



2022

SEED GUIDE

PRO Coop

Corn / Soybean / Alfalfa / Forage Sorghum

CORN



Let's leave status quo in the dust.

It's time to tune out all the bluster and focus on what works. CROPLAN[®] by WinField United gives you the right tools to make the best agronomic decisions for your corn crop. CROPLAN[®] seed uses the latest data to recommend what hybrids to choose and where to place them to get optimal bang for your buck. And we're one of the only seed brands in the industry to offer zinc as a standard treatment on all commercial hybrids to promote early-season growth and root development. We'll work with you to determine how much, when and where to apply nutrients and crop protection products to generate the most yield and profit potential. Our expertise leads. And it yields.

KEY TAKEAWAYS

- 1 Be familiar with hybrid response to continuous corn (RTCC) and soil type.
- 2 Optimize yield potential by understanding hybrid response to population (RTP).
- 3 Use hybrid response-to-nitrogen (RTN) scores to maximize your nitrogen management plan.
- 4 Understand hybrid ROI potential with fungicide applications by knowing the response-to-fungicide (RTF) score.
- 5 Use quality data from WinField United to make informed decisions.

RESPONSE-TO SCORES DELIVER RESULTS YOU CAN HARVEST¹

Ten years of nationwide Answer Plot[®] data show that there is a **+98.8-bushel-per-acre average response** over the four different response-to-scores (response to continuous corn, response to population, response to nitrogen, response to fungicide). By using response-to-scores to choose hybrids that fit specific management conditions, there are potentially 98.8 bushels per acre at stake, with a range of 31.2 to 178.4 bushels per acre across the four input decisions.

Response to Cont. Corn
15.1 BU/A

Range: 7.3 to 35.1 bu/A

Response to Population
8.6 BU/A

Range: 0.15 to 20.3 bu/A

Response to Nitrogen
66.9 BU/A

Range: 19.8 to 97.7 bu/A

Response to Fungicide
13.6 BU/A

Range: 3.9 to 25.3 bu/A
6-yr range

MAKE CONTINUOUS CORN COUNT²

All hybrids have strengths and weaknesses that must be considered when determining how they will respond under different cropping systems and on various soil types.

- Matching hybrids to your cropping system will allow you to achieve optimal yield potential. Good management of residue, insects and disease in addition to vigilant scouting are all critical to sustaining an optimal corn-on-corn system.

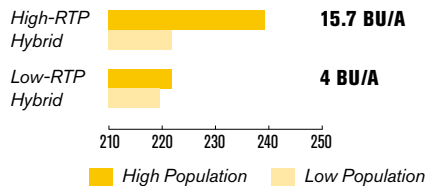
- For good emergence, plant corn at uniform depths and position stronger-emerging hybrids on continuous-corn fields with heavy residue.

► RTCC Average Response — 14.4 bu/A

TARGET POPULATIONS²

Planting each hybrid at the right population is key to optimizing its performance potential. A high RTP score identifies a hybrid that shows a potential yield gain with increased populations. A low RTP score indicates a hybrid that does not deliver high yield potential with increased populations.

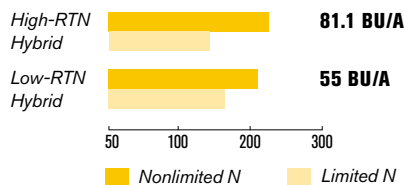
► RTP Yield Response Variance — 11.7 bu/A



LET NITROGEN NOURISH²

Be sure to consider the RTN scores of the hybrids you choose. Select hybrids with high RTN scores if you are planning to apply additional or late-season nitrogen, and hybrids with moderate or low scores in limited nitrogen environments. Perform appropriate tissue testing to determine optimal application timing for nitrogen, which may help minimize the financial and environmental costs of applying too much.

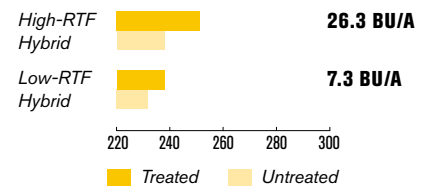
► RTN Yield Response Variance — 26.1 bu/A



LEVERAGE FUNGICIDES FOR PLANT HEALTH²

Fungicides are another tool to help you optimize the yield potential of your corn crop. RTF scores help you understand where fungicides may increase yield potential and protect ROI potential.

► RTF Yield Response Variance — 19 bu/A



TURN DATA INTO INSIGHTS

Trusted WinField United advisors help you connect various data sources, analyzing and interpreting different data sets to make personalized recommendations for your farm to achieve more yield and profit potential.

- More Than 6 Million Data Points³
- 20-Plus Years of Answer Plot[®] Expertise
- Nationwide Answer Plot[®] Locations
- Exceptional Data Accuracy (low LSDs)

1. Response ranges show the importance of how hybrids respond to each management practice to help ensure the highest yield potential. 2019 nationwide Answer Plot[®] data. Because of factors outside of WinField United's control, such as weather, product application and any other factors, results to be obtained, including but not limited to yields, financial performance or profits, cannot be predicted or guaranteed by WinField United.
2. 2020 Answer Plot[®] trial data.
3. 1998–2020 Answer Plot[®] trial data.

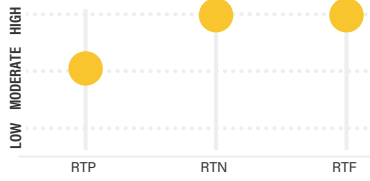
CORN



CROPLAN® TRAIT LETTERING FOR CORN HYBRIDS

Descriptive hybrid numbering and trait lettering systems are used for CROPLAN® corn hybrids.

KEY	HYBRID	TRAIT	LOGO
SS	SmartStax®	YieldGard VT Rootworm, Herculex® RW, YieldGard VT PRO® Corn Borer and Herculex® protection, Roundup Ready® 2 Technology and LibertyLink®	
SS/RIB	SmartStax® RIB Complete® Corn Blend	5% RIB, YieldGard VT Rootworm, Herculex® RW, YieldGard VT PRO® Corn Borer and Herculex® protection, Roundup Ready® 2 Technology and LibertyLink®	
VT2P	VT Double PRO®	YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology	
VT2P/RIB	VT Double PRO® RIB Complete® Corn Blend	5% RIB, YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology	
RR	Roundup Ready® Corn 2	Roundup Ready® Corn 2	
DGVT2P	DroughtGard® VT Double PRO® Corn Blend	DroughtGard® YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology	
DGVT2P/RIB	DroughtGard® VT Double PRO® RIB Complete® Corn Blend	5% RIB, DroughtGard® YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology	
AS3000GT	Agrisure® 3000GT	Agrisure® Corn Borer and Rootworm protection, Glyphosate Tolerant and LibertyLink®	
AS3011A	Agrisure Artesian® 3011A	Agrisure Artesian® and Agrisure® Corn Borer, Rootworm, Glyphosate Tolerant and LibertyLink®	
AS3111	Agrisure Viptera® 3111	Agrisure® Corn Borer, Rootworm and Broad Lepidopteran protection, Glyphosate Tolerant and LibertyLink®	
GT	Agrisure® GT	Agrisure® Glyphosate Tolerant	
AS3122-EZ	Agrisure® 3122 E-Z Refuge®	Agrisure® E-Z Refuge®, Agrisure® Glyphosate Tolerant, Agrisure® Corn Borer and LibertyLink®, Agrisure® Rootworm Protection and Herculex® XTRA Insect Protection	
AS3220-EZ	Agrisure Viptera® 3220 E-Z Refuge®	Agrisure Viptera® E-Z Refuge®, Corn Borer, LibertyLink®, Glyphosate Tolerant and Herculex® 1 Insect Protection	
AS3220A-EZ	Agrisure Viptera® 3220A E-Z Refuge®	Agrisure Artesian®, Agrisure® Corn Borer, LibertyLink®, Glyphosate Tolerant and Herculex® 1 Insect Protection	

NEW**CROPLAN CP3735SS/RIB**[VTP2/RIB]*
Relative Maturity: 97 Days**Response Scores**

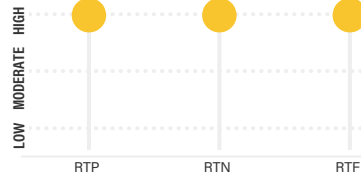
- Adaptable east to west; best suited for variable and tough acres
- Excellent test weight and emergence with solid defensive traits
- Plant at moderate to high densities; fungicide application is recommended
- Keep in RM zone

Characteristics

	Not Recommended	Excellent
Seedling Vigor	2	1
Drought Tolerance	3	
Root Strength	2	
Staygreen	2	
Stalk Quality	2	
Dry Down	2	
Test Weight		1

CROPLAN CP3899VT2P/RIB

Relative Maturity: 98 Days

**Response Scores**

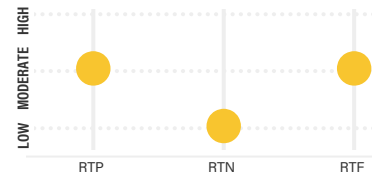
- Consistent high-yield performance potential across multiple environments and soil types
- Excellent seedling vigor; strong stalks, roots and drought tolerance
- High response to intensive management; can handle average acres
- Manage in areas with gray leaf spot and northern corn leaf blight

Characteristics

	Not Recommended	Excellent
Seedling Vigor		1
Drought Tolerance	2	
Root Strength	2	
Staygreen	2	
Stalk Quality	2	
Dry Down	3	
Test Weight	2	

CROPLAN CP3980VT2P/RIB

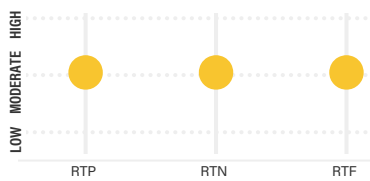
Relative Maturity: 99 Days

**Response Scores**

- High-yield potential hybrid that works across many acres
- Moderate management allows for versatile placement
- Acceptable stalks; can benefit from a fungicide application
- Use caution when applying growth regulator chemistries

Characteristics

	Not Recommended	Excellent
Seedling Vigor		2
Drought Tolerance	3	
Root Strength		1
Staygreen	3	
Stalk Quality	3	
Dry Down		2
Test Weight	3	

CROPLAN CP4188SS/RIB[VTP2/RIB*, CONV]
Relative Maturity: 101 Days**Response Scores**

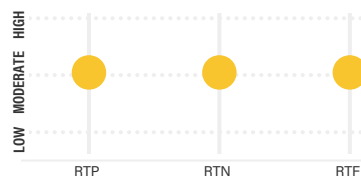
- Works east to west with a widely adapted footprint
- Very attractive plant type with solid agronomic package
- Semi-flex ear allows lower densities, but will respond when population is pushed
- Handles tough, variable and ideal yield environments

Characteristics

	Not Recommended	Excellent
Seedling Vigor		1
Drought Tolerance	2	
Root Strength		1
Staygreen		1
Stalk Quality	2	
Dry Down	3	
Test Weight		1

CROPLAN CP4265VT2P/RIB

Relative Maturity: 102 Days

**Response Scores**

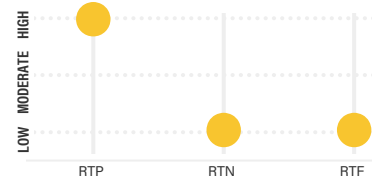
- Position in average to productive acres; dual purpose potential
- Excellent emergence and roots with solid stalks
- More fixed ear; keep at moderate to high populations
- Avoid areas with history of Physoderma node breakage

Characteristics

	Not Recommended	Excellent
Seedling Vigor		1
Drought Tolerance	3	
Root Strength		1
Staygreen	3	
Stalk Quality	2	
Dry Down		1
Test Weight	3	

CROPLAN CP4444VT2P/RIB

Relative Maturity: 104 Days

**Response Scores**

- Consistent and versatile hybrid to cover broad acres
- Excellent emergence and seedling vigor; strong stalks and roots
- Manage populations in high-yield environments
- Tall hybrid with acceptable anthracnose rating

Characteristics

	Not Recommended	Excellent
Seedling Vigor		1
Drought Tolerance	3	
Root Strength		2
Staygreen	3	
Stalk Quality	2	
Dry Down	2	
Test Weight	3	

KEY Scale
 1 = Excellent
 2 = Strong
 3 = Acceptable
 4 = Manage
 5 = Not Recommended

Product descriptions and ratings are generated from Answer Plot® trials and/or from the genetics supplier and may change as additional data is gathered.



CROPLAN® corn silage hybrids that consistently perform for high-quality and high-tonnage in Answer Plot® trials.

CROPLAN **CP4997VT2P/RIB**
WINFIELD UNITED

Relative Maturity: 109 Days

VT DoublePRO
RIB COMPLETE

Response Scores

Characteristics

	Not Recommended			Excellent	
Seedling Vigor				2	
Drought Tolerance				2	
Root Strength				2	
Staygreen				2	
Stalk Quality				2	
Dry Down				2	
Test Weight				2	

- Moves east to west; broadly adapted to soil types and yield environments
- Tall hybrid with strong stalks, roots and staygreen
- Manage nitrogen and population
- Best-suited for rotated acres; manage accordingly in corn-on-corn situations

CROPLAN **CP5073SS/RIB**
WINFIELD UNITED

[VTP2/RIB]*
 Relative Maturity: 110 Days

SmartStax
RIB COMPLETE

Response Scores

Characteristics

	Not Recommended			Excellent	
Seedling Vigor					1
Drought Tolerance				2	
Root Strength				2	
Staygreen				2	
Stalk Quality				2	
Dry Down				2	
Test Weight				3	

- Best performance on medium to highly productive acres
- Strong early plant vigor for reduced tillage and early planting
- Has nice flex for moderate densities; high response-to-nitrogen
- Utilize fungicide to enhance late-season health

CROPLAN **CP5115SS/RIB**
WINFIELD UNITED

[VTP2/RIB]*
 Relative Maturity: 111 Days

SmartStax
RIB COMPLETE

Response Scores

Characteristics

	Not Recommended			Excellent	
Seedling Vigor					1
Drought Tolerance				2	
Root Strength					1
Staygreen				3	
Stalk Quality				2	
Dry Down				3	
Test Weight					1

- Best suited for variable to tough acres
- Excellent emergence, seedling vigor and roots
- Semi-flex ear; plant at moderate populations
- Avoid areas with Goss's wilt history

CROPLAN **CP5210SS/RIB**
WINFIELD UNITED

Relative Maturity: 112 Days

SmartStax
RIB COMPLETE

Response Scores

Characteristics

	Not Recommended			Excellent	
Seedling Vigor					1
Drought Tolerance				3	
Root Strength				3	
Staygreen				3	
Stalk Quality				3	
Dry Down				3	
Test Weight				3	

- Versatile hybrid with high yield potential
- Strong Goss's wilt and disease tolerance make it a fit for corn on corn acres
- Good ear flex; responds to fungicide and nitrogen management
- Acceptable roots and late season intactness

CROPLAN **CP5244VT2P/RIB**
WINFIELD UNITED

Relative Maturity: 112 Days

VT DoublePRO
RIB COMPLETE

Response Scores

Characteristics

	Not Recommended			Excellent	
Seedling Vigor				2	
Drought Tolerance				2	
Root Strength				2	
Staygreen				3	
Stalk Quality				3	
Dry Down				2	
Test Weight				3	

- Versatile hybrid with high yield potential
- Strong root system and drought tolerance
- Responds to additional fungicide and nitrogen management, but not required
- Manage for greensnap in susceptible areas

CROPLAN **CP5335SS/RIB**
WINFIELD UNITED

[VTP2/RIB]*
 Relative Maturity: 113 Days

SmartStax
RIB COMPLETE

Response Scores

Characteristics

	Not Recommended			Excellent	
Seedling Vigor				2	
Drought Tolerance				2	
Root Strength				2	
Staygreen				2	
Stalk Quality					1
Dry Down				2	
Test Weight					1

- Tremendous consistency across variable yield environments
- Excellent agronomics, including stalks and late-season intactness; improved Goss's wilt rating over 5370
- Acceptable ear flex for variable densities; strong plant health for continuous corn
- Benefits from enhanced nitrogen management

KEY

Scale
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CROPLAN® corn silage hybrids that consistently perform for high-quality and high-tonnage in Answer Plot® trials.



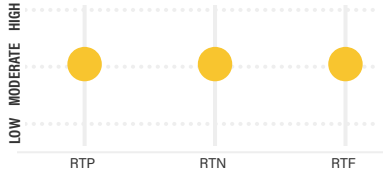
CP6594SS/RIB

[VTP2/RIB]*

Relative Maturity: 113 Days



Response Scores



- Widely adapted east to west with excellent heat tolerance and high-yield-potential
- Solid agronomics; excellent stalks and roots; acceptable Goss's wilt tolerance
- Moderate response-to-nitrogen and population scores
- Take advantage of fast drydown at harvest; keep in 110RM zones

Characteristics

	Not Recommended	Excellent
Seedling Vigor	2	
Drought Tolerance	2	
Root Strength		1
Staygreen	2	
Stalk Quality		1
Dry Down	2	
Test Weight	2	

KEY

- Scale**
- 1 = Excellent
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CROPLAN® corn silage hybrids that consistently perform for high-quality and high-tonnage in Answer Plot® trials.



GORN



Response to Nitrogen (RTN) **1**

Response to Mitrogen (RMP) **1**

Relative Maturity

Response to Fungicide (RTF) **1**

Response to Fungicide (RTFC) **1**

GDU to Mid-pollination**

GDU to Maturity***

Flower Date **5**

Plant Height **2**

Ear Height **3**

Cob Color

Ear Flex **4**

Kernel Rows

Seeding Vigor

Stalk Quality

Root Strength

Staygreen **6**

Drought Tolerance

Test Weight

Gray Leaf Spot

NGLB

SGLB

Common Rust

Anthraxnose Stalk Rot

Goss's Wilt

Phytophthora Node Breakage

Diplodia Ear Rot

BRAND

RM: 91-99

NEW	CP3166VT2P/RIB*	91	H	M	M	M	2285	1180	E	M	M	RED	SF	16-18	2	3	3	2	2	2	2	3	3	3	3	N/A	N/A	3	2	N/A	N/A
	CP3314VT2P/RIB*	93	M	L	M	M	2330	1210	M	M	M	RED	FL	16-18	2	2	2	2	2	2	2	2	3	3	3	N/A	3	4	N/A	N/A	
	CP3337VT2P/RIB*	93	M	M	L	M	2310	1190	E	M	M	RED	FL	16-18	2	3	1	3	2	1	2	4	2	4	2	5	3	N/A	N/A		
	CP3399SS/RIB*	94	M	H	M	M	2350	1220	M	M	M	RED	SF	16-18	2	2	2	2	2	2	2	3	3	3	N/A	3	4	3	N/A	N/A	
NEW	CP3490VT2P/RIB*	94	M	L	M	M	2360	1230	M-L	M-T	M-H	RED	SF	18-20	1	3	3	3	2	3	3	3	3	3	3	N/A	3	3	N/A	N/A	
	CP3499VT2P/RIB*	94	M	M	M	M	2370	1240	L	M-S	M-L	RED	SF	16-18	1	2	2	2	2	3	2	2	3	3	3	N/A	3	3	N/A	N/A	
	CP3533VT2P/RIB*	95	M	L	L	M	2375	1230	M	M	M	RED	FL	16-18	2	3	1	3	2	1	2	N/A	3	3	5	N/A	N/A	N/A	N/A		
	CP3575SS/RIB*	95	H	H	M	M	2360	1240	M-L	M	M	RED	SF	16-18	2	2	2	2	2	3	1	3	2	N/A	N/A	4	1	N/A	N/A		
	CP3614VT2P/RIB*	96	H	M	L	M	2400	1240	M	M	M	RED	SF	16-18	1	3	1	3	2	3	2	3	3	N/A	N/A	3	3	N/A	N/A		
	CP3699RR	96	M	M	M	M	2400	1240	M	M-T	M-H	RED	SF	16-18	1	1	3	3	2	2	3	3	3	3	N/A	3	3	N/A	N/A		
	CP3705SS/RIB*	97	H	M	M	M	2425	1240	M-E	M-T	M	RED	SF	16-18	2	1	3	3	3	3	2	3	3	3	N/A	N/A	3	N/A	N/A		
	CP3735SS/RIB*	97	M	H	M	M	2425	1250	M	M	M	RED	SD	16-18	1	2	2	2	2	2	3	1	3	3	N/A	N/A	3	3	N/A	N/A	
	CP3795VT2P/RIB*	97	M	H	M	M	2440	1270	M-L	M-T	M-H	RED	SF	16-18	2	2	2	3	1	1	2	3	2	2	2	N/A	2	2	N/A	N/A	
	CP3899VT2P/RIB*	98	H	H	M	M	2450	1280	L	M-T	M-H	PINK	SF	16-20	1	2	2	2	3	2	2	4	4	N/A	3	3	3	N/A	N/A		
	CP3909SS/RIB*	99	M	M	M	H	2475	1250	E	M	M	RED	SF	16-18	2	2	2	3	1	2	3	3	3	3	N/A	1	4	N/A	N/A		
NEW	CP3980VT2P/RIB*	99	M	L	L	M	2475	1270	M	M-T	M-H	RED	SF	14-16	2	3	1	3	2	2	3	3	2	N/A	N/A	N/A	3	3	4	3	

KEY

Product descriptions and ratings are generated from AnswerPig® trials and/or from the genetics supplier and may change as additional data is gathered.

