

# 2023 SEED GUIDE



Hybrids that help maximize the productivity on every acre, from your toughest ground to your most productive soil. All backed by Answer Plot® testing and data. CROPLAN® is also one of the only seed brands to offer zinc in the bag, to promote early season growth and root development. So when you want to maximize the potential of your corn acres, start with seed that puts you in control. CROPLAN.

### **KEY TAKEAWAYS**

- Optimize yield potential by understanding hybrid response to population (RTP).
- 2 Use hybrid response-to-nitrogen (RTN) scores to maximize your nitrogen management plan.
- 3 Understand hybrid ROI potential with fungicide applications by knowing the response-to-fungicide (RTF) score.
- **4** Use quality data from CROPLAN® to make informed decisions.
- 5 CROPLAN® hybrids come standard with with Fortivent® Plus seed treatment, to protect and drive early season vigor.

# **OPTIMIZE YOUR SEED ROI**

You need more sophisticated data to unlock the potential of your seed investment. CROPLAN® seed is answering the call. New Answer Plot® research provides responseto data for all CROPLAN corn hybrids. So you're armed with Response-to-Nitrogen and Response-to-Fungicide intelligence for each hybrid, and can fine tune management plans to increase yield potential in the most economically efficient manner.

Response-to-Nitrogen data helps you identify the nitrogen strategy which will maximize ROI for each hybrid. Three levels of nitrogen testing creates a response curve for each hybrid.

- Low (.2#N/bu of expected yield)
- Moderate (.7#/bu of expected yield)
- High (1.1#N/bu of expected yield)

Response to Fungicide data allows growers to make two key decisions in the most profitable manner:

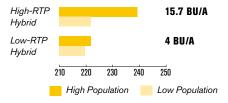
- Which hybrids should receive a fungicide application to create maximum ROI potential.
- Application timing that can help unlock the greatest yield response for each hybrid.

Combining these two testing strategies allows us to make sense of the almost infinite interactions between nitrogen levels, fungicide applications and hybrid response. And that means more confident, profitable decision making all year round. When it comes to seed, demand a brand that provides the intelligence you need to maximize ROI. Demand CROPLAN.

# **TARGET POPULATIONS<sup>2</sup>**

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.

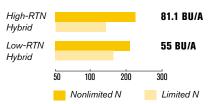
### ▶ RTP Yield Response Variance — 11.7 bu/A



# LET NITROGEN NOURISH<sup>2</sup>

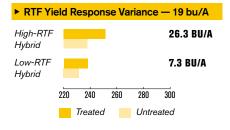
Be sure to consider the RTN scores of the hybrids you choose. Select hybrids with high RTN scores if you are planning to apply additional or late-season nitrogen, and hybrids with moderate or low scores in limited nitrogen environments. Perform appropriate tissue testing to determine optimal application 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 HEALTH<sup>2</sup>

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.



### **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 Points<sup>3</sup>

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<sup>®</sup> trial data

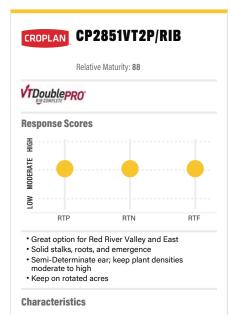




# CROPLAN® TRAIT LETTERING FOR CORN HYBRIDS

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

HYBRID	TRAIT	LOGO
SmartStax <sup>®</sup>	YieldGard VT Rootworm, Herculex® RW, YieldGard VT PRO® Corn Borer and Herculex® protection, Roundup Ready® 2 Technology and LibertyLink®	SmartStax:
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®	SmartStax:
VT Double PRO®	YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology	<b>√</b> TDouble <sub>PRO</sub> •
VT Double PRO® RIB Complete® Corn Blend	5% RIB, YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology	VTDoublePRO°
Roundup Ready® Corn 2	Roundup Ready® Corn 2	Roundup Ready: CORN 2
Trecepta® RIB Complete® Corn Blend	5% RIB, Trecepta® Technology Corn Ear Worm Protection, YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology	Trecepta <sup>®</sup>
Trecepta®	Trecepta® Technology Corn Ear Worm Protection, YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology	Trecepta <sup>®</sup>
DroughtGard® VT Double PRO® Corn Blend	DroughtGard® YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology	DroughtGard HEBRIDS VTDoublePRO
DroughtGard® VT Double PRO® RIB Complete® Corn Blend	5% RIB, DroughtGard® YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology	DroughtGard ##8#105 VTDoublePRO
Agrisure® 3000GT	Agrisure® Corn Borer and Rootworm protection, Glyphosate Tolerant and LibertyLink®	Agrisure LIBERTY 3000GT LINK
Agrisure Viptera® 3111	Agrisure® Corn Borer, Rootworm and Broad Lepidopteran protection, Glyphosate Tolerant and LibertyLink®	Agrisure Viptera LIBERTY LINK W
Agrisure <sup>®</sup> GT	Agrisure® Glyphosate Tolerant	✓ AgrisureGT
Duracade™	Duracade™ Corn Borer and Rootworm protection, Glyphosate Tolerant, LibertyLink® and Herculex®I Insect Protection	Duracade: LIBERTY LINK W
	SmartStax® RIB Complete® Corn Blend  VT Double PRO®  VT Double PRO® RIB Complete® Corn Blend  Roundup Ready® Corn 2  Trecepta® RIB Complete® Corn Blend  Trecepta®  DroughtGard® VT Double PRO® Corn Blend  DroughtGard® VT Double PRO® RIB Complete® Corn Blend  Agrisure® 3000GT  Agrisure® GT	SmartStax® YieldGard VT Rootworm, Herculex® RW, YieldGard VT PRO® Corn Borer and Herculex® protection, Roundup Ready® 2 Technology and LibertyLink®  SmartStax® RIB Complete® 5% RIB, YieldGard VT Rootworm, Herculex® RW, YieldGard VT PRO® Corn Biend LibertyLink® Frotection, Roundup Ready® 2 Technology and LibertyLink® VT Double PRO® YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology and LibertyLink® Set RIB Complete® 7% RIB Complete® 7% RIB, YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology 7% Technology 7% Technology 7% Technology 7% Roundup Ready® Corn 2 8% RIB Complete® Corn Blend 7% Roundup Ready® Corn 2 8% RIB Complete® Corn Blend 7% Roundup Ready® Corn Ear Worm Protection, YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology 7% Trecepta® 7% Technology Corn Ear Worm Protection, YieldGard VT PRO® Corn Borer protection, Roundup Ready® 2 Technology 7% Trecepta® 7% Technology 7% Trecepta® 7% Technology 7% Trecepta® 7% Technology 7% Trecepta® 7% Technology 7% Technology 7% Trecepta® 7% Technology 7% Trecepta® 7% Technology 7% Trecepta® 7% Technology 7% Trecepta® 7% Technology 7% Technology 7% Trecepta® 7% Technology 7% Trecepta® 7% Technology 7% Technol



Seedling Vigor

Root Strenath

Stavareen

Dry Down

Test Weight

Stalk Quality

Drought Tolerance

Not Recommended

3

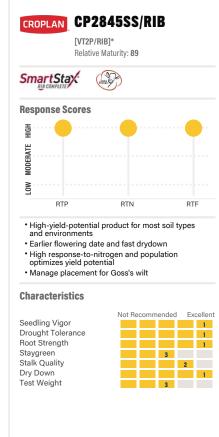
3

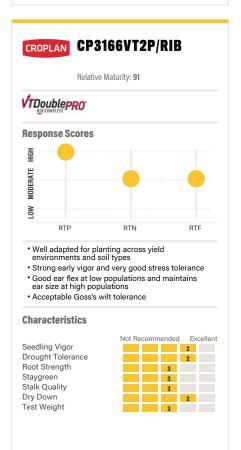
3

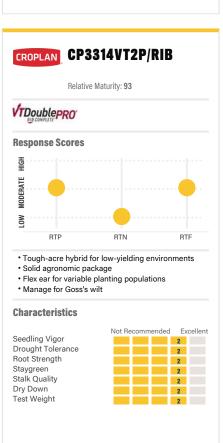
2

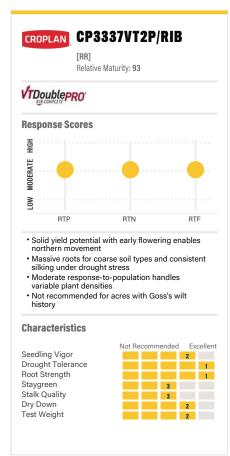
Excellent













Scale 1 = Excellent

2 = Strong

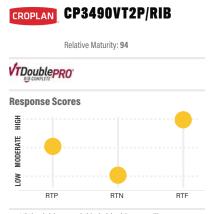
3 = Acceptable 4 = Manage

5 = Not Recommended

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



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



- · High-yield potential hybrid with versatility
- Strong drought tolerance allows placement on
- · Excellent emergence allows for early-plant option
- · Acceptable drydown

### **Characteristics**

Seedling Vigor **Drought Tolerance** Root Strength Staygreen Stalk Quality Dry Down Test Weight



# CROPLAN CP3399SS/RIB Relative Maturity: 94 SmartStax **Response Scores** MODERATE WO.

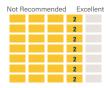
- · Best-positioned in high-yield environments
- Medium-stature hybrid that has strong staygreen

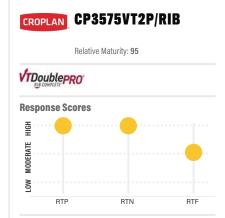
RTN

- · Optimize yield with enhanced nitrogen management
- Manage for Goss's wilt

### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



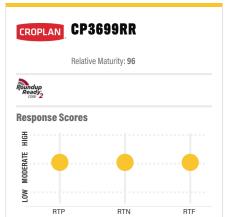


- Excels in moderate- to high-yield environments and moves across all soil types
- Strong stalk quality and root strength
- Has good ear flex for low plant densities, but will respond to higher management
- · Manage for Goss's wilt

### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight





- Adaptable across most soil types; able to move into low-yield environments
- · Consistent hybrid handles stress well with excellent emergence, roots and stalks
- Moderate response-to scores provide versatility for positioning and managing this hybrid

### **Characteristics**

Seedling Vigor **Drought Tolerance** Root Strength Stavareen Stalk Quality Dry Down Test Weight

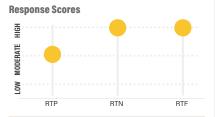


### CP3735SS/RIB CROPLAN

[VT2P/RIB]\* Relative Maturity: 97

# SmartStax





- 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**

Seedling Vigor Drought Tolerance Root Strength Stavgreen Stalk Quality Dry Down Test Weight

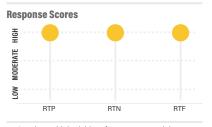


# CROPLAN CP3899VT2P/RIB

Relative Maturity: 98

# VTDoublePRO





- 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**

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



Scale 1 = Excellent

2 = Strong

3 = Acceptable

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



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

# CROPLAN CP3980VT2P/RIB Relative Maturity: 99 VTDoublepRO **Response Scores** 표 MODERATE F0W · High-yield potential hybrid that works across many acres Moderate management allows for versatile Acceptable stalks; can benefit from a fungicide application · Use caution when applying growth regulator chemistries **Characteristics**

Seedling Vigor

Root Strength

Staygreen

Dry Down

Test Weight

Stalk Quality

Drought Tolerance

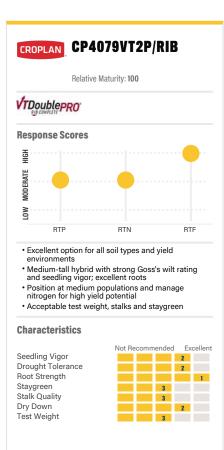
Not Recommended Excellent

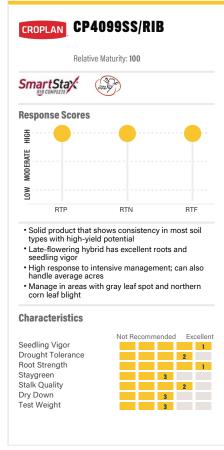
3

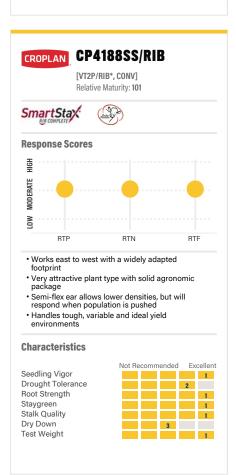
3 3

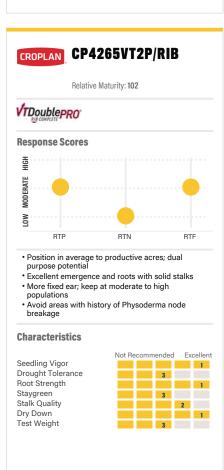
2

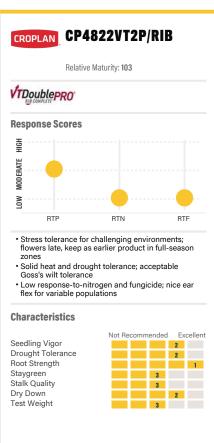
2











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.



- RTP RTN RTF

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

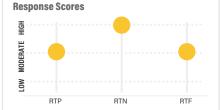
### **Characteristics**

LOW

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



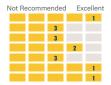
# Relative Maturity: 106 SmartStax MB COMPLETE STATES MB COMPLETE CP4676SS/RIB

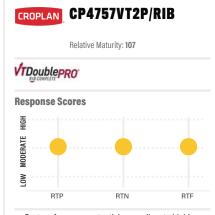


- Versatile hybrid, position and manage for high yield
- Medium-height hybrid with excellent emergence, seedling vigor and test weight
- Position at medium populations and manage nitrogen for high-yield-potential
- Fungicide application recommended in areas prone to gray leaf spot

### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight





- Best performance potential on medium to highly productive acres
- Strong roots and test weight with high yield potential
- Moderate response to nitrogen and fungicide offers great flexibility
- · Best suited for rotated acres

### Characteristics

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



NEW

# CROPLAN CP4880SS/RIB

Relative Maturity: 108



# **Response Scores**



- Best performance on high yield potential, well drained soils
- SmartStax® hybrid with exceptional top end yield potential
- Strong stalks and strong roots
- Acceptable Goss's Wilt tolerance

# Characteristics

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



# CROPLAN CP4997VT2P/RIB

Relative Maturity: 109

# VTDoublePRO

# **Response Scores**



- 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

# Characteristics

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



# CROPLAN CP4930DGVT2P/RIB

Relative Maturity: 109

DroughtGard HTBRIDS VTDoublePRO

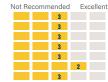
# **Response Scores**



- Strong western adaptation with good Goss's wilt and strong greensnap tolerance
- Exceptional top end yield potential
- Plant at moderate populations due to semi-flex ear • Recommend a fungicide application in areas with
- high disease pressure

# Characteristics

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



# KEY

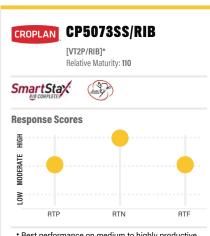
Scale

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

Product descriptions and ratings are generated from Answer Plot<sup>®</sup> 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



- Best performance on medium to highly productive
- · 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

### **Characteristics**

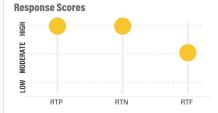
Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



# CROPLAN CP5115SS/RIB [VT2P/RIB]\*

Relative Maturity: 111

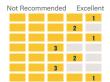
# SmartStax



- 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

### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



# CROPLAN CP5210SS/RIB Relative Maturity: 112 SmartStax **Response Scores** MODERATE LOW

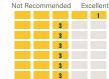
- Versatile hybrid with high yield potential
- · Strong Goss's wilt and disease tolerance make it a fit for corn-on-corn acres

RTN

- Good ear flex; responds to fungicide and nitrogen management
- Acceptable roots and late season intactness

### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



RTF

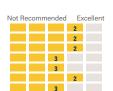
# CROPLAN CP5244VT2P/RIB Relative Maturity: 112 VTDoublePRO



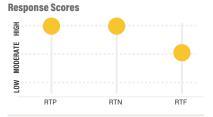
- Versatile hybrid with high yield potential
- Strong root system and drought tolerance
- Responds to additional fungicide and nitrogen management, but not required
- Manage for greensnap in susceptible areas

# **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



# CP5370SS/RIB CROPLAN [VT2P/RIB]\* Relative Maturity: 113 SmartStax



- Versatile, dual-purpose product; adapted across multiple yield environments
- Excellent stalks, roots and test weight; strong
- Optimize yield potential with enhanced nitrogen management and mod-high plant densities
- Best positioned on rotated acres; ear tip back influenced by genetics

# **Characteristics**

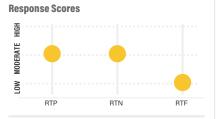
Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



### **CP5340VT2P** CROPLAN

[CONV] Relative Maturity: 113

# VTDoublePRO



- · Versatile hybrid with excellent heat tolerance and vield potential
- Medium-short hybrid with strong stalks and solid
- Position at moderate-to-low populations to maximize girthy flex ear • Use caution in areas with high risk of greensnap

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight

**Characteristics** 



Scale

1 = Excellent

 ${\bf 2} = {\sf Strong}$ 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<sup>®</sup> corn silage hybrids that consistently perform for high-quality and high-tonnage in Answer Plot® trials.

