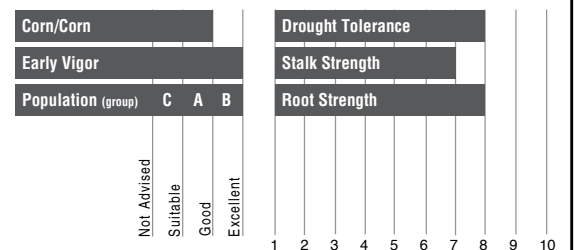


**104 Day Maturity**



**The real deal for the stateline area.**

- High yield potential
- Fast dry down
- Works across a range of soils
- Corn borer protection with integrated refuge



GLYPHOSATE

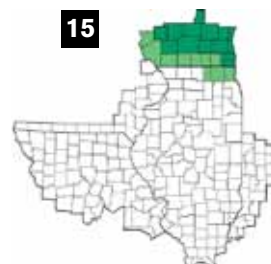


Liberty®

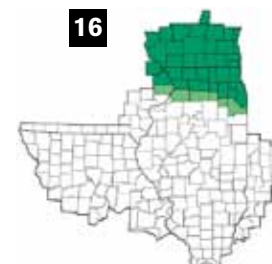


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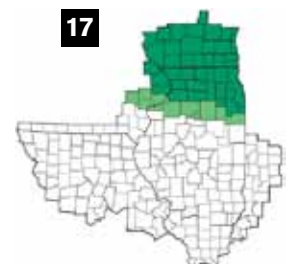
15



16



17







## NEW

Brand



POWER  
PLUS®

Corn/Corn	Drought Tolerance
Early Vigor	Stalk Strength
Population (group)	Root Strength
C	
A	
B	
Not Advised	1
Suitable	2
Good	3
Excellent	4
	5
	6
	7
	8
	9
	10

**GLYPHOSATE**



18

Branch



Corn/Corn				Drought Tolerance	
				Optimum™ AQUAmax®	
Early Vigor				Stalk Strength	
Population (group)				Root Strength	
	C	A	B		
	Not Advised	Suitable	Good		
			Excellent		
				1	2
				3	4
				5	6
				7	8
				9	10

**GLYPHOSATE**



9

Brand



POWER  
PLUS®

Corn/Corn		Drought Tolerance	
Early Vigor		Stalk Strength	
Population (group)	A B C	Root Strength	
Not Advised			
Suitable			
Good			
Excellent			

**GLYPHOSATE**



20

Brand



**HERCULEX<sup>®</sup> HX**  
Impact Protection

Corn/Corn				Drought Tolerance	
Early Vigor				Stalk Strength	
Population (group)	A	B	C	Root Strength	
Not Advised				1	2
Suitable				3	4
Good				5	6
Excellent				7	8
				9	10

**GLYPHOSATE**



1







ABOVE GROUND INSECT CONTROL



NEW

6Z43AM<sup>TM</sup>\*

Brand

112 Day Maturity

Optimum<sup>®</sup>

Above

AcreMax<sup>®</sup>

- Wide area of adaptation
- Beautiful ears
- Early silk for maturity
- Integrated refuge above ground protection
- Good agronomics

POWER PLUS

All terrain hybrid.

Corn/Corn		
Early Vigor		
Population (group)	A	C B
	Not Advised	Suitable
		Good
		Excellent

Drought Tolerance		
Stalk Strength		
Root Strength		

1 2 3 4 5 6 7 8 9 10

GLYPHOSATE

Liberty<sup>®</sup>

LIBERTY LINK

22

6P73AM<sup>TM</sup>\*

Brand

113 Day Maturity

Optimum<sup>®</sup>

Above

AcreMax<sup>®</sup>

- Performs best on moderate to high productivity soils
- Yield leader
- Good disease package
- Good dry down
- Solid choice for above ground insect protection

POWER PLUS

Proven top yield potential with great agronomics.

Corn/Corn		
Early Vigor		
Population (group)	A	B C
	Not Advised	Suitable
		Good
		Excellent

Drought Tolerance		
Stalk Strength		
Root Strength		

1 2 3 4 5 6 7 8 9 10

GLYPHOSATE

Liberty<sup>®</sup>

LIBERTY LINK

23

NEW

7L12 3110

Brand

114 Day Maturity

Agrisure

Viptera<sup>®</sup>

3110

- Corn earworm protection with Agrisure Viptera<sup>®</sup>
- Goes across all soil types & environments
- Low maintenance hybrid
- Strong roots

Think BURRUS

Efficient use of your input dollars.