Scale

1 = Excellent

2 = Strong

3 = Acceptable

4 = Manage

5 = Not Recommended

1 RTP/RTN/RTC/RTF Ratings

L = Low Response

M = Moderate Response

H = High Response

TBD = To be tested in 2021

2 Plant Height

T = Tall

M = Medium

S = Short

3 Ear Height

H = High

M = Medium

L = Low

4 Ear Flex

FL = Flex

SF = Semi-flex

FX = Fixed

5 Flower Date

L = Late

M = Medium

E = Early

6 Staygreen

Late-season health coming from strong leaf-disease resistance, enhancing hybrid standability.

These ratings reflect trends observed in research trials that change with variations in rainfall, temperature, crop production patterns and other factors. Ratings on new hybrids are based on limited data and may change as more data is collected.

**GDUs published for each product are an estimate and the actual GDUs in a given year/location can vary based upon environmental factors.

*Follow IRM guidelines and refuge configurations to preserve the benefits and insect protection of these technology crops.



GORN



UNIVERSITY OF MINNESOTA

BRAND	Relative Maturity	Response to Nitrogen (R/N)	Response to Fungicide (R/F)	Response to Continuous Corn (R/CC)	GDU to Mid-pollination**	GDU to Maturity**	Flower Date	Plant Height	Ear Height	Cob Color	Ear Flex	Kernel Rows	Seeding Vigor	Stalk Quality	Root Strength	Staygreen	Drought Tolerance	Test Weight	Gray Leaf Spot	NGLB	SCLB	Common Rust	Anthraxnose Stalk Rot	Gross S Will	Phytophthora Node Breakage	Diplodia Ear Rot				
RM: 100-104																														
CP4020VT2P/R/B*	100	L	M	H	H	H	2500	1280	M	M	W	RED	FL	16-20	2	3	1	3	2	1	3	3	3	3	3	3	3	3	N/A	N/A
CP4079SS/R/B*	100	M	H	H	H	H	2480	1280	M	M-T	W	RED	SF	14-16	2	3	1	3	2	2	3	3	3	3	2	N/A	2	3	N/A	N/A
CP4099SS/R/B*	100	H	H	M	H	H	2500	1290	L	M-T	M	PINK	SF	16-20	1	2	1	3	3	2	3	4	4	N/A	3	3	3	N/A	N/A	
CP4188SS/R/B*	101	M	M	L	M	M	2490	1280	M	M	M	RED	SF	16-18	1	2	1	1	3	2	1	3	2	N/A	N/A	2	3	N/A	N/A	
CP4199SS/R/B*	101	H	M	M	M	M	2525	1300	L	M	M	RED	SF	16-18	1	1	1	3	3	1	3	3	3	N/A	3	4	2	N/A	N/A	
CP5146SS/R/B*	101	M	M	M	M	M	2545	1280	M	M	M	RED	SF	16-18	2	2	1	2	2	2	1	4	3	3	3	3	2	N/A	N/A	
CP4203SS/R/B*	102	H	H	H	H	H	2540	1290	M	M	M	RED	SD	14-16	3	2	2	3	2	2	2	3	3	3	3	1	3	N/A	N/A	
CP4242SS/R/B*	102	M	L	L	H	H	2560	1290	M	M-T	M	RED	FL	14-16	2	2	2	3	2	2	1	3	3	3	N/A	N/A	2	N/A	N/A	
CP4285VT2P/R/B*	102	M	M	M	M	M	2550	1300	M-L	M	M	RED	SD	16-18	1	2	1	3	1	3	3	3	3	2	N/A	2	3	5	3	
CP4350SS/R/B*	102	M	M	M	M	M	2530	1280	M-E	M-S	M-L	RED	SF	16-18	2	3	1	2	3	2	3	3	2	N/A	3	2	3	N/A	N/A	
CP4819AS3000GT*	103	M	H	M	M	M	2575	1300	M	T	M-H	WHITE	FL	16-18	2	3	2	3	2	2	3	3	2	3	3	1	N/A	N/A	N/A	
CP4822VT2P/R/B*	103	M	L	M	M	L	2575	1310	L	M	M-H	RED	SF	16-18	2	3	1	3	2	2	3	3	2	N/A	3	3	3	N/A	N/A	
CP4444VT2P/R/B*	104	H	L	L	H	H	2580	1300	M	T	M-H	RED	SF	14-16	1	2	2	3	2	3	3	3	3	3	2	N/A	3	3	3	
CP4488SS/R/B*	104	H	H	H	H	H	2600	1300	M	T	M-H	RED	SF	16-18	3	3	2	3	2	2	3	3	3	3	3	2	2	3	N/A	3

KEY

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- Scale**
- 1 = Excellent
 - 2 = Strong
 - 3 = Acceptable
 - 4 = Manage
 - 5 = Not Recommended

- 1 R/P/R/T/V/T/C/C/RTF Ratings**
- L = Low Response
 - M = Moderate Response
 - H = High Response
 - TBD = To be tested in 2021

- 2 Plant Height**
- T = Tall
 - M = Medium
 - S = Short

- 4 Ear Flex**
- FL = Flex
 - SF = Semi-flex
 - FX = Fixed

- 6 Staygreen**
- Late-season health coming from strong leaf-disease resistance, enhancing hybrid standability.

- 3 Ear Height**
- H = High
 - M = Medium
 - L = Low

- 5 Flower Date**
- L = Late
 - M = Medium
 - E = Early

These ratings reflect trends observed in research trials that change with variations in rainfall, temperature, crop production patterns and other factors. Ratings on new hybrids are based on limited data and may change as more data is collected.

**GDUs published for each product are an estimate and the actual GDUs in a given year/location can vary based upon environmental factors.

*Follow IRM guidelines and refuge configurations to preserve the benefits and insect protection of these technology crops.



GORN



HYBRID

BRAND	Response to Nitrogen (RTN)	Response to Fungicide (RTF)	GDU to Mid-pollination**	Flower Date	Plant Height	Ear Height	Cob Color	Ear Flex	Kernel Rows	Seeding Vigor	Stalk Quality	Root Strength	Staygreen	Drought Tolerance	Test Weight	Gray Leaf Spot	NGLB	SGLB	Common Rust	Anthraxnose Stalk Rot	Goss's Wilt	Phytophthora Node Breakage	Diplodia Ear Rot								
RM: 105-111																															
CP4549SS/RIB*	105	H	H	L	H	2560	1300	M-E	T	M-H	RED	SF	16-18	1	3	2	3	2	2	2	2	2	2	N/A	2	3	N/A	N/A			
CP4676SS/RIB*	106	M	M	H	H	2650	1310	M	M	M	PINK	SF	16-18	1	3	3	1	1	3	1	3	2	2	N/A	3	1	N/A	2			
CP4644D6VT2P/RIB*	106	M	M	M	L	2640	1320	M	M-T	M	RED	SF	16-18	1	3	3	3	3	3	3	3	3	3	N/A	2	3	N/A	N/A			
CP4791AS3111	107	M	M	M	L	2675	1320	M	M-T	M	PINK	SF	16-18	3	2	2	3	3	2	3	2	3	3	2	N/A	N/A	N/A	N/A			
CP4895SS/RIB*	108	M	M	M	L	2700	1330	M	M	M-L	PINK	SF	16-18	4	2	1	3	2	2	3	3	3	3	1	2	4	2	N/A	3		
NEW CP4930D6VT2P/RIB*	109	TBD	TBD	TBD	TBD	2725	1330	M	M-T	M-H	RED	SF	14-16	3	3	3	2	3	3	3	3	2	N/A	2	3	3	3	N/A			
CP4997VT2P/RIB*	109	H	H	L	L	2725	1330	M	T	M-H	RED	SF	16-18	2	2	2	2	2	2	2	2	2	2	3	2	2	2	3	2		
CP5073SS/RIB*	110	M	M	H	H	2730	1340	M	M	M-H	RED	SF	16-18	1	3	2	2	2	2	2	2	2	3	3	2	1	N/A	3	3	N/A	N/A
CP6110VT2P/RIB*	110	M	M	M	M	2750	1340	M	M	M	RED	SF	16-18	2	3	1	2	3	1	3	4	2	2	2	4	3	3	N/A	3		
CP5115SS/RIB*	111	H	H	H	H	2775	1350	M-L	M-T	M-H	RED	SF	18-20	1	2	1	3	3	2	1	3	2	1	3	3	2	1	3	3	5	3

KEY

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- Late-season health coming from strong leaf-disease resistance, enhancing hybrid standability.

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*Follow RMI guidelines and refuge configurations to preserve the benefits and insect protection of these technology crops.

CORN



Product Name _____

Attributes _____

Placement _____

Product Name _____

Attributes _____

Placement _____

Product Name _____

Attributes _____

Placement _____

Product Name _____

Attributes _____

Placement _____

SOYBEAN

1 of 2



There's no good reason risk has to increase with yield.

We won't promise you the world. We will promise you an honest and insightful approach to maximizing your soybean yield potential. At WinField United, we use proven technologies to match the right soybean genetics and traits to your field's conditions. Plus, our CROPLAN® seed varieties are selected for disease tolerance that helps protect the soybean plant throughout all stages of growth. We know this is the best way to help you achieve optimal return on your seed and crop inputs.

KEY TAKEAWAYS

- 1 Use appropriate trait technology to achieve effective weed control.
- 2 Introduce stability to your fields with CROPLAN® WinPak® soybean varieties.
- 3 Ensure optimal plant health at the start of the season with Warden® CX seed treatment.
- 4 Use the R7® Tool to help choose the right soybean varieties for your specific fields.
- 5 Select varieties for disease tolerance and manage them throughout the season.

	Glyphosate	Glufosinate	2,4-D Choline	Dicamba
LIBERTYLINK®		X		
XTENDFLEX®	X	X		X
ROUNDUP READY 2 YIELD®	X			
ROUNDUP READY 2 XTEND®	X			X
ENLIST E3®	X	X	X	

REDUCE RISK WITH WINPAK® SOYBEAN VARIETIES

WinPak® soybean varieties from CROPLAN® seed are a unique combination of two varieties that provide an exceptional level of stability throughout the field. Designed to address field variability, WinPak® varieties have excellent yield potential on productive acres along with the ability to handle the stress of performing on more challenging acres.

EXAMPLE OF HOW A WINPAK® VARIETY CAN BE FORMULATED

	VARIETY A EXAMPLE	VARIETY B EXAMPLE
PLACEMENT	Average to below-average yield environments.	Best-suited to productive acres.
DISEASE PACKAGE	Strong soybean white mold and iron deficiency chlorosis (IDC) tolerance.	Excellent phytophthora root rot and frog-eye field tolerance.
AGRONOMICS	<ul style="list-style-type: none"> ▪ Narrow canopy type ▪ Tall height ▪ Excellent standability 	<ul style="list-style-type: none"> ▪ Bushy canopy type ▪ Medium height ▪ Average standability
STRESS TOLERANCE	Excellent stress tolerance.	Strong stress tolerance.

- WinPak® varieties are designed to mitigate risk across the whole field by offering more stability on variable acres, delivering high yield potential on productive acres and maintaining consistency on more challenging acres. They also provide an enhanced disease and agronomic package for the whole farm.

MANAGE WEEDS WITH TRAIT TECHNOLOGY

CROPLAN® soybean seed offers the newest genetics with multiple herbicide trait options developed to effectively manage your weed-resistance issues.



SOYBEAN HERBICIDE TOLERANCE AND WEED CONTROL

Weed control in soybeans starts with seed selection. With several herbicide-tolerant traits now available and more on the way with full commercial approval, the number of tools in the toolbox is increasing. But as you face hard-to-control weeds, creating a plan for season-long weed management is critical. The chart outlines CROPLAN® soybean herbicide-tolerant varieties available today. These traits offer some great postemergence options.

SOYBEAN

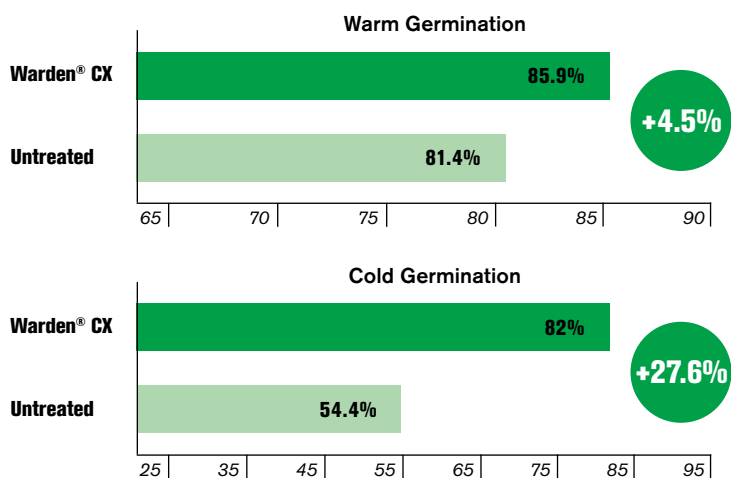
2 of 2



PROTECT YIELD POTENTIAL WITH WARDEN® CX SEED TREATMENT

Guard high-value soybean seed from early-season disease and insect threats with Warden® CX seed treatment. In 2018, testing by an independent seed lab and the University of Minnesota Plant Disease Clinic indicated a positive response to soybean seed treated with Warden® CX seed treatment compared to an untreated control group. Compared to untreated seed, Warden® CX treated seed improved the warm germination test by +4.5% and the cold germination test by +27.6%.

AVERAGE GERMINATION IMPROVEMENT: WARDEN® CX VS. UNTREATED



OPTIMAL CONDITIONS FOR DISEASE INFECTION

FUNGUS	DISEASE	TEMPERATURE (F) RANGE/OPTIMUM	MOISTURE
<i>Pythium</i>	Damping-off	50°–68°/<59°	Saturated
<i>Rhizoctonia</i>	Damping-off	60°–86°/80°	30%–60% water
<i>Phytophthora</i>	Damping-off	59°–86°/77°–80°	Saturated; weekly periodic rain
<i>Fusarium</i>	SDS and root rot	50°–86°/59°	Wet to saturated

MANAGE IN-SEASON






Select your disease package based on field conditions.

- Knowing where yield potential is falling behind alerts you to disease and other potential threats, allowing you to make in-season adjustments.
- Satellite imagery highlights field variability and indicates where appropriate crop inputs might help optimize yield potential.
- Use R7® Tool satellite imagery to monitor plant health.



CROPLAN® TRAIT LETTERING FOR SOYBEAN VARIETIES

Descriptive variety numbering and trait lettering systems are used for CROPLAN® soybean varieties.

KEY	VARIETY	TRAIT HERBICIDE TOLERANCE	LOGO
L	LibertyLink®	Liberty® tolerant	
XF	XtendFlex®	Roundup®, dicamba and glufosinate tolerant	
RR	Roundup Ready 2 Yield®	Roundup® tolerant	
X	Roundup Ready 2 Xtend®	Roundup® and dicamba tolerant	
E	Enlist E3®	Glyphosate, glufosinate and 2,4-D choline tolerant	
S	STS®	Sulfonylurea tolerant	N/A

NEW**CROPLAN CP1430E**

Group: 1.4 Days

**Characteristics**

	Not Recommended	Excellent
PRR Tolerance	2	
SDS Tolerance	2	
Frogeye Leaf spot	N/A	
SWM Tolerance	3	
Iron Chlorosis	3	

Height	MT	Canopy Type	-
Emergence	1	Standability	2
BSR Tolerance	1		

- WinPak® variety consisting of CP1422E and CP1522E
- Replaces CP1420E for improved agronomics and higher yield potential
- Excellent BSR tolerance and emergence
- Acceptable SWM and IDC tolerance

CROPLAN CP1600X

Group: 1.6 Days

**Characteristics**

	Not Recommended	Excellent
PRR Tolerance	2	
SDS Tolerance	N/A	
Frogeye Leaf spot	N/A	
SWM Tolerance	2	
Iron Chlorosis	3	

Height	M	Canopy Type	Int
Emergence	1	Standability	1
BSR Tolerance	2		

- WinPak® variety consisting of CP1578X and CP1788X
- This combination offers high yield potential and excellent standability
- Excellent agronomics with strong disease package
- Manage on IDC hot spots

CROPLAN CP1611X

Group: 1.6 Days

**Characteristics**

	Not Recommended	Excellent
PRR Tolerance	3	
SDS Tolerance	2	
Frogeye Leaf spot	N/A	
SWM Tolerance	2	
Iron Chlorosis	3	

Height	M	Canopy Type	Int
Emergence	1	Standability	1
BSR Tolerance	1		

- High-yield-potential variety that works east to west
- Great standability for high yield environments
- Strong SDS and SWM tolerance
- Acceptable IDC and PRR tolerance

NEW**CROPLAN CP1640XF**

Group: 1.6 Days

**Characteristics**

	Not Recommended	Excellent
PRR Tolerance	2	
SDS Tolerance	3	
Frogeye Leaf spot	N/A	
SWM Tolerance	3	
Iron Chlorosis	3	

Height	T	Canopy Type	-
Emergence	2	Standability	2
BSR Tolerance	N/A		

- WinPak® variety consisting of CP1542XF* and CP1742XF
- High yield potential combined with complementary agronomics from each component
- Strong standability and emergence
- Acceptable disease package

NEW**CROPLAN CP1830E**

Group: 1.8 Days

**Characteristics**

	Not Recommended	Excellent
PRR Tolerance	2	
SDS Tolerance	3	
Frogeye Leaf spot	N/A	
SWM Tolerance	2	
Iron Chlorosis	3	

Height	MT	Canopy Type	-
Emergence	2	Standability	2
BSR Tolerance	3		

- WinPak® variety consisting of CP1722E and CP1822E
- Strong SWM and PRR ratings make for a versatile fit in humid environments
- Strong PRR, SWM, emergence and standability
- Acceptable SDS, BSR and IDC tolerance

CROPLAN CP1960X

Group: 1.9 Days

**Characteristics**

	Not Recommended	Excellent
PRR Tolerance	3	
SDS Tolerance	3	
Frogeye Leaf spot	N/A	
SWM Tolerance	2	
Iron Chlorosis	2	

Height	MT	Canopy Type	Int/Nar
Emergence	1	Standability	1
BSR Tolerance	1		

- WinPak® variety consisting of CP1827X and CP2088X
- Medium-tall plant with excellent standability and emergence
- Strong tolerance to SWM
- Acceptable SDS tolerance

KEY**Scale**

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- 2 = Strong
- 3 = Acceptable
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- 5 = Not Recommended

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NEW**CROPLAN CP2042XF**

Group: 2 Days

**Characteristics**

	Not Recommended			Excellent		
PRR Tolerance						
SDS Tolerance						
Frogeye Leaf spot						
SWM Tolerance						
Iron Chlorosis						

Height	MT	Canopy Type	Int
Emergence	2	Standability	3
BSR Tolerance	3		

- Standalone variety offers strong yield potential
- Works well on IDC-prone fields
- Excellent PRR and strong IDC tolerance
- Acceptable standability

NEW**CROPLAN CP2122E**

Group: 2.1 Days

**Characteristics**

	Not Recommended			Excellent		
PRR Tolerance						
SDS Tolerance						
Frogeye Leaf spot						
SWM Tolerance						
Iron Chlorosis						

