2016 Product Guide USA



MNorthStar Genetics

LOCAL EXPERTS

We understand your land!

At NorthStar Genetics, we take pride in focusing on specific geographies and finding the soybean varieties that suit your farm the best. We know the upper midwest and what soybean traits and characteristics will get our farmers the best performing varieties and highest yields.

Visit our website to see our trial data map and to find a dealer near you.

At NorthStar Genetics, we know beans.

www.northstargenetics.com



Morth Star
Genetics

Dear Friends,

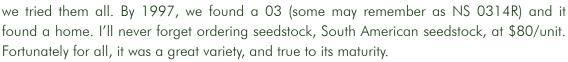
2016 marks the 20th Anniversary of NorthStar Genetics.

In 1996:

- The Dow hit 6448 at year end; today it's 18,000+
- Gas was \$1.22/gallon
- DVDs were launched in Japan
- Ebay was started
- Interest rates, year-end Federal Reserve: 8.25%
- Bill Clinton defeats Bob Dole
- Prince Charles and Princess Diana were divorced

Seems like yesterday?

NorthStar received its Roundup Ready® license in October 1996. There were very few early varieties available and



We also began replicated trials throughout our marketing area. By testing hundreds of varieties, we were able to localize them to their best advantage, grow them in that area, and had great confidence they would perform. And they did.

Today, we produce well over 1,000,000 units of soybeans throughout the Upper Midwest and Western Canada. Our retail sales are strong, and the company is continuing to grow and expand.

How did all this happen? A dedicated group of dealer seeds men and a growing family of great employees nurtured the business to where it is today. To all who purchased, grew, and continue to grow with us...THANK YOU. Without you, it would not have happened.

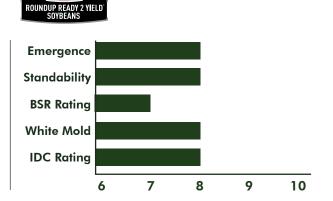
Best of luck in 2016!

Dan Hogstad, CEO, NorthStar Genetics

Genuity® Roundup Ready 2 Yield® Soybeans

NS 0057R2 RM - 00.5

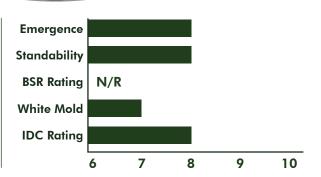
- Great yielder for early maturity
- Very good IDC tolerance
- Pods well on lateral branches



NS 0060NR2 RM - 00.6

- Med-tall and attractive with extensive branching
- Very good emegence, IDC, and PRR scores
- Excellent yields in an early cyst resistant variety

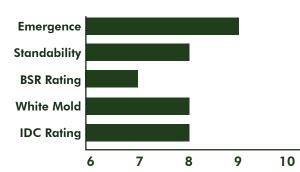




NS 0080R2 RM - 00.6

- Very good plant height with exceptional branching
- Proven yield across diverse geography
- Very strong yield for maturity



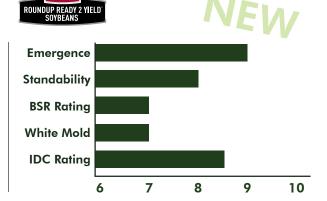




NS 0081NR2

RM - 00.8

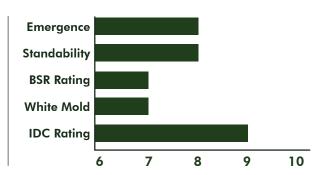
- High yield performance across our northern ND & MN early market area
- Combination of Rps3a and 1c tolerance in one product
- Med-tall, medium canopy product



NS 0088R2 RM - 00.8

- Proven top IDC tolerance, consistent in 2013/2014 NDSU testing
- Exhibits very good Phytophthora field tolerance
- Performs well in the Valley and moves west well
- Carries cyst resistance genes



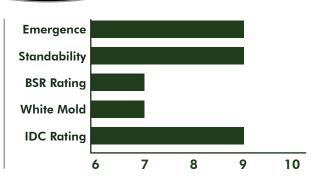


NS 0090R2 RM - 00.9



- Yield dominator across early maturity area
- Maintains high yield potential north or south of maturity zone
- Will branch extensively in wider row situations

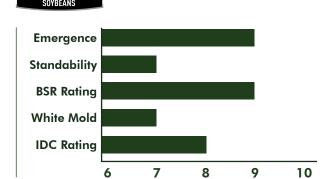




Genuity® Roundup Ready 2 Yield® Soybeans

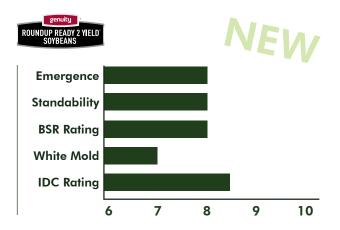
NS 0096R2 RM - 00.9

- Proven performance with great customer satisfaction
- Plant type works in all row widths
- Adapted well in the Valley and east or west in maturity zone



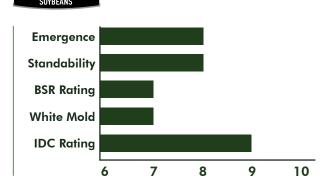
NS 0111R2 RM - 0.1

- Broadly adapted early group zero variety
- Yield performance in testing well above trendline for maturity
- High yield potential outshines average defensive package



NS 0200NR2 RM - 0.2

- 0.2 maturity with excellent cyst protection
- Very good IDC and Phytophthora scores
- Outstanding performer compared to competition





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NS 0318R2 RM - 0.3

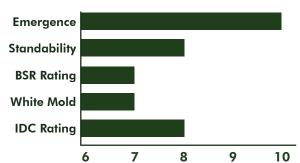
- Above average IDC scores
- Rps3a gene with very high Phytophthora field tolerance
- Great yield potential in early group zero maturity



NS 0480NR2 RM - 0.4

- Yield dominator in mid-zero maturity
- Excellent emergence to perform well in tough conditions
- Strong IDC tolerance with very good SCN resistance

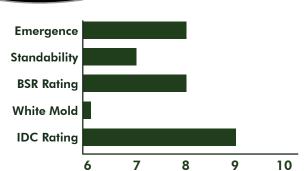




NS 0537R2 RM - 0.5

- Continues to prove its excellent IDC score
- Performs well across all of mid-zero maturity area
- Med-bush plant type with excellent yield