# CROPLAN CP5335SS/RIB [VT2P/RIB]\* Relative Maturity: 113 Smart State My COMPLETE Response Scores

Tremendous consistency across variable yield environments

RTN

- Excellent agronomics, including stalks and lateseason 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

### **Characteristics**

RTP

L0W

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight

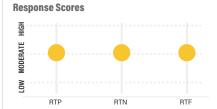


RTE

# CROPLAN CP6594SS/RIB

[VT2P/RIB]\* Relative Maturity: 113

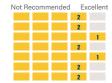
# SmartStax



- 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**

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



# Relative Maturity: 114 VIDoublepro Response Scores HE HANDER OF THE PRINT RIFE REPORT OF THE PRINT RIFE

- Widely adapted east to west across multiple soil types and yield levels
- Strong roots and drought tolerance with excellent test weight
- Semi-flex ear and high response-to-population score allow positioning across yield environments
- Manage fields with history of Anthracnose and Southern rust

### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



# CROPLAN CP5570VT2P/RIB Relative Maturity: 115



- Excellent yield potential for eastern and southern environments
- Medium plant height and ear placement
- High response-to-population score to push populations and maximize yield potential; fungicide is highly recommended
- Use caution in areas with high risk of greensnap

## **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight

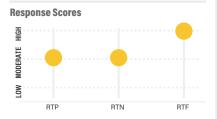


# CROPLAN CP5588DGVT2P/RIB

Relative Maturity: 115

DroughtGard

WYDOUNGPRO



- Best performance in the central and eastern corn
- Top end yield potential with very good stress tolerance
- Excellent dual purpose silage potential
- Use caution in high Physoderma regions

# Characteristics

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight

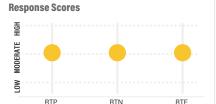


# CROPLAN CP5550VT2P/RIB

Relative Maturity: 115

VTDoublePRO

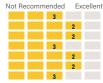




- Position in average to high yield potential acres; dual purpose option
- Solid agronomic and disease package
- Keep plant densities moderate to high
- Acceptable Goss's wilt tolerance

# **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



KFY

Scale

1 = Excellent

2 = Strong 3 = Acceptable

4 = Manage 5 = Not Recommended Product descriptions and ratings are generated from Answer Plot<sup>®</sup> 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.



MODERATE LOW

RTN

- Broadly adapted across yield environments; medium flower date offers north to south movement across maturity zones
- Medium-height plant with wide leaves and a girthy semi-flex ear
- Position at medium populations with enhanced nitrogen management for high-yield-potential

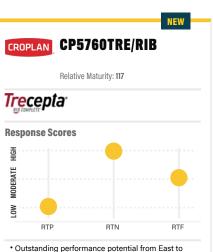
### **Characteristics**

RTP

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



RTF



- Outstanding performance potential from East to West
- Top end yield potential with good ear flex
- capabilities
   Versatile placement across soil types at moderate
- Fungicide recommended to enhance protection against Southern Rust

### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Staygreen Stalk Quality Dry Down Test Weight



CP2965VT2P/RIB*	CP2845SS/RIB*	CP2851VT2P/RIB*	CP2790VT2P/RIB*	NEW CP2692D	CP2520RR	NEW CP2585VT2P/RIB*	CP2315VT2P/RIB*	CP2288VT2P/RIB*	CP2180VT2P/RIB*	CP184RR	RM: 80-89	BRAND
												Minter anticord  O study antic
89	89	88	87	86	86	85	83	82	81	80		O'sludsed lind i dead
<b>S</b>	=	<b>S</b>	_	<b>S</b>	<b>S</b>	<b>S</b>	<b>S</b>	<b>=</b>	<b>S</b>	<b>S</b>		O Little of the
工	Ξ	≤	Ξ	≤	≤	Ξ	工	≤	Z	_		TH Ship.
Ξ	Ξ	≤	Ξ	≤	≤	≤	≤	≤	≤	Ξ		O'THE WEST OF THE STATE OF THE
2235	2210	2200	2175	2160	2125	2125	2075	2065	2025	2000		/ // // // //
1180	1150	1160	1130	1140	1120	1120	1080	1090	1070	1040		Originating Originating
M-L	ш	≤	ш	≤	≤	≤	Ш	≤	M-E	Е		O Halanti
<b>=</b>	M-T	≤	≤	M-T	M-T	≤	M-T	≤	≤	M-T		Originals originals
<b>S</b>	Z	≤	Z	≤	Z	3	Z	≤	Z	≤		
RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	PINK		183
SF	SF	SD	SF	SF	SF	SF	SF	SF	SD	F		Shrat Bilest
14-16	16-18	16-18	16-18	16-18	16-20	16-18	18-20	16-18	18-20	16-18		Shipping S
$\vdash$	-	ω	-	2	ω	2	2	2	2	2		11/8, 2000
1	2	2	ω	1	ω	2	ω	2	2	ω		O de strate strate
2	-	2	2	1	-	ω	2		2	2		0 10 010
3 2	3 1	3 2	3 2	1 3	3 2	3 2	3 2	2 2	3 2	2 4		IMOP OLITIE
2		ω	1	NA NA	1	ω	2	2	ω	3		olese francisco
2	ω	2	2	A 3	ω	ω	ω	1	ω	1		ing Tables
ω	NA	ω	ω	NA	ω	ω	ω	NA	NA	NA		Riot
ω	ω	ω	2	1	ω	ω	ω	2	2	ω		105/1102
_	NA	ω	2	NA	NA	NA	NA	NA	NA	NA		girs and results
NA	ω	NA	NA	1	ω	NA	2	NA	NA	ω		JIIM & Seling, 19 Hoeking
3 2	4 4	ω	4 3	1	4	ω ω	3 4	2 3	ω	5		Self light of Self Self Self Self Self Self Self Sel
				NA N	NA					NA N		Speker Spirite High Loss See Selection of Spekers Spirite Spir
NA N	NA	NA N	NA 2	NA	NA	NA N	NA	NA N	NA	NA N		TON IS TANK
NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA		

Scale

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

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

RTP/RTN/RTF Ratings

L = Low Response
M = Moderate Response
H = High Response
TBD = To be tested in 2021

Plant Height

T = Tall

M = Medium

S = Short

8 Ear Height

 $L = L_{0W}$ H = High M = Medium

M = Medium
E = Early

4 Ear Flex

FL = Flex
SF = Semi-flex
FX = Fixed

5 Flower Date

L = Late

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 these technology crops. preserve the benefits and insect protection of

CP3980VT2P/RIB*	CP3899VT2P/RIB*	CP3735SS/RIB*	CP3699RR	CP3575VT2P/RIB*	CP3490VT2P/RIB*	CP3399SS/RIB*	CP3337VT2P/RIB*	CP3314VT2P/RIB*	CP3166VT2P/RIB*	RM: 91-99	BRAND
T2P/RIB*	T2P/RIB*	S/RIB*	æ	T2P/RIB*	T2P/RIB*	S/RIB*	T2P/RIB*	T2P/RIB*	T2P/RIB*	1-99	0
•	η.			•	*		*	•	*		
											Kirifel at the of state of the
99	98	97	96	95	94	94	93	93	91		OHHHADDANA BERTHUR BERTHERS
											Jasingsagring, nogsag
≤	工	≤	≤	工	3	3	3	3	Ξ		OHHHI Laund of Service of the Control of the Contro
≤	Ξ	Ξ	≤	Ξ	_	Ξ	≤	_	≤		II Applite
Ŧ	Ŧ	Ŧ	≤	S	Ŧ	Z	<b>S</b>	S	Z		O LIHI BOLIN O SURSON  O LIHI BOLIN O SURSON  O LIHI BOLIN O SURSON  *** GREEN OF THE OF SURSON  *** GREEN OF THE OF SURSON  O LIHI BOLIN O SURSON  O LIHI BOLIN
2475	2450	2425	2400	2360	2360	2350	2310	2330	2285		OLIHIR OLIHOL NUB
5 1270	0 1280	5 1250	0 1240	0 1240	0 1230	0 1220	0 1190	0 1210	5 1180		Starting **Thistilling
0 M	0	0 M	0 M	.0 M-L	0 M-L	о М	0 E	0 M	0 E		Organitory  Organitory
M-T	M-T	Z	M-T	Z	L-W-T	≤	≤	≤	≤		Originates
M-H	M-H	≤	M-H	≤	M-H	≤	≤	≤	≤		internet
RED	PINK	RED	RED	RED	RED	RED	RED	RED	RED		182
SF	SF	SD	SF	SF	SF	SF	끋	프	SF		Shot allest
14-16	16-20	16-18	16-18	16-18	18-20	16-18	16-18	16-18	16-18		shouth dess
2	1	1	1	2	1	2	2	2	2		1181, 1000
ω	2	2	1	2	ω	2	ω	2	ω		interest of the state of the st
-	2	2	_	2	ω	2	_	2	ω		(3) 10 M
ω	2	2	ω	2	ω	2	ω	2	ω		IMU, OLIK
2	ω	2	ω	2	ω	2	2	2	2		o is o it is
ω	2 2	ω	2 2	3 1	2 3	2 2	1 2	2 2	2 3		ligis list lets
3 2	2 4	ر ع	3	ر ع	ω	3	2 4	3	ω		ing 2,
NA	4	ω	ω	2	ω	ω	2	ω	ω		dig.
NA	NA	NA	NA	NA	ω	NA	4	NA	NA		griss granter that
N A	ω	NA	ω	NA	NA	ω	2	ω	NA		III Seguine IN Secretary
ω	ω	ω	ω	4	ω	4	5	4	ω		Self-light Control of
ω	ω	ω	ω	ь	ω	ω	ω	NA	2		Speker Briting The Principle of the Prin
4	NA	ω	NA	NA	ω	NA	NA	NA	NA		ter resident
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		•
											-

C C C C C C C C C 57 B

# KEY

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

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

# RTP/RTN/RTF Ratings

L = Low Response

M = Moderate Response

H = High Response

TBD = To be tested in 2021

# Plant Height

T = Tall

M = Medium

S = Short

# 8 Ear Height

L = Low H = High M = Medium

# 4 Ear Flex

FL = Flex
SF = Semi-flex
FX = Fixed

# 5 Flower Date

M = Medium
E = Early L = Late

strong leaf-disease resistance, enhancing hybrid standability.

# Staygreen Late-season health coming from

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

\*Follow IRM guidelines and refuge configurations to preserve the benefits and insect protection of

these technology crops.

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

CP4444VT2P/RIB*	CP4822VT2P/RIB*	CP4265VT2P/RIB*	CP4188SS/RIB*	CP4099SS/RIB*	CP4079VT2P/RIB*	RM: 100-104	BRAND
							CHIRIPARIFIER OF SERVICES A SERVICES A SERVICES OF SERVICES OF SERVICES OF SERVICES AS SERVICES A S
104	103	102	101	100	100		ldigged lings ead
王	<b>S</b>	8	<b>S</b>	Ŧ	<b>S</b>		O Little of the Control of the Contr
_	_	_	<b>S</b>	Ŧ	S		Ald alloin
_	_	3	≤	Ξ	Ξ		Chine Marine China
2580	2575	2550	2490	2500	2480		OLIHIS TUBBLI INTERNATIONALI PROPERTIES PROP
1300	1310	1300	1280	1290	1280		Originalists Originalists Originalists  Orig
≤	_	M-L	<b>=</b>	_	≤		This is i
_	≤	≤	≤	M-T	M-T		Originals Originals
M-H	M-H	<b>S</b>	<b>=</b>	≤	<b>=</b>		indiction of the state of the s
RED	RED	RED	RED	PINK	RED		183
SF	SF	SD	SF	SF	SF		
14-16	16-18	16-18	16-18	16-20	14-16		
_	2	-	_	_	2		Well Jose
2	ω	2	-	2	ω		O lag ther thing the state of t
2	-	-	-	<b>—</b>	<u></u>		analis .
ω	ω	ω	ш	ω	ω		IINOY OLIVE
2 3	2 2	1 3	3 2	3 2	2 2		Bulgal
ω	ω	ω	1	ω	ω		acution little for the first l
ω	ω	ω	ω	4	ω		ints's
ω	2	ω	2	4	ω		ALON SOL
2	NA	2	NA	NA	2		dice the season of the season
NA	ω	NA	NA	ω	NA		IM 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
ω	ω	2	2	ω	2		TOTHERS STONE WITH
ω	ω	ω	ω	ω	ω		Spekera Britain
ω	NA	5	NA	NA	NA		Speriod of the state of the sta
ω	NA	ω	NA	NA	NA		X

Scale

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

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

# RTP/RTN/RTF Ratings

L = Low Response
M = Moderate Response
H = High Response
TBD = To be tested in 2021

# Plant Height

T = Tall

M = Medium

S = Short

# 8 Ear Height

5 Flower Date

L = Late

 $L = L_{0W}$ H = High M = Medium

M = Medium
E = Early

# 4 Ear Flex

FL = Flex
SF = Semi-flex
FX = Fixed

# Staygreen

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

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

\*\*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.

				NEW	NEW			_
CP5115SS/RIB*	CP5073SS/RIB*	CP4997VT2P/RIB*	CP4930DGVT2P/RIB*	CP4880SS/RIB*	CP4757VT2P/RIB*	CP4676SS/RIB*	RM: 105-111	BRAND
								Chinest string of the String of String String String of String Str
<u>=</u>	110	109	109	108	107	106		Calded to History
エ	<b>S</b>	工	<b>S</b>	工	<b>S</b>	≤		CHAPTER THE
工	Ξ	工	≥	≥	≥	工		THE SHEET
≤	Z	_	×	工	Z	S		OLIMBAN ING HIS
2775	2730	2725	2725	2700	2675	2650		112 (013
1350	1340	1330	1330	1330	1320	1310		aled likely
<b>≤</b>	≤	≤	≤	≤	≤	≤		Ontake of the state of the stat
M-T	≤	_	M-T	M-S	≤	≤		O'Habiret O'Habiret
M-H	M-H	M-H	M-H	3	M-H	Z		ing des
RED	RED	RED	RED	RED	RED	PINK		183/
SF	SF	SF	SF	SD	SD	SF		
18-20	16-18	16-18	14-16	14-16	18-20	16-18		Still 1015
-	-	2	ω	2	ω	_		Algha alg
2	ω	2	ω	2	ω	ω		III all lakers
1 ω	2 2	2 2	ω	2 3	2 3	3 2		indigital de la serie de la se
ω	2	2	2	ω	2	_		ing solly.
2	2	2	ω	ω	2	ω		one set set
	ω	2	ω	2	2			'ods'
3 2	3 2	3 2	ω	ω	3 2	3 2		\ <b>1</b> 311
ω	_	2	2	2	NA	2		4135 UIIIOS
NA	NA	ω	NA	NA	NA	NA		de la companya de la
4	ω	2	2	ω	ω	ω		ilim so on suisti
ω	ω	2	ω	ω	ω	_		Steward Brown Through Steward Steward Brown Throng Steward Ste
5	NA	ω	ω	ω	ω	NA		Para para para para para para para para
ω	NA	2	NA	NA	NA	2		100

Scale

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

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

# RTP/RTN/RTF Ratings

L = Low Response
M = Moderate Response
H = High Response
TBD = To be tested in 2021

# Plant Height

T = Tall

M = Medium

S = Short

# 8 Ear Height

5 Flower Date

L = LowH = High M = Medium

M = Medium
E = Early L = Late

# 4 Ear Flex

FL = Flex
SF = Semi-flex
FX = Fixed

# Staygreen

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

# 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.

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

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

NE N													
NEW CP5760TRF/RIR*	CP5678SS/RIB*	CP5588DGVT2P/RIB*	CP5570VT2P/RIB*	CP5550VT2P/RIB*	CP5497VT2P/RIB*	CP6594SS/RIB*	CP5370SS/RIB*	CP5335SS/RIB*	CP5340VT2P	CP5244VT2P/RIB*	CP5210SS/RIB*	RM: 112-120	BRAND
													Hinemanganda Okulanganda Okulanganda Okulanganda Okulanganda
117	116	115	115	115	114	113	113	113	113	112	112		Id Hills 84 III O
-	≤	≤	<b>=</b>	<b>S</b>	工	<b>S</b>	<b>=</b>	≤	≤	≤	<b>S</b>		O'SEL HBU
Ξ	ェ	<b>S</b>	<b>S</b>	<b>S</b>	_	<b>S</b>	ェ	Ŧ	<b>S</b>	×	<b>±</b>		Oly Substitutes
<	≤	<b>±</b>	Ŧ	<b>S</b>	工	<b>S</b>	<b>S</b>	<b>S</b>	_	<b>S</b>	工		Little of the Children of September of September of the Children of the Childr
2925	2900	2875	2875	2850	2850	2810	2830	2820	2825	2800	2790		/ 112 / 113 /
1370	1360	1360	1360	1360	1350	1350	1370	1350	1350	1360	1340		3 sted by the state of the stat
N/A	<b>S</b>	<b>S</b>	<b>S</b>	Z	M-E	Z	<b>S</b>	×	<b>S</b>	M-L	<b>S</b>		Originalists
-	≤	M-T	≤	≤	M-T	≤	-	≤	M-S	M-T	M-T		Chigania,
<b>S</b>	≤	M-H	≤	≤	M-H	≤	M-H	≤	≤	M-H	M-H		
DINE	RED	RED	RED	PINK	RED	RED	PINK	PINK	RED	RED	RED		11/83
2	SF	SD	SF	SF	SF	SF	SF	SF	끋	SF	SF		Short allan
16 10	14-16	16-18	16-18	14-16	14-16	16-18	18-20	16-18	16-20	16-18	16-18		Inglight 2
s	2	2	ω	ω	2	2	_	2	2	2	_		Ingligation of the state of the
S	2	2	2	2	ω	-	ш	Ь	_	ω	ω		Olastiers Historistory
د	ω	2	2	2	2	-	-	2	<u></u>	2	ω		II. II. Balan
S	ω	2	2	ω	ω	2	ш	2	ω	ω	ω		Oles of The Control o
S	ω	2	ω	2	2	2	2	2	2	2	ω		Solf 1811
ပ ၁	2 1	2 3	2 3	2 3	2 1	2 2	2 1	2 1	ω	2 3	3		ogle set felt
ى ى	1 3	ω ω	ω ω	ω ω	1 2	2 3	1 3	1 3	ω	ω ω	3		inds !
w	2	ω	ω	ω	ω	ω	2	2	2	2	2		13/1
S	2	2	2	2	2	2	2	2	2	2	2		8192 Uning
N	NA	NA	NA	NA	NA	2	ω	NA	ω	NA	NA		Per Seon Billy
w	ω	ω	ω	ω	ω	ω	4	2	4	ω	2		A LI LIGHT TO THE STATE OF THE
9	ω	ω	ω	-	4	ω	2	2	ω	ω	ω		See a Sept of the state of the see of the se
N	ω	5	NA	NA	4	NA	NA	NA	NA	ω	ω		Para Fallund
Z	ω	ω	ω	ω	NA	ω	NA	2	4	NA	NA		100

Scale

Scale

1 = Excellent

2 = Strong

3 = Acceptable

4 = Manage

5 = Not Recommended

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

# RTP/RTN/RTF Ratings

L = Low Response
M = Moderate Response
H = High Response
TBD = To be tested in 2021

# Plant Height

T = Tall

M = Medium

S = Short

# 8 Ear Height

 $L = L_{0W}$ H = High M = Medium

# Ear Flex

FL = Flex
SF = Semi-flex
FX = Fixed

# 5 Flower Date

M = Medium
E = Early L = Late

# Staygreen

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

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

\*\*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 these technology crops. preserve the benefits and insect protection of





Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	



# & SOYBEAN

We search the world over for high performing soybean genetics, then bring them to you with industry leading trait platforms. Because genetic diversity and trait flexibility mean innovative soybean products that fit the way you want to farm. This year, plant soybeans that have high yield potential and are built to perform in your local area. Plant CROPLAN.