Height	M	Canopy Type	-
Emergence	2	Standability	2
BSR Tolerance	2		

- Standalone variety excels in high yield environments
- Versatile product works across many acres
- Strong standability and emergence coupled with PRR, SWM and BSR tolerance
- Acceptable SDS and IDC tolerance

NEW**CROPLAN CP2240XF**

Group: 2.2 Days

**Characteristics**

	Not Recommended			Excellent		
PRR Tolerance						
SDS Tolerance						
Frogeye Leaf spot						
SWM Tolerance						
Iron Chlorosis						

Height	MT	Canopy Type	-
Emergence	2	Standability	3
BSR Tolerance	N/A		

- WinPak® variety consisting of CP2242XF and CP2342XF
- High yield potential with strong emergence
- Acceptable SDS, IDC and standability
- Not recommended in heavy SWM or BSR prone acres

NEW**CROPLAN CP2220E**

Group: 2.2 Days

**Characteristics**

	Not Recommended			Excellent		
PRR Tolerance						
SDS Tolerance						
Frogeye Leaf spot						
SWM Tolerance						
Iron Chlorosis						

Height	MT	Canopy Type	-
Emergence	2	Standability	2
BSR Tolerance	2		

- WinPak® variety consisting of CP2222E and CP2232E
- Works well on BSR- and IDC-prone fields
- Strong standability, BSR and IDC tolerance
- Acceptable PRR, SDS and SWM tolerance

NEW**CROPLAN CP2322E**

Group: 2.3 Days

**Characteristics**

	Not Recommended			Excellent		
PRR Tolerance						
SDS Tolerance						
Frogeye Leaf spot						
SWM Tolerance						
Iron Chlorosis						

Height	M	Canopy Type	-
Emergence	2	Standability	2
BSR Tolerance	2		

- Single line variety with solid agronomics
- Excellent SDS resistance
- Strong IDC, SWM and standability
- Strong emergence and PRR

NEW**CROPLAN CP2450XF**

Group: 2.4 Days

**Characteristics**

	Not Recommended			Excellent		
PRR Tolerance						
SDS Tolerance						
Frogeye Leaf spot						
SWM Tolerance						
Iron Chlorosis						

Height	MT	Canopy Type	-
Emergence	2	Standability	2
BSR Tolerance	1		

- WinPak® variety consisting of CP2442XF and CP2452XF
- High yield potential; solid agronomics
- Acceptable IDC, SWM and PRR
- Manage on SDS acres

KEY**Scale**

- 1 = Excellent
- 2 = Strong
- 3 = Acceptable
- 4 = Manage
- 5 = Not Recommended



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UPGRADED



CP2520E

Group: 2.5 Days



WinPak[®]
BY WINFIELD
UNITED

Characteristics

	Not Recommended	Excellent
PRR Tolerance		
SDS Tolerance		
Frogeye Leaf spot		
SWM Tolerance		
Iron Chlorosis		

Height	MT	Canopy Type	Int
Emergence	2	Standability	4
BSR Tolerance	1		

- Upgraded WinPak[®] variety consisting of CP2422E and CP2521E
- Best-suited for productive prairie soils; strong performance east to west
- Excellent stress tolerance with strong IDC and emergence
- Manage SWM and standability

KEY

- Scale**
- 1 = Excellent
 - 2 = Strong
 - 3 = Acceptable
 - 4 = Manage
 - 5 = Not Recommended

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WinPaK® Variety Components

SCN Resistant Source
Relative Maturity

PRR Gene

SDS Tolerance
Chloride Tolerance

SWM Tolerance
BSR Tolerance

Southern Stem Canker
Iron Chlorosis

Root-Knot Nematode
Frogeye Leaf Spot

Emergence
Standability

Canopy Type
Plant Height

Flower Color
Pod Color

Hilum Color

ROUNDUP READY 2 XTEND®/XTENDFLEX®/ROUNDUP READY 2 YIELD® – RM: 0.9-1.8

NEW	CP0940XF	CP0942XF*/CP1042XF*	0.9	IND	PI88,788	HRps3a/NG	3	N/A	Includer/N/A	2	4	2	N/A	N/A	N/A	1	2	N/A	Int/Bush	MT	P	LTW	BR/TN	BR
NEW	CP0942XF*		0.9	IND	PI88,788	NG	4	N/A	N/A	2	5	1	N/A	N/A	N/A	1	2	N/A	Int/Bush	MT <td>P <td>LTW <td>BR</td> <td>BR</td> </td></td>	P <td>LTW <td>BR</td> <td>BR</td> </td>	LTW <td>BR</td> <td>BR</td>	BR	BR
NEW	CP0957RR		0.9	IND	PEKING	Rps1k,3a	3	N/A	Includer	1	3	3	N/A	N/A	N/A	1	1	1	Int/Nar	M	P	GR	BR	BF
NEW	CP1042XF*		1	IND	PI88,788	HRps3a	2	N/A	Includer	2	3	3	N/A	N/A	N/A	1	2	2	Int/Bush	MT <td>P <td>LTW <td>TN</td> <td>BR</td> </td></td>	P <td>LTW <td>TN</td> <td>BR</td> </td>	LTW <td>TN</td> <td>BR</td>	TN	BR
NEW	CP1078X*		1	IND	PI88,788	NG	2	N/A	Includer	3	4	1	N/A	N/A	N/A	1	2	1	Int	MT <td>P <td>LTW <td>TN</td> <td>BR</td> </td></td>	P <td>LTW <td>TN</td> <td>BR</td> </td>	LTW <td>TN</td> <td>BR</td>	TN	BR
NEW	CP1100X	CP1078X*/CP1111X	1.1	IND	PI88,788	NG	2	N/A	Includer	3	3	2	N/A	N/A	N/A	1	2	N/A	Int	MT <td>P <td>LTW <td>BR</td> <td>BR</td> </td></td>	P <td>LTW <td>BR</td> <td>BR</td> </td>	LTW <td>BR</td> <td>BR</td>	BR	BR
NEW	CP1111X		1.1	IND	PI88,788	NG	1	N/A	Includer	2	1	2	N/A	N/A	N/A	1	1	N/A	Int	M	P <td>LTW <td>BR</td> <td>BR</td> </td>	LTW <td>BR</td> <td>BR</td>	BR	BR
NEW	CP1240XF	CP1242XF*/CP1341XF	1.2	IND	PI88,788	Rps1c,H3a	2	3	Includer/N/A	3	2	3	N/A	N/A	N/A	1	2	N/A	Int/Bush	MT <td>P <td>LTW <td>BR</td> <td>BL</td> </td></td>	P <td>LTW <td>BR</td> <td>BL</td> </td>	LTW <td>BR</td> <td>BL</td>	BR	BL
NEW	CP1242XF*		1.2	IND	PI88,788	HRps3a	2	3	Includer	2	1	2	N/A	N/A	N/A	1	1	2	Int	MT <td>P <td>LTW <td>BR</td> <td>BL</td> </td></td>	P <td>LTW <td>BR</td> <td>BL</td> </td>	LTW <td>BR</td> <td>BL</td>	BR	BL
NEW	CP1341XF		1.3	IND	PI88,788	Rps1c	2	3	N/A	3	3	3	N/A	N/A	N/A	1	3	N/A	Int/Bush	MT <td>P <td>LTW <td>BR</td> <td>BL</td> </td></td>	P <td>LTW <td>BR</td> <td>BL</td> </td>	LTW <td>BR</td> <td>BL</td>	BR	BL
NEW	CP1400X	CP1411X*/CP1578X*	1.4	IND	PI88,788	Rps1c,1k,3a/H1c	3	N/A	Includer	3	4	3	N/A	N/A	N/A	1	2	N/A	Int/Bush	M	P <td>LTW <td>BR</td> <td>BL</td> </td>	LTW <td>BR</td> <td>BL</td>	BR	BL
NEW	CP1411X*		1.4	IND	PI88,788	Rps1c/1k,3a	3	N/A	Includer	3	4	3	N/A	N/A	N/A	1	2	N/A	Int/Bush	M	P <td>LTW <td>BR</td> <td>BL</td> </td>	LTW <td>BR</td> <td>BL</td>	BR	BL
NEW	CP1542XF*		1.5	IND	PI88,788	Rps3a	1	3	N/A	2	N/A	3	1	N/A	N/A	2	2	N/A	Int	MT <td>P <td>LTW <td>BR</td> <td>BR</td> </td></td>	P <td>LTW <td>BR</td> <td>BR</td> </td>	LTW <td>BR</td> <td>BR</td>	BR	BR
NEW	CP1578X*		1.5	IND	PI88,788	HRps1c	2	N/A	Includer	3	3	3	N/A	N/A	N/A	1	1	1	Int	M	P <td>LTW <td>BR</td> <td>BL</td> </td>	LTW <td>BR</td> <td>BL</td>	BR	BL
NEW	CP1600X	CP1578X*/CP1788X*	1.6	IND	PI88,788	HRps1c	2	N/A	Includer	2	2	3	N/A	N/A	N/A	1	1	2	Int	M	P <td>LTW <td>BR</td> <td>BL/BR</td> </td>	LTW <td>BR</td> <td>BL/BR</td>	BR	BL/BR
NEW	CP1611X		1.6	IND	PI88,788	HRps1c/1k	3	2	Includer	2	1	3	N/A	N/A	N/A	1	1	N/A	Int	M	P <td>GR</td> <td>TN</td> <td>IB</td>	GR	TN	IB
NEW	CP1640XF	CP1542XF*/CP1742XF	1.6	IND	PI88,788	Rps1c,3a	2	3	N/A	3	N/A	3	1	N/A	N/A	2	2	N/A	Int/Nar	T	P <td>LTW <td>BR</td> <td>BR</td> </td>	LTW <td>BR</td> <td>BR</td>	BR	BR
NEW	CP1742XF		1.7	IND	PI88,788	Rps1c	2	2	N/A	3	N/A	2	1	N/A	N/A	2	1	N/A	Int/Nar	T	P <td>LTW <td>BR</td> <td>BR</td> </td>	LTW <td>BR</td> <td>BR</td>	BR	BR
NEW	CP1788X*		1.7	IND	PI88,788	Rps1c	2	N/A	Includer	1	1	2	N/A	N/A	N/A	1	1	3	Int	M	P <td>LTW <td>BR</td> <td>BR</td> </td>	LTW <td>BR</td> <td>BR</td>	BR	BR
NEW	CP1827X		1.8	IND	PI88,788	Rps1a,3a	3	3	Includer	2	1	2	N/A	N/A	N/A	1	1	1	Int/Nar	MT <td>P <td>GR</td> <td>BR</td> <td>BF</td> </td>	P <td>GR</td> <td>BR</td> <td>BF</td>	GR	BR	BF

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 2 = Moderately Resistant
 3 = Moderately Resistant-Moderately Susceptible
 4 = Moderately Susceptible
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 Nar = Narrow
 Im = Intermediate
 Bush = Bushy
- 5 Plant Height**
 T = Tall
 M = Medium
 S = Short
- 6 Flower Color**
 P = Purple
 W = White
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 GR = Gray
 TW = Tawny
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- 8 Pod Color**
 TN = Tan
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- 9 Hilum Color**
 YE = Yellow/Clear
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SOYBEAN



WinPaK® Variety Components

SCN Resistant Source
Relative Maturity

PRR Gene

PRR Tolerance
SDS Tolerance

Chloride Tolerance

SWM Tolerance
BSR Tolerance

Southern Stem Canker
Iron Chlorosis

Root-Knot Nematode
Frogeye Leaf Spot

Emergence
Standability

Stress Tolerance
Canopy Type

Plant Height
Flower Color

Pubescence Type
Pod Color

Hilum Color

ROUNDUP READY 2 XTEND®/XTENDFLEX®/ROUNDUP READY 2 YIELD® – RM: 1.9-2.9

CP21960X	CP1827X/CP2088X*	1.9	IND	PI88.788	Ros1a.3a	3	3	Includer	2	1	2	N/A	N/A	1	1	1	1	1	1	Int/Nar	MT	P	GR	BR	BF	
NEW CP2042XF		2	IND	PI88.788	Ros3a	1	3	N/A	3	3	2	N/A	N/A	2	3	2	2	2	2	Int	MT	P	GR	TN	IB	
NEW CP2088X*		2	IND	PI88.788	Ros1a.3a	3	3	Includer	1	1	2	N/A	N/A	1	1	1	1	1	1	Int/Nar	MT	P	GR	BR	BF	
CP2128X		2.1	IND	PI88.788	Ros1c	2	2	Includer	1	N/A	3	N/A	N/A	2	1	N/A	N/A	2	1	N/A	Int/Bush	M	W	LTW	BR	BL
CP2128X/CP2219X*		2.2	IND	PI88.788	Ros1c/1k	3	N/A	Includer	N/A	N/A	2	N/A	N/A	2	2	N/A	N/A	2	2	N/A	Int/Bush	M	PW	GR/LTW	BR/TN	BL/IB
NEW CP2219X*		2.2	IND	PI88.788	Ros1k	3	N/A	Includer	N/A	1	1	N/A	N/A	2	2	N/A	N/A	2	2	N/A	Int	M	P	GR	TN	IB
NEW CP2240XF		2.2	IND	PI88.788	Ros1c.3a/NG	N/A	3	N/A	N/A	N/A	3	1	N/A	N/A	3	N/A	N/A	2	3	N/A	Int/Bush	MT	P	GR	BR/TN	BF/IB
NEW CP2242XF*		2.2	IND	PI88.788	NG	1	2	N/A	N/A	N/A	2	1	2	N/A	2	3	N/A	3	N/A	Int	M	P	GR	TN	IB	
NEW CP2242XF*		2.3	IND	PI88.788	Ros1c.3a	N/A	3	N/A	4	1	4	1	N/A	N/A	1	3	N/A	3	N/A	Int/Bush	MT	P	GR	BR	BF	
NEW CP2342XF*		2.4	IND	PI88.788	Ros1c/NG	3	N/A	Includer	4	1	3	N/A	N/A	N/A	1	2	2	2	2	Int/Bush	MT	P	GR/LTW	BR/TN	BL/IB	
CP2400X		2.4	IND	PI88.788	Ros1c	2	3	N/A	3	1	2	N/A	N/A	2	2	2	2	2	2	Int	MT	P	GR	TN	GR	
NEW CP2442XF*		2.4	IND	PI88.788	Ros1c	3	4	N/A	3	1	3	N/A	N/A	2	2	N/A	N/A	2	2	N/A	Int/Bush	MT	P	GR	BR/TN	GR/IB
NEW CP2450XF		2.4	IND	PI88.788	Ros1c	3	4	N/A	2	1	3	1	N/A	N/A	1	2	N/A	2	2	N/A	Int/Bush	T	P	GR	BR	IB
NEW CP2452XF*		2.4	IND	PI88.788	Ros1c	3	4	N/A	2	1	3	1	N/A	N/A	1	2	N/A	2	2	N/A	Int/Bush	T	P	GR	BR	IB
CP2487X*		2.4	IND	PI88.788	NG	3	3	Includer	4	1	3	N/A	N/A	1	3	1	1	1	1	Int	M	P	LTW	TN	BL	
NEW CP2578X*		2.5	IND	PI88.788	Ros1c	3	N/A	Includer	4	1	2	N/A	N/A	1	1	2	N/A	1	2	Int/Bush	MT	P	GR	BR	IB	
NEW CP2640XF		2.6	IND	PI88.788	Ros1c/NG	2	3	Excluder/N/A	N/A	1	2	N/A	N/A	2	3	N/A	N/A	2	3	N/A	Int/Bush	MT	P	GR	TN	BF/GR
NEW CP2642XF*		2.6	IND	PI88.788	Ros1c	2	3	Excluder	4	1	2	N/A	N/A	1	3	N/A	N/A	1	3	N/A	M	P	GR	TN	GR	
NEW CP2652XF*		2.6	IND	PI88.788	NG	2	3	N/A	N/A	1	2	N/A	N/A	2	2	2	2	2	2	Int/Bush	MT	P	GR	TN	BF	
NEW CP2742XF		2.7	IND	PI88.788	Ros1c	2	1	N/A	N/A	N/A	3	1	3	N/A	2	3	N/A	2	3	N/A	Int	W	LTW	BR	BL	
NEW CP2842XF		2.8	IND	PI88.788	NG	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	2	3	3	N/A	N/A	MT	P	GR	TN	BF	

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- WinPaK® Variety Components
- Determinate/Indeterminate
- SCN Resistant Source
- Relative Maturity
- PRR Gene
- Chloride Tolerance
- SDS Tolerance
- PRR Tolerance
- SWM Tolerance
- BSP Tolerance
- Southern Stem Canker
- Iron Chlorosis
- Root-Knot Nematode
- Tragopogon Leaf Spot
- Emergence
- Stress Tolerance
- Standability
- Canopy Type
- Plant Height
- Flower Color
- Pubescence Type
- Pod Color
- Hilum Color

ENLIST E3® 0.0-1.9																								
NEW	CP00729E	0.07	IND	P188.788	Rps1a	3	N/A	Includer	3	NG	2	N/A	N/A	1	3	3	Int	M	P	GR	BR	BF		
NEW	CP0320E	0.3	IND	P188.788	Rps1c/NG	3	N/A	Includer	3	NG	3	N/A	N/A	1	2	3	Int	M	PW	GR	TN	BF		
NEW	CP0322E*	0.3	IND	P188.788	Rps1c	2	N/A	Includer	2	NG	3	N/A	N/A	5	1	1	3	Int	M	P	GR	TN	BF	
	CP0329E	0.3	IND	P188.788	NG	3	N/A	Includer	3	NG	2	1	N/A	N/A	1	2	2	Int	M	W	GR	TN	BF	
	CP0520E	0.5	IND	P188.788/NG	Rps3a	2	N/A	Includer	2	N/A	N/A	1	2	2	2	2	Int/Bush	M	P	GR	BR/7N	BF		
NEW	CP0522E*	0.5	IND	P188.788	Rps3a	1	N/A	Includer	1	N/A	N/A	5	1	1	2	2	Int	M	P	GR	BR	BF		
	CP0529E	0.5	IND	P188.788	Rps3a	2	N/A	Includer	2	N/A	N/A	4	1	3	N/A	N/A	1	2	1	Int/Bush	M	P	GR	BF
	CP0721E	0.7	IND	P188.788	Rps1c/3a	1	N/A	Includer	2	NG	2	1	N/A	N/A	1	2	1	Int	MT	P	GR	BR	IB	
	CP0820E	0.8	IND	P188.788	Rps1c,3a/NG	2	N/A	Includer/Excluder	2	NG	2	N/A	N/A	N/A	1	2	1	Int	M	P	GR	BR/7N	BF/IB	
NEW	CP0822E*	0.8	IND	P188.788	NG	2	N/A	Excluder	2	NG	2	N/A	N/A	5	1	1	1	2	Int	M	P	GR	BR	BF
	CP1120E	1.1	IND	P188.788	Rps1c/NG	2	N/A	Includer/Excluder	3	NG	2	N/A	N/A	N/A	1	2	2	Int	MT	P	GR	BR/7N	IB	
	CP1121E	1.1	IND	P188.788	NG	2	2	Includer	3	NG	2	1	N/A	N/A	1	2	1	Int	MT	P	GR	BR	IB	
NEW	CP1222E*	1.2	IND	P188.788	Rps1c	2	2	Excluder	3	NG	2	N/A	N/A	5	1	2	2	Int	MT	P	GR	TN	IB	
NEW	CP1422E*	1.4	IND	P188.788	NG	2	2	Includer	3	1	3	N/A	N/A	5	1	2	2	Int	MT	P	L7W	TN	BL	
NEW	CP1430E	1.4	IND	P188.788	Rps3a/NG	2	2	Includer	3	1	3	N/A	N/A	5	1	2	2	Int	MT	P	GR/L7W	TN	BF/BL	
NEW	CP1522E	1.5	IND	P188.788	Rps3a	1	2	Includer	3	1	2	N/A	N/A	5	1	2	2	Int	M	P	GR	TN	BF	
	CP1721E	1.7	IND	P188.788	Rps1k	2	3	Includer	2	NG	2	N/A	N/A	N/A	1	2	2	Int	M	P	GR	BR	IB	
NEW	CP1722E*	1.7	IND	P188.788	Rps3a	1	2	Includer	3	3	2	N/A	N/A	5	1	2	1	Int	MT	P	GR	TN	BF	
NEW	CP1822E*	1.8	IND	P188.788	Rps1c	3	3	N/A	3	3	3	1	N/A	N/A	2	2	N/A	Int	M	P	GR	BR	IB	
NEW	CP1830E	1.8	IND	P188.788	Rps1c/3a	2	3	Includer/N/A	2	3	3	N/A	N/A	N/A	2	2	N/A	Int	MT	P	GR	BR/7N	BF/IB	