Corn/Corn		
Early Vigor		
Population (group)	A	C B
	Not Advised	Suitable
		Good
		Excellent

Drought Tolerance		
Stalk Strength		
Root Strength		

1 2 3 4 5 6 7 8 9 10

GLYPHOSATE

Liberty<sup>®</sup>

LIBERTY LINK

24

7M83AM<sup>TM</sup>\*

Brand

115 Day Maturity

Optimum<sup>®</sup>

Above

AcreMax<sup>®</sup>

- Tons of yield potential
- Great drought tolerance
- Large, girthy ears with very deep kernels
- Moderate response to fungicide
- Hard endo premium candidate

POWER PLUS

Better stalks, better roots.

Corn/Corn		
Early Vigor		
Population (group)	A	C B
	Not Advised	Suitable
		Good
		Excellent

Drought Tolerance		
Stalk Strength		
Root Strength		

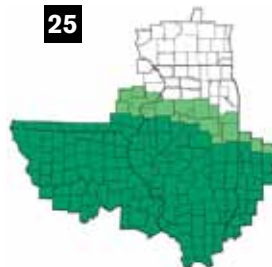
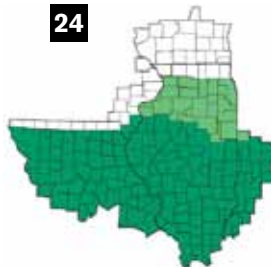
1 2 3 4 5 6 7 8 9 10

GLYPHOSATE

Liberty<sup>®</sup>

LIBERTY LINK

25



\*® Power Plus is a registered trademark of Pioneer. Power Plus brand is distributed by Burrus





PHOTO COURTESY DAVID NIENHISER, CHAPIN, IL



GLYPHOSATE RESISTANT

NEW

7L11 GT

Brand

114 Day Maturity

AgrisureGT

- Goes across all soil types
- Ideal refuge for structured products
- Strong roots
- Moderate response to fungicide

Think BURRUS

Ideal refuge product.

Corn/Corn

Early Vigor

Population (group)

A

C

B

Not Advised

Suitable

Good

Excellent

Drought Tolerance

Stalk Strength

Root Strength

1

2

3

4

5

6

7

8

9

10

GLYPHOSATE

26

ON FARM ASSESSMENTS

To assess compliance, Burrus will use a third-party to conduct IRM compliance assessments for a randomly selected set of customers who purchased Bt hybrids as well as soybeans with Genuity® Roundup Ready 2 Xtend® technology. Following each on-farm assessment, it will be determined if the grower is in compliance. If a grower is found to be out of compliance, Burrus will contact the grower prior to the next growing season to provide compliance assistance. Anyone found to be out of compliance will be checked the following two years. Repeated non compliance can result in loss of access to these technologies.

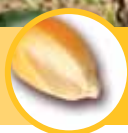
26

61





CONVENTIONAL



2R67<sup>TM\*</sup>

Brand

105 Day Maturity

conv

- Versatile high yield potential
- Excellent disease package
- Great roots and stalks
- Great corn after corn

POWER PLUS

Developed for the stateline area.

Corn/Corn			
Early Vigor			
Population (group)	C	A	B

CORN ON CORN

Not Advised

Suitable

Good

Excellent

Drought Tolerance									
Stalk Strength									
Root Strength									
1	2	3	4	5	6	7	8	9	10

CONVENTIONAL HERBICIDES ONLY

27

4J90<sup>TM\*</sup>

Brand

109 Day Maturity

conv

optimum AQUAmax

- High yield potential with dry grain
- It yields more than it looks
- Deep kernels sit on small cobs
- Will respond to fungicide application

POWER PLUS

Our first conventional Optimum<sup>®</sup> AQUAmax<sup>®</sup> product.

Corn/Corn			
Early Vigor			
Population (group)	C	A	B

Not Advised

Suitable

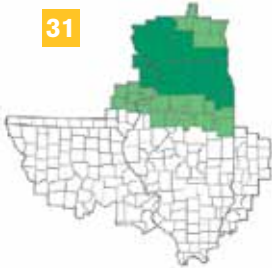
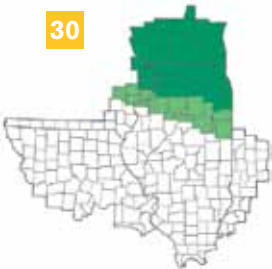
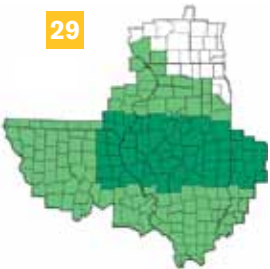
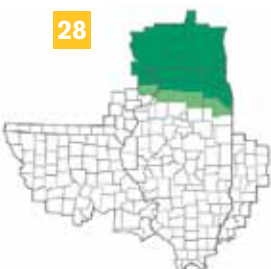
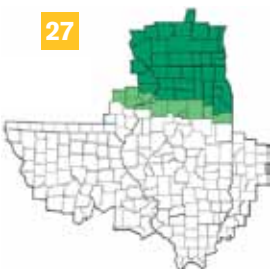
Good