1 of 2

### **KEY TAKEAWAYS**

- 1 Use appropriate trait technology to achieve effective weed control.
- 2 Introduce stability to your friends 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.

# 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.

	Glyphosate	Glufosinate	2,4-D Choline	Dicamba
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 frogeye field tolerance.
AGRONOMICS	<ul><li>Narrow canopy type</li><li>Tall height</li><li>Excellent standability</li></ul>	<ul><li>Bushy canopy type</li><li>Medium height</li><li>Average standability</li></ul>
STRESS TOLERANCE	Excellent stress tolerance.	Strong stress tolerance.
GENETIC BACKGROUND	Germplasm pool A	Germplasm pool B

▶ 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.

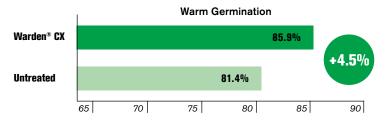


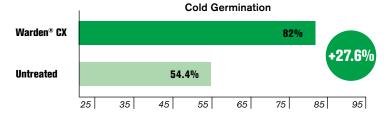


# PROTECT YIELD POTENTIAL WITH WARDEN® CX SEED TREATMENT

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**

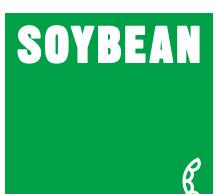
FUNGUS	DISEASE	TEMPERATURE (F) RANGE/OPTIMUM	MOISTURE
Pythium	Damping-off	50°-68°/<59°	Saturated
Rhizoctonia	Damping-off	60°-86°/80°	30%-60% water
Phytophthora	Damping-off	59°-86°/77°-80°	Saturated; weekly periodic rain
Fusarium	SDS and root rot	50°-86°/59°	Wet to saturated

### **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 inseason 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.

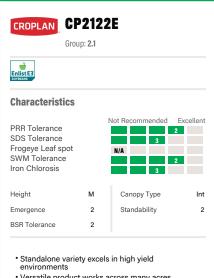


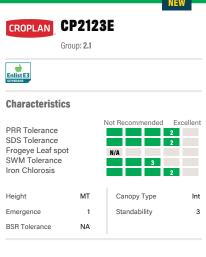


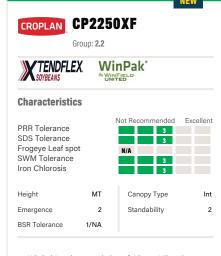
# **CROPLAN® TRAIT LETTERING FOR SOYBEAN VARIETIES**

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

KEY	VARIETY	TRAIT HERBICIDE TOLERANCE	LOGO
XF	XtendFlex <sup>®</sup>	Roundup®, dicamba and glufosinate tolerant	TENDFLEX
RR	Roundup Ready 2 Yield®	Roundup® tolerant	Roundup 2 YIELD
Х	Roundup Ready 2 Xtend®	Roundup <sup>®</sup> and dicamba tolerant	ROUNDUP READY 2 TEND SOYBEANS
E	Enlist E3®	Glyphosate, glufosinate and 2,4-D choline tolerant	Enlist E <sub>3</sub> Sopteme
s	STS®	Sulfonylurea tolerant	N/A



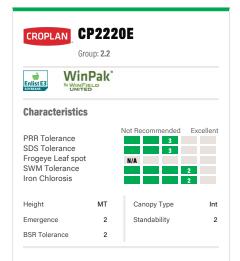




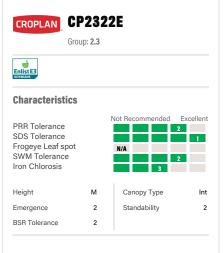
- Versatile product works across many acres
- Strong standability and emergence coupled with PRR, SWM and BSR tolerance
- Acceptable SDS and IDC tolerance

- Standalone variety with Peking SCN resistance
- · Excellent stress tolerance
- Versatile product with strong IDC and SDS tolerance
- Acceptable standability and SWM

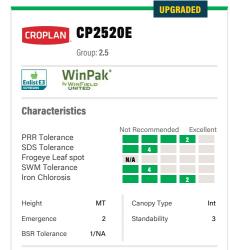
- · WinPak® variety consisting of CP2243XF and
- Versatile product with strong standability and emergence
- Acceptable SWM, SDS, and IDC
- · Acceptable PRR tolerance



- 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



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



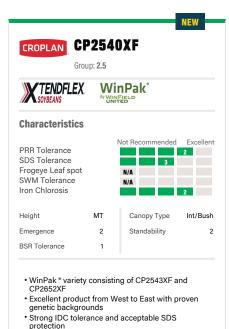
- WinPak® variety consisting of CP2521E and 2523E
- Best suited for productive prairie soils, strong performance east to west
- Strong stress tolerance, IDC and emergence
- · Manage for SWM and SDS in susceptible

Product descriptions and ratings are generated from

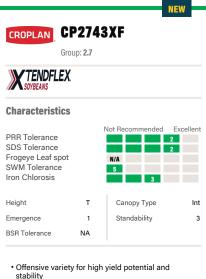
Answer Plot® trials and/or from the genetics supplier and may change as additional data is gathered.

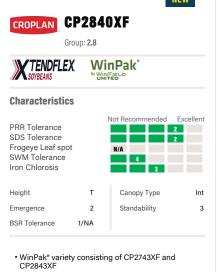


KEY



· Manage for SWM in susceptible environments

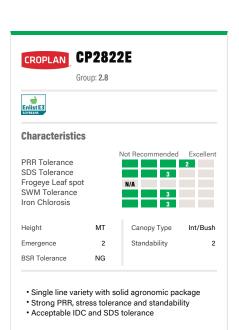


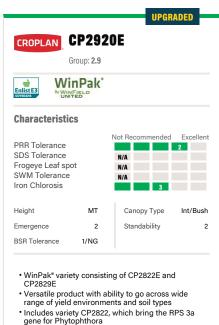


- · Excellent height for hills and stressed acres
- Strong SDS tolerance with acceptable IDC
- · Use caution on SWM prone fields

# Versatile product that can go across a variety of yield environments and soil types

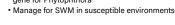
- Very strong IDC and SDS tolerance
- · Use caution on fields with SWM history







- WinPak® variety consisting of CP3043XFS and CP3142XF
- Versatile product with high yield potential; solid defensive characteristics including stacked PRR
- Strong SDS tolerance; med-tall plant type to
- maintain height in stressed environments
   Manage for SWM and FELS in susceptible





- WinPak® variety consisting of CP3121E and CP3131E
- Excellent stress tolerance allows movement east
- Strong IDC and PRR tolerance
- Acceptable standability and FELS tolerance



• WinPak® variety consisting of CP3222E and CP3321E

NA

Emergence

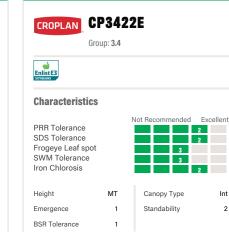
BSR Tolerance

 Stable, offensive variety paired with a new line for solid defensive characteristics and high yield potential

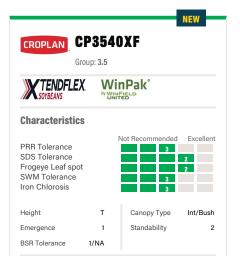
Standability

3

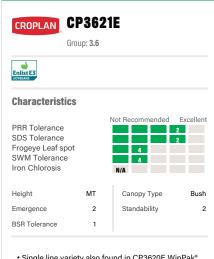
- Excellent stress tolerance and strong PRR tolerance
- Manage for BSR in susceptible environments



- · High yield potential single line with solid disease package and appearance late season
- Versatile variety that can perform nationally from the low- to high-end acre
- Excellent stress tolerance, strong PRR, SDS and
- · Acceptable FELS tolerance



- WinPak® variety consisting of CP3443XF and CP3543XF
- Versatile variety that performs well in both low and high yield potential environments
- Excellent emergence and SSC; very strong SDS
- Acceptable PRR field tolerance with partial Rps1c aene



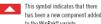
- Single line variety also found in CP3620E WinPak®
- Versatile variety that performs well east to west
- Strong PRR, SDS, and stress tolerance
- Manage for FELS in susceptible environments

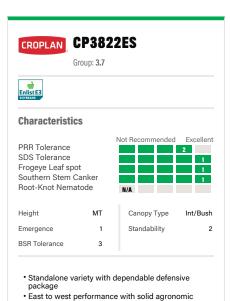


- WinPak® variety consisting of CP3621E and CP3622E
- Upgraded national product with improved overall yield potential, versatility and solid defensive characteristics
- Strong standability late season; strong PRR and SDS tolerance
- · Manage for FELS in susceptible environments

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.

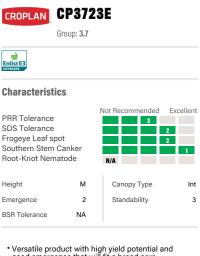


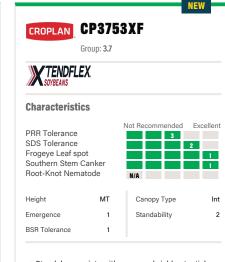


Excellent tolerance to SDS, SSC and FELS

Acceptable rating for white mold - manage areas with issues

package





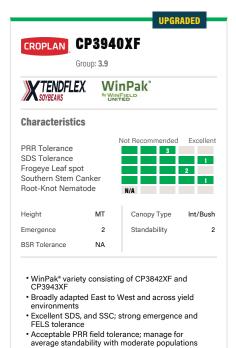
- Versatile product with high yield potential and good emergence that will fit a broad acre
- · Very good East to West movement, with good diversity in a Standalone product
- Standalone variety with strong SDS and FELS.
   Excellent Southern Stem Canker
- Acceptable standability, with a slight watch on PRR
- Standalone variety with very good yield potential and agronomics Intermediate plant plant type that excels in driller
- or 15" row spacing
   Excellent BSR, FELS, SSC and emergence; strong SDS tolerance
- · Acceptable PRR field tolerance rating

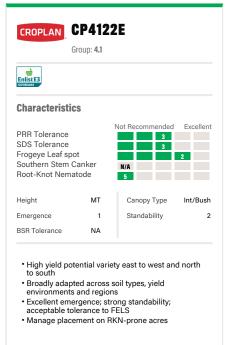


 WinPak® variety consisting of CP4029E with upgrade to CP3922E Stable WinPak® variety that can perform across soil types and yield environments

Excellent emergence and stress tolerance

Manage for SDS and BSR in susceptible fields

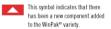


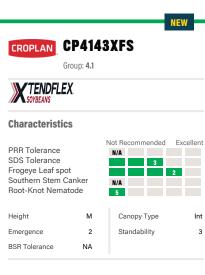




Scale 2 = Strong

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.





- STS-tolerant, standalone with high yield potential
- Good southern movement with attractive reddish pubescence
- Excluder variety with strong FELS tolerance and emergence
- Manage for average SDS and standability



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

P

CP2	NEW CP25	NEW CP2540XF	CP2	CP2400X	NEW CP23	NEW CP2250XF	NEW CP22	CP2128X	NEW CP18	NEW CP1840XF	CP1:	CP1611X	CP15	NEW CP1540XF	NEW CP14	NEW CP13	CP1:	CP1:	RO	
CP2578X*	CP2543XF*	540XF	CP2487X*	X00t	CP2343XF*	250XF	CP2243XF*	128X	CP1843XF*	340XF	CP1742XF	311X	CP1542XF*	540XF	CP1443XF	CP1343XF*	CP1242XF*	CP1240XF	UNDC	SHandi
		CP2543XF*/CP2652XF*		CP2487X*/CP2578X*		CP2243XF*/CP2343XF*				CP1742XF/CP1843XF*				CP1443XF/CP1542XF*				CP1242XF*/CP1343XF*	ROUNDUP READY 2 XTEND®/XTENDFLEX®/ROUNDUP READY 2 YIELD®	Kilingen
2.5	2.5	2.5	2.4	2.4	2.3	2.2	2.2	2.1	1.8	1.8	1.7	1.6	1.5	1.5	1.4	1.3	1.2	1.2	ND®	IIIII
IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	/XTE	Sall
P188.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	P188.788	PI88.788	NDFLEX®	
Rps1c	Rps1c	Rps1c/NG	NG	Rps1c/NG	NG	Rps1c/NG	Rps1c	Rps1c	NG	Rps1c/NG	Rps1c	HRps1c/1k	Rps3a	Rps1c,3a/3a	Rps1c,3a	Rps1c	HRps3a	Rps1c,H3a	/ROUNDUP	angrang angrang
ω	2	2	ω	ω	ω	ω	2	2	2	2	2	ω	-	2	2	2	2	2	忍	\-116.
NA	ω	ω	ω	NA	2	ω	ω	2	2	2	2	2	ω	ω	2	NA	ω	ω	P	901E191
Includer	Includer	Includer/NA	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	2 YIELD	8 Jule 181
4	2	2/NA	4	4	ω	ω	2	-	2	2	2	2	2	2	ь	ω	2	ω	1	Ballog
_	<b>—</b>	-	ш	-	NA	1/NA	-	NA	-	ш	-	ш	-	2	2	NA	ш	1/NA	RM:	ololi
2	2	2	ω	ω	ω	ω	2	ω	2	2	2	ω	ω	ω	ω	2	2	2	1.1 - 2.5	© Jawi
NA	<b>—</b>	1/NA	NA	NA	-	1	-	NA	1	_	1	NA	-	1	-	<b>□</b>	NA	1/NA	2.5	, S. Page
NA	NA	NA	NA	NA	ω	3/NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	_	NA	1/NA		Saloi Saloi
NA	5	5/NA	NA	NA	NA	5/NA	5	NA	5	5/NA	NA	NA	NA	NA	NA	NA	NA	NA		1887
1	2	2	-	_	_	2	2	2	-	2	2	-	2	2	2	ω	_	2		ille
1	2	2	ω	2	ω	2	-	1	-	<u> </u>	1	1	2	2	2	2	1	2		1167
2	2	2	_	2	NA	2/NA	2	NA	2	2/NA	NA	NA	NA	NA	NA	NA	2	2/NA		33th
Int/Bush	Int	Int/Bush	Int	Int/Bush	Int	Int	Int	Int/Bush	Int	Int	Int/Nar	Int	Int	Int	Int	Int	Int	Int		11/81/9
MT	M	MT	Z	M	M	M	Z	≤	M	⊣	_	≤	M	MT	M	≤	M	M		10,
Р	Р	Р	Р	Р	P	Р	Р	₹	Р	Р	Р	Р	P	Р	Р	8	Р	P/W		O add !
GR	GR	GR	LTW	GR/LTW	GR	GR	GR	LTW	GR	GR/LTW	LTW	GR	LTW	LTW	LTW	GR	LTW	LTW/GR		@ Julo
BR	BR	BR/TN	N	BR/TN	BR	N	N	BR	N	BR/TN	BR	N	BR	BR	BR	N	BR	BR/TN		@ Jajor
В	В	BF/IB	ВL	BL/IB	В	GR/IB	GR	BL	BF	BF/BR	BR	В	BR	BR	BR	BF	BL	BL/BF		8

9			ŧ
2			3
_			ш
	_	4	

# Scale 1 = Excellent 2 = Strong 3 = Acceptable

4 = Manage 5 = Not Recommended

NG = No gene present

Product descriptions and ratings are generated from Answer Plot® trials and/or from the genetics

additional data is gathered. supplier and may change as

# SCN Resistant Source

Peking = These varieties contain from the Peking soybean breeding lines SCN resistance genes

P188.788 = These varieties contain SCN resistance genes

from the PI88.788 soybean breeding lines

# PRR Gene

**Rps** = Resistance to Phytophthora sojae

**HRps** = Heterozygous segregating Rps occurrence

5 = Susceptible 4 = Moderately Susceptible

1 = Resistant
2 = Moderately Resistant
3 = Moderately Resistant
Moderately Susceptible

M = Medium S = Short

# Canopy Type

Southern Stem Canker and Root-Knot Nematode

# Plant Height

T= Tall

Nar = Narrow Int = Intermediate Bush = Bushy

Pubescence Type P = Purple W = White

GR = Gray

LTW = Light Tawny TW = Tawny

# 6 Flower Color

TN = Tan BR = Brown

# 8 Pod Color

IY = Imperfect Yellow TN = Tan

# Hilum Color

variations in rainfall, temperature, crop in research trials that change with These ratings reflect trends observed

YE = Yellow/Clear
GR = Gray
BL = Black
IB = Imperfect Black
BR = Brown
BF = Buff
\$L = Slate Ratings on new soybean varieties are based on limited data and may change production patterns and other factors. as more data is collected.