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 - S = Short
- 6 Flower Color**
- P = Purple
 - W = White
- 7 Pubescence Type**
- GR = Gray
 - TW = Tawny
 - L7W = Light Tawny

- 8 Pod Color**
- TN = Tan
 - BR = Brown
- 9 Hilum Color**
- YE = Yellow/Clear
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WinPaK® Variety Components

SCN Resistant Source
Determinate/Indeterminate
Relative Maturity

PRR Gene

PRR Tolerance
SDS Tolerance
Chloride Tolerance

SWM Tolerance
BSR Tolerance
Iron Chlorosis

Root-Knot Nematode
Frogeye Leaf Spot

Emergence
Stress Tolerance
Standability

Canopy Type
Plant Height

Flower Color
Pubescence Type

Pod Color
Hilum Color

ENLIST E3® 2.0-3.2

NEW	CP2122E	2.1	IND	P188,788	Rps1c	2	3	M/A	2	2	3	1	N/A	N/A	2	2	N/A	Int	M	P	GR	BR	IB
NEW	CP22220E	2.2	IND	P188,788	Rps1c/MG	3	3	Includer/N/A	3	2	2	2	N/A	N/A	2	2	N/A	Int	MT	PW	GR	BR/TN	BF/IB
NEW	CP22222E*	2.2	IND	P188,788	Rps1c	3	3	M/A	3	2	2	1	N/A	N/A	2	2	N/A	Int	MT	P	GR	BR	IB
NEW	CP22232E*	2.2	IND	P188,788	NG	2	2	Includer	2	1	2	N/A	N/A	N/A	2	2	2	Int	MT	W	GR	TN	BF
NEW	CP2322E	2.3	IND	P188,788	Rps1c	2	1	M/A	2	2	2	1	N/A	N/A	2	2	N/A	Int	M	P	GR	BR	IB
NEW	CP2422E*	2.4	IND	P188,788	Rps1c	2	3	M/A	3	1	2	N/A	3	N/A	2	3	1	Int	MT	W	GR	TN	BF
NEW	CP2520E	2.5	IND	P188,788	Rps1k/NG	2	4	Includer/N/A	4	1	2	N/A	N/A	N/A	2	4	1	Int	MT	P/W	GR	BR/TN	BF/IB
NEW	CP2521E*	2.5	IND	P188,788	NG	2	4	Includer	4	1	1	N/A	N/A	N/A	1	4	1	Int	MT	P	GR	BR	IB
NEW	CP2822E	2.8	IND	P188,788	Rps1k	2	3	N/A	N/A	NG	3	N/A	N/A	N/A	2	2	2	Int/Bush	MT	P	GR	BR	IB
NEW	CP2829E*	2.8	IND	P188,788	Rps1k	1	N/A	Includer	N/A	1	2	N/A	N/A	N/A	1	2	1	Int/Bush	MT	W	GR	TN	BF
NEW	CP2920E	2.9	IND	P188,788	Rps1k,1c/1k	2	N/A	Includer/N/A	N/A	N/A	2	N/A	N/A	N/A	1	2	N/A	Int/Bush	MT	W	GR	TN	BF
NEW	CP2922E*	2.9	IND	P188,788	Rps1k,3a	2	1	N/A	4	N/A	2	1	N/A	N/A	1	2	N/A	Int/Bush	M	W	GR	TN	BF
NEW	CP3022E	3.0	IND	P188,788	Rps1k,3a	2	2	N/A	4	N/A	2	1	N/A	N/A	1	2	N/A	Int/Bush	M	W	GR	TN	BF
NEW	CP3120E	3.1	IND	P188,788	Rps1c/NG	2	4	Includer	4	N/A	2	1	3	N/A	2	3	1	Int/Bush	MT	W	GR/LTW	BR	BF/BR
NEW	CP3121E*	3.1	IND	P188,788	NG	2	4	Includer	3	NG	2	1	4	N/A	2	2	1	Int/Bush	MT	W	LTW	BR	BR
NEW	CP3131E*	3.1	IND	P188,788	Rps1c	1	3	Includer	4	3	2	1	1	N/A	1	3	1	Int/Bush	MT	W	GR	BR	BF
NEW	CP3222E*	3.2	IND	P188,788	NG	2	2	Includer	4	4	NG	3	3	N/A	2	2	1	Bush	MT	P	GR	TN	IB

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Product Name _____

Attributes _____

Placement _____

Product Name _____

Attributes _____

Placement _____

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Attributes _____

Placement _____

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Going the extra mile isn't extra to us.

Our dedication goes way beyond a handshake or a pat on the back. We're fully committed to you and the success of your alfalfa crop from day one.

That means we'll work closely with you to help you select the best genetics for your field — pairing new traits with the latest technologies to give you your very best chance to produce higher-quality feed and optimize tonnage.

Meeting your expectations? Heck, we're more interested in beating them.

KEY TAKEAWAYS

- 1 Choose varieties with the traits that fit your fields and management.
- 2 Use coated seed to help you improve stand establishment and seed efficiency.
- 3 Manage in-season by Reading the Stand and harvesting and storing properly.

VARIETY SELECTION

FALL DORMANCY (FD) AND WINTERHARDINESS (WH)

- A higher FD number equals higher yield potential. A lower WH number equals more cold tolerance and stand persistence.
- Independent of breeding efforts, lower FD (more dormant) provides a significant increase in fiber digestibility potential.

PEST RESISTANCE

▶ Anthracnose Disease

- A severe stem and crown disease that causes defoliation. Multiple races, including a new race 5, can be present in late season.
- Varieties are now available with multi-race high resistance.
- It occurs most often under warm, moist conditions.
- It causes yield loss of up to 25%.
- Susceptible plants have large, sunken oval-to diamond-shaped lesions.
- Lesions can enlarge to girdle or kill plant. Girdled stems can exhibit a shepherd's hook.

▶ Aphanomyces Root Rot Disease

- Infects roots causing seedling stunting, reduced nodulation and poor root development.
- Commonly found in soils that are saturated, poorly drained, compacted or have limited water dispersal.
- Visual symptoms can include gray, water-soaked roots, yellowed cotyledons, and stunted growth that can result in limited yield production or stand failure.

- Varieties are now available with enhanced multi-race high resistance.

▶ Potato Leafhopper (PLH)

- Small, light-green insect that feeds on alfalfa plants, causing leaf tips to display a V-shaped yellowing.
- Varieties with glandular hairs provide natural nonpreference feeding for PLH.
- Commonly found in the Plains, Midwest and East; most severe in new seedings and summer regrowth that causes yield reduction.

▶ Nematodes

- Microscopic roundworms (several identified species) that live in the soil, surface irrigation water, alfalfa roots and crown tissue.
- Can reduce yield and stand life and cause secondary infections from other diseases. Control them by planting a high-resistance alfalfa variety.
- Commonly found throughout most of the West and Plains.

▶ High-Salinity Soils

- Greenhouse tests provide baseline indicators of a varieties ability to germinate in high salinity conditions. Salt breeding nurseries provide greater insights to variety selection based on its ability to mitigate high-salinity stress conditions with more predictable performance for on-farm potential.
- Soils vary. Saline: high soluble salts. Sodic: high sodium ion content. Alkaline: soil pH that is higher than optimum (pH>8.0).
- Commonly found in the western half of the U.S.

▶ Aphids

- Can be a problem in dry periods; controlled by other predators in cool and/or wet periods.
- The blue aphid is the most damaging in the Southern Plains to the Southwest.

IN-SEASON MANAGEMENT

NEW SEEDING AND STAND ESTABLISHMENT

- Plant into a firm seedbed to control seed depth; seed-to-soil contact is crucial.
- Planting rates do not need to be adjusted for coated seed since bulk density is higher.
- The planting rate for alfalfa varies from region to region, but generally 18 to 20 lbs. per acre is recommended with a goal of about 25 plants per square foot at the end of the seeding year.

ESTABLISHED STANDS: READING THE STAND

- Each spring, determine potential winter damage or winterkill.
- Follow the Reading the Stand program to evaluate the alfalfa stand density and crown health of each field to determine current and future yield potential.

WEED CONTROL

- Control weeds early for a high-producing pure alfalfa stand. Roundup Ready® Alfalfa provides farmers with more flexible management strategies.

INSECT AND DISEASE CONTROL

- Control insects such as aphids (spotted, blue, pea, cowpea), alfalfa weevils and leafhoppers.
- Manage foliar leaf diseases and anthracnose.
- Choose alfalfa varieties with built-in resistance and use a spray application to control as necessary.

NUTRIENT MANAGEMENT

- Alfalfa requires a neutral soil pH (6.8 to 7.2) for high production. Take soil and plant tissue tests to monitor macronutrients and micronutrients.
- A healthy alfalfa plant will have a luxury supply of potassium, boron, sulfur and phosphorus.

HARVEST MANAGEMENT

- Manage leaf loss in-season with fungicide application and during harvest from over-handling during raking, merging, chopping or baling. New Leaf Percentage Test available to estimate leaf content in your alfalfa. See your CROPLAN® alfalfa dealer for more information.
- Wheel traffic can increase soil compaction and crown damage, leading to reduced crop regrowth and yield loss.

ALFALFA

2 of 2



COATED SEED

IMPROVE SEEDLING EFFICIENCY WITH COATED SEED

- Provides an ideal microenvironment with better imbibition (water uptake) and germination.
- Facilitates and enhances the addition of seed treatments/inoculants, which are applied by weight, not per seed; therefore, higher rates are applied on coated seed.
- Keeps treatments/inoculants close to or bound to the seed for more complete coverage.
- Increases vigor under disease pressure.
- Purdue reported an average 30% increase in seedling success for coated seed.¹

SEED COATING

- ▶ **GroZone® plus Advanced Coating® Zn 34%**
- Rhizobium bacteria to fix nitrogen.
- Micronutrient package to provide zinc and manganese.
- Ascend® PGR to promote early seedling growth.
- Apron XL® fungicide to help protect seedlings from root diseases such as phytophthora during establishment.
- Stamina® fungicide to provide additional protection to multiple races of aphanomyces root rot disease.
- Provides an average 30% increase in resistance to aphanomyces root rot as compared to standard treated commercial 9% coat.²

1. Alfalfa and Red Clover Stand Establishment Forage Management Day at Feldun-Purdue Agricultural Center, August 9, 2018. Seeding Date: May 2, 2018. Data collected on June 29, 2018.

2. Data from FGI trials in West Salem, Wis., 2018.

3. Data from FGI trials comparing HarvXtra® Alfalfa with Roundup Ready® Technology 2017 FD4 commercial varieties to FD4 commercial checks. Trials were seeded in 2013 and harvested 2014-2016 at five locations across the U.S. Yield increase is directly correlated to the ability to delay harvest.

4. Data from an FGI trial in West Salem, Wis., comparing three cuttings at 35-day intervals to four cuttings at 28-day intervals. Trials were seeded in 2013 and harvested in 2014-2016. Yield increase is directly correlated to the ability to delay harvest.

*WinField® United does not guarantee forage harvested from stands established with this seed will be GMO-free. Check with your local organic certifying organization before planting.

TRAITS

HARVXTRA® ALFALFA³

HarvXtra® Alfalfa with Roundup Ready® Technology is one of the most advanced alfalfa traits currently available, providing extra flexibility when it comes to cutting without sacrificing forage quality or yield potential.

- Gives you a more flexible cutting window to help manage your operation, putting you in control of your cutting schedule.
- Delivers a higher RFQ³ and NDFd³ than conventional varieties cut on the same day.
- Achieve up to 20% higher yield at harvest⁴ by lengthening your cutting window up to 10 days.

ROUNDUP READY® ALFALFA

- Offers application flexibility for greater weed-control options.
- Helps deliver a higher percentage of pure alfalfa for more high-quality hay and haylage.
- Delivers exceptional weed control and crop safety.

CONVENTIONAL ALFALFA

- Conventional alfalfa breeding techniques have provided strong advancements in yield production, stand persistence, and insect and disease resistance.
- For more than three decades, alfalfa breeders have used conventional alfalfa breeding techniques to select for improved fiber digestibility (e.g., LegenDairy and RR Presteez lines).
 - These varieties show an incremental improvement in fiber digestibility when compared to nonselected varieties.

ALFALFA FOR ORGANIC FORAGE PRODUCTION

- Alfalfa products that were developed through conventional breeding and were not the result of genetic engineering.*
- Approved varieties meet industry standards for LLP (low-level presence of bio-tech traits) and are noted on our variety detail pages.



APEX™ GREEN SEED COATING

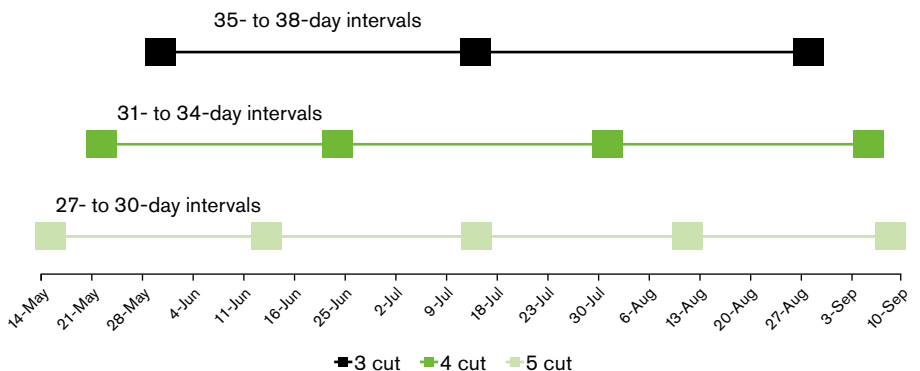
- OMRI Listed® for organic use.
- Includes natural micronutrients and nitrogen-fixing rhizobia in an organic hydration coating that maximizes water absorption.

FLEXIBILITY OF HARVXTRA® ALFALFA HAS NEVER BEEN MORE IMPORTANT

With unpredictable weather patterns, you need the ability to alter your cutting plans quickly. HarvXtra® Alfalfa lets you maximize your growing season by providing the flexibility to space out cuttings so that each harvest optimizes ROI and yield potential.

- Harvest first cutting ~28" (to avoid lodging), usually around May 25-30 in the Midwest.
- Delay summer cutting(s).
- Timely final harvest improves stand persistence; last cutting around Sept. 1 in northern regions and Sept. 5 in southern regions allow at least 500 growing degree days (GDD) before experiencing a killing frost of ≤25°F.
- Avoid mid-late October cuttings.

HARVXTRA® CUTTING SCHEDULE



NEW

HVX Driver

Regions: Central|East|North|West
 Dormancy: 4
 Winterhardiness: 2



Characteristics

	Not Recommended			Excellent	
Yield Index				2	
Persistence Index					1
Feed Quality*					1
Disease Resistance				2	
Insect Resistance			3		
Nematode Resistance	5				

*Feed quality ratings for HarvXtra® Alfalfa are represented on a separate scale than Roundup Ready® and conventional alfalfa varieties and are signified with an "H." Because there is a significant improvement in Forage quality, HarvXtra Alfalfa products can only be compared to other HarvXtra Alfalfa products.

- H2 feed quality rating; maximize harvest flexibility; excellent yield or forage quality potential with the HarvXtra® Alfalfa trait
- Good disease package provides exceptional ability to perform well across multiple geographies
- Great option for 3- to 5-cut flexible hay/haylage harvest system with quick regrowth after cutting



HVX MegaTron

Regions: Central|East|North|West
 Dormancy: 4.2
 Winterhardiness: 1.7



Characteristics

	Not Recommended			Excellent	
Yield Index					1
Persistence Index					1
Feed Quality*					1
Disease Resistance					1
Insect Resistance			4		
Nematode Resistance			3		

*Feed quality ratings for HarvXtra® Alfalfa are represented on a separate scale than Roundup Ready® and conventional alfalfa varieties and are signified with an "H." Because there is a significant improvement in Forage quality, HarvXtra Alfalfa products can only be compared to other HarvXtra Alfalfa products.

- H2 feed quality rating; exceptional soil disease resistance to help improve root and plant health
- Highest resistance (HR+) rating to multi-race Aphanomyces root rot disease (races 1, 2 and EMR); resistant (R) to multi-race anthracnose (including new race 5)
- Excellent quality and yield potential with a 3- to 5-cut flexible harvest system based on geography



HVX MegaTron AA

Regions: Central|East|North|West
 Dormancy: 4.4
 Winterhardiness: 1.4



Characteristics

	Not Recommended			Excellent	
Yield Index					1
Persistence Index					1
Feed Quality*					1
Disease Resistance					1
Insect Resistance			3		
Nematode Resistance			3		

*Feed quality ratings for HarvXtra® Alfalfa are represented on a separate scale than Roundup Ready® and conventional alfalfa varieties and are signified with an "H." Because there is a significant improvement in Forage quality, HarvXtra Alfalfa products can only be compared to other HarvXtra Alfalfa products.

- H2 feed quality rating; exceptional root and plant health to support highest yield and quality potential
- Highest resistance (HR+) rating to multi-race Aphanomyces root rot disease (races 1, 2 and EMR); HR+ to multi-race anthracnose disease (including race 5)
- Exceptional yield potential ideal with a 3- to 5-cut flexible harvest system based on geography

NEW

RR Stratica

Regions: Central|East|North|West
 Dormancy: 4.3
 Winterhardiness: 2



Characteristics

	Not Recommended			Excellent	
Yield Index					1
Persistence Index				2	
Feed Quality			3		
Disease Resistance			3		
Insect Resistance				2	
Nematode Resistance			3		

- Exceptional ability to perform well across multiple geographies and growing conditions
- Features a good disease-resistance package for soils east to west
- High-forage yield potential, fast regrowth and good winterhardiness; ideally suited for a 4- to 5-cut haylage or aggressive hay management system



MP 1000 Brand

Regions: Central|East|North|West
 Dormancy: 3
 Winterhardiness: 3

Characteristics

	Not Recommended			Excellent	
Yield Index			3		
Persistence Index			3		
Feed Quality			3		
Disease Resistance			4		
Insect Resistance			5		
Nematode Resistance			5		

- Premium multifoliate blend with wide geographic adaptation
- Good forage yield and quality potential
- Works well in a 3- to 4-cut hay or haylage management system
- Available with Apex™ Green Seed Coating; OMRI Listed® for organic use



LegenDairy AA

Regions: Central|East|North|West
 Dormancy: 3.4
 Winterhardiness: 1.1

Characteristics

	Not Recommended			Excellent	
Yield Index					1
Persistence Index					1
Feed Quality					1
Disease Resistance					1
Insect Resistance				2	
Nematode Resistance			5		

- The next generation of LegenDairy; the added AA disease resistance has advanced yield potential to new levels
- Highest resistance (HR+) rating to multi-race Aphanomyces root rot disease (races 1, 2, and EMR); HR+ to multi-race anthracnose disease (including race 5)
- Excellent choice for producers in northern growing regions east to west; ideal for 3- to 4-cut baled hay or haylage harvest system
- Available with Apex™ Green Seed Coating; OMRI Listed® for organic use

KEY Scale
 1 = Excellent
 2 = Strong
 3 = Acceptable
 4 = Manage
 5 = Not Recommended

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Rebound AA

Regions: Central|East|North|West

Dormancy: 4.4

Winterhardness: 1.7

Characteristics

	Not Recommended		Excellent	
Yield Index	■	■	■	1
Persistence Index	■	■	■	1
Feed Quality	■	■	2	■
Disease Resistance	■	■	■	1
Insect Resistance	■	■	3	■
Nematode Resistance	5	■	■	■

- Packs a punch with AA disease resistance providing exceptional yield potential
- Highest resistance (HR+) rating to multi-race Aphanomyces root rot disease (races 1, 2 and EMR); HR+ to multi-race anthracnose disease (including race 5)
- Best-suited for 4- to 5-cut haylage or aggressive hay management systems in the Upper Midwest and East; great for baled hay in the West where pockets of Aphanomyces root rot disease is a problem
- Available with Apex™ Green Seed Coating; OMRI Listed® for organic use

KEY

- Scale**
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 - 4 = Manage
 - 5 = Not Recommended

Product descriptions and ratings are generated from Answer Plot® trials and/or from the genetics supplier and may change as additional data is gathered.