Excellent

Drought Tolerance				Optimum <sup>®</sup> AQUAmax <sup>®</sup>					
Stalk Strength									
Root Strength									
1	2	3	4	5	6	7	8	9	10

CONVENTIONAL HERBICIDES ONLY

28





# 6R20

## 112 Day Maturity

- Outstanding seedling vigor
- Excellent fall appearance
- Impressive grain quality
- High fungicide response
- Harvest timely

### High yield and consistency, low drama.

Condition	Yield Type	Yield Potential	Yield Stability	Yield Consistency
Excellent	1	2	3	4
Good	5	6	7	8
Fair	9	10	11	12
Poor	13	14	15	16

# 6C40™

## 112 Day Maturity

- Marked by its high seed potential and response to fungicide
- Taller plant type with excellent stalks
- Heavy test weight grain to the foundation
- Does not respond to higher density

### Excellent grain quality.

Condition	Yield Type	Yield Potential	Yield Stability	Yield Consistency
Excellent	1	2	3	4
Good	5	6	7	8
Fair	9	10	11	12
Poor	13	14	15	16

# 7M80™

## 115 Day Maturity

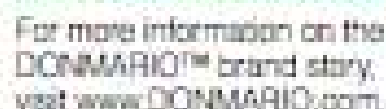
- New drought tolerance
- Excellent seedling
- Long grain fill and pluffy ears
- Moderate fungicide response

### Tons of yield potential.

Condition	Yield Type	Yield Potential	Yield Stability	Yield Consistency
Excellent	1	2	3	4
Good	5	6	7	8
Fair	9	10	11	12
Poor	13	14	15	16







Response	Percentage
Yes, the U.S. should take action to reduce global warming	85%
No, the U.S. should not take action to reduce global warming	15%

Emergency	
Availability	
Cost	

Reported			
Unreported			
Total			

Frequency	
Availability	
Cost	

[illegible]

Investment	
Dividend Yield	
ESG	

**ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.** Inquire with your local health department about the safe use of pesticides and whether pesticides are needed. Pesticides should not be used indoors, outdoors, or on food.





2585

### Mathematik 3.5

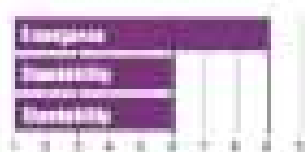
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275

### Maturity 2.1

- 



3165

### Monday 9.1

- 



355

MAY 1997

- 
- UNIVERSITY OF NORTH CAROLINA



1043

**Melvin Pitt**

- 
- Theodor MURNU  
LAW OFFICES



LIBERTYLINK  
GI27

LibertyLink® GT27™ soybeans offer all the power of LibertyLink® technology, supercharged with enhanced weed control and cutting-edge yield.

- Elite genetics providing unprecedented yield performance.
- First soybean trait to market enabling both Liberty and glyphosate herbicides, which offer growers the ability to dial up the post emergence weed control they need in-season.
- Non-volatile chemistries with fewer restrictions for more flexible and effective weed control.
- Also tolerant to a new HPPQ/Group 2.7 mode of action for soybeans\*, pending EPA approval.

This is currently an HPA/ECDC/WHO study of children for purposes registered for public use in the United States.

© 2005 Blackwell Publishing Ltd, *Journal of Internal Medicine* 258: 103–110





LIBERTYLINK®



**LIBERTY  
LINK** 



**\$33+/A**  
**MORE PROFIT POTENTIAL**

**236LL**  
Seed



**Maturity 2.3**

- Versatile early LibertyLink® line
- Plant on any soil type
- Excellent yield performance
- Medium-tall plant type that branches well
- Very good overall disease package
- Yield leader in the early to mid group 2

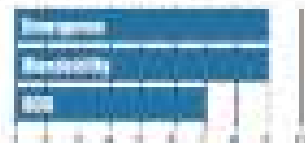


**266LL**  
Seed



**Maturity 2.8**

- Plant anywhere
- Big yields, versatile agronomic package
- Medium-tall, bushy plant type, widely adapted
- Good ratings for a variety of diseases
- Adds diversity to your genetic package
- Excellent standability
- Untreated option available



**298LL**  
Seed



**Maturity 2.9**

- Solid disease package
- Top yield performer across many environments
- Stands well and resists shattering
- Exceptional emergence scores
- Good SDS score
- Great southern movement
- Easy cutability