This symbol indicates that there has been a new component added

to the WinPak® variety.

	READY 2 743XF*/CP314	2.8 2.8 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	XTEND®/XTEN  2.6 IND P18  2.7 IND P18  2.8 IND P18  2.8 IND P18  3.0 IND P18  3.1 IND P18	ENDFLEX®/RI P188.788 NG P188.788 RD	ROUNDUP R Rps1c/NG 2 Rps1c,3a/1a 2/ Rps1c,3a/1a 2/ Rps1c,3a/1a 2/ Rps1c,3a NA Rps1c,3a NA Rps1c,3a NA	UP READY 2 2 3 Inc 2 2 Inc 2 2 Inc 2 3 Inc 2 1 Inc 2 1 Inc 3 2 Inc 5 1 Inc 6 1 Inc 7 1 Inc 8 1 Inc 8 2 Inc 9 1 Inc	2 2 1 1 2 2 3 3 2 2 2 3 3 ADY Jugan	2 YIELD®— Includer NA Includer 4 Includer 2 Includer 3 Includer NA	De objete the state of the stat	RW. and Louis Hadilly NA		3 2 4 4 1 3 2 3 3 2 5 Stell legille	NA 1 2 NA 1 1 NA 3 1 NA 3 1 NA 3	N N N N N N N N N N N N N N N N N N N	NA N	NA NA S/NA NA S/NA NA S/NA NA NA S/NA NA S/NA NA S/NA NA NA S/NA NA NA NA S/NA NA NA NA S/NA NA NA NA S/NA NA NA S/NA NA NA S/NA NA NA S/NA NA S/NA NA S/NA NA S/NA NA S/NA NA S/NA S/	NA NA 1  NA NA 1  NA NA 1  NA S/NA 2  NA S/NA 2  NA NA 1  NA NA 1  NA NA 1  NA NA 1  NA NA 1	NA NA 2 2 2  NA NA 5/NA 2 2 2  NA NA 5/NA 2 3 2/N/  NA S/NA 2 3 2/N/  NA NA 1 3 NA  NA NA 1 1 1 NA  1 NA NA 1 1 3 NA  2 NA 1 1 3 NA	NA NA 2 2 2 Int/Bu  NA NA 1 3 NA Int  NA 5/NA 2 2 2 Int/Bu  NA 5/NA 2 3 2/NA Int  NA 5/NA 2 2 2 Int/Bu  NA NA 1 1 NA Int/Bu  NA NA 1 1 NA Int/Bu  NA NA 1 1 NA Int/Bu  NA NA 1 2 NA Int/Bu  NA NA 1 2 NA Int/Bu  NA NA 1 1 NA Int/Bu  NA NA 1 2 NA Int/Bu  NA NA 1 1 NA Int/Bu	NA NA 2 2 2 Int/Bu  NA NA 1 3 NA Int  NA 5/NA 2 2 2 Int/Bu  NA 5/NA 2 3 2/NA Int  NA 5/NA 2 2 2 Int/Bu  NA NA 1 1 NA Int/Bu  NA NA 1 1 NA Int/Bu  NA NA 1 1 NA Int/Bu  NA NA 1 2 NA Int/Bu  NA NA 1 2 NA Int/Bu  NA NA 1 1 NA Int/Bu  NA NA 1 2 NA Int/Bu  NA NA 1 1 NA Int/Bu	NA NA 2 2 2 Int/Bu  NA NA 1 3 NA Int  NA 5/NA 2 2 2 Int/Bu  NA 5/NA 2 3 2/NA Int  NA 5/NA 2 2 2 Int/Bu  NA NA 1 1 NA Int/Bu  NA NA 1 1 NA Int/Bu  NA NA 1 1 NA Int/Bu  NA NA 1 2 NA Int/Bu  NA NA 1 2 NA Int/Bu  NA NA 1 1 NA Int/Bu  NA NA 1 2 NA Int/Bu  NA NA 1 1 NA Int/Bu	NA NA 2 2 2 Int/Bush MT P GR/LTW  NA S/NA 2 3 2/NA Int T P GR/LTW  NA S/NA 2 2 2 Int/Bush MT P GR  NA NA 5 2 2 2 Int/Bush MT P GR/LTW  NA S/NA 2 3 1 Int M P LTW  NA NA 1 1 1 NA Int/Bush T P GR/LTW  NA NA 1 1 3 NA Int/Bush MT P GR/LTW  1 NA 1 2 NA Int/Bush T P GR/LTW  2 NA 1 2 NA Int/Bush T P GR/LTW	NA NA 2 2 2 Int/Bush MT P GR/LTW  NA NA 5/NA 2 3 2/NA Int T P LTW  NA NA 5 2 2 2 Int/Bush MT P GR  NA NA 5 2 2 2 Int/Bush MT P GR  NA NA 5 2 2 2 Int/Bush MT P LTW  NA NA 5 2 2 2 2/NA Int/Bush T P GR/LTW  NA NA 1 1 1 NA Int/Bush T P GR/LTW  2 NA 1 2 NA Int/Bush T P GR/LTW  2 NA 1 2 NA Int/Bush T P GR/LTW
ROUNDU THEIRING THE TRANSPORT	P READY 2 XTE	OTHING SALES SAME	alk annos it	ENDFLEX	/ROUNDUP	ang apply to mining	A San Jah	2 YIELD SHAUMAS	antibuted of	RM: 2.6	Sista Land	5 (kg lakaga hada hada hada hada hada hada hada h		Salaui j	anue profits	Willian Page	30	OH July	July, in 3 saturd	adilant	out Duty	Jaco Julin	<b>S</b>
ROUNDU	P READY 2 XTE	N N	TX/®	<b>ENDFLEX</b> ®	/ROUNDUP	ᇛ	ADY	2 YIELD	1	RM:	2.6	-4.4											
CP2652XF*		2.6	IND	PI88.788	NG	2	ω	Includer	NA	1	2	NA	NA	NA	2	2	2	Int/Bush	MT	Р	GR	IN	뫄
EW CP2743XF		2.7	IND	PI88.788	NG	2	2	Includer	5	NA	ω	_	NA	NA	1	ω	NA	Int	-	Р	LTW	BR	ВГ
CP2840XF	CP2743XF/CP2843XF*	2.8	IND	P188.788	Rps1c/NG	2	2	Includer	4	1/NA		<u>-</u>	NA	5/NA		ω	2/NA	Int	_	Р	GR/LTW	BR/TN	BL/IB
		2.8	IND	P188.788	Rps1c	2	2	Includer	2	_	2	-	NA	5	2	2	2	Int	M	Ρ	GR	N	В
		3.0	IND	PI88.788	Rps1a	2	ω	Includer	ω	ω	ω	_	NA	5	2	2	2	Int/Bush	M	Р	LTW	BR	ВГ
CP3057XS		3.0	IND	P188.788	HRps1c	4	2	Includer	NA	$\vdash$	_	NA	NA	NA	2	ω	$\vdash$	Int	≤	Р	LTW	N	ВГ
CP3140XF	CP3043XF*/CP3142XF*	3.1	IND	PI88.788	Rps1c,3a/1a	2/NA	2	Inc/Exc	3/NA	ω	4	-	NA	5/NA		2	2/NA	Int/Bush	_	Р	GR/LTW	BR	BL/IB
CP3142XF*		3.1	IND	P188.788	Rps1c,3a	NA	_	Excluder	NA	2	4	_	NA	NA	_	1	NA	Int/Bush	-	Ρ	GR	BR	В
NEW CP3443XF*		3.4	IND	PI88.788	NG	2	-	Includer	2	NA	2	-	-	NA	-	ω	NA	Int/Bush	M	P	LTW	BR	ВГ
CP3540XF	CP3443XF*/CP3543XF*	3.5	IND	PI88.788	Rps1c/NG	ω	2	Inc/Exc	ω	1/NA	ω	-	2	NA	<u>-</u>	2	NA	Int/Bush	-	Ρ	GR/LTW	BR	BL/IB
NEW CP3543XF*		3.5	IND	PI88.788	Rps1c	4	2	Excluder	ω	-	4	-	ω	NA	-	-	N <sub>A</sub>	Int	_	Р	GR	BR	В
NEW CP3753XF		3.7	IND	P188.788	NG	ω	2	Includer	NA	_	ω	_	_	NA	_	2	NA	Int	M	Ρ	LTW	BR	ВГ
CP3806XS		3.8	IND	PI88.788	Rps1c	4	2	Excluder	5	2	1	4	ω	4	2	2	_	Int/Bush	≤	8	GR	BR	В
CP3842XF*		4.0	IND	PI88.788	NG	ω	<u>-</u>	Includer	NA	NA	4	<u></u>	<u></u>	5	2	-	NA	Int/Bush	MT	Р	LTW	BR	ВГ
CP3940XF	CP3842XF*/CP3943XF*	3.9	IND	PI88.788	Rps1c/NG	ω	-	Includer	NA	N <sub>A</sub>	ω	-	2	5/NA	2	2	NA	Int/Bush	M	Р	GR/LTW	BR	BL/IB
NEW CP3943XF*		3.9	IND	PI88.788	Rps1c	ω	-	Includer	NA	NA	2	ш	2	NA	2	2	NA	Int/Bush	M	Р	GR	BR	В
NEW CP4143XFS		4.1	IND	PI88.788	Rps1a	NA	ω	Excluder	NA	NA	ω	NA	2	5	2	ω	NA	Int	3	P	LTW	BR	ВГ
NEW CP4343XF		4.3	IND	PI88.788	Rps1c	2	_	Includer	NA	ь	4	-	_	NA	_	ω	NA	Int/Bush	M	₹	LTW	N	ВГ

Scale

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

NG = No gene present

Product descriptions and ratings are generated from Answer Plot® trials and/or from the genetics

additional data is gathered. supplier and may change as

SCN Resistant Source

Peking = These varieties contain breeding lines from the Peking soybean SCN resistance genes

P188.788 = These varieties contain SCN resistance genes from the PI88.788 soybean breeding lines

PRR Gene

Rps = Resistance to Phytophthora sojae

**HRps** = Heterozygous segregating Rps occurrence

Southern Stem Canker and Root-Knot Nematode

1 = Resistant
2 = Moderately Resistant
3 = Moderately Resistant
Moderately Susceptible

4 = Moderately Susceptible5 = Susceptible

Plant Height T= Tall

P = Purple W = White

Nar = Narrow Int = Intermediate Bush = Bushy

Canopy Type

Pubescence Type

M = Medium S = Short **LTW** = Light Tawny TW = Tawny GR = Gray

6 Flower Color

8 Pod Color

TN = Tan
BR = Brown

IY = Imperfect Yellow TN = Tan 9 Hilum Color

in research trials that change with

These ratings reflect trends observed

YE = Yellow/Clear
GR = Gray
BL = Black
IB = Imperfect Black
BR = Brown
BF = Buff
\$L = Slate production patterns and other factors. variations in rainfall, temperature, crop

based on limited data and may change Ratings on new soybean varieties are as more data is collected.

This symbol indicates that there has been a new component added to the WinPak® variety.

Þ			NEW		<b>&gt;</b>					NEW		NEW	NEW			NEW	NEW					/	Relli	İW
► CP2920E	CP2829E*	CP2822E	NEW CP2523E*	CP2521E*	CP2520E	CP2322E	CP2232E*	CP2222E*	CP2220E	CP2123E	CP2122E	CP2030E	CP1923E*	CP1722E*	CP1721E	CP1720E	CP1623E	ENLIST E3®	/35	andhi	in State of the st	allen	y	
CP2822E/CP2829E*					CP2521E*/CP2523E*				CP2222E*/CP2232E*			CP1923E*/CP2122E				CP1721E/CP1722E*		E3 <sup>®</sup> — RM: 1.6-3.0		/	IIE	le l	188	/
2.9	2.8	2.8	2.5	2.5	2.5	2.3	2.2	2.2	2.2	2.1	2.1	2.0	1.9	1.7	1.7	1.7	1.6	ა	VI)	HIHIR	Sapul Sapul	Sisan	W.	
IND	IND	IND	IND	IND	IND	IND	IND	IND	ND	IND	IND	IND	IND	IND	IND	IND	IND		97	Silice	55°	/		
PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PEKING	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PEKING			31130	HHd			
Rps1k	Rps1k	Rps1k	Rps1a	NG	Rps1a/NG	Rps1c	NG	Rps1c	Rps1c/NG	Rps1c	Rps1c	Rps1k/1c	Rps1k	Rps3a	Rps1k	Pps1k,3a	Rps1k			,gi0	JAHd	/	/	/ /
2	1	2	2	2	2	2	2	ω	ω	2	2	2	2	-	2	2	2		80.	is 1810	T Sur	CHI		
3/NA	NA	ω	ω	4	4	1	2	ω	ω	2	ω	ω	2	2	ω	ω	2		S)	181810	<i>y</i> ,	/		
Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer			/.	MM	/	/	/
3/NA	NA	ω	ω	4	4	2	2	ω	2	ω	2	2	2	ω	2	ω	ω		80	181810	Juli		nos	/
1/NG	_	NG	NG	<u></u>	1/NA	2		2	2	NA	2	2/NG	NG	ω	NG	3/NG	<u></u>		/	101.	/ 3	∕ כּ	X.	/
ω	2	ω	ω	<b>—</b>	2	ω	2	2	2	2	ω	ω	2	ω	2	2	2		ς. ζ.	ISHIP	Sell (Sell)	H	nd/	/
NA	NA	NA	<u> </u>	NA	1/NA	ш	NA	-	NA	_	_	-	1	NA	NA	NA	_		\(\delta\)	Ska	Talaha Salaha	OII Y. T	/	<i>'</i>
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					/	/	/
NA	NA	NA	υ	NA	5/NA	NA	NA	NA	NA	5	NA	1/NA	1	5	NA	5/NA	1		/ 3	19 <sub>0</sub> .	/			,
2	1	2	2	-	2	2	2	2	2	_	2	2	_	-	_	_	_		اند./	liez	\ <sup>E</sup> 8 <sub>)</sub>	,s		
2	2	2	2	4	ω	2	2	2	2	ω	2	2	2	ω	1	2	2		891	181810	done	3	/	/
2	1	2	2	1	2	NA	2	NA	NA	1	NA	1/NA	1	_	2	2	1			Squ.			/	/
Int/Bush	Int/Bush	Int/Bush	INT	TNI	TNI	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	TNI	Int			/3	Jile,		/	/
M	M	M	M	M	M	≤	M	MT	M	M	≤	M	M	MT	≤	M	M			1010;	71835	adho	· /	/
P/W	≷	Ρ	Р	Р	Р	Р	×	Р	PW	Ρ	Р	Р	Р	Р	Р	Ρ	Р			જ	,	/		,
GR	GR	GR	GR	GR	GR	GR	GR	GR	GR	GR	GR	GR/LTW	LTW	GR	GR	GR	GR		,	,o;	10.			
BR/TN	N	BR	BR	BR	BR	BR	N	BR	BR/TN	N	BR	BR	BR	N	BR	BR/TN	N			Jolo;	Junia			
BF/IB	BF	IB	BF	IB	BF/IB	В	BF	IB	BF/IB	IB	В	BL/IB	BL	BF	В	IB/BF	BF		8	)				

ΚEΥ

Scale

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

NG = No gene present

Product descriptions and ratings are generated from Answer Plot® trials and/or from the genetics

additional data is gathered. supplier and may change as

SCN Resistant Source

Peking = These varieties contain breeding lines from the Peking soybean SCN resistance genes

P188.788 = These varieties contain from the PI88.788 soybean breeding lines SCN resistance genes

PRR Gene

Rps = Resistance to Phytophthora sojae

**HRps** = Heterozygous segregating Rps occurrence

Southern Stem Canker and Root-Knot Nematode

1 = Resistant
2 = Moderately Resistant
3 = Moderately Resistant
Moderately Susceptible

4 = Moderately Susceptible5 = Susceptible

T= Tall

Plant Height Bush = Bushy

Canopy Type Nar = Narrow Int = Intermediate P = Purple W = White

Pubescence Type

LTW = Light Tawny TW = Tawny GR = Gray

M = Medium S = Short

6 Flower Color

8 Pod Color

TN = Tan
BR = Brown

9 Hilum Color

YE = Yellow/Clear
GR = Gray
BL = Black
IB = Imperfect Black
BR = Brown
BF = Buff
SL = Slate

TN = Tan

IY = Imperfect Yellow

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

This symbol indicates that there has been a new component added

to the WinPak® variety.