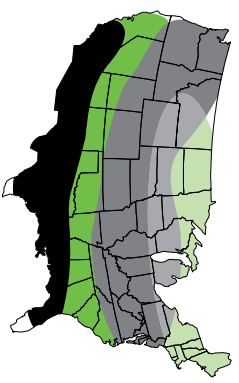
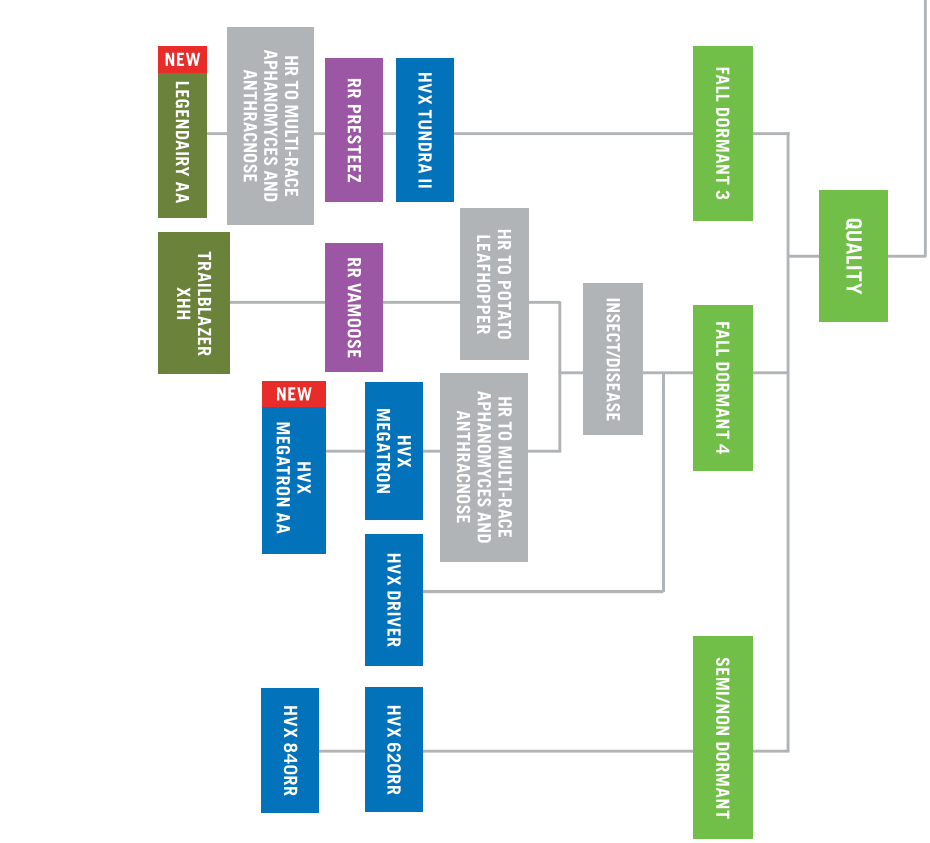
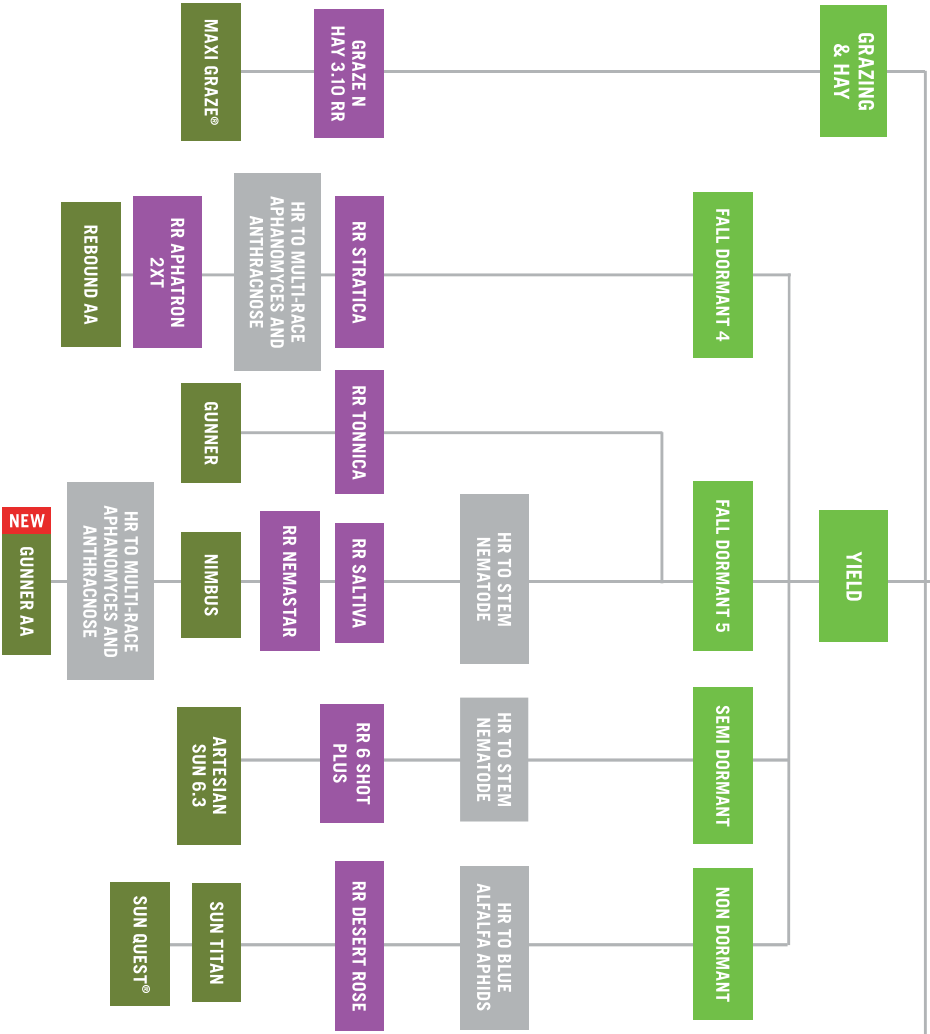
Feed quality ratings for HarvXtra® Alfalfa are represented on a separate scale than Roundup Ready® and conventional alfalfa varieties and are signified with an "H." Because there is a significant improvement in forage quality, HarvXtra® Alfalfa products can only be compared to other HarvXtra® Alfalfa products.

ALFALFA

ALFALFA VARIETY PLACEMENT¹

The map can be used to determine which alfalfa varieties are recommended for your area's climate challenges. Also, use the chart below to place the recommended variety to help manage common diseases and pests in your area, and to match quality to your desired cutting frequency.

- HARVYTRA[®] ALFALFA VARIETIES
- ROUNDUP READY[®] VARIETIES
- CONVENTIONAL VARIETIES
- VARIETIES WITH ADDITIONAL INSECT AND DISEASE RESISTANCE



- WINTERHARDY FD2/3
- WINTERHARDY FD3/4
- WINTERHARDY FD4/5
- SEMIDORMANT FD5/6/7
- NONDORMANT FD7/8/9

PRODUCT DORMANCY MAP²

Fall dormancy and winterhardness are important considerations in alfalfa seed selection. This map shows CROPLAN[®] seed varieties that match fall dormancy and winterhardness zones in various regions of the United States.

1. This chart is provided as an illustration only. Planting decisions are complex and any implementation of the placement described above is your decision. Because of factors outside of our control, such as weather and product application, results to be obtained, including but not limited to yields, cannot be predicted or guaranteed by WinField United.

2. Fall dormancy (FD) and winterhardness (WH): Higher FD number = higher yield potential; lower WH number = more cold tolerant and stand persistent.



Train
 Winter hardiness
 Fall Dormancy
 Feed Quality Index
 Persistence Index
 Grazing Tolerance
 Baled Hay (Dormant) **1**
 Haylage (Regrain)
 Pivoting/Re-a Root Rot
 Potato Leafroller
 Aphanomyces Race 1
 Aphanomyces Race 2
 Aphanomyces Enhanced
 Multi-Race (EMR)
 Bacterial Wilt
 Anthracnose Multi-Race
 Anthracnose Wilt
 Fusarium Wilt
 Verticillium Wilt
 Spotted Alfalfa Aphid
 Pea Aphid
 Blue Alfalfa Aphid
 Stem Nematode
 Northern Root-Knot Nematode
 Salt Germination Tolerance **2**

HARVXTRA®/ROUNDUP READY® ALFALFA																										
	HarvXtra	3.3	1.2	2	1	H1	3	1	2	HR	-	HR	R	R	HR	HR	-	HR	HR	-	R	-	R	-	G	
HVX Tundra II	HarvXtra	3.9	2.1	3	2	H2	3	2	2	HR	-	HR	HR	-	HR	HR	MR	R	-	-	-	-	-	-	G	
HVX HarvaTron	HarvXtra	4.0	2.0	2	1	H2	4	2	1	HR	-	HR	-	-	HR	HR	R	R	-	-	-	-	-	-	G	
HVX Driver	HarvXtra	4.2	1.7	1	1	H2	4	2	1	HR	-	HR+	HR+	HR+	HR	HR+	R	HR	HR	-	R	-	-	-	G	
HVX MegaTron	HarvXtra	4.4	1.4	1	1	H2	4	2	1	HR	-	HR+	HR+	HR+	HR	HR+	HR+	HR	HR	-	R	-	-	-	G	
NEW HVX MegaTron AA	HarvXtra	6.0	-	2	2	H3	5	1	1	HR	-	R	-	-	MR	R	-	HR	HR	-	R	-	-	-	-	
HVX 620RR Brand	HarvXtra	7.9	-	2	1	H3	5	1	1	R	-	-	-	-	R	R	-	R	HR	-	R	-	-	-	-	
HVX 840RR Brand	HarvXtra	2.9	1.8	3	1	3	1	1	4	HR	-	HR	-	-	HR	HR	-	HR	HR	-	R	-	-	-	G	
Graze N Hay 3.10RR	Roundup Ready	3.2	1.2	2	1	1	3	1	2	HR	-	HR	-	-	HR	HR	-	HR	HR	-	MR	-	-	-	G	
RR Presteez	Roundup Ready	3.9	1.8	3	1	3	1	1	4	HR	HR	-	-	-	HR	HR	-	HR	HR	-	MR	-	-	-	G	
RR Vamoose	Roundup Ready	4.0	1.5	1	1	2	4	2	1	HR	-	HR	HR	-	HR	HR	-	HR	HR	-	MR	-	-	-	G	
RR AphaTron 2XT	Roundup Ready	4.3	2.0	1	2	3	4	2	1	HR	-	HR	-	-	HR	HR	-	HR	HR	-	HR	-	-	-	G	
RR Stratica	Roundup Ready	4.8	2.5	1	2	3	4	1	1	HR	-	HR	-	-	HR	HR	-	HR	HR	-	MR	HR	-	-	G	
RR Saltiva	Roundup Ready	4.9	2.8	1	2	1	3	2	1	HR	-	HR	-	-	HR	HR	-	HR	HR	-	HR	R	-	-	G	
RR NemaStar	Roundup Ready	5.0	2.0	1	2	3	4	2	1	HR	-	HR	-	-	HR	HR	-	HR	HR	-	R	-	-	-	G	
RR Tomnica	Roundup Ready	6.0	-	1	2	3	4	1	1	HR	-	R	-	-	R	HR	-	HR	HR	-	HR	HR	-	-	G	
RR 6 Shot Plus	Roundup Ready	8.5	-	1	2	3	5	1	1	HR	-	-	-	-	MR	HR	-	HR	HR	-	HR	HR	-	-	G	
RR Desert Rose	Roundup Ready																									G

KEY

Scale

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- 4 = Manage
- 5 = Not Recommended

1 Feed Quality Index

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2 Salt Tolerance

6 = Variety tolerance for germination under high saline conditions in a petri dish
 F = Variety tolerance for forage growth under high saline conditions as a potted plant in the greenhouse

Resistance Ratings

- S = Susceptible (0–5%)
- LR = Low Resistance (6–14%)
- MR = Moderate Resistance (15–30%)
- R = Resistance (31–51%)
- HR = High Resistance (>50%)
- HR+ = Highest Resistance available on the market (>50%)

Note: Field tests are currently being used to select and validate true salt-tolerant varieties. Many soils that are high in salinity also have other problematic conditions. Therefore, germination and forage salt-tolerant ratings may not predict field performance.

Product descriptions and ratings are generated from Answer Pipe® trials and/or from the genetics supplier and may change as additional data is gathered.

	CONVENTIONAL ALFALFA																	
Train	Maxi Graze®	MP 1000 BRAND	LEGENDARY XHD	LEGENDARY AA	TRAILBLAZER XHH	REBOUND 6XT	REBOUND AA	NEW GUNNER AA	GUNNER	NIMBUS	ARTESIAN SUN 6.3	SUN TITAN	SUN QUEST®					
Winterhardiness	2.0	2.0	3	1	3	1	4	HR	R	-	-	HR	R	-	-	-	-	-
Fall Dormancy	3.0	3.0	3	3	3	3	2	3	HR	R	-	-	HR	HR	-	-	-	-
Feed Quality Index	3.2	1.2	2	1	1	3	1	2	HR	-	-	-	HR	HR	-	-	-	-
Resistance Index	3.4	1.1	1	1	1	3	1	1	HR	-	HR+	HR+	HR	HR+	HR+	HR	R	-
Feed Quality Index	4.0	3.0	3	3	3	4	1	3	HR	HR	-	-	HR	HR	-	-	-	-
Grazing Tolerance	4.3	1.5	1	1	2	4	2	1	HR	-	HR	HR	HR	HR	-	-	-	-
Baled Hay (Drydown)	4.4	1.7	1	1	2	4	2	1	HR	-	HR+	HR+	HR	HR	HR+	HR+	HR	R
Haylage (Regrrowth)	4.8	1.2	1	1	2	4	2	1	HR	-	HR+	HR+	HR	HR	HR+	HR+	HR	R
Ply (on for a Root Rot)	4.9	1.2	2	1	2	4	2	1	HR	-	HR	-	-	HR	HR	-	-	R
Potato Leafroller	5.0	2.2	1	2	2	4	1	1	HR	-	HR	-	-	HR	HR	-	-	HR
Aphanomyces Race 1	6.0	3.1	1	2	3	4	1	1	HR	-	HR	-	-	R	HR	-	-	HR
Aphanomyces Race 2	8.4	-	1	1	2	5	1	1	HR	-	-	-	-	MR	R	-	-	MR
Aphanomyces Enhanced Multi-Race (EMR)	9.0	-	1	2	3	5	1	1	MR	-	-	-	-	MR	R	-	-	MR
Anthracnose Race 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracnose Multi-Race	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bacterial Wilt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracnose Race 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Verticillium Wilt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spotted Alfalfa Aphid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blue Alfalfa Aphid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pea Aphid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stem Nematode	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salt Germination Tolerance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Root-Knot Nematode	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

KEY

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Resistance Ratings

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Product Name _____

Attributes _____

Placement _____

Product Name _____

Attributes _____

Placement _____

Product Name _____

Attributes _____

Placement _____

Product Name _____

Attributes _____

Placement _____

FORAGE SORGHUM



More tonnage potential and not an ounce of excuses.

You hear a lot of talk about how to improve tonnage. Soon enough, it all starts to sound the same. We know what you want most: bottom-line results. Our job is to help you get those results with the right forage sorghum genetics. It's how we deliver the best nutrition, high total plant digestibility, and the specific traits that optimize production and quality.

We put all of this expertise into a comprehensive, season-long plan that's long on results and never filled with excuses.

KEY TAKEAWAYS

- 1 Select the right forage type for your operation.
- 2 Choose a hybrid that has the traits you need.
- 3 Practice in-season management for optimal production.

SELECT THE RIGHT FORAGE TYPE

► Forage Sorghum (single-cut silage)

Tall plant that has a sweet stalk and small grain head with limited regrowth potential.

► Sorghum x Sudan (multi-cut or grazing)

Strong tillering and regrowth ability, which is ideal for multiple harvests with increased tonnage potential.

► Pearl Millet (multi-cut or grazing)

Brachytic plant stature with finer stalks and prolific tillering.

SELECT THE HYBRID WITH THE TRAIT YOU NEED

BROWN MIDRIB-6 TRAIT

- Excellent forage quality and agronomics.
- The nutritional value potential is comparable to corn silage.
- Trait available in the following forage types: forage sorghum, sorghum x sudan, pearl millet.

BRACHYTIC TRAIT

- Shorter stature and high leaf-to-stem ratio due to reduced internode length.
- Excellent standability and tillering.
- Trait available in the following forage types: forage sorghum, sorghum x sudan, pearl millet.

PHOTOPERIOD SENSITIVITY TRAIT

- Extended harvest window.
- Remains vegetative until day length falls below 12 hours and 20 minutes; it will then enter the reproductive stage.
- Trait available in the following forage types: forage sorghum, sorghum x sudan.

SUGARCANE APHID (SCA)

- Use a tolerant hybrid to slow down the rate of infestation.
- Use seed treatment for early control.
- Plant as early as soil temperature allows. An earlier-maturity variety may help avoid late-season infestations.
- Scout early and often; treat as soon as threshold is reached.
- Avoid use of pyrethroids and other insecticides that are harmful to beneficials (SCA natural enemies include lady beetles, hover fly and green lacewing). Insecticides may cause SCA numbers to increase rapidly.

IN-SEASON MANAGEMENT

TREATED SEED

► Seed Safener Treatment

Helps protect seed against preemergence herbicide applications, some herbicide carry-over or residual, and some grass herbicides.

► Systemic Insecticide Treatment

Effective on aboveground insects, such as early sugarcane aphid, for roughly 40 days.

► Base Seed Treatment

Pearl millet hybrids include a base seed treatment only.

WEED CONTROL

Herbicides for forage sorghums are limited to bromoxynil, atrazine, metolachlor or 2,4-D.¹

- Metolachlor, by itself or in combination with atrazine, is the recommended preemergence herbicide.
- There are no postemergence grass herbicides.
- Broadleaf postemergence herbicides include 2,4-D, bromoxynil and Huskie® herbicide.
- The best way to control weeds is to start with clean ground and get the crop up and shading the soil as quickly as possible.

FERTILITY

- Sorghums require 1 to 1.25 units of nitrogen per growing day. Apply at a 5:1 ratio of nitrogen to sulfur to help the plant convert nitrogen to protein.
- Stressed plants will not convert nitrate into usable protein, resulting in high concentrations of nitrates in the plant. High nitrates can be toxic if fed to cattle.

FEEDING/HARVEST MANAGEMENT

FORAGE SORGHUM

- Harvest at late-milk to soft-dough stage.
- Single-cut for silage when plant reaches 67% to 72% whole plant moisture.
- Forage sorghums can be harvested after frost in the North for silage.
- Manage harvest moisture to meet operational needs, consider swath and wilt method in order to chop at the proper whole plant moisture.

SORGHUM X SUDAN

- Optimal harvest timing is 40 days or 40 inches tall.
- Dry hay in the Plains, West, South and Southwest; haylage or baleage in the Midwest, East and Southeast.
- Start summer grazing when plants reach 18 to 24 inches. Remove animals when two nodes are left above the ground.
- Forage quality and yield can be maximized at flag leaf stage.

PEARL MILLET

- Optimal harvest timing is 40 days or 40 inches tall.
- No prussic acid and highly digestible makes this a great choice for horse feed.
- Fine stalks allow the ability to make dry hay in areas with high summer humidity.
- Start summer grazing when plants reach 18 to 24 inches. Remove animals when there is six-inches of stubble height. Forage quality and yield can be maximized at flag leaf stage.