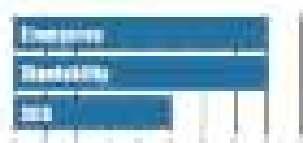


**368LL**  
Seed



**Maturity 3.6**

- Consistent yield performer
- Works across all soil types
- Outstanding emergence and standability scores
- Resists Phytophthora and shattering
- Comparison product to 364LL for better SDS
- Large seeded

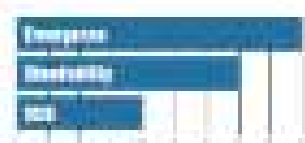


**364LL**  
Seed



**Maturity 3.8**

- Exceptional emergence
- Higher yielder
- Nice bean for those a little "shattering shy"
- Good Phytophthora scores
- Lurid® is recommended for improved SDS control
- Untreated option available

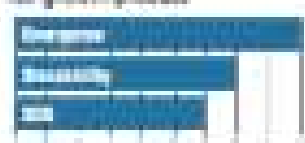


**418LL**  
Seed



**Maturity 4.1**

- Bulletproof versatile bean
- Impressive overall disease package
- Outstanding emergence and standability scores
- Handles Phytophthora
- Good on brown stem rot and SDS
- Impressive early growth and early appearance
- Tall growth product

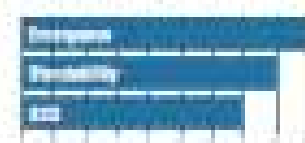


**457LL**  
Seed



**Maturity 4.5**

- Outstanding yields
- SCN control with great SDS scores
- Handles diverse conditions
- Great standability
- Protects against brown stem rot
- Shorter and wider canopy
- Slower early-season growth but works well going north







## GLYPHOSATE TOLERANT SOYBEANS

**20B7™**  
R11T

**POWER PLUS**  
Glyphosate

**Maturity 2.0**

- Yield potential is high
- Peking source of SCN resistance
- Well-rounded disease package
- Great harvest standability
- Very good against brown stem rot
- Widely adapted line



**25G8™**  
R11T

**POWER PLUS**  
Glyphosate

**Maturity 2.5**

- Top yield potential in mid-group 2 maturity
- Peking source of SCN resistance
- Very good SDS ratings
- Nice disease package
- Versatile medium plant type
- Unrated option available



**2808™**  
R11T

**POWER PLUS**  
Glyphosate

**Maturity 2.8**

- Topped development traits
- Highly versatile variety
- Stands up well
- Build your crop plan around this strong variety
- Very good emergence score



**38K5™**  
R11T

**POWER PLUS**  
Glyphosate

**Maturity 3.8**

- Yield, yield, yield potential
- High yield in all conditions
- Grows off really after quick emergence
- Very good SDS tolerance
- Very good standability score



## PROTECTION OF INTELLECTUAL PROPERTY: PVPA AND PATENTS

"Buyer acknowledges he is purchasing the Seed solely for purposes of producing a grain crop, and the Seed, and any product from the Seed, shall not be resold or used as Seed."

The purchase of this seed does not, and shall not be construed to, transfer ownership of any Plant Variety Protection Act rights, patent rights and other intellectual property rights associated with a Soybean Product. Buyer shall take all measures requested by our suppliers (e.g., labeling, requiring contractual agreement with its customers) to protect the PVP and/or intellectual property rights relating to a Soybean Product.

Buyer shall print on all bags, tags, brochures and order forms for each Soybean Product which is subject to protection under the Plant Variety Protection Act and/or Patent Act, as applicable:

Soybean Product for which a PVP certificate has been issued or for which such a certificate has been applied will be labeled as such. Unauthorized sales for reproductive purposes prohibited.

For Soybean Product on which a U.S. patent has been issued, or for which a patent has been applied will be labeled as such.

"By contract, use or sale as seed of the product derived from this seed is prohibited."

Always follow good farming, stewardship practices and pesticide and herbicide labels. That is appropriate to your farm and the crops you are growing. Glyphosate herbicide will control the weeds and grasses in your field.

**LIBERTYLINK**  
GT27

**Think DURRUS**

**LIBERTY LINK**

**ROUNDUP READY 2 XTEND**

**DONMARIO**

**Glyphosate**

**POWER PLUS**

**Harvest**

**GLASS**



How we farm has changed.  
**WHO WE ARE** has not.



**FREEDOM to CHOOSE!**

**ROUNDUP READY 2  
XTEND  
SOYBEANS**

**LIBERTYLINK  
GT27**

**LIBERTY  
LINK**

**Glyphosate  
Tolerant**