				NEW												8. dilin
CP4029E*	CP3922E*	CP3920E	CP3822ES	NEW CP3723E	CP3622ES*	CP3621E	CP3620E	CP3422E	CP3321E*	CP3320E	CP3222E*	CP3131E*	CP3121E*	CP3120E	ENLIST E3®	SHANDHITT FEATEN SEATH
		CP3922E*/CP4029E*					CP3621E/CP3622ES*			CP3222E*/CP3321E*				CP3121E*/CP3131E*	E3® — RM: 3.1-4.0	ileles ileles
4.0	3.9	3.9	3.7	3.7	3.6	3.6	3.6	3.4	ယ ယ	ω .ω	3.2	3.1	3.1	3.1	4.0	Satura integration
IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND		91 Julios
PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788		O along bud
NG	Rps1k	Rps1k/NG	Rps1c	HRps1k	Rps1k	Rps1k	Rps1k	NG	NG	NG	NG	Rps1c	NG	Rps1c/NG		ati titid
2	2	2	2	ω	2	2	2	2	2	2	2	ш	2	2		Soft Soft Soft Soft Soft Soft Soft Soft
2	ω	ω	-	2	2	2	2	2	ω	ω	2	ω	4	4		order and support
Includer	Includer	Includer	Excluder	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer	Includer		REBUTHIE
NA	NA	NA	5	NA	4	4	4	ω	4	4	4	4	ω	4		Surfacility 11 11 11 11 11 11 11 11 11 11 11 11 11
5	NG	NA	ω	N A	-	1	_	_	ω	NA	NG	ω	NG	NA		July 1818
2	2	2	2	NA	ω	NA	NA	2	2	ω	ω	2	2	2		SI, 18MES FORT
-	_	_	ш	_	NA	_	NA	NA	-	NA	NA	_	_	_		Search Control of Search Contr
2	ω	ω	-	2	2	4	4	ω	ω	ω	2	_	ω	ω		
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		/ilagr/
-	-	_	-	2	2	2	2	_	-	_	-	_	2	2		schaft saits
2	-	2	2	ω	2	2	2	2	ω	ω	2	2	2	ω		STREAD SOUTH OF STREAM SOUTH O
<b>—</b>	2	2	NA	NA	2	1	2	1	-	1	-	1	-	1		adir
Int	Int	Int	Int/Bush	Int	Int	Bush	Int/Bush	Int	Bush	Bush	Bush	Int/Bush	Int/Bush	Int/Bush		"IIIE"
MT	M	M	M	≥	M	M	M	M	M	M	M	M	M	M		Into Ita Santo
8	8	≤	8	Р	Р	Р	Р	Р	Р	Р	Р	8	8	≤		
GR	LTW	GR/LTW	GR	GR	LTW	GR	GR/LTW	LTW	LTW	GR/LTW	GR	GR	LTW	GR/LTW		OPU
BR	N	BR/TN	¥	Ĭ	BR	N	BR/TN	BR	BR	BR/TN	Ĭ	BR	BR	BR		O late 3 miles
BF	BR	BF/BR	BF	В	ВГ	IB	BL/IB	ВГ	BR	BR/IB	В	BF	BR	BF/BR		∕ 🔊

# ΚEΥ

Scale
1 = Excellent
2 = Strong
3 = Acceptable
4 = Manage
5 = Not Recommended
N6 = No gene present

Product descriptions and ratings are generated from Answer Plot® trials and/or from the genetics

supplier and may change as additional data is gathered.

# SCN Resistant Source

Peking = These varieties contain breeding lines from the Peking soybean SCN resistance genes

P188.788 = These varieties contain SCN resistance genes from the PI88.788 soybean breeding lines

# 2 PRR Gene

**Rps** = Resistance to Phytophthora sojae

**HRps** = Heterozygous segregating Rps occurrence

# Southern Stem Canker and Root-Knot Nematode

1 = Resistant
2 = Moderately Resistant
3 = Moderately Resistant—
Moderately Susceptible
4 = Moderately Susceptible
5 = Susceptible

M = Medium S = Short T = Tall

# Canopy Type

Nar = Narrow Int = Intermediate Bush = Bushy

# Plant Height

# 6 Flower Color

P = Purple W = White

# Pubescence Type

**GR** = Gray

**LTW** = Light Tawny TW = Tawny

# 8 Pod Color

TN = Tan
BR = Brown

# Hilum Color

in research trials that change with These ratings reflect trends observed

# YE = Yellow/Clear GR = Gray BL = Black IB = Imperfect Black BR = Brown BF = Buff SL = Slate TN = Tan

production patterns and other factors. Ratings on new soybean varieties are variations in rainfall, temperature, crop as more data is collected. based on limited data and may change

IY = Imperfect Yellow

This symbol indicates that there has been a new component added to the WinPak® variety.

\*WinPak® seed components only. Not for sale individually.

NEW					NEW	<b>&gt;</b>			
NEW CP4923ES	CP4822ES	CP4529ES	CP4521E	CP4331ES*	NEW CP4323E	CP4320ES	CP4122E	<b>ENLIST</b>	2 Hallothia
						CP4331ES*/CP4323ES		ENLIST E3® — RM: 4.1-5.0	om arti
4.9	4.9	4.5	4.5	4.3	4.3	4.3	4.1	5.0	ALIMBO SI
ND	IND	ND	IND	IND	IND	IND	IND		3 agriffic Si
NG	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788	PI88.788		Called HH
NG	NG	NG	Rps1a	NG	NG	NG	NG		N. S.
ω	ω	ω	2	2	ω	ω	ω		Solf Blot St.
2	ω	ω	2	2	2	2	ω		Solf Bull St.
Excluder	Excluder	Excluder	Includer	Includer	Includer	Includer	Includer		W.10.
NA	NA	NA	NA	NA	NA	NA	NA		Solf Bull B
NA	NA	NG	NG	NA	NA	NG/NA	NA		/.([3
NA	NA	NA	NA	2	NA	2/NA	NA		S Patrice In
$\vdash$	NA	-	Н	-	<b>—</b>	-	NA		12 kg 1 gr
ω	2	2	2	2	2	2	2		Total and State of St
NA	NA	5	<sub>Ω</sub>	5	51	5	5		Salaga and a salaga a
<b>—</b>	2	2	-	-	2	2	-		Villeding's
2	2	ω	2	-	2	2	2		KHIRADI SE
_	NA	-	NA	2	2	2	NA		3 alk lite
Int	Int/Bush	Int/Bush	NA	Int	Int	Int	Int/Bush MT		/.\
M	MT	MT	M	M	M	MT	MT		ido ja
⋖	≷	Ρ	Р	≷	8	8	×		O July Sur
GR	GR	GR	GR	GR	LTW	GR/LTW	LTW		1010300
BR	BR	BR	¥	BR	BR	BR	BR		@ Jano Jun
ΥE	BF	IB	IB	BF	ВГ	BF/BL	BR		<b>(6)</b>

KEY

- Scale
  1 = Excellent
  2 = Strong
  3 = Acceptable
- 4 = Manage 5 = Not Recommended
- NG = No gene present

additional data is gathered. supplier and may change as

- Product descriptions and ratings are generated from Answer Plot® trials and/or from the genetics

# soybean breeding lines

from the PI88.788

# SCN Resistant Source

Peking = These varieties contain from the Peking soybean SCN resistance genes

P188.788 = These varieties contain SCN resistance genes breeding lines

# PRR Gene

Rps = Resistance to **HRps** = Heterozygous segregating Phytophthora sojae Rps occurrence

- 1 = Resistant
  2 = Moderately Resistant
  3 = Moderately Resistant
  Moderately Susceptible
- 5 = Susceptible 4 = Moderately Susceptible

# Southern Stem Canker and Root-Knot Nematode

# Plant Height

M = Medium S = Short T= Tall

# Canopy Type

Nar = Narrow Int = Intermediate Bush = Bushy

LTW = Light Tawny TW = Tawny

# 6 Flower Color

P = PurpleW = White

Pubescence Type **GR** = Gray

# 8 Pod Color

TN = Tan
BR = Brown

IY = Imperfect Yellow TN = Tan

# 9 Hilum Color

These ratings reflect trends observed

# YE = Yellow/Clear GR = Gray BL = Black IB = Imperfect Black BR = Brown BF = Buff \$L = Slate

# Þ

Ratings on new soybean varieties are in research trials that change with as more data is collected. based on limited data and may change production patterns and other factors. variations in rainfall, temperature, crop

This symbol indicates that there has been a new component added to the WinPak® variety.

\*WinPak® seed components only. Not for sale individually.





Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	





We're here to help you select the best genetics for your field. And by pairing new traits with the latest technologies, you'll stand the best chance to produce high-quality feed and optimize tonnage.

1 of 2

### **KEY TAKEAWAYS**

- Choose varieties with the traits and pest resistance package to fit your fields.
- Use coated seed to help you improve stand establishment and seed efficiency with the traits and pest resistance package to fit your fields
- 3 Manage in-season by Reading the Stand and harvesting/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.
- It occurs most often under warm, moist conditions.
- It causes yield loss of up to 25%.
- Susceptible plants have large, sunken ovalto 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, watersoaked roots, yellowed cotyledons, and stunted growth that can result in limited yield production or stand failure.

### **CROPLAN AA ALFALFA:**

# ▶ Advanced disease resistance packages

- New varieties are available that offer disease resistance to multiple races of both Aphanomyces root rot and Anthracnose
- The combination of healthy roots and healthy stems lead to higher alfalfa yield potential.
- Below ground, alfalfa roots gather water and nutrients.
- Above ground, stems and leaves produce and transport plant energy to make valuable forage.
- Diseases can limit these plant processes.
- An enhanced multi-pathogen disease package helps protect alfalfa stems and crowns that transport valuable plant energy.

# ► 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 overhandling 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.

## **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.<sup>1</sup>

# 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.<sup>2</sup>

# **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 RFQ<sup>3</sup> and NDFd<sup>3</sup> than conventional varieties cut on the same day.
- Achieve up to 20% higher yield at harvest<sup>4</sup> 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.

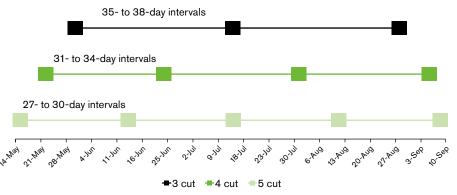
# FLEXIBILITY OF HARVXTRA® ALFALFA HAS NEVER BEEN MORE IMPORTANT

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

# HARVXTRA® CUTTING SCHEDULE







# CROPLAN HVX Tundra II

Regions: East|North|West Dormancy: 3.3 Winterhardiness: 1.2



### **Characteristics**

Yield Index Persistence Index Feed Quality\* Disease Resistance Insect Resistance Nematode Resistance



\*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.

- H1 feed quality rating; highest forage quality potential in our lineup; on average, 24% higher NDFD than Roundup Ready\* check varieties
- · Ideal for Northern growing regions or high elevation; good disease and pest package for east to west adaptation
- Versatile harvest options: ideal for a 2- to 3-cut baled hay management system or great for a 1- or 2-cut hay harvest followed by grazing

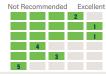
# CROPLAN HVX Driver

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



### **Characteristics**

Yield Index Persistence Index Feed Quality\* Disease Resistance Insect Resistance Nematode Resistance



"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

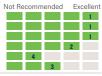
# CROPLAN HVX MegaTron

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



### **Characteristics**

Yield Index Persistence Index Feed Quality\* Disease Resistance Insect Resistance Nematode Resistance



\*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

# NEW

# CROPLAN HVX MegaTron AA

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



### **Characteristics**

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

\*Feed quality ratings for HarvXtra\* Alfalfa are represented on a separate sithan Roundup Ready\* and conventional alfalfa varieties and are signified van 'H'. Because there is a significant improvement in Forage quality, HarvX Alfalfa products can only be compared to other HarvXtra Alfalfa products.

- H2 feed quality rating; exceptional root and plant health with the AA disease resistance package 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 and quality potential; ideal with a 3- to 5-cut flexible harvest system based on geography

### CROPLAN

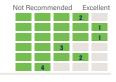
# **RR Presteez**

Regions: Central|East|North|West Dormancy: 3.2 Winterhardiness: 1.2



### **Characteristics**

Yield Index Persistence Index Feed Quality Disease Resistance Insect Resistance Nematode Resistance



- High forage quality potential ideal for baled hay or haylage harvest
- Excellent salt-tolerance ratings in germination tests and exceptional performance in stand persistence trials
- Ideal for Upper Midwest and West as a 3- to 4-cut baled hay and/or haylage harvest system

# CROPLAN

# **RR Vamoose**

Regions: Central|East|North Dormancy: 3.9 Winterhardiness: 1.8



### **Characteristics**

Yield Index Persistence Index Feed Quality Disease Resistance Insect Resistance Nematode Resistance



- Performs well in the Upper Midwest and East where high resistance to potato leafhopper (PLH) may be necessary
- PLH resistance provides improved yield potential, high-quality feed and stand persistence

  Outstanding agronomics; PLH resistance offers
- reduced-spray or no-spray options; best-suited in a 3- to 4-cut system



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.

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.

# CROPLAN RR AphaTron AA

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



### Characteristics

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

- The newest addition in the AA disease resistance package; exceptional root and plant health to support top notch 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)
- Provides exceptional yield and forage quality potential under a 4- to 5-cut haylage or aggressive hay management system

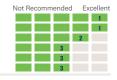
# CROPLAN RR AphaTron 2XT

Regions: Central|East|North|West Dormancy: 4 Winterhardiness: 1.5



### Characteristics

Yield Index Persistence Index Feed Quality Disease Resistance Insect Resistance Nematode Resistance



- Great soil disease resistance to help improve root and plant health
- High resistance (HR) to Aphanomyces root rot disease races 1 and 2; resistant (R) to EMR
- Provides high yield potential and good forage quality potential under a 4- to 5-cut haylage or aggressive hay management system

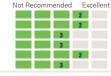
# CROPLAN RR Stratica

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



### Characteristics

Yield Index Persistence Index Feed Quality Disease Resistance Insect Resistance Nematode Resistance



- 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

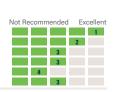
# CROPLAN RR Tonnica

Regions: Central|East|North|South|West Dormancy: 5 Winterhardiness: 2



# **Characteristics**

Yield Index Persistence Index Feed Quality Disease Resistance Insect Resistance Nematode Resistance



- · Maximize yield potential all season long
- Well-rounded pest resistance package for wide-range adaptability from east to west
- Very early spring growth, fast regrowth and late fall growth; aggressive 5-cut schedule

# CROPLAN

# Maxi Graze®

Regions: North|West Dormancy: 2 Winterhardiness: 2

# **Characteristics**

Yield Index Persistence Index Feed Quality Disease Resistance Insect Resistance Nematode Resistance



- Recessed crown provides excellent durability for grazing or high-traffic fields; exceptional winterhardiness and stand persistence
- Great yield and quality potential for northern regions or high elevations; ideal for 1- or 2-cut mechanical harvest followed by grazing
- · Excellent option for mixed grass and alfalfa

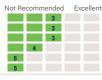
# CROPLAN

# MP 1000 Brand

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

# **Characteristics**

Yield Index Persistence Index Feed Quality Disease Resistance Insect Resistance Nematode Resistance



- 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

# CROPLAN LegenDairy AA

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

### **Characteristics**

Yield Index Persistence Index Feed Quality Disease Resistance Insect Resistance Nematode Resistance



- 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

# CROPLAN

# TrailBlazer XHH

Regions: Central|East|North Dormancy: 4 Winterhardiness: 3

### **Characteristics**

Yield Index Persistence Index Feed Quality Disease Resistance Insect Resistance Nematode Resistance



- Excellent resistance to potato leafhopper (PLH); improved yield potential; high-quality feed and stand persistence
- PLH resistance offers reduced-spray or no-spray
- Great option for the Upper Midwest and East; best suited in a 3- to 4-cut hay/ haylage harvest system
- Available with Apex™ Green Seed Coating; OMRI Listed® for organic use

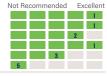
# CROPLAN

# Rebound AA

Regions: Central|East|North|West Dormancy: 4.4 Winterhardiness: 1.7

### **Characteristics**

Yield Index Persistence Index Feed Quality Disease Resistance Insect Resistance Nematode Resistance



- 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)
- 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
- Available with Apex™ Green Seed Coating; OMRI Listed® for organic use

# NEW

### CROPLAN

# **Gunner AA**

Regions: Central|East|North|South|West Dormancy: 4.8 Winterhardiness: 1.2

# **Characteristics**

Yield Index Persistence Index Feed Quality Disease Resistance Insect Resistance Nematode Resistance



- · Outstanding AA disease resistance combined with
- maximum yield potential

   High resistance (HR+) to multi-race Aphanomyces root rot disease (races 1, 2, and EMR); HR+ to multi-race anthracnose disease (including race 5)
- Very early spring growth, fast regrowth and late fall growth; ideal for aggressive 5- to optional 6-cut hay or haylage harvest schedule

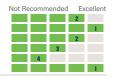
# CROPLAN

# Gunner

Regions: Central|East|North|South|West Dormancy: 4.9 Winterhardiness: 1.2

### **Characteristics**

Yield Index Persistence Index Feed Quality Disease Resistance Insect Resistance Nematode Resistance



- · Optimize yield potential with very early spring growth, fast regrowth and late fall growth
- Good disease resistance package allows this variety to move well in the East as haylage to the West as dry hay
- Plan for aggressive 5- to optional 6-cut hay or haylage harvest schedule
- Available with Apex™ Green Seed Coating; OMRI Listed® for organic use

# ALFALFA VARIETY PLACEMENT

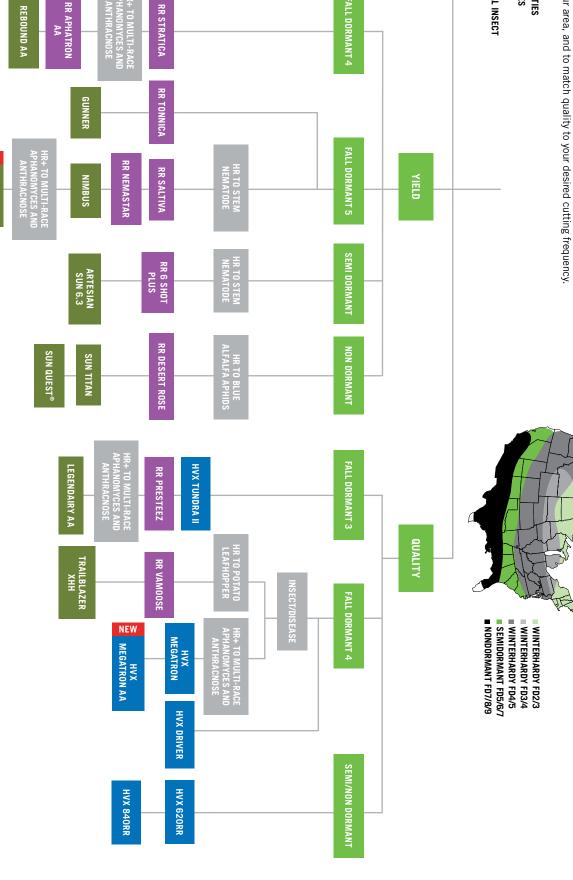
Fall dormancy and winterhardiness are important considerations in alfalfa seed selection. This map shows CROPLAN seed varieties that match fall dormancy and winterhardiness zones in various regions of the United States.