1. Read all labels before application.

NEW



BMR 3212

Regions: Central|East|North|Double-crop
Maturity: Early

Characteristics

	Not Recommended	3	2	1
Stress Tolerance			3	
Forage Quality				1
Disease Tolerance			2	
Hay	4			
Silage				1
Grazing	4			

- Early-maturing forage sorghum hybrid with excellent yield potential
- BMR-6 trait with excellent forage quality potential; great for lactating cows
- Strong disease resistance; moves well north and east; excellent option for double-cropping in the Central Plains regions
- Avoid overwatering and excessive populations; plants can reach 8 feet tall
- Recommended seeding rate: 60,000 to 70,000 seeds per acre at 1 to 1 1/2 inches deep, depending on soil moisture

NEW



3531 BMR Leafy

Regions: Central|South|West
Maturity: Mid

Characteristics

	Not Recommended	2	1
Stress Tolerance		2	
Forage Quality			1
Disease Tolerance			1
Hay	5		
Silage			1
Grazing	5		

- Excellent forage quality of the BMR-6 gene paired with the brachytic dwarf trait for high leaf-to-stem ratio
- Extremely flexible hybrid; excellent disease and drought tolerance allow for placement across most of the U.S.
- Mid-maturity variety with excellent combination of yield potential and quality
- Combining the brachytic dwarf traits with excellent stalks, standability is excellent with a 6-7 foot plant height
- Recommended seeding rate: 60,000 to 100,000 seeds per acre at 1 to 1 1/2 inches deep, depending on soil moisture



Greentreat® 1531

Regions: Central|East|North|South|West
Maturity: Heads at ~50 days

Characteristics

	Not Recommended	3	2	1
Stress Tolerance				1
Forage Quality				1
Disease Tolerance			2	
Hay				1
Silage				1
Grazing		3		

- Excellent forage quality of the BMR-6 gene paired with the brachytic dwarf trait for lower cutting height and high leaf-to-stem ratio
- A best-in-class variety for drought tolerance and heat stress; strong disease package for humid areas and those at risk for anthracnose
- Dry stalk (~5% less) paired with fine stems allows for easier transition into dry hay use
- Requires proper harvest management or forage quality may be compromised (40 days or 40 inches); harvest prior to 50 days before head is initiated
- Recommended seeding rate: 20 to 25 pounds per acre at 1 inch (by drill is recommended)

NEW



Greentreat® 1731

Regions: Central|East|North|South|West
Maturity: Heads at ~60 days

Characteristics

	Not Recommended	3	2	1
Stress Tolerance			3	
Forage Quality				2
Disease Tolerance			3	
Hay				1
Silage		3		
Grazing				1

- Great forage quality with the BMR-6 gene; moves well across growing regions
- The brachytic dwarf trait provides shortened internode length for lower harvest height and greater leaf-to-stem ratio
- Ideal for hay or grazing systems; fast growing and quick recovery after cutting
- Harvest at 40 days or 40 inches, whichever comes first; for grazing, start when plants reach 18 to 24 inches, remove animals when two nodes are left aboveground
- Recommended seeding rate: 20 to 25 pounds per acre at a depth of 1 inch (by drill is recommended)



GUARDIAN AT

Regions: Central|East|North|South|West
Maturity: Heads at ~60 days

Characteristics

	Not Recommended	3	2	1
Stress Tolerance			3	
Forage Quality				2
Disease Tolerance			3	
Hay				1
Silage		3		
Grazing				1

- Great forage quality with the BMR-6 gene; moves well across growing regions
- The brachytic dwarf trait provides shortened internode length for lower harvest height and greater leaf-to-stem ratio
- Sugarcane aphid tolerance offers in-plant crop protection; can handle more cuttings with confidence
- Harvest at 40 days or 40 inches, whichever comes first; for grazing, start when plants reach 18 to 24 inches, remove animals when two nodes are left aboveground
- Recommended seeding rate: 20 to 25 pounds per acre at a depth of 1 inch (by drill is recommended)



Greentreat® 1923

Regions: Central|East|North|South|West
Maturity: photoperiod sensitive

Characteristics

	Not Recommended	3	2	1
Stress Tolerance				2
Forage Quality			3	
Disease Tolerance			3	
Hay				2
Silage				2
Grazing				2

- High yield potential product with the BMR trait for excellent warm-season accumulation of highly digestible fiber
- Photoperiod sensitive trait allows the plant to remain in the vegetative state with a minimum of 12 hours and 20 minutes of daily sunlight; then head formation starts
- Excellent disease tolerance; strong drought and heat tolerance; moves well east to west and north to south
- Versatile product for grazing, baled hay or silage with excellent regrowth; easier to dry when cut at 40 days or 40 inches
- Recommended seeding rate: 20 to 25 pounds per acre at a depth of 1 inch (by drill is recommended)

KEY
Scale
1 = Excellent
2 = Strong
3 = Acceptable
4 = Manage
5 = Not Recommended

Product descriptions and ratings are generated from Answer Plot® trials and/or from the genetics supplier and may change as additional data is gathered.

Hybrid Number System
First Number: 1 = Sorghum x Sudan; 2 = Sudan; 3 = Forage Sorghum; 4 = Pearl Millet
Second Number: 1 = very early; 2 = early; 3-4 = mid-early; 5 = mid; 6-7 = mid-late; 8 = late; 9 = PPS
Third Number: 0 = No special features; 1 = BMR; 2 = BMR and photoperiod; 3 = BMR and brachytic; 5 = Conventional dwarf, not a brachytic; 8 = Photoperiod
Fourth Number: Series number or new variety type

NEW

CROPLAN

PM 4612 BMR

Regions: Central|East|North|South|West
Maturity: Heads at ~50 days

Characteristics

	Not Recommended			Excellent		
Stress Tolerance						1
Forage Quality						1
Disease Tolerance				2		
Hay						1
Silage	5					
Grazing						1

- Will eventually replace 4611 BMR, with no major differences; leafy, compact structure; the BMR-6 gene provides exceptional forage digestibility potential
- Extremely uniform in maturing height with high yield potential and quick drydown; ideal for baled hay
- Resistant to sugarcane aphid; good disease tolerance and well-adapted for use in all growing areas
- Great for horses as dry hay or grazing with no prussic acid; harvest at 40 days or 40 inches
- Recommended seeding rate: 10 to 15 pounds per acre at a depth of 3/4 inch (by drill is recommended)

KEY

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Third Number: 0 = No special features; 1 = BMR; 2 = BMR and photoperiod;
 3 = BMR and brachytic; 5 = Conventional dwarf, not a brachytic; 8 = Photoperiod
Fourth Number: Series number or new variety type



FORAGE SORGHUM



	Maturity	Seeding Rate per Acre	Seeding Depth	Average Seeds per Lb (x1000)	Soil Temperature at Planting	Forage Quality	Drought Stress	Heat Stress	Sugarcane Aphid Tolerance	Cold Tolerance	Wet Soils	Hay	Balage	Silage	Grazing
FORAGE SORGHUM HYBRIDS															
NEW BMR 3212	Early	60-70K seeds	1-1 1/2"	15.5	60	Y	1	2	3	2	-	3	2	4	4
IQ 3501	Mid	50-60K seeds	1-1 1/2"	15	60	N	2	1	2	1	-	3	2	5	5
NEW 3531 BMR Leaty	Mid	60-100K seeds	1-1 1/2"	15	60	Y	1	1	2	1	-	3	2	5	5
NEW 3681 AT	Mid/Late	60-70K seeds	1-1 1/2"	15	60	N	3	1	2	1	2	3	2	5	5
NEW 3731 BMR Leaty	Late	60-100K seeds	1-1 1/2"	15	60	Y	1	1	2	1	-	3	2	5	5
SORGHUM X SUDAN HYBRIDS															
Greentreat® 1331	Heads at ~50 days	20-25 lbs	1"	14	60	Y	1	1	1	2	-	3	3	3	3
Greentreat® 1731	Heads at ~60 days	20-25 lbs	1"	16.5	60	Y	2	3	3	3	-	3	3	1	3
NEW GUARDIAN AT	Heads at ~60 days	20-25 lbs	1"	16.5	60	Y	2	3	3	3	1	3	3	1	3
Greentreat® 1923	Photoperiod sensitive	20-25 lbs	1"	14.5	60	Y	3	2	2	3	-	4	4	2	2
NEW DYNAMIC	Photoperiod sensitive	20-25 lbs	1"	15	60	Y	2	2	2	2	-	3	3	2	1
NEW Honey Sweet AT	Heads at ~50 days	20-25 lbs	1"	15	60	N	4	2	2	2	1	3	3	2	1
PEARL MILLET															
PM 4611 BMR	Heads at ~50 days	10-15 lbs	3/4"	60	65	Y	1	2	1	2	1	4	3	1	2
NEW PM 4612 BMR	Heads at ~50 days	10-15 lbs	3/4"	60	65	Y	1	2	1	2	1	4	3	1	2
NEW PM 4507 PM	Heads at ~50 days	10-15 lbs	3/4"	60	65	N	1	2	2	2	1	4	3	1	1

KEY

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Fourth Number: Series number or new variety type

FORAGE SORGHUM



Product Name _____

Attributes _____

Placement _____

Product Name _____

Attributes _____

Placement _____

Product Name _____

Attributes _____

Placement _____

Product Name _____

Attributes _____

Placement _____

SEED TREATMENTS

1 of 2



Warden[®] CX

By WINFIELD UNITED

WARDEN[®] CX SEED TREATMENT HELPS PROTECT YIELD POTENTIAL FROM THE START

Warden[®] CX insecticide-fungicide seed treatment is designed to protect high-value seed from yield-robbing seedling disease and insect pests. Containing three fungicides for multiple modes of action, Warden[®] CX seed treatment can help provide optimal protection against *Fusarium*, *Rhizoctonia*, *Phytophthora* and *Pythium*. With Cruiser[®] insecticide for unmatched defense against seed and foliar-feeding insects, Warden[®] CX seed treatment is the first step toward high yield and profit potential.

EARLY-SEASON ADVANTAGES

Warden[®] CX seed treatment features the following crop protection advantages over untreated seed:

- Increases plant stands, promotes quick canopy closure and can improve yield potential.
- Helps improve root health and provides industry-leading *Rhizoctonia* protection.
- Contains sedaxane, the first fungicide developed exclusively for use as a seed treatment.
- Warden[®] CX includes one of the highest available rates of Apron XL[®] fungicide available in the industry. This allows for extended *Phytophthora* control in tough growing conditions.

ADDITIONAL ADVANTAGES

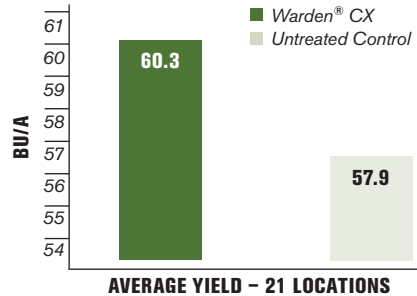
- Incorporates the active ingredient from Cruiser[®] insecticide, an industry standard for seed-applied insect protection, delivering the patented vigor effect (U.S. Patent number 6,753,296).
- Improves seed handling and flowability.

OUTSTANDING DISEASE PROTECTION

Warden[®] CX seed treatment contains sedaxane, a fungicide designed exclusively as a seed treatment. Creating strong, healthy root systems, it also provides *Rhizoctonia* protection. Warden[®] CX seed treatment has a high rate of mefenoxam, providing *Pythium* and *Phytophthora* seed and young seedling protection.

WARDEN[®] CX SEED TREATMENT HAS BEEN SHOWN TO IMPROVE PLANT STANDS, REGARDLESS OF PLANTING DATE¹

Data from these trials showed that Warden[®] CX is a premier soybean seed treatment.



Source: 21 locations across key soybean-growing states; trials conducted with independent contract researchers.

1. Because of factors outside of WinField United's control, such as weather, product application and any other factors, results to be obtained, including but not limited to yields, financial performance or profits, cannot be predicted or guaranteed by WinField United.

DISEASES AND INSECTS CONTROLLED

Warden[®] CX seed treatment is designed to control a broad spectrum of destructive diseases, including the following:

DAMPING-OFF AND SEED ROT

- *Fusarium*
- *Pythium*
- *Phytophthora*
- *Rhizoctonia*

ROOT ROT

- *Phomopsis**
 - *Sclerotinia**
 - *Phytophthora*
- *Suppression only.

Warden[®] CX seed treatment is also designed to control a wide variety of destructive insects, including the following:

- Aphids
- Bean leaf beetles
- Grape colaspis
- Leafhoppers
- Leaf miners
- Mexican bean beetles
- Seedcorn maggots
- Threecornered alfalfa hoppers
- Thrips
- White grubs
- Wireworms

PAIR WARDEN[®] CX WITH AN INOCULANT

Help meet the nitrogen needs of soybean crops by adding a microbial inoculant. These symbiotic rhizobia bacteria fix atmospheric nitrogen, improving nodulation and boosting plant-available nitrogen.

SEED TREATMENTS

2 of 2



Fortivent® Plus

By WINFIELD UNITED

EARLY-SEASON INSECT AND DISEASE CONTROL WITH OPTIMIZED PLANT VIGOR

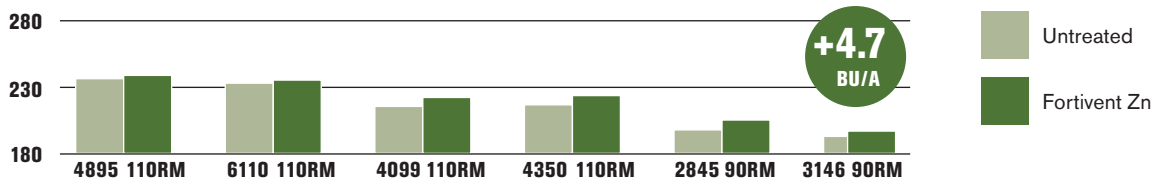
Fortivent® Plus seed treatment combines the early-season insect control of Poncho® VOTiVO® seed treatment, INTEGO® Solo fungicide for enhanced *Pythium* control and Fortivent Zn for early-season corn vigor. The Poncho® insecticide at a rate of 500 mg active ingredient combined with the nematode control of VOTiVO® seed treatment is designed to help control insects, while Fortivent Zn aids in early corn development, including stand establishment and enhanced yield potential.

► Fortivent® Plus Features and Benefits

- All CROPLAN® Signature hybrids come with Poncho® VOTiVO® seed treatment
- Provides enhanced *Pythium* control with INTEGO® Solo fungicide
- Includes Fortivent Zn for success in early-season growth and root development
- Includes 100% replant offering on all CROPLAN® Signature hybrids

YIELD ADVANTAGE

► Fortivent Zn – 2018 Answer Plot® Testing



Active Ingredients*	Rates
Insecticide	
Clothianidin	500
*Clothianidin	1,250
Base Fungicides (Acceleron® Seed Treatment)	
Fluoxastrobin	0.24 fl. oz./100 lbs. of seed
Prothioconazole	0.24 fl. oz./100 lbs. of seed
Metalaxyl	0.10 fl. oz./100 lbs. of seed
Ethaboxam (INTEGO® Solo)	0.34 fl. oz./100 lbs. of seed
Nematicide	
Poncho® VOTiVO® - 500	2.7 fl. oz./80,000 seeds

*Always read and follow label instructions.

TECHNOLOGY



INNOVATIVE TECHNOLOGY

Traits include SmartStax® corn technology with a broad spectrum of control for above- and belowground insects, along with herbicide tolerance. DroughtGard® Hybrids are available with risk-management benefits for corn hybrids facing drought stress.

CORN TRAITS

- Farmers choose their level of insect protection field by field.
- SmartStax® RIB Complete® corn blend offers a broad spectrum of above- and belowground insect protection with the simplicity and convenience of a single-bag refuge solution. Two modes of action against corn earworm and corn rootworm help optimize yield potential.
- As the first double-stacked corn trait with two ways to help control ear-feeding insects, VT Double PRO® corn delivers a broad spectrum of protection against above-ground pests, including European corn borer, southwestern corn borer, fall armyworm and corn earworm.
- DroughtGard® Hybrids provide farmers with a valuable tool for managing water-deficit risks.

SmartStax® technology helps protect corn against ear-feeding insects.



SMARTSTAX® RIB COMPLETE® CORN BLEND

- It includes a 5% structured refuge, the lowest in the corn-growing area.
- Roundup Ready® 2 Technology and LibertyLink® herbicide tolerance provide weed control.
- This corn trait platform is achieved through best-in-class trait integration to help provide the highest level of whole-farm success.

▶ Aboveground Control

SmartStax® technology controls aboveground insects by uniting *Bacillus thuringiensis* (B.t.) proteins with multiple modes of action from VT Triple PRO® and Herculex®. It stops stalk-feeding insects, such as corn borers, and protects against ear-feeding insects, including western bean cutworm, corn earworm and black cutworm. This protection has the potential to help improve grain quality.

▶ Belowground Control

Belowground, SmartStax® technology combines high-performing VT Triple PRO® trait protection with complementary Herculex® XTRA rootworm protection. This unique combination of B.t. technologies provides season-long control of corn rootworm, a primary pest.

▶ Roundup Ready® 2 Technology and LibertyLink® Traits Together

In addition to above- and belowground insect control traits, SmartStax® products include standard-setting weed control — the Roundup Ready® 2 Technology and LibertyLink® systems — for unprecedented weed management.

▶ The First Single-Bag Refuge Solution

SmartStax® RIB Complete® corn blend products are a single-bag refuge solution for farmers — the first of its kind on the market. With SmartStax® RIB Complete® corn blend, the refuge seed is distributed in the bag along with seeds containing the SmartStax® trait, allowing farmers to plant an entire field with just one product. Farmers in corn-growing areas will no longer need to plant a separate, structured refuge when they use SmartStax® RIB Complete® corn blend.



▶ SmartStax® RIB Complete® Corn Blend Benefits

- Controls key above- and belowground insects.
- Provides optimal yield protection with two ways to control corn rootworm and corn earworm.
- Includes a blend of 95% traited and 5% refuge seed with no separate, structured refuge required in the corn-growing area.
- Offers a truly simple refuge-in-a-bag solution — just fill your planter and go.

▶ Bringing New Germplasm to Market Faster

SmartStax® RIB Complete® corn blend products are developed using best-in-class trait integration that can bypass traditional slower breeding processes. This allows seed brands to bring new germplasm to market sooner. With all-in-one protection, seed brands will now be able to better evaluate each product's true performance in the field.



VT DOUBLE PRO® RIB COMPLETE® CORN BLEND

VT Double PRO® RIB Complete® corn blend allows you to plant the most traited acres fencerow to fencerow with the simplicity of a single-bag solution. There's no need to calculate or plant a separate structured refuge ever again. VT Double PRO® RIB Complete® corn includes 95% traited seed and 5% refuge seed. You get all the benefits of the VT Double PRO® trait plus the convenience of 5% refuge seed interspersed in every bag.

▶ VT Double PRO® RIB Complete® Corn Blend Benefits

- Optimal yield protection with two ways to control corn earworm.
- A blend of 95% traited and 5% refuge seed with no separate, structured refuge required in corn-growing areas.
- The truly simple refuge-in-a-bag solution — just fill your planter and go.

Content on this page provided by Bayer, please contact Bayer for more information. Due to factors such as weather, crop production patterns, product application and other factors, results to be obtained, including but not limited to yields or financial performance, cannot be predicted or guaranteed by Bayer or WinField United. Actual results may vary.

TECHNOLOGY



AN EASY FIT FOR YOUR OPERATION

Enlist E3® soybeans offer the most advanced trait technology available in soybeans, providing a new standard for weed control and yield performance. Farmers gain access to more herbicides featuring effective sites of action for better weed control.

Enlist E3® soybeans offer resistance to 2,4-D choline, glyphosate and glufosinate and have no plant-back restrictions after using an Enlist™ herbicide for burndown. Enlist E3® soybeans are compatible with nearby crops, such as soybeans without the Enlist™ trait, alfalfa, corn, peanuts, sorghum, rice and wheat. Farmers can apply Enlist™ herbicides on Enlist E3® soybeans planted right next to these compatible crops with no wind directional restrictions.

This technology gives farmers the confidence to take down tough weeds such as Palmer amaranth, common and giant ragweed, waterhemp, and marestail, along with other tough-to-control broadleaf weeds such as lambsquarters and velvetleaf.



DROUGHTGARD® HYBRIDS

DroughtGard® Hybrids are part of a system to help farmers manage risk by mitigating yield loss due to drought. The system offers farmers improved genetics, agronomic practice recommendations and the drought-tolerant biotech trait. DroughtGard® Hybrids can help increase hydroefficiency under drought stress, which can result in increased kernel numbers and reduced frequency of barren plants, providing the opportunity to reduce yield loss in certain drought conditions. DroughtGard® Hybrids are available for sale in all states.