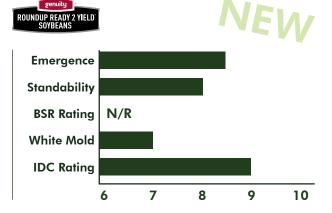




Genuity® Roundup Ready 2 Yield® Soybeans

NS 0651NR2 RM - 0.6

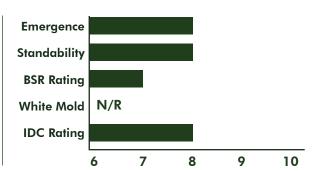
- Broadly adapted to our mid-zero maturity market
- Very good IDC and PRR tolerances
- Excellent performer in offensive or defensive situations



NS 0839NR2 RM - 0.8

- SCN choice in late zero maturity with terrific yields
- Good performer in IDC problem fields
- Strong emergence in a medium height, medbush plant type

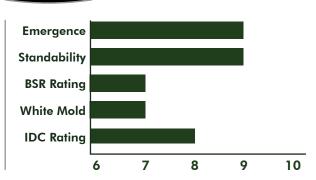




NS 0949R2 RM - 0.9

- Tall, med-bush plant type with excellent standability
- Rps3a gene with high field tolerance to Phytophthora
- Very strong IDC score with top end yield

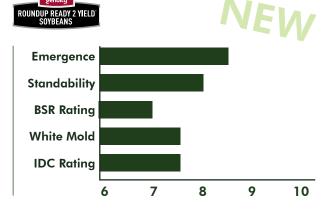






NS 0941NR2 RM - 0.9

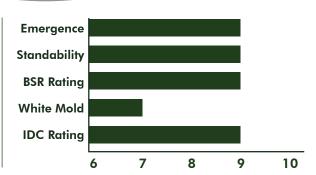
- Uniquely adapted to western MN stretching into North and South Dakota
- Med-tall, med-bush plant type
- Yield performance to make great companion to NS 0839NR2
- Strong defensive package



NS 1040NR2 RM - 1.1

- This variety packs high yield into a strong defensive package
- Contains the Rag1 gene for soybean aphid tolerance
- Exhibits strong IDC and BSR scores with excellent stress tolerance

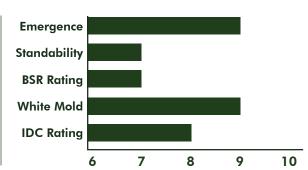




NS 1388NR2 RM - 1.3

- SCN, IDC, SWM plus yield all in one package
- Adapts to a wide range of soils and geography beyond its maturity zone
- Outstanding performance when compared to 1.0-1.6 maturity competitors





Genuity® Roundup Ready 2 Yield® Soybeans

NS 1390NR2

RM - 1.3

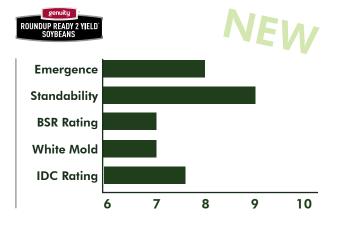
- Brown stem rot resistance in an SCN resistant variety
- High yielder in this maturity with good IDC score
- Attractive med-tall, med-bush plant
- Exciting performance in 2014
- Strong SDS tolerance





NS 1441NR2 RM - 1.4

- Strong disease package with top end yield
- Very good standability and shatter tolerance
- Attractive blond color at harvest time

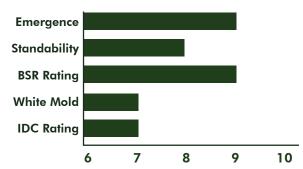


NS 1528NR2

RM - 1.5

- High performing option and widely adapted
- White mold, BSR, IDC, and SDS tolerance in one variety
- Excellent choice for consistency

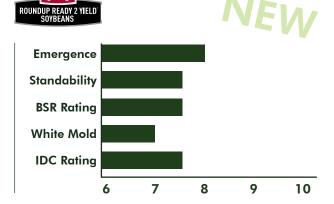






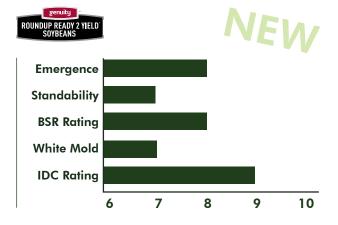
NS 1661NR2

- RM 1.6
- Moderate branching on this med-tall plant creates an attractive high yield product
- Very good PRR field tolerance
- Strong on your best soil as well as in marginal areas
- Solid companion to NS 1528NR2 with more marginal area adaptation



NS 1701NR2 RM - 1.7

- Very strong IDC tolerance
- Medium height, med-bush plant type
- High yields in a superior defensive soybean



NS 1726NR2 RM - 1.7

- Excellent standability and highly resistant to white mold
- Strong IDC package matched with cyst protection
- High PRR field tolerance to maximize stand and yield



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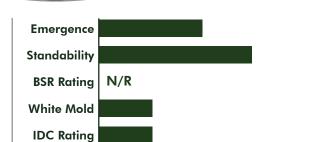
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Genuity® Roundup Ready 2 Yield® Soybeans

NS 1800NR2

RM - 1.8

- Holds plant health late into season then drops leaves quickly
- Average height plant loaded with branches of pods
- Very good defensive package, works in any row width

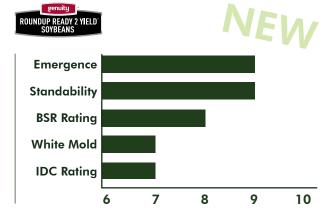


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NS 1911NR2 RM - 1.9

- Outstanding yield for maturity
- Well above trial mean in MN and SD testing in 2013 and 2014
- Very good PRR score with greenhouse testing confirmation
- Performs on a wide variety of soils



NS 1916NR2 RM - 1.9

- Solid PRR tolerance with the Rps1c gene
- Med-tall bushy plant with above average IDC score
- Outstanding BSR, SWM, and SCN ratings



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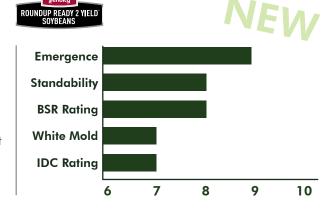
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IDC Rating