PRODUCT DORMANCY MAP<sup>2</sup>

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.

- HARVXTRA® ALFALFA VARIETIES
- ROUNDUP READY® VARIETIES
- CONVENTIONAL VARIETIES
- VARIETIES WITH ADDITIONAL INSECT AND DISEASE RESISTANCE

GRAZING & HAY



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.

NEW

**GUNNER AA** 

MAXI GRAZE®

NEW

GRAZE N HAY 3.10 RR

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

						NEW						NEW					
RR 6 Shot Plus	RR Tonnica	RR NemaStar	RR Saltiva	RR Stratica	RR AphaTron 2XT	RR AphaTron AA	RR Vamoose	RR Presteez	Graze N Hay 3.10RR	HVX 840RR Brand	HVX 620RR Brand	HVX MegaTron AA	HVX MegaTron	HVX Driver	HVX Tundra II	HARVXTRA®/ROUNDUP READY® ALFALFA	
Roundup Ready	Roundup Ready	Roundup Ready	Roundup Ready	Roundup Ready	Roundup Ready	Roundup Ready	Roundup Ready	Roundup Ready	Roundup Ready	HarvXtra	HarvXtra	HarvXtra	HarvXtra	HarvXtra	HarvXtra	UP READY®	Hert Ap
ady 6.0	ady 5.0	ady 4.9	ady 4.8	ady 4.3	ady 4.0	ady 4.4	ady 3.9	ady 3.2	ady 2.9	7.9	6.0	4.4	4.2	4.0	3.3	ALFALF/	tarenten en per
,	2		2								,		1			P	esa, hair elaq
	.0	2.8	.5	2.0	1.5	.4	1.8	1.2	1.8			1.4	.7	2.0	1.2		1941, 11912, 1190
-	_	2	_	2	_	-	ω	2	ω	2	2		_	2	2		talill Kilk Sis
2	2	2	2	2	1	-	_	-	1	-	2	-	1	-	_		
ω	ω	$\vdash$	ω	ω	2	2	ω	-	ω	Н3	Н3	Н2	Н2	Н2	H.		COME TO WEATH FEET
4	4	ω	4	4	4	4	2	ω	-	5	5	4	4	4	ω		oregal telepa oregal distributed under a griffic distributed
-	2	2	_	2	2	2	-	-	_	-	_	2	2	2	_		(holdschilly)
-	<u></u>	_	<b>⊢</b>	⊷	<u>-</u>	<b>⊢</b>	4	2	4	⊷	<u>-</u>	<u>-</u>	<u></u>	-	2		acuteria salidatent likal salidatenta likal salid
_	I	Ŧ	ェ	I	ェ	Ŧ	I	Ŧ	ェ	æ	ェ	Ŧ	I	Ŧ	Ŧ		Jog Challes (Malley)
	품 -	품 -	품 -		HR -	품 -	HR +	품 -	품 -		HR -	HR -	H .	품 -	품 -		
ľ							풌										1838 283/1111
æ	HR	HR	HR	ŦR	HR	HR+	HR	퐀	HR	'	R	HR+	HR+	퐀	HR		Laste Sandruster Constitution of the Constitut
'	1	1	1	1	HR	HR+	1	1	1	1	1	HR+	HR+	1	R		/ 33' 25' /
'		•	1		R	HR+			1		1	HR+	HR+		R		Se of the second
R	_	_	_	_	_	_	_	_	_	æ	_	_	_	_	_		FIIM. 9201 Undering
_	丟	픘	丢	픘	픘	丢	픘	픘	丢	_	MR -	픘	丟	픘	픘		192 11192
⇒	⇒	⇒	⇒	⇒	⇒	<del>\$</del>	⇒	⇒	⇒	مد	الد	<del>1</del> 2+	<del>1</del> 2+	⇒	⇒		\"\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
'	1	1	1	1	1	HR+	1	1	1	1	1	HR+	R	1	1		ogorium unitariories sogorium
Ŧ	품	품	Ŧ	퓨	퓨	- 芸	퓨	픘	Ŧ	≂	퓨	- 芸	품	픘	퓨		thing as 4 and the little
HR	HR	HR	HR	HR.	HR	퓨	HR	HR	HR		1	HR	HR	HR	HR		illi, olk,
HR.	-	~ ₽	~ ₽	~ ₩	-	~ ∞	~ ₹	~ ≂	~ ₽	ಸ	HR	~ ∞	~ ₹	~ ≂	-		hin 689 Asula
景	R	R	HR	ZD	HR	æ	MR	HR	1	HR	₹ HR	HR	R	R	R		phile short in the state of the
70	,	,			R -		R -	R -	1	70	R -	R -	,		1		THE STATE OF THE S
_	_	_	MR +	_	æ		_	_		æ	æ	æ	æ		æ		200, 2Mx 150r.
	R -	HR R	HR -	R -	70	Ċ	MR -	MR -		70	70	70	70	Ċ	λ -		Schrisch Biching  Ogden Biching  Ogd
G	G	۰ G	G	G	G		G	G	G				G	G	G		Schristing and the property of
																	origises produced a state of the state of th
4	ω	ω	ω	ω	ω	_	ω	ω	ω	4	4	_	2	4	2		32118125 A 311 L
2	4	ω	_	2	ω	ω	ω	2	4	2	2	ω	4	ω	4		ague st.
1	ω	1	1	ω	ω	'	4	4	5	ω	ω	ω	ω	5	ω		ľ

1 = Excellent	

RR Desert Rose

Roundup Ready 8.5 - 1 2 3 5 1 1 HR - - - - MR HR - HR - HR HR HR R - G 4 1 3

2 = Strong
3 = Acceptable
4 = Manage
5 = Not Recommended

# Feed Quality Index

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

# 2 Salt Tolerance

**G** = 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.

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

R

SUN QUEST®

Conventional

9.0

MR

MR

æ

품

HR

퓨

5	-
п	
_	
	_

# Scale

- 1 = Excellent
- 4 = Manage5 = Not Recommended

# 2 = Strong3 = Acceptable

# Feed Quality Index

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

be compared to other HarvXtra® Alfalfa products.

# Salt Tolerance

- **G** = 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

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

tolerant ratings may not predict field performance. **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

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





Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	



# CORN SILAGE

We work with you to select our Data Proven (high quality x high tonnage) silage products, diagnose pest problems and figure out the right levels of quality nutrients in your silage throughout the growing season.

#### **KEY TAKEAWAYS**

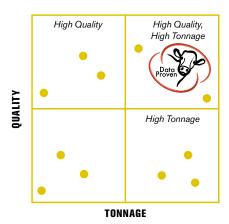
- 1 Select hybrids based on forage quality and tonnage needs.
- 2 Properly harvest and store your crop.

# SELECT HYBRIDS FOR QUALITY AND TONNAGE

This scatter graph illustrates yield as tonnage per acre on the horizontal axis and milk per ton as quality on the vertical axis. The lines through the center represent the trial average.

Each year, replicated corn silage trials are planted at Answer Plot® locations nationwide. After harvest, data is compiled and summarized over multiple years and locations to provide a performance snapshot.

Considering both nutrient requirements and agronomic factors during hybrid selection is an important risk-management tool for corn silage products. CROPLAN® corn silage hybrids that consistently perform in this high-quality and high-tonnage quadrant are marked with the Data Proven logo.



Your nutritionist can determine the parameters for nutrient needs, and your WinField United representative can use Answer Plot® data in the R7® Tool to help position each hybrid for optimal performance based on multiple variables.

#### **SEE HOW SEED MEASURES UP**

The CHT function of the R7® Tool uses Answer Plot® program data to compare CROPLAN® seed products, as well as seed from other major companies, to see how they are projected to perform in fields like yours. CHT charts show how various hybrids are projected to perform at high and low plant populations when compared to the following categories:\*

- Yield
- Milk per ton
- NDFD

\*Other categories are available.

#### SILAGEFIRST® SEED LINE DELIVERS

The SilageFirst® seed line of products from CROPLAN® seed is specifically designed for high-producing dairy and beef cattle. There are three types of SilageFirst® hybrids.

#### **LEAFY HYBRIDS**

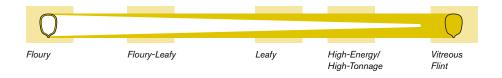
Leafy stalks are thicker and more digestible, with larger ears to produce more energy.

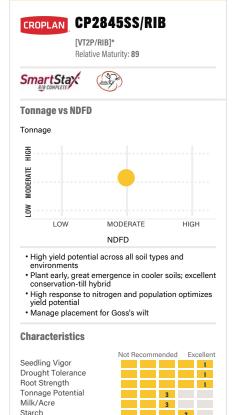
#### FLOURY-LEAFY HYBRIDS

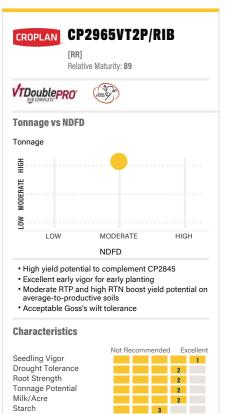
- At feedout, floury-leafy products effectively bridge the gap between the previous year's corn silage pile and the current year's feed.
- Leafy and floury-leafy hybrids may not contain a high level of total starch, but have a softer kernel
  texture that is easily broken during the chopping, storage and chewing process. This allows
  starch to be readily digested for more available energy.

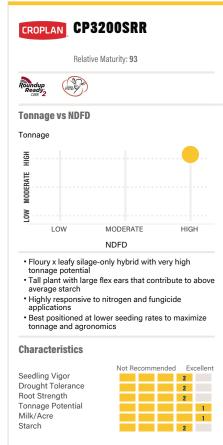
#### HIGH-ENERGY/HIGH-TONNAGE HYBRIDS

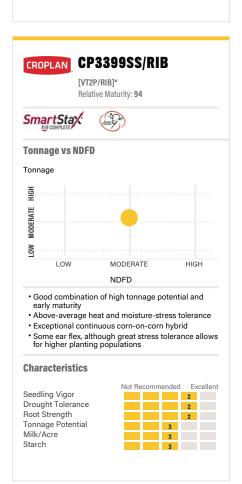
- These hybrids have more flexibility in harvest and feedout as grain or high-energy/high-tonnage silage when used in combination with leafy and floury-leafy hybrids.
- These are appropriate for feeding after the 120+ day post-ensiling period, when they reach
  optimum starch and fiber digestibility.

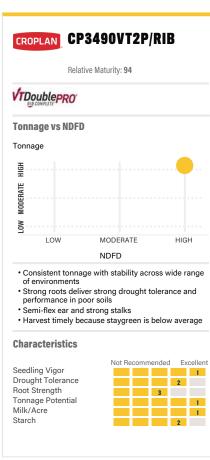


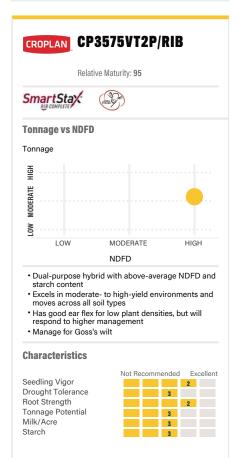












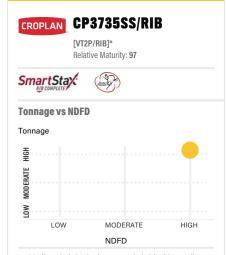
Scale 1 = Excellent 2 = Strong 4 = Manage

5 = Not Recommended

Product descriptions and ratings are generated from Answer Plot® trials and/or from the genetics supplier and may change 3 = Acceptable as additional data is gathered



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



- Medium-height dual-purpose hybrid with excellent NDFD
- Excellent test weight and emergence with solid defensive traits
- Plant at moderate-to-high densities; fungicide application is recommended
- Keep in RM zone

#### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch



# Relative Maturity: 98 From State Contract Tonnage Tonnage LOW MODERATE HIGH

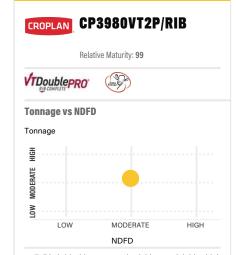
- NDFD

   Tall hybrid with consistently high tonnage potential and above-average digestibility
- Late-flowering with excellent heat and moisture stress tolerance
- Works well in both hot or cool growing seasons
- Excellent yield potential across all yield environments

#### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch

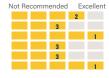




- Tall hybrid with strong grain yield potential drive high tonnage potential
- Excellent roots and good drought tolerance allow for high seeding rates and high tonnage
- Moderate response to nitrogen provides consistent performance across variable soils
- Harvest timely to avoid excess drydown

#### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch





#### CP4079SS/RIB

[VT2P/RIB]\* Relative Maturity: 100

## SmartStax

#### **Tonnage vs NDFD**

#### Tonnage

LOW MODERATE HIGH
NDFD

- Dual-purpose option for most soil types and yield environments
- Medium-tall hybrid with strong Goss's wilt rating and seedling vigor; excellent roots
- Position at medium populations and manage nitrogen for high yield potential

#### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch



#### CROPLAN

#### CP4099SS/RIB

Relative Maturity: 100

## SmartStax



#### **Tonnage vs NDFD**

#### Tonnage



- Tall hybrid with consistently high tonnage potential and above-average digestibility
- Late-flowering hybrid with excellent roots and seedling vigor for early planting
- High response to intensive management; can also handle average acres
- Manage in areas with gray leaf spot and NCLB

#### Characteristics

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch



#### CROPLAN C

#### CP4100SVT2P/RIB

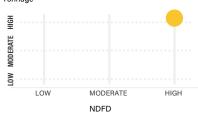
Relative Maturity: 101

#### VTDoublePRO



#### **Tonnage vs NDFD**

#### Tonnage



- Highly digestible leafy-type silage hybrid with high yield potential
- Tall white cob hybrid does best in medium-high populations
- Excellent performance for high tonnage and highquality potential
- Average seedling vigor

#### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch



#### KEY

Scale 1 = Excellent

1 = Excellen 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



#### **Tonnage vs NDFD** Tonnage 표 MODERATE LOW LOW MODERATE HIGH NDFD

- Healthy, versatile, high tonnage dual-purpose hybrid
- 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**

Seedling Vigor **Drought Tolerance** Root Strength Tonnage Potential Milk/Acre Starch



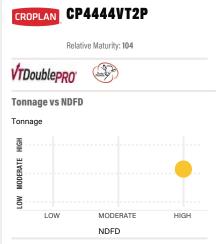
## CP4199SS/RIB CROPLAN [VT2P/RIB]\* Relative Maturity: 101 SmartStax **Tonnage vs NDFD** 플 MODERATE ΓOM LOW MODERATE HIGH NDFD

- Dual-purpose hybrid adapted to fields with variable soils
- · Excellent heat and drought tolerance
- Offensive product also performs well in loweryielding environments
- Offers a bit more ear flex than 4099

#### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch





- · Consistent, versatile hybrid to cover broad acres
- Excellent emergence and seedling vigor; strong stalks and roots
- Manage population in high-yield environments

#### Characteristics

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch



## CROPLAN CP4676SS/RIB Relative Maturity: 106 SmartStax **Tonnage vs NDFD** Tonnage H MODERATE

NDFD • Versatile hybrid; position and manage for high yield potential

MODERATE

- Medium-height hybrid with excellent emergence, seedling vigor and test weight Position at medium populations and manage nitrogen for high yield potential
- Fungicide application recommended in areas with GLS pressure

#### **Characteristics**

LOW

Seedling Vigor Drought Tolerance Root Strenath Tonnage Potential Milk/Acre Starch



## CP4757VT2P/RIB CROPLAN Relative Maturity: 107 VTDoublePRO **Tonnage vs NDFD** Tonnage HIGH MODERATE LOW MODERATE NDFD

- · Great tonnage hybrid, combined with high quality
- · Strong roots and test weight with high yield potential
- Moderate response to nitrogen and fungicide scores offer flexibility
- · Best suited for rotated acres

#### **Characteristics**

Seedling Vigor **Drought Tolerance** Root Strength Tonnage Potential Milk/Acre Starch



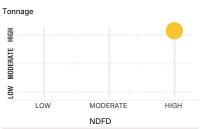
#### CP4791AS3111 CROPLAN [ASGT]

Relative Maturity: 107

Agrisure Viptera



#### **Tonnage vs NDFD**



- Medium-tall silage hybrid with great late-staygreen agronomics
- Tough hybrid; semi-flexed ear can handle droughty soils and corn-on-corn acres
- High-starch hybrid; doesn't need high populations
- Excellent disease package, including for gray leaf spot and Goss's wilt

#### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch



LOW

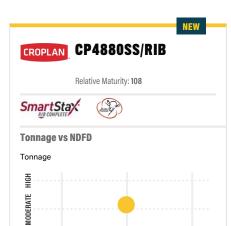
Scale 1 = Excellent

- 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.



NDFD • Best performance on high yield potential and well

MODERATE

- SmartStax® hybrid with exceptional top end yield potential
- Strong stalks and roots

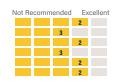
LOW

High tonnage potential, despite being a medium-short statured hybrid

#### **Characteristics**

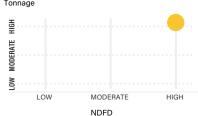
NO.