► Traits Available With DroughtGard® Hybrids

DroughtGard® Hybrids will be available with the following corn traits: VT Double PRO® corn, VT Double PRO® RIB Complete® corn blend and Roundup Ready® Corn 2.

► Advantages of DroughtGard® Hybrids

- In drought-stress conditions that caused damaging yield losses, comparisons demonstrated a 5-bushel-per-acre performance advantage with DroughtGard® Hybrids over commercially available competitive check products.³
- Ongoing research indicates that products with the drought-tolerant biotech trait have had more kernels per ear and can use less water during severe drought stress.

- DroughtGard® Hybrids have the potential to maintain top-end yield in well-watered conditions and provide a valuable tool for managing water-deficit risks.



ROUNDUP READY® CORN 2 SYSTEM

Whether you follow a pre- and postemergence spray program or only spray postemergence, Roundup Ready® Corn 2 will fit your system. Designed to work with Roundup® agricultural herbicides, the Roundup Ready® Corn 2 System provides outstanding yield potential without the crop injury other postemergence herbicides can cause.



ROUNDUP READY 2 XTEND® SOYBEANS

Built on high-yielding Roundup Ready 2 Yield® soybean technology, Roundup Ready 2 Xtend® soybeans contain the industry's first biotech-stacked soybean trait with both dicamba and glyphosate herbicide tolerance.

This tolerance gives farmers access to additional tools to help control glyphosate-resistant broadleaf weeds such as Palmer amaranth, waterhemp and marestail, along with other tough-to-control broadleaf weeds such as lambsquarters and velvetleaf.

This technology offers the yield and quality potential that farmers already know and trust from Roundup Ready 2 Yield® soybeans.

1. Based on approved EPA herbicide labels for the herbicides recommended for use in each system as of 10/28/2020.

2. Results may vary, depending on rain fall and soil type. Always use dicamba with residual herbicides in pre-emergence and post-emergence applications that have different, effective sites of action, along with other Diversified Weed Management Practices.

3. 2012 Monsanto GroundBreaker plot trial based on approximately 250 growers in the western Great Plains.

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THE TRULY SIMPLE REFUGE-IN-A-BAG SOLUTION

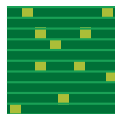
RIB Complete® is a single-bag refuge solution for farmers. With RIB Complete® corn blend, the refuge seed is distributed in the bag along with seeds containing B.t. traits, allowing farmers to plant an entire field with just one product. Farmers in the Corn Belt will no longer need to plant a structured refuge when they use RIB Complete® corn blend products.



20% refuge



5% refuge



5% refuge in the bag



UNLOCK MORE PROFITABILITY POTENTIAL

Built on the high-yielding Roundup Ready 2 Xtend® technology, XtendFlex® soybeans offer proven performance potential and herbicide tolerance to dicamba, glyphosate and glufosinate. These three modes of action give farmers control over 337 weeds¹ and up to 14 days of soil activity on certain small-seeded broadleaf weeds from XtendiMax® herbicide and VaporGrip® Technology, a restricted use pesticide.²

XtendFlex® soybean varieties are bred with the latest genetics to improve yield potential. Herbicide application flexibility and outstanding agronomic benefits give farmers more opportunity to improve their bottom line.

TECHNOLOGY



ROUNDUP READY 2 YIELD® SOYBEANS

With more three-, four- and five-bean pods, Roundup Ready 2 Yield® soybeans offer a proven yield advantage over the competition. With more beans per pod and more bushels per acre, Roundup Ready 2 Yield® soybeans also provide more profit potential.

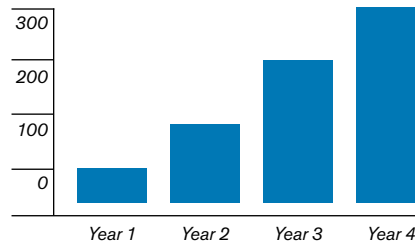
Research demonstrates a significant yield increase with Roundup Ready 2 Yield® soybeans over Roundup Ready® soybeans, with the same simple, dependable weed control as the Roundup Ready® Soybean System.¹

► Powerful Performance

Roundup Ready 2 Yield® soybeans contain in-plant tolerance to Roundup® agricultural herbicides, allowing farmers to spray Roundup® agricultural herbicides on crops from emergence through flowering.

The occurrence of more three-, four- and five-bean pods per plant is contributing to the increased yields seen with Roundup Ready 2 Yield® soybeans. These soybeans have demonstrated a clear yield advantage opportunity over the competition by delivering an average of 4.5 bushels per acre more than original Roundup Ready® soybeans.²

CUMULATIVE NUMBER OF ROUNDUP READY 2 YIELD® VARIETIES



1. Roundup Ready 2 Yield® soybeans yield higher than Roundup Ready® soybeans, based on 73 Monsanto field trials (17 to 20 per year) from 2004 to 2007. The four-year average percentage increase for Roundup Ready 2 Yield® equals 8.63, with a 95% confidence interval of 6.8% to 10.5% advantage from Roundup Ready 2 Yield®.
2. Data as of October 29, 2012. Includes all breeding and commercial strip trial data. All head-to-head comparisons are within a +/-0.4 day maturity. Data represents the top-performing Roundup Ready 2 Yield® products (with a minimum of 30 comparisons per product) versus competitive Pioneer® and NK® brands with Roundup Ready® by state.

ACCELERON® PROMOTES STRONG EARLY-SEASON GROWTH



ACCELERON® SEED APPLIED SOLUTIONS FOR CORN

Acceleron® Seed Applied Solutions help corn seedlings emerge strong by providing superior protection against seed and seedling diseases as well as early-season insects and pests. With protection from Acceleron® Seed Applied Solutions at planting, high-yielding seed develop more uniform, vigorous plant stands for high yield potential.

► Insect and Disease Protection for Corn

Insect Protection: Protection from early-season pests such as wireworms, seedcorn maggots, white grubs, grape colaspis and black cutworms (suppression).

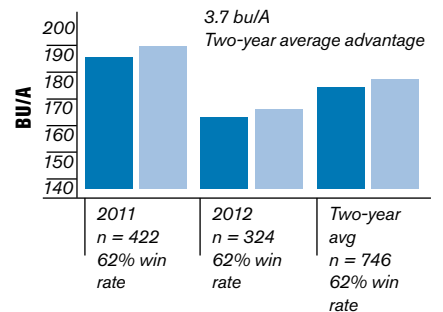
Disease-Fighting Protection: Excellent control of soilborne and seedborne disease, including *Fusarium*, *Rhizoctonia* and *Pythium*.

► Poncho®/VOTiVO® for Corn, Soybeans and Cotton

Acceleron® Seed Applied Solutions paired with Poncho®/VOTiVO® helps protect against seed and seedling diseases and early-season pests.

- **For corn:** Offers a unique biological mode of action for nematode management. Protects against damage from a range of nematode species and early-season insects, from planting through early development.
- **For soybeans:** Can provide the maximum level of protection against seed and seedling diseases; early-season insects; and nematodes including soybean cyst, reniform and root-knot.
- **For cotton:** Controls early-season insects such as thrips and aphids, and also protects against damage from nematodes including reniform and root-knot.

► Two-Year Performance



■ Acceleron® Seed Applied Solutions for corn
■ Acceleron® Seed Applied Solutions for corn with Poncho®/VOTiVO®

Source: 2011 and 2012 Internal Monsanto Commercial Field Trials. Individual results may vary.

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TECHNOLOGY



ECONOMICAL, CONSISTENT HERCULEX® YIELD PROTECTION

Herculex® *Insect Protection* technology helps top-performing hybrids achieve their highest performance potential.



HERCULEX® XTRA

Herculex® *XTRA Insect Protection* combines Herculex® *I Insect Protection* and Herculex® *RW Rootworm Protection* for powerful protection above- and belowground. It enables top-performing hybrids to reach their optimal yield potential by combining high-yielding genetics with consistent, season-long control of European corn borer, corn rootworm and black cutworm.

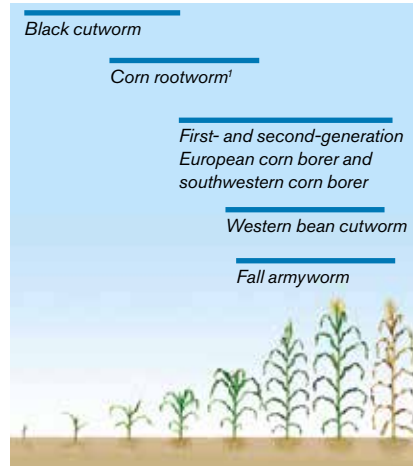
Herculex® XTRA is stacked with LibertyLink® technology, offering the ability to use a cost-effective, alternative weed-control option such as Liberty® herbicide or a conventional herbicide program. Herculex® XTRA is an effective corn insect management trait option for greater profit potential.



HERCULEX® I

If you don't need corn rootworm protection, Herculex® *I Insect Protection* gives full-plant protection all season long against European corn borer, black cutworm and other yield-robbing, aboveground pests. All Herculex® *I* hybrids contain LibertyLink® technology, making them resistant to over-the-top applications of Liberty® herbicide.

HERCULEX® XTRA AND HERCULEX® I DELIVER A WIDE WINDOW OF PROTECTION



CROP AND GRAIN MARKETING STEWARDSHIP

Dow AgroSciences is a member of Excellence Through Stewardship® (ETS). Dow AgroSciences products are commercialized in accordance with ETS product launch stewardship guidance and Dow AgroSciences Product Launch Stewardship Policy. No crop or material produced from this product can be exported to, used, processed or sold across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. For further information about your crop or grain marketing options, contact DAS at 877-4-TRAITS (877-487-2487). Information regarding the regulatory and market status of agricultural biotechnology products can be found at www.biotradestatus.com.

Properly managing trait technology is key to preserving it as a long-term crop protection tool. Growers who fail to comply with insect resistance management (IRM) requirements risk losing access to this product. To help preserve the effectiveness of B.t. corn technologies, growers planting B.t. corn technologies are required to follow an IRM Plan. Consult the Corn Product Use Guide for appropriate refuge configuration options. Before opening a bag of seed, be sure to read, understand and accept the stewardship requirements, including applicable refuge requirements for insect resistance management, for the biotechnology traits expressed in the seed as set forth in the Technology Use Agreement and Product Use Guide. By opening and using a bag of seed, you are reaffirming your obligation to comply with the most recent stewardship requirements. For complete details on IRM requirements for hybrids with B.t. technology, including refuge examples and important information on the use of insecticides on refuge and B.t. corn acres, please consult the appropriate Product Use Guide. Go to www.corteva.us/Resources/trait-stewardship.html to download the latest Dow AgroSciences Corn Product Use Guide.

Herculex® *Insect Protection* technology by Dow AgroSciences and Pioneer® Hi-Bred. Herculex® and the Herculex® logo are trademarks of The Dow Chemical Company ("Dow") or an affiliated company of Dow. Bayer CropScience LP, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709. Always read and follow label instructions. Liberty®, LibertyLink® and the Water Droplet Design are registered 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 at www.BayerCropScience.us.

¹ Corn rootworm is only controlled with Herculex® *XTRA Insect Protection*. Follow IRM, grain marketing and all other stewardship practices and pesticide label directions.

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TECHNOLOGY



BREAKTHROUGH AGRISURE® TRAIT TECHNOLOGY

Agrisure® traits deliver corn insect control, water optimization technology and outstanding herbicide tolerance to optimize the yield potential of elite hybrids.

AGRISURE ARTESIAN®

- Maximize yield potential when it rains and increase yield potential when it doesn't.

Built using scientifically selected genes, this elite class of high-performing hybrids can respond to water stress with multiple genes and at virtually any stage of growth — managing gaps in rainfall throughout the season. Artesian™ corn hybrids can help manage the unpredictability of weather and improve yield consistency by converting water to grain more efficiently than other hybrids.

AGRISURE ARTESIAN® ADVANTAGE



Elkville, Ill., 2012

AGRISURE VIPTERA®

- More control of more insects for more yield potential.

Agrisure Viptera® trait stacks provide the most comprehensive corn insect control, reducing insect feeding damage to ears and the subsequent development of molds and mycotoxins. By controlling major leaf-, stalk- and ear-feeding corn insects, the Agrisure Viptera® trait offers better crop stands and lower levels of disease, resulting in increased yield and profit potential.

► Agrisure Viptera® 3111

Above- and belowground insect control.

► Agrisure Viptera® 3220 E-Z Refuge®

Dual modes of action against aboveground insects, with a 5% single-bag refuge.

Trait stacks containing the Agrisure Viptera® trait are also available in combination with Agrisure Artesian® technology for maximized yield in water-stressed environments.

AGRISURE VIPTERA® TRAIT PERFORMANCE ON WESTERN BEAN CUTWORM¹



Hybrid with the Agrisure Viptera® trait

Hybrid without the Agrisure Viptera® trait

1. Agrisure Viptera® on western bean cutworm vs. competitive hybrid. Sterling, Colo., 2014.

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TECHNOLOGY



ACHIEVE REAL YIELDS WITH THE LIBERTYLINK® SYSTEM

The LibertyLink® trait and Liberty® herbicide offer a broad-spectrum weed-control program and an effective resistance-management tool.

Farmers can preserve the value of glyphosate-tolerant crops by rotating them to the LibertyLink® trait and Liberty® herbicide. This efficient system is the only alternative crop technology available that maintains the simplicity of glyphosate-tolerant crop systems while controlling a wide spectrum of broadleaf weeds and grasses, including weeds resistant to glyphosate and other herbicide classes.

Liberty®

LIBERTY® HERBICIDE

Liberty® herbicide delivers superior weed control across enabled trait systems, with greater application flexibility, unmatched convenience and no known resistance in U.S. row crops. Liberty® provides:

- Trait flexibility across today's trait platforms
- Excellent weed control from the broadest spectrum herbicide, for control of tough weeds like Palmer amaranth and waterhemp
- Peace of mind with Liberty® herbicide's proven formulation that provides reliable, consistent performance and is backed by the Liberty® Herbicide Weed Control Guarantee

Talk to your retailer to learn how you can qualify for the Liberty® Guarantee as well as to learn more about your local S.T.O.P. Weeds application guidelines for maximum weed control.

LIBERTYLINK® SYSTEM



► LibertyLink® Soybeans¹

The LibertyLink® system combines the high-performing LibertyLink® trait with the power of Liberty® herbicide for proven excellent yield performance. The system provides excellent weed control with greater flexibility and convenience.

Features & Benefits

- Excellent yield performance
- High-performing genetics, protected by excellent weed control, to ensure weeds are better controlled to reduce their drain on yield
- 2+ bu/A advantage over Asgrow® Roundup Ready 2 Xtend® in over 2,100 observations¹

► LibertyLink® Corn

The LibertyLink® system enables growers to use the powerful Liberty® herbicide, a nonselective herbicide effective on tough-to-control grasses and broadleaf weeds, for over-the-top use on over 50 million LibertyLink®-enabled corn hybrid acres with Herculex®, Genuity® SmartStax® and Agrisure® hybrids with corn-borer protection. The LibertyLink® system is simply the better solution built upon high-performing genetics and excellent weed control for a stronger yield.

► InVigor® LibertyLink® Canola

The LibertyLink® system is the simply better solution built upon high-performing genetics and excellent weed control that delivers real yield. InVigor® canola hybrids enabled with the LibertyLink® trait are top performers, known for consistently outstanding yield potential, vigorous early-season growth, uniform height and maturity, and excellent harvestability enabled by the pod shatter resistance trait. The LibertyLink® system provides excellent weed control and preserves the yield of high-performing hybrids.

1. Yield shown summarizes average of LibertyLink® and Asgrow® RRRxtend varieties entered across the Midwest, Delta, Northeast and the Southwest.

Liberty
Herbicide

LIBERTY LINK
LIBERTYLINK
GT27
XtendFlex
Soybeans

FREEDOM FOR LIFE ON.

Your Land. Your Legacy. Your Liberty.

Liberty herbicide is here to help your soybean fields flourish with:

- **Trait Flexibility:** Across LibertyLink®, LibertyLink® GT27®, Enlist®, and XtendFlex® trait systems
- **Excellent Weed Control:** Providing unmatched convenience and greater application flexibility
- **Backed by the Liberty Herbicide Weed Control Guarantee:** Proven formulation, proudly formulated & packaged in the USA

To learn more, visit: yourliberty-herbicide.com

BASF
We create chemistry

Results based on five years of trials where Liberty herbicide is applied according to S.T.O.P. Weeds with Liberty herbicide guidelines and as part of a complete weed control program using an effective residual product in combination with Liberty herbicide. Control applications include 1,1-DMP and other herbicide formulations available. Always read and follow label directions. Liberty and LibertyLink are registered trademarks of BASF. GT27 is a registered trademark of BASF. XtendFlex and XtendFlex Flex are trademarks of Bayer Crop Science. Roundup Ready and Roundup Ready 2 Xtend are registered trademarks of Bayer Crop Science. Use of Roundup trademark does not imply any affiliation with or endorsement by Bayer Crop Science. © 2017 BASF Corporation. All rights reserved.

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TECHNOLOGY



CALIBRATE® TECHNOLOGIES

KNOW THE QUALITY OF YOUR FORAGES

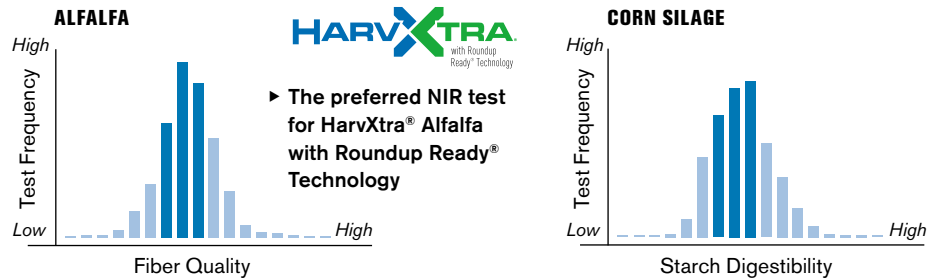
Variation in any dairy feeding program can cause underperformance: lost milk production, lower feed efficiency and lower profit potential. Calibrate® fiber and starch quality tests are designed to reduce the impact of nutrition variation in feedstuffs and allow more value to be obtained from forages, grown or purchased.

Calibrate® patented forage quality tests are designed to:

- Feed homegrown forages more effectively.
- Assist in making informed decisions when purchasing hay.
- Enable and assist your nutritionist to further improve rations.
- Confidently feed highly digestible forages in the ration and maximize ROI potential.
- Get optimal performance out of lower-quality forages.
- Determine if forage quality is a limiting factor to milk production.
- Provide more peace of mind because better decisions are made with available feedstuffs.

WITH HIGH- OR LOW-QUALITY FORAGES, CALIBRATE® TESTS DELIVER RELIABLE ACCURACY

Laboratory analysis can be less accurate when forage quality is not average. In the quality graphs below, the light bars represent where fiber and starch digestibility is either high or low. The analysis accuracy of these extremes is financially critical to forage growers and dairy farmers. Calibrate® forage quality tests maintain their accuracy as feeds drift toward the extremes.



CALIBRATE® PATENTED FORAGE QUALITY TESTS OFFER EXCEPTIONAL DIGESTIBILITY INFORMATION

Calibrate® technology provides forage analysis testing with improved accuracy for forages of all qualities. Designed to eliminate the necessity of an in vitro analysis (wet chem), Calibrate® forage analysis tests were developed using in vitro results from over 125,000 samples and 15 years of research, representing a wide range of forage quality from across the U.S. The volume of samples tested and the emphasis on samples of extreme quality (high and low) make Calibrate® forage analysis more precise.

CALIBRATE® HIGH QUALITY FORAGE ANALYSIS FOR ALFALFA

In addition to starch and fiber digestibility values for feed and forage feedstuffs, Calibrate® also offers the Calibrate® HQ Forage Analysis specifically targeted at alfalfa. This test provides crude protein, ash, NDF and NDFD, as well as calculated values for summative TDN, RFV and RFQ. Coming in 2021 will be the addition of a value for Leaf Percentage to help understand how the leaf to stem ratio affects alfalfa quality.