NS 2031NR2 RM - 2.0

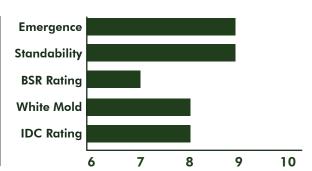
- Very versatile soybean
- Works in a wide range of soil types
- Strong defensive package combined with great yield
- Exhibits high levels of SDS tolerance, showed very strong in 2014



NS 2050NR2 RM - 2.0

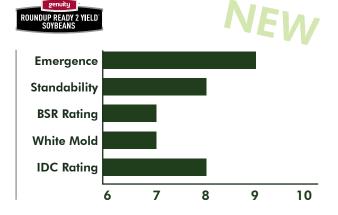
- Versatility to match most any condition
- Outstanding yield for maturity in research trials
- Strong emergence and stress tolerance with a solid disease package





NS 2111NR2 RM - 2.1

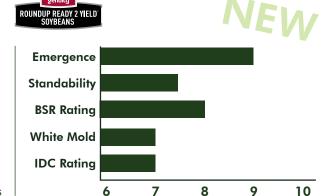
- Consistent, high yield performance in 2013 and 2014 replicated trials
- Very solid disease tolerance package
- Lots of branches on this medium height variety

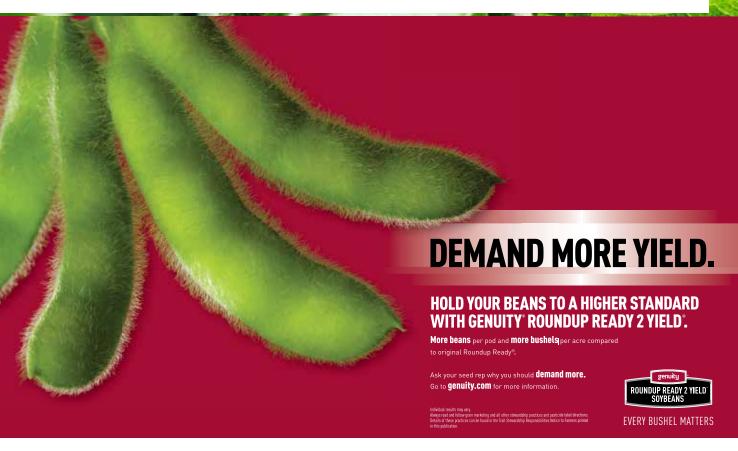


Genuity® Roundup Ready 2 Yield® Soybeans

NS 2281NR2 RM - 2.2

- Excellent yield performance in our marketing
- Tons of lateral branches with high pod counts
- Top performer in 2013 and 2014 testing
- Excellent replacement for NS 2199NR2 with improved PRR tolerance for southern MN clay soils







Soybean Seed Piracy Statement: Genuity® Roundup Ready 2 Yield® soybeans

Seeds containing the Genuity® Roundup Ready 2 Yield® trait are protected under numerous U.S. patents. Seed containing patented traits, such as seed containing Roundup Ready 2 Yield® traits, can only be used to plant a single commercial crop. It is unlawful to save and replant Genuity® Roundup Ready 2 Yield® soybeans. Additional information and limitations on these products are provided in the Monsanto Technology Stewardship Agreement and Technology Stewardship Stewardsh

Into product. Excellence Intrough sewardsanips is a registerea trademark of biotechnology industry Organization.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready® crops clinic 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. Acceleron and Design®, Genuity Design®, Genuity Icons, Roundup Ready 2 Yield®, Roundup Ready® and Roundup® are registered trademarks of Monsanto Technology LLC. ©2014 Monsanto Company.

Benefits of Professionally Grown Seed

- Convenience

 High quality and high yield potential product vs. bin-run

 Reliable seed supply in many maturities

 Economics of New Seed vs. Bin-Run

 Average loss of ~ 10-15% cleanout at harvest for bin-run seed

 Bin-Run planting rates are generally 15% highers than new certified seed
- Limited Warranty Benefits
- Dealer agronomic support before and after the sale
 Risk management benefits of Roundup Rewards® (over \$600 million in benefits paid)
 New Innovations
- Monsanto's 100% commitment to agriculture
 - Our very preliminary estimate is that farmers get a \$6 benefit for each \$1 spent on private sector research.





We are the soybean's biggest fans!

At NorthStar Genetics, we take pride in expanding the territory of soybean acres across North America and work hard at providing the best varieties for our specific growing areas. With our vast network of seed growers, we have tested our varieties in your area and we know we have the right bean for your farm.

Visit our website to see our trial data map and to find a dealer near you.

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WE KNOW BEAMS

MorthStar Genetics

Soybean Characteristics

	Brand	Maturity	Emergence	Height	Туре	Standability	
		Genuity® R	oundup Rea	dy 2 Yield® S	oybeans		
	NS 0057R2	00.5	8	Med	Med-Bush	8	
	NS 0060NR2	00.6	8	Med-Tall	Med-Bush	8	
	NS 0080R2	00.6	9	Med-Tall	Med-Bush	8	
NEW	NS 0081NR2	00.8	9	Med-Tall	Thin-Bush	8	
	NS 0088R2	00.8	8	Med	Med-Bush	8	
	NS 0090R2	00.9	9	Med	Med-Bush	9	
	NS 0096R2	00.9	9	Med-Tall	Med-Bush	7	
NEW	NS 0111R2	0.1	8	Med-Tall	Med-Bush	8	
	NS 0200NR2	0.2	8	Tall	Thin-Bush	8	
	NS 0318R2	0.3	9	Med	Med-Bush	8	
	NS 0480NR2	0.4	10	Med-Tall	Med-Bush	8	
	NS 0537R2	0.5	8	Med	Med-Bush	7	
NEW	NS 0651NR2	0.6	8.5	Med-Tall	Med-Bush	8	
	NS 0839NR2	0.8	8	Med	Med-Bush	8	
	NS 0949R2	0.9	9	Tall	Med-Bush	9	
NEW	NS 0941NR2	0.9	8.5	Med	Med-Bush	8	
	NS 1040NR2	1.1	9	Med-Tall	Med-Bush	9	
	NS 1388NR2	1.3	9	Med	Med-Bush	7	
	NS 1390NR2	1.3	8	Med-Tall	Med-Bush	8	
NEW	NS 1441NR2	1.4	8	Med	Med-Bush	9	
	NS 1528NR2	1.5	9	Med	Med-Bush	8	
NEW	NS 1661NR2	1.6	8	Med	Med-Bush	7.5	
NEW	NS 1701NR2	1.7	8	Med	Med-Bush	7	
	NS 1726NR2	1.7	8	Med	Med-Bush	9	
	NS 1800NR2	1.8	8	Med	Bush	9	
NEW	NS 1911NR2	1.9	9	Med	Med-Bush	9	
	NS 1916NR2	1.9	9	Med-Tall	Med-Bush	7	
NEW	NS 2031NR2	2.0	9	Med-Tall	Med-Bush	8	
	NS 2050NR2	2.0	9	Med-Tall	Med-Bush	9	
NEW	NS 2111NR2	2.1	9	Med-Tall	Med-Bush	8	
NEW	NS 2281NR2	2.2	9	Med	Med-Bush	7.5	