Seedling Vigor **Drought Tolerance** Root Strenath Tonnage Potential Milk/Acre Starch



HIGH

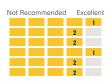
# CROPLAN CP5073SS/RIB [VT2P/RIB]\* Relative Maturity: 110 SmartStay( **Tonnage vs NDFD** Tonnage

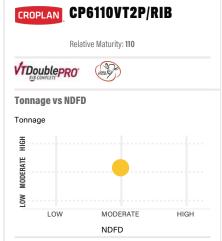


- Medium height dual-purpose hybrid with soft floury
- Strong early plant vigor for reduced tillage and early planting
- Has nice flex for moderate densities; high response
- · Utilize fungicide to enhance late-season health

#### **Characteristics**

Seedling Vigor **Drought Tolerance** Root Strenath Tonnage Potential Milk/Acre Starch





- Tough high-tonnage silage hybrid for lower-yielding environments
- Keep north of the 110-day zone as a full-season silage
- Great for irrigated ground; excels with fungicides

#### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch



# CP5115SS/RIB

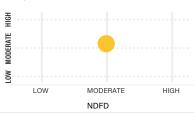
Relative Maturity: 111





#### **Tonnage vs NDFD**

Tonnage



- Medium-tall, dual-purpose hybrid with high tonnage potential at higher seeding rates
  • Excellent emergence, seedling vigor and roots
- Semi-flex ear; plant at moderate populations
- · Use caution on Goss's wilt acres; keep in RM zone

#### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch



#### CP5244VT2P/RIB CROPLAN

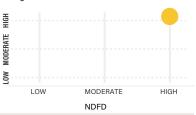
Relative Maturity: 112





#### **Tonnage vs NDFD**

Tonnage



- High tonnage potential adapted for many soil types
- Robust plant with strong heat and drought tolerance allow broad use of this high-starch dual-purpose hybrid
- Ear flex and stress tolerance drive performance in a wide range of populations and soil types
- Fungicide application increases staygreen and harvest flexibility

#### **Characteristics**

Seedling Vigor **Drought Tolerance** Root Strenath Tonnage Potential Milk/Acre



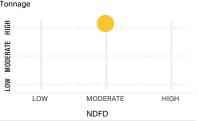
#### CROPLAN CP5370SS/RIB

Relative Maturity: 113

SmartStax



#### **Tonnage vs NDFD**



- Tall hybrid with very high tonnage potential and above average starch content
- Excellent stalks and roots
- Optimize yield potential with nitrogen management and plant densities
- Best positioned on rotated acres; ear tip back influenced by genetics

#### **Characteristics**

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch



#### KEY

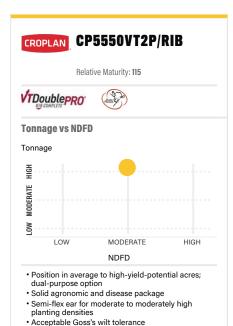
Scale

- 1 = Excellent
- $\mathbf{2} = \mathsf{Strong}$ 3 = Acceptable
- 4 = Manage

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 lybrids that consistently perform for high-quality and high-tonnage in Answer Plot® trials.



**Characteristics** 

Drought Tolerance

Tonnage Potential

Seedling Vigor

Root Strength

Milk/Acre

Starch

## CP5678VT2P/RIB CROPLAN [SS/RIB]\* Relative Maturity: 116 VTDoublePRO **Tonnage vs NDFD** Tonnage MODERATE TOW LOW MODERATE HIGH NDFD

- Medium-height hybrid with wide leaves and girthy stalk that contributes to solid tonnage potential
- Tough hybrid; good stress tolerance; has a semi-flex
- Full-season dual-purpose hybrid with great stalks and roots
- Excels with high nitrogen and fungicides, and medium-high populations

#### **Characteristics**

2

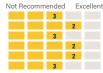
- 1

1

2

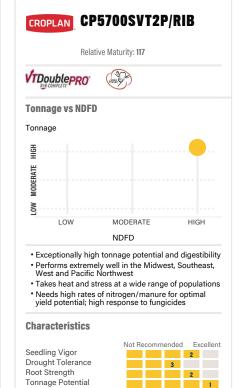
2

Seedling Vigor Drought Tolerance Root Strength Tonnage Potential Milk/Acre Starch

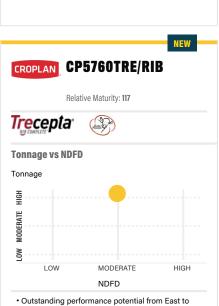


Milk/Acre

Starch

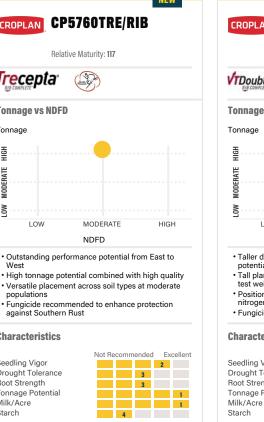


1



Versatile placement across soil types at moderate

Fungicide recommended to enhance protection



### CP5789VT2P/RIB Relative Maturity: 117 **VTDoublePRO Tonnage vs NDFD** LOW MODERATE HIGH NDFD • Taller dual-purpose hybrid with high tonnage potential across multiple environments • Tall plant with excellent stalks, roots, staygreen and test weight Position at medium-high populations with moderate nitrogen management · Fungicide application recommended **Characteristics** Not Recommended Excellent 2 Seedling Vigor **Drought Tolerance** 2 Root Strength 3 Tonnage Potential Milk/Acre 3

Scale

West

populations

**Characteristics** 

Drought Tolerance

Tonnage Potential

Seedling Vigor

Root Strength

Milk/Acre

Starch

against Southern Rust

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.

3

3



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

NEV																		NEW		
NEW CP4757VT2P/RIB*	CP4676SS/RIB*	CP4444VT2P	CP4199SS/RIB*	CP4188VT2P/RIB*	CP4100SVT2P/RIB*	CP4099SS/RIB*	CP4079SS/RIB*	CP3980VT2P/RIB	CP3899VT2P/RIB*	CP3735SS/RIB*	CP3575VT2P/RIB*	CP3490VT2P/RIB	CP3399SS/RIB*	CP3200SRR	CP2965VT2P/RIB*	CP2845SS/RIB*	CP2790VTP2/RIB*	CP2692D	CP184RR	BRAND
IB*	*		•	<b>B</b> *	RIB*	*	7	IB	<b>B</b> *	*	B*	IB	*		IB*	*	B*			hinten antend
107	106	104	101	101	101	100	100	99	98	97	95	94	94	93	89	89	87	86	80	alar
×	<b>S</b>	-	<b>S</b>	8	-	M-T	M-T	M-T	M-T	×	<b>S</b>	M-T	<b>S</b>	-	<b>S</b>	M-T	M-T	M-T	M-T	Oliver F.
M-H	Z	M-H	≤	<b>S</b>	Z	Z	Z	M-H	M-H	<b>S</b>	Z	M-H	Z	≤	≤	S	Z	Z	Z	/ , }*
SD	SF	SF	SF	SF	SF	SF	SF	SF	SF	SF	SF	SF	SF	끋	SF	SF	SF	SF	72	Stary 18th
Z	≤	M-L	≤	Z	≤	_	Z	Z	_	Z	M-L	M-L	≤	≤	≤	П	ш	Z	ш	Swad array
18-20	16-18	14-16	16-18	16-18	16-18	16-20	14-16	14-16	16-20	16-18	16-18	18-20	16-18	14-16	14-16	16-18	16-18	16-18	16-18	
≤	≤	=	Ξ	<b>Z</b>	エ	工	<b>Z</b>	<b>Z</b>	Ξ	≤	<b>=</b>	<b>Z</b>	≤	_	≤	=	_	<b>Z</b>	Z	O seldesturt O seldesturt O seldesturt
M	エ		<b>S</b>	<b>S</b>	NA	Ξ	<b>S</b>	8	工	Ξ	Ξ	_	王	エ	Ξ	エ	≤	<b>S</b>	_	or state of
≤	<b>S</b>		3	Z	8	工	Ξ.	工	Ξ.	王		工	<b>Z</b>	工	T	工	_	Z	3	of string of str
3 2	1 3	1 2	1 1	1 1	3 2	1 1	2 1	2 1	1 2	1 2	2 2	1 3	2 2	2 2	1 2	1 1	1 2	2 1	2 2	IIAIIB EIS
ω	ω	2		2	2	2	ω	ω	2	2	2	ω	2	2	<b>—</b>	2	ω	ь	ω	Life to The 18
ω	ω	ω	ω	ω	ω	4	ω	2	4	ω	ω	ω	ω	ω	ω	NA	ω	NA	NA	
2 N	2 3	ω	3 4	2 2	3 2	4 3	3 2	NA 3	4 3	ω ω	2 4	ω	3 4	3 2	ω	3 4	2 4	1 1	3 5	Si and
NA 2	ω	ω	_	2	2	3 2	2	ω	3 2	ω	ω	3 2	2	2	2	_	_	NA	ω	Sure of Stelle
_	2	ω	ω	-	-	2	2	ω	-	2	ω	-	ω	$\vdash$	2	ω	2	ь	2	SHHIM #
_	2	ω	2	2	-	2	2	ω	ш	ш	ω	-	ω	<u></u>	2	ω	ω	2	ω	(HIM)
3	1 2	2 1	2 2	3 2	2 3	2 3	2 2	3 2	ω ω	1 3	1 3	2 3	4 3	2 2	ω	4 3	ω	3 2	3	JUN 000
ω	ω	<b></b>	ω	ω	4	ω	ω	_	2	ω	ω	2	ω	2	ω	2	<b>—</b>	ω	4	Hard Survey
ω	2	4	ω	2	ω	ω	ω	ω	ω	2	ω	ω	ω	ω	ω	2	ω	2	ω	O they hely of they of they of they
2 M	1 MF	3 MF	2 MF	2 M	2 MF	S	2 M	3 M	3 MF	1 MF	1 M	2 M	4 MS	3 MF	2 MF	4 MS	3 NA	3 NA	4 S	Salika Jaky
M	Ti Ti	Ť M	1F MF	MS MS	1F MF	MS	1 MF	1 MS	IF M	1F MF	_	_	IS MS	1F MF	IF M	1S MS	A NA	A NA	NA	Osilish hip Stilley
			. 1	,		,		,		.,			3,	.,		٥,				

4 = Manage

KEY Scale
1 = Excellent
2 = Strong
3 = Acceptable

5 = Not Recommended

Product descriptions and ratings are generated from Answer Plot® supplier and may change as trials and/or from the genetics

additional data is gathered.

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

Plant Height

XT = Extra Tall
T = Tall
M = Medium
S = Short

Ear Height

H = High
M = Medium
L = Low

3 Ear Flex

FL = Flex
SF = Semi-flex
FX = Fixed

4 Flower Date

L = Late
M = Medium
E = Early

6 RTP/RTN/RTF Ratings L = Low Response
M = Moderate Response
H = High Response

**TBD** = To be tested in 2022

6 Calibrate® Starch Rating

Relative rumen digestibility

of grain starch
S = Slow
M = Moderate

Ratings based on 2018-2021 **F** = Fast

silage samples.

Calibrate® Fiber Rating

Relative rumen digestibility of fiber

silage samples. S = Slow M = Moderate Ratings based on 2018-2021 F = Fast

		NEW									NEW		
CP5900SVT2P/RIB*	CP5789VT2P/RIB*	NEW CP5760TRE/RIB*	CP5700SVT2P/RIB*	CP5678VT2P/RIB*	CP5550VT2P/RIB*	CP5370SS/RIB*	CP5244VT2P/RIB	CP6110VT2P/RIB*	CP5115SS/RIB*	CP5073SS/RIB*	NEW CP4880SS/RIB*	CP4791AS3111	BRAND
													Kilinewalikasi
119	117	117	117	116	115	113	112	110	111	110	108	107	Alg.
_	_	⊣	M-T	≤	M-T	_	M-T	<b>S</b>	M-T	<b>S</b>	M-S	M-T	Jillia I.
M-H	M-H	M-H	≤	≤	M-H	M-H	M-H	≤	M-H	M-H	<b>S</b>	≤	
SF	SF	SF	SF	SF	SF	SF	SF	SF	SF	SF	SD	SF	aled.
Z	≤	NA	Z	<b>S</b>	≤	≤	ш	≤	M-L	<b>Z</b>	≤	Z	Should blank
16-18	16-18	16-18	16-18	14-16	14-16	18-20	16-18	16-18	18-20	16-18	14-16	16-18	Shedralay (1974)
≤	Ξ	_	≤	<b>S</b>	≤	エ	≤	≤	Ξ	<b>S</b>	Ξ	<b>S</b>	O's eligible of the control of seligible of the control of the con
エ	≤	Ξ	エ	Ξ	≤	エ	≤	≤	エ	エ	≤	≤	
NA	エ	<b>S</b>	≤	<b>S</b>	S	<b>S</b>	≤	≤	≤	王	王	≤	Ostalita Ost
2	2	2	2	ω	2	1	2	2	-	_	2	ω	in the state of th
ω	$\vdash$	ω	2	ω	2	_	2	_	_	2	2	2	litten fes
N A	_	ω	NA	2	2	_	ω	ω	2	ω	2	2	Indsk
NA N	3 1	3	NA N	3 2	ω	ω	3	4 2	3	3 2	ω ω	3 2	
IA NA	4	NA	IA NA	ω	ω	4	ω	ω	4	ω	NA	2	/.51 /400
2	2	ω	ω	2	2	2	2	-	2	2	ω	ω	iliman da ganat
-	ω	_	_	2	<b>-</b>	2	<b>-</b>	ω	ω	⊷	ω	ш	24/1
1	ω	1	-	2	_	2	_	ω	ω	2	2	1	A IUM
2	4	ω	2	4	ω	ω	2	ω	ω	2	ω	1	(M)()
3 4	ω ω	2 4	4 4	4 3	4 4	2 2	2 1	2 1	2 2	2 2	5 2	3	
_	ω	5	2	2	ω	ω	ω	4	ω	_	ω	ω	18/016
2	ω	ω	2	2	2	ω	ω	ω	ω	2	_	1	Ophila Heira Safilla 2  Ophila Heira Safilla 2  Ophila Heira Safilla 2
≤	≤	≤	MF	≤	MS	≤	≤	≤	MS	MF	<b>S</b>	MF	O HILE HOILS
≤	<b>S</b>	<b>S</b>	MF	<b>S</b>	NS	<b>S</b>	MF	MF	3	MF	3	MF	
													_

	í	Ŧ
3 - C+rong	1 = Excellent	Scale

2 = Strong 3 = Acceptable 4 = Manage

5 = Not Recommended

additional data is gathered. supplier and may change as trials and/or from the genetics

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

Plant Height

Product descriptions and ratings are generated from Answer Plot®

XT = Extra Tall
T = Tall
M = Medium
S = Short

2 Ear Height

H = High
M = Medium
L = Low

Sar Flex FL = Flex SF = Semi-flex FX = Fixed

L = Late
M = Medium
E = Early

4 Flower Date

5 RTP/RTN/RTF Ratings

TBD = To be tested in 2022

L = Low Response
M = Moderate Response
H = High Response

silage samples. F = Fast 6 Calibrate® Starch Rating

Relative rumen digestibility

of grain starch
S = Slow
M = Moderate Ratings based on 2018-2021

Calibrate® Fiber Rating

Ratings based on 2018-2021 silage samples. Relative rumen digestibility of fiber S = Slow M = Moderate F = Fast



Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	





# FORAGE SORGHUM

We use our expertise to provide you with a comprehensive, season-long plan that can help you get results with the right forage sorghum genetics. It's how we deliver the best nutrition and high total plant digestibility for optimal production and quality.

#### **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 carryover 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
- 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 high digestibility make 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.