For more information, contact your local WinField United representative or go to www.calibratetechnologies.com.



TECHNOLOGY



THE KEMIN® NUTRISAVE® SYSTEM HELPS OPTIMIZE FORAGE QUALITY

The Kemin® NutriSAVE® Forage Management System is a complete forage management approach to preserving quality in the forages you grow for use in dairy or beef production. The products and support offered through the NutriSAVE® System aid producers in helping maintain forage quality by reducing shrinkage and spoilage, resulting in better nutrition. The NutriSAVE® System includes management recommendations from harvest to storage and through feeding. The system's crop- and condition-specific products include the latest technology and are backed by current research and experts in the forage management field.

ACID-BASED PRODUCTS

- **Fresh CUT® Plus Liquid Hay Preservative**
Applied to hay baled at up to 25% moisture. The blend of acids helps control the growth of mold and wild yeast, preventing bale heating and preserving nutrients.
- **Silage SAVOR® Plus Liquid and Silage SAVOR® Dry Silage Preservatives**
These forage preservatives are applied to ensiled crops before storage. The acid blends are used to prevent mold and wild yeast growth, allowing for improved fermentation.
- **Myco CURB® Liquid and Dry Mold Inhibitors**
Designed to prevent mold growth on stored grain, feed and feed ingredients. For more than 35 years, Myco CURB® has been the gold standard for mold control.
- **Ultra CURB® Liquid and Dry Mold Inhibitors**
These products contain a powerful blend of four organic acids designed to control heating in total mixed rations (TMRs).

BENEFITS OF THE NUTRISAVE® PROGRAM AND PRODUCTS

The minute forages are harvested, the race against time begins. The crop quickly deteriorates after cutting, and the quality CROPLAN® seed that was so carefully selected can fail to deliver the nutrients expected without proper preservation. Forage quality can have a huge impact on your operation's profitability and performance. That is why generating the most value from the forages you grow is important. High-quality forage optimizes productivity and herd health.

The NutriSAVE® Forage Management System features acid-based solutions. The blended organic acid products work to reduce mold and wild yeast growth to widen harvest windows, enhance fermentation and increase aerobic stability, both before and after storage. The flexibility to offer the ideal solution for nearly every forage management challenge is why producers have relied on the NutriSAVE® Forage Management System for decades.

KEY FEATURES OF USING NUTRISAVE® PRODUCTS

- Acid-based products for all forage applications.
- Helps reduce shrinkage and spoilage of dry matter.
- Reduces growth of mold and wild yeast.
- Promotes faster fermentation or curing.
- Extends aerobic stability at feedout.
- Supports optimal animal performance.

PROVEN PERFORMANCE WITH NUTRISAVE® PRODUCTS AND PROGRAMS

Extensive laboratory, university and field trials show that NutriSAVE® products can outperform other additives. By using the tools and resources available, NutriSAVE® programs can help you achieve a greater potential return on your forage investment. For more information about the Kemin® NutriSAVE® Forage Management System, talk with your WinField United representative or contact Kemin® at KeminAg@kemin.com or 515-559-5304. Additional product details are available online at kemin.com/feedquality.

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TECHNOLOGY



PROPER MANAGEMENT PROTECTS TECHNOLOGY'S VALUE

Sound management practices and compliance with stewardship requirements will help protect the benefits and value of biotech trait seed technology for future generations.

SOYBEAN AND CANOLA PIRACY

Seed containing a patented trait can only be used to plant a single commercial crop. It is unlawful to save and replant seed from that crop. Examples of seed containing a patented trait include but are not limited to XtendFlex® soybeans, Roundup Ready 2 Yield® soybeans, Roundup Ready 2 Xtend® soybeans, TruFlex™ canola, Roundup Ready® spring canola and Roundup Ready® winter canola. Additional information and limitations on the use of these products are provided in the Technology Stewardship Agreement, the Bayer Technology Use Guide: <https://tug.bayer.com>. U.S. patents for Bayer technologies can be found at the following webpage: <http://www.monsantotechnology.com>.

INSECT RESISTANCE MANAGEMENT

Insect-protected crops are genetically improved to provide in-plant protection against selected insect pests. Beneficial insects are not affected. To preserve the benefits and insect protection of these technology crops, Bayer CropScience, Syngenta Crop Protection and Dow AgroSciences have developed IRM guidelines that must be incorporated by everyone purchasing and planting insect-protected crops.



Think Before You Bin Run

Verification Required The last patent on the original Roundup Ready® soybean trait expired a few years ago and U.S. farmers may legally plant saved seed from some varieties of soybean containing the Roundup Ready® soybean trait. However, it is important that you check with your seed supplier to determine if a specific Roundup Ready® soybean variety is covered by other intellectual property rights, and if so, the policy for saving seed of that variety.

Higher Seeding Rate A higher seeding rate may be required for bin-run Roundup Ready® soybeans compared to new branded seed.

Yield Loss Roundup Ready 2 Yield®, Roundup Ready 2 Xtend® and XtendFlex® soybean varieties typically have a higher yield opportunity than Roundup Ready® soybean varieties.

Cleanout Loss Loss of seed and/or shrink occurs during the seed cleaning and handling processes for bin-run seed.

Seed Treatment Costs Treating your seed will add costs—both the cost of the treatment and the application of that treatment.

Lost Income Every bushel of saved seed you plant is a bushel you're not selling as commodity grain.

Increased Seed Management If you plan to save and bin-run Roundup Ready® soybeans for planting, you will have to manage your harvest operations and grain storage so that the seed isn't co-mingled with other seed that's covered by intellectual property rights.

High Value of New Branded Seed

LATEST TECHNOLOGY

- // High-yielding soybean technologies
- // Better variety options
- // Leading seed treatment options

CUSTOMER SERVICE

- // Dealer agronomic support before and after the sale
- // Replant policy support
- // Convenient packaging and delivery

RELIABLE GERMINATION AND QUALITY

- // Rigorously tested and meets U.S. Federal Seed Act requirements
- // Free of seed-borne diseases
- // Properly stored and conditioned

For more information on seed intellectual property protection, or to anonymously report a tip, please call 1-866-99-BAYER. For a list of relevant patents visit www.monsantotechnology.com



Bayer is a member of Excellence Through Stewardship® (ETS). Bayer products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Bayer's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. Commercial plant products have been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain trader or product purchaser to confirm their buying position for this product. Excellence Through Stewardship® is a registered trademark of Excellence Through Stewardship.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. It is a violation of federal and state law to use any pesticide product other than in accordance with its labeling. **NOT ALL** formulations of dicamba or glufosinate are approved for in-crop use with Roundup Ready 2 Xtend® soybeans. **NOT ALL** formulations of dicamba, glufosinate or glyphosate are approved for in-crop use with products with Roundup Ready® technology. **ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USES AND APPROVED FOR SUCH USE IN THE STATE OF APPLICATION.** Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with Roundup Ready 2 Xtend® soybeans or products with Roundup Ready® technology.

Roundup Ready® Technology contains genes that confer tolerance to glyphosate. **Roundup Ready 2 Technology** contains genes that confer tolerance to glyphosate. **Roundup Ready 2 Xtend® soybeans** contain genes that confer tolerance to glyphosate and dicamba. Products with **Roundup Ready® Technology** contain genes that confer tolerance to glyphosate, glufosinate and dicamba. **Glyphosate** will kill crops that are not tolerant to glyphosate. **Dicamba** will kill crops that are not tolerant to dicamba. **Glufosinate** will kill crops that are not tolerant to glufosinate. Contact your seed brand dealer or refer to the Bayer Technology Use Guide for recommended weed control programs.

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Roundup Ready 2 Yield® soybeans and Roundup Ready 2 Xtend® soybeans are covered by different patents than original Roundup Ready® soybeans and cannot be saved and planted. For more information about seed innovation and intellectual property protection, please visit www.seedipalliance.com.

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TECHNOLOGY



CORN INSECT RESISTANCE MANAGEMENT OVERVIEW¹

QUICK COMPLIANCE GUIDE FOR DEALERS AND FARMERS

1 REFUGE SIZE

Plant the correct size refuge for the area and corn product.

► The Corn-Growing Area

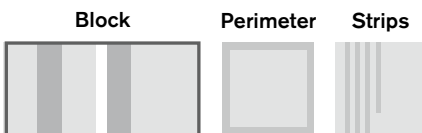
- 20% required for some B.t. products (20 acres of refuge for every 80 acres of B.t.)
- 5% only for SmartStax[®] and VT Double PRO[®] (5 acres of refuge for every 95 acres of B.t.)

► The Cotton-Growing Area

- 20% only for SmartStax[®] and VT Double PRO[®] (20 acres of refuge for every 80 acres of B.t.)

2 REFUGE LOCATION

Plant the required refuge within each field that contains B.t. insect-protected corn. There are other options, but an in-field refuge is always accepted. The refuge should always be a minimum of four contiguous rows wide.



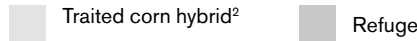
3 REFUGE PLANTING

In each field, plant your refuge first before planting any insect-protected corn. This will ensure that the minimum refuge size requirement is met should unforeseen circumstances (e.g., adverse weather) alter your planting schedule and strategy. Use a refuge product that contains no B.t. insect-protection traits (e.g., Roundup Ready[®] or conventional corn are acceptable). Growers must read the IRM/Grower Guide for complete refuge planting requirements.

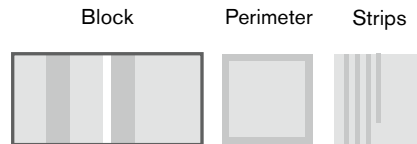
4 TREATMENT

If you need to treat your refuge with a non-B.t. foliar insecticide, you may have to treat the B.t. technology in a similar manner. Growers must read the IRM/Grower Guide for complete treatment options.

COMMON REFUGE CONFIGURATIONS



► In-Field Configuration Examples



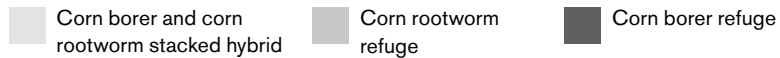
Minimum of four rows

► Adjacent-Field Configuration Examples



Separated by road, path, ditch, etc., but not by another field

SEPARATE REFUGE CONFIGURATIONS



► Block



← ≤ 1/2 mile

← ≤ 1/2 mile

► Perimeter



← ≤ 1/2 mile

← ≤ 1/2 mile

1. Provided as a summary only. Farmers must read the IRM/Grower Guide prior to planting for important information on planting and insect resistance management.

2. Traited = B.t., RW or B.t./RW.

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TECHNOLOGY



REFUGE REQUIREMENTS FOR BIOTECH CORN PRODUCTS^{1, 2}

	% NON-B.T. REFUGE	CONFIGURATIONS	REFUGE LOCATION
SMARTSTAX[®] RIB COMPLETE[®] CORN BLEND³	5% in the bag	—	No separate planted refuge is required
VT DOUBLE PRO[®] RIB COMPLETE[®] CORN BLEND³	5% in the bag	—	No separate planted refuge is required
DROUGHTGARD[®] HYBRIDS WITH VT DOUBLE PRO[®] RIB COMPLETE[®] CORN BLEND³	5% in the bag	—	No separate planted refuge is required
SMARTSTAX[®] CORN	5% corn-growing areas; 20% cotton-growing areas	Block, Perimeter, Strips, Adjacent	Within or adjacent to SmartStax [®] field; if adjacent, may be separated by a road, path, ditch, etc., but not another field
VT DOUBLE PRO[®] CORN	5% corn-growing areas; 20% cotton-growing areas	Block, Perimeter, Strips, Adjacent	Within, adjacent to or within 1/2 mile from VT Double PRO [®] field
AGRISURE VIPTERA[®]	20% corn-growing areas	Block, Perimeter, Strips, Adjacent	Within or adjacent to Agrisure Viptera [®] field; if adjacent, may be separated by a road, path, ditch, etc., but not another field
AGRISURE[®] 3000GT, AGRISURE[®] CB/LL/RW	20% corn-growing areas; 50% cotton-growing areas	Block, Perimeter, Strips, Adjacent	Within or adjacent to Agrisure [®] 3000GT or Agrisure [®] CB/LL/RW field; if adjacent, may be separated by a road, path, ditch, etc., but not another field
AGRISURE[®] GT/CB/LL, AGRISURE[®] CB/LL	20% corn-growing areas; 50% cotton-growing areas	Block, Perimeter, Strips, Adjacent	Within, adjacent to or within 1/2 mile from Agrisure [®] GT/CB/LL or Agrisure [®] CB/LL field
HERCULEX[®] XTRA INSECT PROTECTION	20% corn-growing areas; 50% cotton-growing areas	Block, Perimeter, Strips, Adjacent	Within or adjacent to Herculex [®] XTRA field; if adjacent, may be separated by a road, path, ditch, etc., but not another field
HERCULEX[®] I INSECT PROTECTION	20% corn-growing areas 50% cotton-growing areas	Block, Perimeter, Strips, Adjacent	Within, adjacent to or within 1/2 mile from Herculex [®] field

1. All refuge configurations require a minimum of four rows.

2. Provided as a summary only. Farmers must read the IRM/Grower Guide prior to planting.

3. SmartStax[®] RIB Complete[®], VT Double PRO[®] RIB Complete[®] and DroughtGard[®] Hybrids with VT Double PRO[®] RIB Complete[®] corn blends are each a blend of 95% traited seed and 5% refuge seed interspersed in the bag and do not require a separate structured refuge in corn-growing areas.

For more detailed refuge requirements please visit: <https://traits.bayer.com/stewardship/Pages/Insect-Resistance-Management.aspx>

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INSECT RESISTANCE MANAGEMENT

IMPORTANT IRM INFORMATION: Always read and follow IRM requirements. Insect-protected crops are genetically improved to provide in-plant protection against selected insect pests. Beneficial insects are not affected. To preserve the benefits and insect protection of these technology crops, Bayer, Syngenta Crop Protection and Dow AgroSciences have developed insect resistance management (IRM) guidelines that must be incorporated by everyone purchasing and planting insect-protected crops.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. It is a violation of federal and state law to use any pesticide product other than in accordance with its labeling. NOT ALL formulations of dicamba or glyphosate are approved for in-crop use with Roundup Ready 2 Xtend® soybeans. NOT ALL formulations of dicamba, glyphosate or glufosinate are approved for in-crop use with products with XtendFlex® Technology. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USES AND APPROVED FOR SUCH USE IN THE STATE OF APPLICATION. Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with Roundup Ready 2 Xtend® soybeans or products with XtendFlex® Technology.

B.t. products may not yet be registered in all states. Check with your seed brand representative for the registration status in your state.

IMPORTANT IRM INFORMATION: RIB Complete® corn blend products do not require the planting of a structured refuge **except** in the Cotton-Growing Area where corn earworm is a significant pest. **See the IRM/Grower Guide for additional information. Always read and follow IRM requirements.**


Roundup Ready® Technology contains genes that confer tolerance to glyphosate. **Roundup Ready® 2 Technology** contains genes that confer tolerance to glyphosate. **Roundup Ready 2 Xtend® soybeans contain genes that confer tolerance to glyphosate and dicamba. Products with XtendFlex® Technology contains genes that confer tolerance to glyphosate, glufosinate and dicamba.** **Glyphosate** will kill crops that are not tolerant to glyphosate. **Dicamba** will kill crops that are not tolerant to dicamba. **Glufosinate** will kill crops that are not tolerant to glufosinate. Contact your seed brand dealer or refer to the Bayer Technology Use Guide for recommended weed control programs.

Insect control technology provided by **Vip3A** is utilized under license from Syngenta Crop Protection AG. Herculex® is a registered trademark of Dow AgroSciences LLC. Agrisure Viptera® is a registered trademark of a Syngenta group company. LibertyLink® and the Water Droplet Design® is a trademark of BASF Corporation. Respect the Refuge and Corn Design® and Respect the Refuge® are registered trademarks of National Corn Growers Association. Acceleron®, DroughtGard®, RIB Complete®, Roundup Ready 2 Technology and Design™, Roundup Ready 2 Xtend®, Roundup Ready 2 Yield®, Roundup Ready®, SmartStax®, Trecepta®, TruFlex™, VT Double PRO® and XtendFlex® are trademarks of Bayer Group.

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.

Agrisure® Technology incorporated into these seeds is commercialized under license from Syngenta Seeds, Inc. Herculex® Technology incorporated into these seeds is commercialized under license from Dow AgroSciences LLC. HERCULEX® and the HERCULEX shield are registered trademarks of Dow AgroSciences LLC.

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. LibertyLink®, Liberty® and the Water Droplet logo are registered trademarks of BASF Corporation.



Before opening a bag of seed, be sure to read, understand and accept the stewardship requirements, **including applicable refuge requirements for insect resistance management**, for the biotechnology traits expressed in the seed as set forth in the Technology/Stewardship Agreement that you sign. By opening and using a bag of seed, you are reaffirming your obligation and agreement to comply with the most recent stewardship requirements.



GENERAL DISCLAIMERS

Performance may vary from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the growers' fields.

Important: Always read and follow label instructions. Some products may not be registered for sale or use in all states or counties. Please check with your local extension service to ensure registration status.

Please know that, despite the challenges, Bayer stands fully behind XtendiMax[®] herbicide and will continue working with the EPA, growers, academics, and others to provide long-term access to this important herbicide.

However, no dicamba may be used in-crop with seed in the Roundup Ready[®] Xtend Crop System, unless and until approved or specifically permitted by the U.S. EPA and the appropriate state agency for such use. As of July 13, 2020, no dicamba formulations are currently registered by the U.S. EPA for in-crop use with seed in the Roundup Ready[®] Xtend Crop System in the 2021 season. Current stocks of low-volatility dicamba herbicides XtendiMax[®] herbicide, Engenia[®] herbicide, and FeXapan[®] herbicide previously approved for in-crop use with seed in the Roundup Ready[®] Xtend Crop System may not be used after July 31, 2020. Dicamba may harm crops that are not tolerant to dicamba. Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with seed in the Roundup Ready[®] Xtend Crop System.

NOTICE: DO NOT APPLY ANY HERBICIDE TO SEED IN THE ROUNDUP READY[®] XTEND CROP SYSTEM UNLESS IT HAS A PRODUCT LABEL SPECIFICALLY AUTHORIZING THAT USE. TO USE A HERBICIDE IN ANY MANNER INCONSISTENT WITH ITS LABELING IS A VIOLATION OF FEDERAL LAW. REFER TO THE BAYER TECHNOLOGY USE GUIDE FOR DETAILS AND RECOMMENDATIONS ON USING APPROVED HERBICIDES ON SEED IN THE ROUNDUP READY[®] XTEND CROP SYSTEM.

SOYBEAN AND CANOLA PIRACY

Seed containing a patented trait can only be used to plant a single commercial crop. It is unlawful to save and replant seed from that crop. Examples of seed containing a patented trait include but are not limited to Roundup Ready 2 Yield[®] soybeans, Roundup Ready 2 Xtend[®] soybeans, XtendFlex[®] soybeans, Roundup Ready[®] spring canola, Roundup Ready[®] winter canola, and TruFlex[™] canola with Roundup Ready[®] Technology. Additional information and limitations on the use of these products are provided in the Technology Stewardship Agreement and the Bayer Technology Use Guide: <https://tug.bayer.com>. U.S. patents for Bayer technologies can be found at the following webpage: <http://www.monsantotechnology.com>

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HarvXtra[®] Alfalfa with Roundup Ready[®] Technology: Purchase and use of HarvXtra[®] Alfalfa with Roundup Ready[®] Technology is subject to a Seed and Feed Use Agreement, requiring that products of this technology can only be used on farm or otherwise be used in the following states: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming. In addition, due to the unique cropping practices do not plant HarvXtra[®] Alfalfa with Roundup Ready[®] Technology in Imperial County, California, pending import approval and until Forage Genetics International, LLC (FGI) grants express permission for such planting. HarvXtra[®] Alfalfa with Roundup Ready[®] Technology has pending import approvals. **GROWERS MUST DIRECT ANY PRODUCT PRODUCED FROM HARVXTRA[®] ALFALFA WITH ROUNDUP READY[®] TECHNOLOGY SEED OR CROPS (INCLUDING HAY AND HAY PRODUCTS) ONLY TO UNITED STATES DOMESTIC USE.** Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted.

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