Rating Key for Soybean Characteristics

10 = Excellent; 1 = Poor. **Height:** Med = Medium; Med-Tall = Medium to Tall; Tall = Tall. **Standability:** 10 = Standing Perfectly; 1 = Completely Flat. **Brown Stem Rot:** 10 = Resistant; 1 = Susceptible. **White Mold:** 10 = Unaffected; 1 = Decimated.





Brown Stem Rot Rating	White Mold	Cyst Nematode	Iron Chlorosis	Phytophthora	Brand	
	Genu	uity® Roundup	Ready 2 Yie	eld® Soybeans		
7	8	S	8	Rps1c/7	NS 0057R2	
N/R	7	R3, MR14	8	Rps1c/8	NS 0060NR2	Ī
7	8	S	8	Rps1c/8	NS 0080R2	
7	7	R3, MR14	8.5	Rps3a + 1c/9	NS 0081NR2	NEW
7	7	R3, MR14	9	Rps1c/8	NS 0088R2	
7	7	S	9	Rps1k/8	NS 0090R2	
9	7	S	8	Rps1c/7	NS 0096R2	
8	7	S	8.5	Rps1c/7.5	NS 0111R2	NEW
7	7	R3, MR14	9	Rps1c/7	NS 0200NR2	
7	7	S	8	Rps3a/9	NS 0318R2	
7	7	R3, MR14	8	Rps3a/9	NS 0480NR2	
8	6	S	9	NG/6	NS 0537R2	
N/R	7	R3, MR14	9	Rps3a/8	NS 0651NR2	NEW
7	N/R	R3, MR14	8	Rps1c/7	NS 0839NR2	Ī
7	7	S	8	Rps3a/9	NS 0949R2	Ī
7	7.5	R3, MR14	7.5	Rps1c/8	NS 0941NR2	NEW
9	7	R3, MR14	9	Rps1c/7	NS 1040NR2	Ī
7	9	R3, MR14	8	Rps1c/8	NS 1388NR2	
10	8	R3, MR14	8	Rps1k/8	NS 1390NR2	
7	7	R3, MR14	7.5	Rps1k/8	NS 1441NR2	NEW
9	7	R3, MR14	7	Rps1c/7	NS 1528NR2	Ī
7.5	7	R3, MR14	7.5	Rps1c/8	NS 1661NR2	NEW
8	7	MR3, MR14	9	NG/8	NS 1701NR2	NEW
6	9	R3	8	Rps1c/7	NS 1726NR2	
N/R	7	R3, MR14	7	Rps1k/8	NS 1800NR2	
8	7	R3, MR14	7	Rps1c/8	NS 1911NR2	NEW
8	7	R	7.5	Rps1c/8	NS 1916NR2	
8	7	R3, MR14	7	Rps1c/8	NS 2031NR2	NEW
7	8	R3, MR14	8	Rps1c/8	NS 2050NR2	
7	7	R3, MR14	8	Rps1c/8	NS 2111NR2	NEW
8	7	R3, MR14	7	Rps1c/8	NS 2281NR2	NEW
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Cyst Nematode: S = Susceptible; R = Resistant to; MR = Moderate Resistance.

Iron Chlorosis: 10 = Unaffected; 1 = Decimated. Phytophthora Field Tolerance: (Gene/

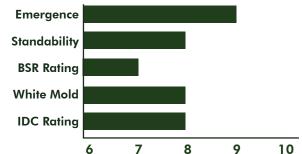
Resistance) 10 = Best; NG = No Specific Gene.

LibertyLink® Soybeans

NS 0095LL RM - 00.9

- Ultra early LibertyLink offering
- High yield with terrific defensive package
- Excellent emergence and standability

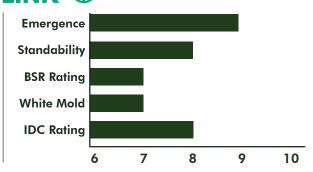




NS 0129LL RM - 0.1

- Widely adapted in the northern market area
- Good IDC score with high yield for maturity
- Rps1k gene with excellent field tolerance

LIBERTY LINK[®] (**)



NS 0361LL RM - 0.3

- Quick emerging
- Consistent high yield performance
- Defensive package to work well both in and out of the Valley



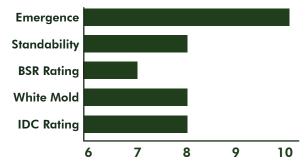


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NS 0567NLL RM - 0.5

- Our earliest offer with SCN resistance
- Proven yielder over the past 4 seasons
- Strong IDC, SCN, and SWM scores make a great defensive package





NS 0571NLL RM - 0.5

- Excellent multi-year trial results
- Strong performance over wide area where maturity fits
- Above average defensive package



NS 0801NLL RM - 0.7

- Above average defensive package
- Bushy plant type
- Widely adapted to most soil types

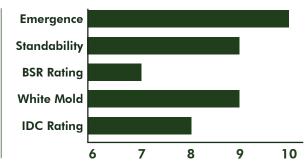


LibertyLink® Soybeans

NS 1128NLL RM - 1.1

- Continues to show strong yields moving north of maturity zone
- Moderate SCN resistance with a good IDC score
- Consistent performer in many environments



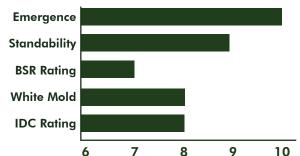


NS 1291NLL RM - 1.2

- Excellent early vigor
- Med-tall, bushy plant type
- Very strong yield performance

LIBERTY LINK *



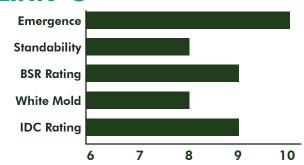


NS 1300NLL

RM - 1.3

- Sets a new standard for LL yields in this maturity
- High Phytophthora root rot field tolerance
- Yield results from replicated trials are 110% of current LL varieties
- Outstanding emergence with great disease tolerance

LIBERTY LINK 🖤



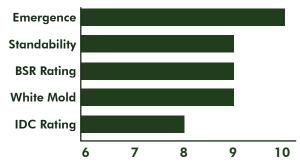




NS 1550NLL RM - 1.5

- Consistent high yields in replicated testing in MN & SD
- SCN protection with great IDC and SWM scores
- Excellent choice in this maturity

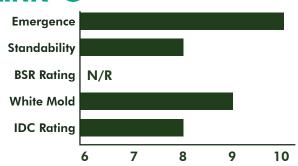




NS 2030NLL RM - 2.0

- Consistent yield performance across environments
- Medium height and canopy provide an attractive compact appearance
- Well-rounded defensive package

LIBERTY LINK[®] 🐠

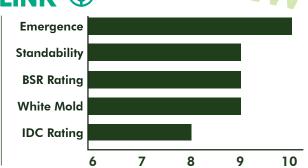


NS 2041NLL RM - 2.0

- Strong emergence with excellent standability
- Good overall defensive package, particularly strong on BSR and SWM
- High yield performance from central MN stretching west into South Dakota







Soybean Characteristics

	Brand	Maturity	Emergence	Height	Туре	Standability	
			LibertyLink®	Soybeans			
	NS 0095LL	00.9	9	Med-Tall	Med-Bush	8	
	NS 0129LL	0.1	9	Med-Tall	Med-Bush	8	
NEW	NS 0361LL	0.3	9	Med-Tall	Med-Bush	7	
	NS 0567NLL	0.5	10	Med-Tall	Med-Bush	8	
NEW	NS 0571NLL	0.5	10	Med-Tall	Med-Bush	8	
NEW	NS 0801NLL	0.7	10	Med-Tall	Med-Bush	8	
	NS 1128NLL	1.1	10	Med-Tall	Med-Bush	9	
NEW	NS 1291NLL	1.2	10	Med-Tall	Med-Bush	9	
	NS 1300NLL	1.3	10	Med	Med-Bush	8	
	NS 1550NLL	1.5	10	Med-Tall	Med-Bush	9	
	NS 2030NLL	2.0	10	Med	Med-Bush	8	
NEW	NS 2041NLL	2.0	10	Med-Tall	Med-Bush	9	

Rating Key for Soybean Characteristics

10 = Excellent; 1 = Poor. **Height:** Med = Medium; Med-Tall = Medium to Tall; Tall = Tall. **Standability:** 10 = Standing Perfectly; 1 = Completely Flat. **Brown Stem Rot:** 10 = Resistant;

1 = Susceptible. White Mold: 10 = Unaffected; 1 = Decimated.

Cyst Nematode: S = Susceptible; R = Resistant to; MR = Moderate Resistance.

Iron Chlorosis: 10 = Unaffected; 1 = Decimated. Phytophthora Field Tolerance: (Gene/

Resistance) 10 = Best; NG = No Specific Gene.

LibertyLink® Soybeans
The LibertyLink® trait with Liberty® herbicide provides excellent weed control and preserves the yield potential of high-performing varieties. Soybeans with the LibertyLink trait allow growers to spray Liberty in-crop for nonselective postemergence control of even the toughest weeds, including Palmer amaranth, giant ragweed, waterhemp and marestail. Liberty works fast, controlling weeds within days versus weeks, before they jeopardize yield potential. Liberty is a group 10 herbicide mode of action.*



*Herbicide mode of action groups designated by the Weed Science Society of America.

LibertyLink® Patent Statement

Soybean seeds containing LibertyLink® are protected under multiple U.S. patents and may be planted only to produce one (1) commercial crop, and only after signing a Bayer Grower Technology Agreement. It is illegal to save or catch soybean seeds containing the LibertyLink trait for use as planting seed or for transfer to others for use as planting seed.

Trademark Statement
Bayer CropScience LP, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709. Always read and follow label instructions. Bayer (reg'd), the Bayer Cross (reg'd), InVigor®, Liberty®, LibertyLink® and the Water Droplet Design (reg'd) are trademarks of Bayer. Liberty is not registered in all states. For additional product information call toll-free 1-866-99-BAYER (1-866-992-2937) or visit our website



Brown Stem Rot Rating	White Mold	Cyst Nematode	Iron Chlorosis Phytophthora		Brand	
		Liberty	Link® Soybed	ans		
7	8	S	8	Rps1k/8	NS 0095LL	
7	7	S	8	Rps1k/8	NS 0129LL	
8	7.5	S	8	Rps1k/8	NS 0361LL	NEW
7	8	MR	8	Rps1k/8	NS 0567NLL	
8	8	MR	8	NG/8	NS 0571NLL	NEW
7	7	MR	9	Rps1k/8	NS 0801NLL	NEW
7	9	MR	8	Rps1k/8	NS 1128NLL	
7	8	MR	8	Rps1c/9	NS 1291NLL	NEW
9	8	MR	9	NG/9	NS 1300NLL	
9	9	MR	8	NG/9	NS 1550NLL	
N/R	9	MR	8	Rps1k/8	NS 2030NLL	
9	9	MR	8	NG/9	NS 2041NLL	NEW

REAL YIELDS WITH NORTHSTAR GENETICS LIBERTYLINK® VARIETIES

In the real world, weeds interfere with high yields, but NorthStar Genetics has you covered. High-performing LibertyLink® soybean genetics, coupled with Liberty®'s excellent performance on tough-to-control weeds, ensure real yields that deliver.

• High-performing Genetics

For 3 years running, 3 out of 4 growers across the U.S. reported that LibertyLink soybeans yielded as much as or better than on-farm averages.*

• Excellent Weed Control

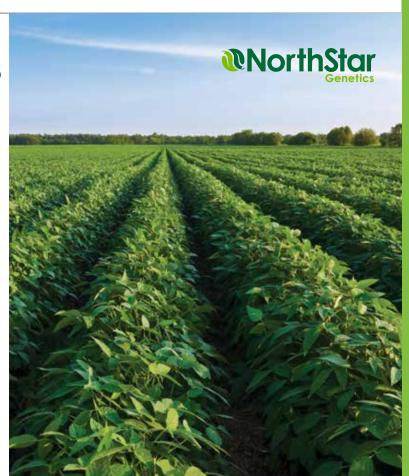
Liberty herbicide controls tough-to-control weeds through a different chemistry and unique mode of action to help prevent misses in the field.

Real Yield

With the LibertyLink system, weeds are better controlled to reduce their drain on yield.









Agrisure Artesian

Agrisure® Corn Traits

GT	Hybrids wth the Agrisure® GT trait provide excellent tolerance to in-crop applications of glyphosate-based hybrids.
GTA	The Agrisure Artesian® GTA trait stack brings together the elite class of high-performing Artesian™ hybrids, which convert water to grain more effectively than other hybrids, with the Agrisure® GT trait—resulting in season-long water optimization, plus excellent tolerance to in-crop applications of glyphosate-based herbicides.
GT/CB/LL	The Agrisure® GT/CB/LL trait stack provides season-long control of European and southwestern corn borer, with its added BT trait, as well as herbicide flexibility with both glyphosate and glufosinate tolerance. GT/CB/LL also controls or suppresses southern cornstalk borer, corn earworm, fall armyworm, sugarcane borer, and common stalk borer.
3010A	The Agrisure Artesian® 3010A trait stack brings together the elite class of high-performing Artesian™ hybrids, which convert water to grain more effectively than other hybrids, and the Agrisure® GT/CB/LL trait stack, which offers herbicide flexibility with both glyphosate and glufosinate tolerance, as well as protection from corn borer.
3000GT	Agrisure® 3000GT hybrids offer control of corn borer and corn rootworm with tolerance to both glyphosate and glufosinate herbicides. 3000GT hybrids also contol or suppress corn earworm, and fall armyworm.
3011A	The Agrisure Artesian® 3011A trait stack brings together the elite class of high-performing Artesian™ hybrids, which maximize yield when it rains and increase yield when it doesn't, and the Agrisure® 3000GT trait stack, which offers herbicide flexibility with both glyphosate and glufosinate tolerance, as well as protection from corn borer and corn rootworm.
3111V	A combination of the Agrisure Viptera® trait and the Agrisure® 3000GT triple stack, the Agrisure Viptera 3111 trait stack controls above- and below-ground insects for increased yield potential, higher quality grain, and glyphosate or glufosinate herbicide flexibility.
3220 E-Z Refuge®	The Agrisure Viptera® 3220 E-Z Refuge® trait stack offers corn growers dual modes of action against ear-feeding insects, including corn borer, with a 5 percent, single-bag refuge. It is ideal for areas where rootworm management is not a key focus.



Agrisure® Corn

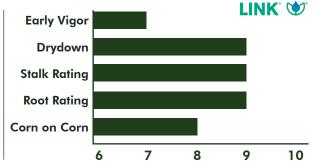
NS77-311 GT/CB/LL

AgrisureGT/CB/LL

RM - 77 Days

Early, fast drydown, strong stalks and roots

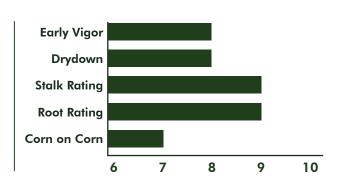
- Well-adapted up the Canadian border
- Dual-purpose hybrid with good stay green
- Very good root strength
- Glyphosate and Liberty tolerant
- Requires 20% refuge



NS82-182 GT RM - 82 Days

Outstanding yield potential

- Very good fall stalk strength
- Good grain quality
- Best performance on medium to heavy soils
- Responds well to good fertility management
- Husks open nicely at maturity for very good drydown



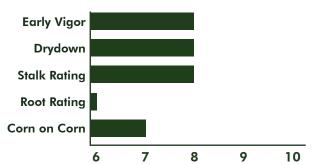
NS84-171 GT RM - 84 Days

Proven yielder

- Very good fall stalk strength
- Above average drydown rating
- Med-tall plant with good emergence
- Best performance at medium to high populations
- Better performance on well drained soils



AgrisureGT









Hybrid without Agrisure Viptera (left) vs. hybrid with Agrisure Viptera 3111 trait stack (right)

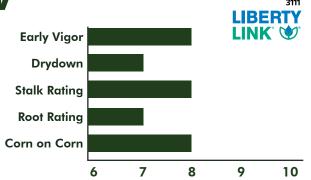
Southern Illinois

NS87-104 3111V

RM - 87 Days

Excellent emergence with high yields

- Proven high yields under good fertility management
- Outstanding emergence and early-season vigor
- Flowers early for excellent northerly movement
- Agrisure Viptera provides full season control of corn rootworm, corn borer, and 12 other insects
- Glyphosate and Liberty tolerant



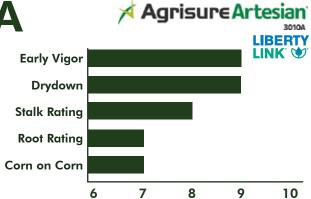
✓ Agrisur∈Viptera

NS89-304 3010A

RM - 89 Days

Maximize drought tolerance with Artesian™

- Maximizes yield under ideal conditions
- Up to 15% higher yield in moisture-stressed environments
- Med-tall hybrid with strong stalks
- Excellent emergence
- Glyphosate and Liberty tolerant



Agrisure® Corn

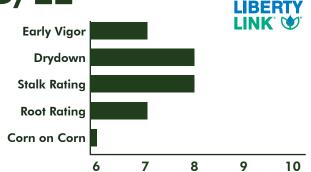
NS90-101 GT/CB/LL

AgrisureGT/CB/LL

RM - 90 Days

Dominant yield in this maturity

- High yield leader since introduction
- Good stalk strength and fast drydown
- Tall, attractive, erect leaf style hybrid
- Best performance on productive, well-drained soils
- Avoid droughty soils and corn-on-corn environments

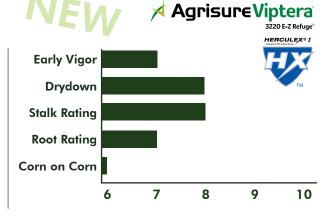


NS90-305 3220

RM - 90 Days

High yields with complete above ground insect protection

- Containts BT, HX1, and Viptera traits to protect against a wide range of above ground insects
- Base genetics the same as NS90-101
- Tall, showy hybrid with erect leave characteristic
- Performs best on productive, well-drained soils
- Avoid droughty soils and corn-on-corn environments

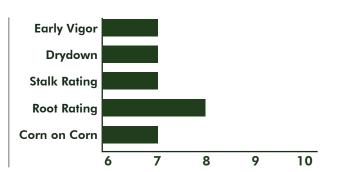


NS99-322 GTA RM - 99 Days

Artesian™ drought tolerance protection

- Artesian drought tolerance maximizes yield when it doesn't rain on time
- Consistent high yield and solid agronomics
- Widely adapted across central MN west through SD
- Avoid moving south as an early hybrid
- Semi-flex ear

Agrisure Artesian GTA





NS99-344 3011A

RM - 99 Days

Great insect control package with Artesian™ drought tolerance

- Consistent high yields and solid agronomics
- Widely adapted across MN and SD
- Semi-flex ear
- Early flowering with excellent drydown
- Great choice to manage stress areas



Agrisure Artesian

Agrisure Artesian

Agrisure3000GT

NS102-304 3011A

RM - 102 Days

Exceptional yield plus Artesian™ drought tolerance

- Med-tall plant with excellent dual-purpose capability
- Strong stalks and roots
- Above average Goss's wilt tolerance
- Keep in zone or south for best performance
- Performs well across all soil types



NS104-394 3000GT

RM - 104 Days

Tall, robust, dual-purpose hybrid

- Proven yield performance across environments over multiple years
- Excellent choice for grain or silage
- Very good emergence and early-season growth
- Good drought tolerance
- Excellent stalk strength with good root system

Early Vigor Drydown Stalk Rating Root Rating Corn on Corn 6 7 8 9 10

northstargenetics.com

Corn Characteristics Agrisure®

	Brand	Trait	Days	GDU Blk	Plant Pop	High Pop	Early Vigor	Ear Flex	Plant Height
				Agris	ure® Corn				
	NS77-311	GTCBLL	77	2005	26-32,000	7	7	Fixed	8
	NS82-182	GT	82	2260	28-34,000	8	8	Fixed	8
	NS84-171	GT	84	2315	28-34,000	7	8	Fixed	8
	NS87-104	3111V	87	2300	28-34,000	8	8	Semi-Flex	7
	NS89-304	3010A	89	2275	29-36,000	8	9	Fixed	8
	NS90-101	GTCBLL	90	2250	28-34,000	7	7	Semi-Flex	8
NEW	NS90-305	3220	90	2250	28-34,000	7	7	Semi-Flex	8
	NS99-322	GTA	99	2430	28-34,000	7	7	Semi-Flex	7
	NS99-344	3011A	99	2500	28-34,000	7	7	Semi-Flex	7
	NS102-304	3011A	102	2520	29-36,000	8	8	Semi-Flex	8
	NS104-394	3000GT	104	2630	28-36,000	7	9	Semi-Flex	9

Rating Key for Corn Characteristics

10 = Best; 9 = Excellent; 8 = Above Average; 7 = Average; 6 = Below Average; 5 = Well Below Average



Artesian Corn hybrid (left)
vs. competitive hybrid
(right)

Audrain County, Missouri

Agrisure®, Agrisure Artesian®, Agrisure Duracade®, Agrisure Viptera®, and Artesian™ are trademarks of a Syngenta group company. LibertyLink®, Liberty® and the Water Droplet logo are registered trademarks of Bayer.



Seed products with the LibertyLink® (LL) trait are resistant to the herbicide glufosinate ammonium, an alternative to glyphosate in corn, and combine high-yielding genetics with the powerful, non-selective, postemergent weed control of Liberty® herbicide for optimum yield and excellent weed control.

Insect Sesistance Sanagement

Before opening a bag of seed, be sure to read and understand the stewardship requirements, including applicable refuge requirements for insect resistance management, for the biotechnology traits expressed in the seed set forth in the technology agreement that you sign. By opening and using a bag of seed, you are reaffirming your obligation to comply with those stewardship requirements.



Brand	Drydown	TST Wt	Goss's Wilt	Corn on Corn	Root Rating	Stalk Rating	Drought Rating	Ear Height
			Corn	Agrisure® (
NS77-311	9	9	6	8	9	9	9	8
NS82-182	8	8	7	7	9	9	8	7
NS84-171	8	8	7	7	6	8	7	7
NS87-104	7	7	7	8	7	8	7	7
NS89-304	9	7	8	7	7	8	10	8
NS90-101	8	7	7	6	7	8	7	8
NS90-305	8	7	7	6	7	8	7	8
NS99-322	7	7	7	7	8	7	10	7
NS99-344	7	7	7	7	9	8	10	7
NS102-304	8	8	8	8	8	9	10	8
NS104-394	7	7	9	9	8	9	8	8

NEW



THEY'VE BEEN CRAWLING, FLYING, CHEWING AWAY AT YOUR FIELDS LONG ENOUGH.

IT'S TIME TO PUT YOUR FOOT DOWN.

Agrisure Viptera® trait stacks result in higher yields and improved grain quality by protecting your fields against up to 16 above and below ground pests—more than any other trait stack on the market. So take a stand against destructive pests like corn earworm, western bean cutworm and black cutworm. Talk to your local seed or Agrisure traits representative about Agrisure Viptera today.

AgrisureViptera.com

✓ Agrisur∈Viptera

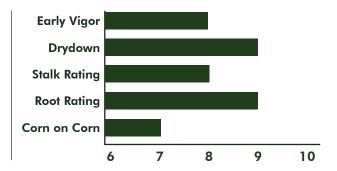
Conventional Corn

NS81-200 CONV.

RM - 81 Days

High yield with fast drydown

- Excellent adaptation of all soil types east to west
- Strong root system
- Good late season plant intactness
- Husks flare for fast drydown

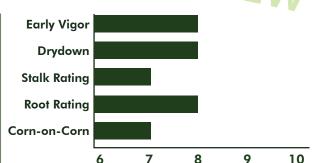


NS85-131 CONV.

RM - 85 Days

Early flowering to finish quickly

- Taller stature with medium ear placement
- Early flowering with fast drydown
- Strong yields across all field environments
- Very good late season intactness and staygreen
- Best performance on moderate to highly productive soils

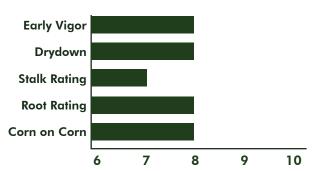


NS92-111 CONV.

RM - 92 Days

Outstanding yield performance

- Conventional version of VS92-110
- Widely adapted for varying soil types
- Performs in high management environments
- Very good early vigor with good stress tolerance
- Fast drydown



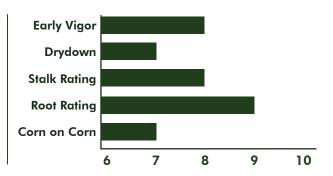


NS95-109 CONV.

RM - 95 Days

High test weight and fast drydown

- Performs well across all plant densities
- High test weight with excellent grain quality
- Impressive stalk and root qualities
- Continued strong performance south of zone
- Very good late season intactness

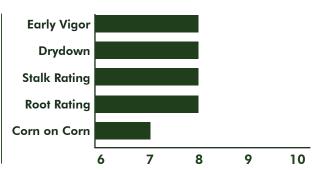


NS98-175 CONV.

RM - 98 Days

Fast-drying hybrid that excels in high yield environments

- Strong Goss's wilt tolerance
- Best performance as full season product
- Fast drying hybrid
- Excels in high yield environments

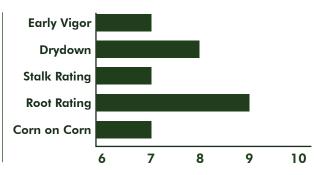


NS100-115 CONV.

RM - 100 Days

Productive across variety of soil types

- · Hybrid exhibits strong rooting characteristics
- Very good grain quality
- Performs well across variations in soil type
- Semi-fixed ear hybrid with response to higher populations
- Excellent grain quality and appearance



Corn Characteristics

	Brand	Trait	Days	GDU Blk	Plant Pop	High Pop	Early Vigor	Ear Flex	Plant Height	
				Conver	ntional Corn					
	NS81-200	Conventional	81	1934	30-36,000	8	8	Semi-Flex	7	
1EW	NS85-131	Conventional	85	2140	30-35,000	8	8	Semi-Flex	8	
	NS92-111	Conventional	92	2310	30-36,000	9	8	Semi-Fixed	8	
	NS95-109	Conventional	95	2390	30-35,000	8	8	Semi-Fixed	7	
	NS98-175	Conventional	98	2480	30-36,000	8	8	Semi-Flex	7	
	NS100-115	Conventional	100	2510	30-35,000	8	7	Semi-Fixed	8	

Rating Key for Corn Characteristics

Ν

10 = Best; 9 = Excellent; 8 = Above Average; 7 = Average; 6 = Below Average; 5 = Well Below Average





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	Brand	Drydown	TST Wt	Goss's Wilt	Corn on Corn	Root Rating	Stalk Rating	Drought Rating	Ear Height
				l Corn	onventiona	C			
	NS81-200	9	8	6	7	9	8	8	7
NEW	NS85-131	8	7	6	7	8	7	7	7
	NS92-111	8	8	7	8	8	7	8	7
	NS95-109	7	9	8	7	9	8	9	7
	NS98-175	8	8	8	7	8	8	8	7
	NS100-115	8	8	7	7	9	7	7	8

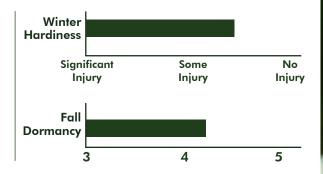




Alfalfa

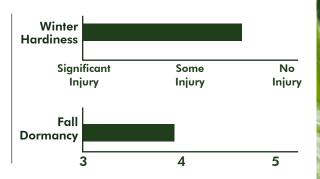
Perform Extra

- Outstanding yields of high quality forage
- Very high leaf to stem ratio with very fast recovery after cutting
- Very winter hardy (1.6) with a fall dormancy of 4.2
- HR to all six major alfalfa diseases
- Expresses multi-leaf expression at 60%



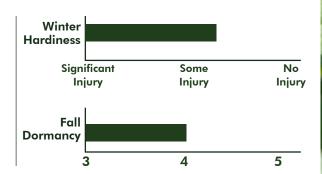
Wetland BR

- Wetland BR is the newest generation of branch rooted alfalfa
- This variety has been field selected to express the branch rooted trait
- Excels in wet soils as roots spread out rather than down
- Wetland BR allows farmers access to less productive fields



Value + Brand

- A blend of high yielding, disease resistant varieties
- Meets our strict germination and purity standards
- Excellent value at an economy price
- Will do well as green chop or dry hay



Alfalfa Disease Rating Chart

Disease/Insect	Perform Extra	Wetland BR	Value + Brand
Bacterial Wilt	HR	HR	HR
Fusarium Wilt	HR	HR	HR
Phytophthora Root Rot	HR	HR	HR
Anthracnose (Race 1)	HR	HR	R
Verticillium Wilt	HR	HR	R
Aphanomyces Root Rot (Race 1)	HR	HR	S
Aphanomyces Root Rot (Race 2)	R	R	N/A
Stem Nematode	HR	HR	N/A
Northern Root-Knot Nematode	HR	HR	N/A
Southern Root-Knot Nematode	R	R	N/A
Pea Aphid	R	N/A	N/A
DRI Rating (WI disease rating index)	34/35	34/35	N/A

Rating Scale: HR = Highly Resistant, R = Resistant, S = Susceptible, N/A = Data not available

Regrowth Characteristics

Characteristic	Perform Extra	Wetland BR	Value + Brand
Winter Hardiness	1.6	1.5	1.8
Fall Dormancy	4.2	3.9	4

Winter Hardiness Rating: 1 = No injury, plants show uniform, symmetrical growth; 2 = Some injury, plant growth is symmetrical but slightly uneven; 3 = Significant injury, regrowth varies and reduced vigor appears; 4 = Severe injury, regrowth varies and reduced vigor appears; 5 = Dead plant.

Fall Dormancy is a measurement of growth related to a last cutting in mid-October. The growth rating is on a scale of 1-11. A rating of 4 or less = Excellent performance in northern growing areas.

Contacts



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NorthStar Genetics Trial Data



At NorthStar Genetics we work hard at creating an extensive network of corn and soybean replicated trials across Minnesota and North Dakota. Plot trials are an important resource that allows us to find the best products for our local geographies and enhance our understanding of what products work best in each area.

We are also proud to offer our trial data online through our interactive map, where you can find all the trials that are being run in specific areas and the data from those trials. Visit our website to check it out and find the perfect soybean and corn varieties for your farm.

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