#### CROPLAN BMR 3211

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

#### **Characteristics**

Stress Tolerance Forage Quality Disease Tolerance Dry Hay Silage Grazing



- 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 11/2 inches deep, depending on soil moisture

#### CROPLAN

#### Greentreat® 1531

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

#### **Characteristics**

Stress Tolerance Forage Quality Disease Tolerance Dry Hay Silage Grazing



- 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
- Recommended seeding rate: 20 to 25 pounds per acre at 1 inch (by drill is recommended)

#### CROPLAN Dynamo II

Regions: Central|East|North|South|West Maturity: Heads at ~75 days

#### **Characteristics**

Stress Tolerance Forage Quality Disease Tolerance Dry Hay Silage Grazing



- Brachytic dwarf provides great forage quality when combined with the BMR-6 gene
- Delayed flowering/head emergence allows for
- very flexible cutting schedules
   Extended cutting window ideal for all forage 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)

#### CROPLAN

#### **GUARDIAN AT**

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

#### **Characteristics**

Stress Tolerance Forage Quality Disease Tolerance Dry Hay Silage Grazing



- 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)

#### **DYNAMIC** CROPLAN

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

#### **Characteristics**

Stress Tolerance Forage Quality Disease Tolerance Dry Hay Silage Grazing



- Brachytic dwarf is combined with Photoperiod sensitivity and BMR 6 for great forage quality
- · 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
- Fits any forage system: graze, bale, baleage, haylage, standing or swathed stockpile winter
- 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)

#### CROPLAN

#### Greentreat® 1923

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

#### Characteristics

Stress Tolerance Forage Quality Disease Tolerance Dry Hay Silage Grazing



- 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)

#### 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;

 $\mathbf{3} = \mathsf{BMR}$  and brachytic;  $\mathbf{5} = \mathsf{Conventional}$  dwarf, not a brachytic;  $\mathbf{8} = \mathsf{Photoperiod}$ 

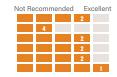
Fourth Number: Series number or new variety type

#### CROPLAN Honey Sweet AT

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

#### **Characteristics**

Stress Tolerance Forage Quality Disease Tolerance Dry Hay Grazing



- In-plant sugarcane aphid tolerance
- Conventional Sorghum x Sudan for an economic
- Experience multiple cuttings in SCA areas with confidence
- Great germination and vigor

#### CROPLAN PM 4611 BMR

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

#### **Characteristics**

Stress Tolerance Forage Quality Disease Tolerance Dry Hay Silage Grazing



- Leafy, compact structure; the BMR-6 gene provides superior forage digestibility
- 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
- 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)

#### CROPLAN PM 4612 BMR

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

#### **Characteristics**

Stress Tolerance Forage Quality Disease Tolerance Dry Hay Silage Grazing



- Will eventually replace 4611 BMR, with no major differences; leafy, compact structure; the BMR-6 gene provides exceptional forage digestibility
- 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)

#### NEW

#### CROPLAN PM 4507 PM

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

Stress Tolerance Forage Quality Disease Tolerance Dry Hay Grazina



- recommended)

#### **Characteristics**



- Leafy, compact structure with extremely uniform
- Excellent yield potential and quick drydown; ideal for baled hay
- Resistant to sugarcane aphid; good disease tolerance and well-adapted for use in all growing
- 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

PEARL IV PM 4611 BMR PM 4612 BMR	PEARL PM 4611 BI	PEARL		NEW Honey Sweet AT	Greentreat® 1923	NEW DYNAMIC	NEW GUARDIAN AT	NEW Dynamo II	Greentreat® 1531	SORGH	NEW 3731 BMR Leafy	NEW 3681 AT	NEW 3531 BMR Leafy	IQ 3501	BMR 3211	FORAG			
MR R	MR		EARL MILLET	et AT	® 1923		4		® 1531	<b>SORGHUM X SUDANGRASS HYBRID</b>	eafy		eafy			FORAGE SORGHUM HYBRIDS	Kiliten		/
Heads at ~50 days		Heads at $\sim 50$ days		Heads at ~50 days	photoperiod sensitive	photoperiod sensitive	Heads at ~60 days	Heads at ~75 days	Heads at ~50 days	HYBRID	Late	Mid/Late	Mid	Mid	Early	S	a in the late of t	HIIIBaS	/
10-15 lbs		10-15 lbs		20-25 lbs	20-25 lbs	20-25 lbs	20-25 lbs	20-25 lbs	20-25 lbs		60-100K seeds	60-70K seeds	60-100K seeds	50-60K seeds	60-70K seeds				
3/4"	2	3/4"		1"	1	1"	1"	1"	1"		1-1 1/2"	1-1 1/2"	1-1 1/2"	1-1 1/2"	1-1 1/2"		differ the strain of the strai	spass s	lios
00	60	60		15	14.5	14.5	16.5	15	14		15	15	15	15	15.5		Mineldean	"	/
65		65		60	60	60	60	60	60		60	60	60	60	60		M8 10'	, /	
~		~		z	~	~	~	~	~		~	Z	~	Z	~		File of Strong	\ s /	/
-	_	_		4	ω	2	2	_	1		-	ω	1	2	<u></u>		1/2/12		/
7	٥	2		2	2	2	ω	ω	_		_	-	_	_	2		ssalts kall	sid Ng	ins
-	-	_		2	2	2	ω	ω	1		2	2	2	2	ω		Sealt State of the Seal of the Sealt State of the Seal	A SILE	/
7	)	2		2	ω	ω	ω	ω	2		1	1	1	1	2		Solf Solf Solf Solf Solf Solf Solf Solf	s /	/
-	•						1	1	1		1	2	'	1	1		-116.		/
4		4		ω	4 4	4 4	ω	ω	ω		ω	ω	ω	ω	ω		"IOS Y		/
	ى	ω		3	4 2	4 2	ω	3	ω		2 5	2 -	2 -	2 -	2 4		(SH LIB)		/
7	<del>-</del>	1 2		2 1	2 1	2 1	1 1	1 1	1 1		5	5 3	5	5 3	4 3		alkales		′
	ر در	3		1 2	1 2	1 2	3	1 3	3		3 1	} 1	3 1	3 1	1		agelis		
-	_	_		1	2	2	<b>⊢</b>	_	_		5	5	5	5	4		Bulging		

7	木	
ľ	П	
	<	
	ŝ	

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: 1= Sorghum x Sudan; 2 = Sudan; 3 = Forage Sorghum; 4 = Pearl Millet

First Number: 1 = Sorghum x Sudan; 2 = Sudan; 3 = Forage Sorghum; 4 = Pearl Millet

Second Number: 1 = Very Early; 2-4 = 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



Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	





# SOFT RED WINTER WHEAT

We're a legacy brand in the industry for notable soft red winter wheat performance, providing you with Answer Plot® data to back up our disease-resistant racehorse varieties with response-to scores to help you achieve your yield goals.

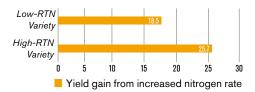
#### **KEY TAKEAWAYS**

- 1 Top-dress nitrogen on responsive genetics for added potential.
- 2 Plant at the right population for optimal varietal performance.
- 3 Know your variety's response-tofungicide (RTF) score and manage it accordingly.

#### MANAGE YOUR VARIETY'S RESPONSE-TO-NITROGEN (RTN) SCORE<sup>1</sup>

Customize nitrogen rate by variety to capture ROI potential. Optimize yield potential on more productive acres with higher nitrogen management by planting varieties with higher RTN scores. Protect yield potential on tougher acres by utilizing lower RTN score varieties on acres with lower-productivity soils or less nitrogen management.

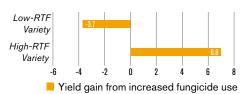
#### ► RTN Yield Response Variance — 7.2 bu/A



#### **USE RESPONSE-TO-FUNGICIDE (RTF)** SCORES TO AID DECISION-MAKING

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

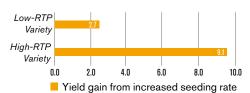
#### ▶ RTF Yield Response Variance — 10.5 bu/A



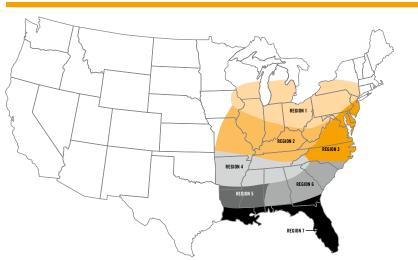
#### **OPTIMIZE SEEDING RATE BY VARIETY**<sup>1</sup>

Each CROPLAN® variety has its own response to population (RTP). Managing that correctly will help you optimize yield potential and help increase standability. Use seed size when determining optimal seeding rates. For more uniform emergence, use Warden® Cereals seed treatments.

#### ► RTP Yield Response Variance — 6.4 bu/A

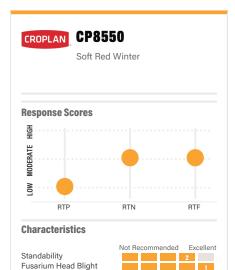


#### **SEEDING RATE CHART<sup>2</sup>** SEED SIZE: SEEDS PER POUND PORI PLANTING SEED Example of how to use the chart: 1. Select total planting seed. Example: 1.4 million seeds per acre 2. Select seeds per pound. Example: 13.000 3. Determine recommended seeding rate 0.8 73 67 62 57 Example: 108 lbs. per acre 1.0 1.0 83 77 71 67 0.9 19.5 Calculation assumptions: 1.2 1.1 109 100 92 80 1.0 23.4 Germ: 95% 1.4 1.3 127 117 108 100 93 1.2 27.3 Survivability: 10% 145 114 107 31.2 1.6 133 123 1.4 1.5 Total stand loss: 15% 129 35.1 1.8 1.7 164 150 138 120 1.5 2.0 1.9 182 167 154 143 133 1.7 390 MILLION SEEDS PER ACRE PLANTS PER ACRE O PLANTS PER SQUARE FOOT SEEDING RATE (LBS/A)



- 1. Response ranges show the importance of how varieties respond to each management practice to help ensure the highest yield potential. 2019 nationwide Answer Plot® data.
- 2. 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.



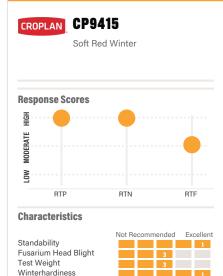


- State-of-the-art fusarium head blight resistance
- Excellent yield potential; responds to lower populations and higher nitrogen

Test Weight

Winterhardiness

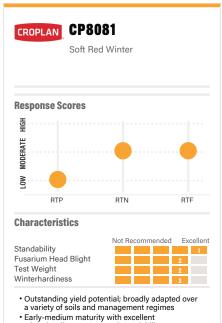
- Outstanding test weight and stripe rust tolerance
- Tall variety has good straw yield potential, but is



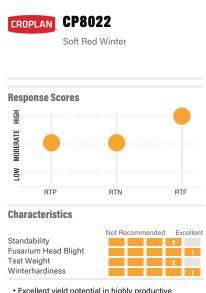
- · Excellent yield potential in highly productive environments
- Responds well to nitrogen; exceptional standability
- Strong disease-tolerance package
- Medium height; fits well in double-crop system



- · High yield potential and excellent test weight
- · Broad adaptation over a variety of soils and management regimes
- Native tolerance to fusarium head blight
- · Smooth head and height make it a good straw



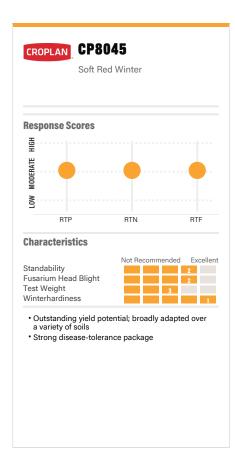
- winterhardiness; very good standability
- Native tolerance to fusarium head blight
- Excellent test weight; good broad-spectrum disease-resistance package



- Excellent yield potential in highly productive environments
- State-of-the-art fusarium head blight resistance
- Excellent test weight and stripe rust resistance
- Plant on time to encourage tilling



- Very stiff and short straw that can handle high N-
- · Strong test weight
- Best performance in northern regions



NEW									,
CP8118	CP8045	CP8007	CP8022	CP8081	CP9203	CP9415	CP8550	CP9606	VAF
118	045	007	022	081	203	115	550	906	VARIETY
									Solin Solin
ω.	ω.	(A)	(A)	<b>(2)</b>	S	(A)	(A)	S	- Seath Frank
Soft Red	Soft Red	Soft Red	Soft Red	Soft Red	Soft Red	Soft Red	Soft Red	Soft Red	de s
ď	ă	Ď	p	bé	р	þ	p	р	I b subject
									interfect to such say
3, 6	1,2,3,4	1, 2	1, 2,	1, 2, 3, 4	1, 2	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	(10)
	4		1, 2, 3, 4	3, 4		3, 4	3, 4	3, 4	
									Office W
-	ω	4	ω	_	ω	4	ω	ω	Original Original
<b>S</b>	3	S	MS	<b>Z</b>	MS	MS	M	MS	origines chas
ω	ω	ω	2	2	_	ω	-	ω	ingther's
_	2	-	2	_	2	_	2	_	Willi
z	~	z	~	~	z	~	~	~	Interes server street server s
11,	11,	11,	11,	11,	10,	10,	12,	11,	(atti
000-1	000-1	000-1	000-1	000-1	000-1	000-1	000-1	000-1	
11,000-14,000	11,000-14,000	11,000-14,000	11,000-14,000	11,000-14,000	10,000-13,000	10,000-12,000	12,000-14,000	11,000-14,000	SHIM Sudson
									allifetti ulodo la sea
2	-	2	-	2	2	1	2	2	Seant Bright of Sentessy  O High Backing of Sentessy  O High Backing of Sentessy  O High Backing of Sentessy
ェ	3	≤	Z	_	_	ェ	_	ェ	O dle do like
_		_		_	~	I	_	<b>S</b>	O Midd a bagins
	_		>	_	_		_		CHAI
8	3	≥	I	3	工	≥	≥	3	Sillo /
2	2	2	ω	_	2	1	-	2	ising in the state of the state
2	2	2	ш	2	-	2	Н	-	
2	2	2	4	4	5	ω	ω	ω	tring dirits of the strengths of the str
ω	2	4	2	2	4	2	2	ω	
NA	NA	NA	NA	NA	NA	NA	NA	NA	92692; Williagy
w	2	2	2	2	2	1	3	3	is of sear in the search in th
									hend we willise soft
2	NA	NA		1	2	ω	2	2	itility the state of the state
ω	2	ω	-	2	2	ω	-	2	sing seath this son
Bioty	N <sub>A</sub>	NA	Native tol.	Bioty	Biotype	Bioty	Biotype	Bioty	
Biotype B, D, L, 0			e tol.	Biotype B, D, L, O	pe L	Biotype B, D, L, O	pe L	Biotype B, D, L, O	
D, L,				D, L,		D, L,		D, L,	allageld
0				0		0		0	all he he
-	-	-	-	7	-	-	-	-	Intestituturanesed
NA	A	NA	NA	NA	NA	NA	NA	NA	

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.

■ Maturity
 1 = Early
 5 = Late

2 Height
S = Short
M = Medium
T = Tall

3 RTP/RTN/RTF Ratings

L = Low ResponseM = Moderate ResponseH = High Response

The comparison ratings are with CROPLAN® wheats only. These ratings reflect trends observed in research trials, which will change based on various factors, including variations in rainfall, temperature and production patterns.



Product Name	_
Attributes	
Placement	
Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	
Product Name	
Attributes	
Placement	



# 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 foliarfeeding 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

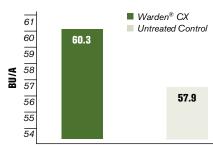
- Incorporates the active ingredient from Cruiser® insecticide, an industry standard for seed-applied insect protection, delivering the patented vigor effect (U.S. Patent number 6,753,296).
- Improves seed handling and flowability.

#### **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 DATE<sup>1</sup>

Data from these trials showed that Warden®



**AVERAGE YIELD - 21 LOCATIONS** 

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

 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 ROTS**

- Fusarium
- Pythium
- Phytophthora
- Rhizoctonia

#### **ROOT ROT**

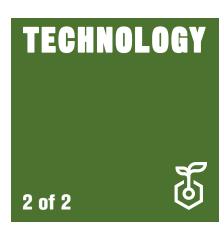
- Phomopsis\*
- Sclerotinia'
- Phytophthora
- \*Suppression only.

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 modulation and boosting plant-available nitrogen.



# Fortivent<sup>®</sup> Plus

#### 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, ethaboxam fungicide for enhanced Pythium control and Fortivent Zn for earlyseason 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.

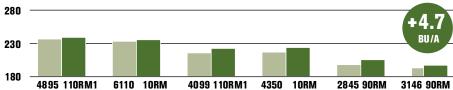
#### ► Fortivent® Plus Features and Benefits

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

#### **YIELD ADVANTAGE**

UNITED

► Fortivent Zn — 2018 Answer Plot® Testing



		+4.7	Untreated
		BU/A	Fortivent Zn
_	_		

Active Ingredients*	Rates			
Insecticide				
Clothianidin5	500			
*Clothianidin1	1250			
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	0.20 fl. oz./100 lbs. of seed			
Nematicide				
Poncho® VOTiVO® - 500	2.7 fl. oz./80,000 seeds			

2.7 fl. oz./80,000 seeds



<sup>\*</sup>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 singlebag 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 waterdeficit risks.
- Trecepta® hybrids are built on the proven performance of VT Double PRO® technology to help promote cleaner ears with broad spectrum control of aboveground pests, including corn borer, corn earworm, fall armyworm, black cutworm and western bean cutworm.

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.





## 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



#### TRECEPTA® RIB COMPLETE® CORN BLEND

Trecepta® Technology helps reduce yield loss by protecting your corn crop from a wide range of above-ground pests. Built on the proven VT Double PRO® Technology, Trecepta Technology gives you more complete control against corn borers (European and southwestern), fall armyworm, western bean cutworm, black cutworm and corn earworm.

#### ► 3 Modes of Action to Protect Against Above-Ground Pests

By controlling insects through multiple modes of action, Trecepta® Technology helps protect your yield potential and reduce the likelihood of resistance issues developing

#### ► Control Weeds with Glyphosate Applications

Trecepta contains Roundup Ready 2
Technology which allows the corn plant to withstand glyphosate treatments used to prevent weeds from competing with corn.



#### **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.

# Drought Gard HYBRIDS

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



#### **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.



# AN EASY FIT FOR YOUR OPERATION

Enlist E3 $^{\circ}$  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.







#### **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.



#### **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

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 earlyseason pests such as wireworms, seedcorn maggots, white grubs, grape colaspis and black cutworms (suppression).

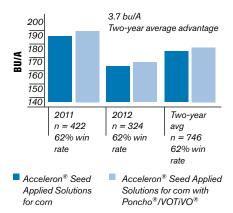
**Disease-Fighting Protection:** Excellent control of soilborne and seedborne disease, including *Fusarium*, *Rhizoctonia* and *Pythium*.

#### ▶ 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



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





# 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.

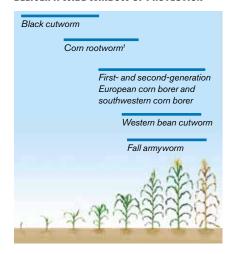
Herculex® XTRA is stacked with LibertyLink® technology, offering the ability to use a cost-effective, alternative weed-control option such as Liberty® herbicide or a conventional herbicide program. Herculex® XTRA is an effective corn insect management trait option for greater profit potential.



#### 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 yieldrobbing, 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**

Corteva Agriscience is a member of Excellence Through Stewardship® (ETS). Corteva Agriscience products are commercialized in accordance with ETS Product Launch Stewardship Guidance and in compliance with the Corteva Agriscience policies regarding stewardship of those products. In line with these guidelines, our product launch process for responsible launches of new products includes a longstanding process to evaluate export market information, value chain consultations, and regulatory functionality. Growers and end-users must take all steps within their control to follow appropriate stewardship requirements and confirm their buyer's acceptance of the grain or other material being purchased. For more detailed information on the status of a trait or stack, please visit 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.

#### ExpressSun<sup>®</sup>

trait

#### **EXPRESSSUN®**

The ExpressSun® trait provides exceptional weed control of many broadleaf weeds, including Canada thistle—and gives you the flexibility to apply herbicides from burndown to bud formation.



# TECHNOLOGY



#### BREAKTHROUGH CORN TRAIT TECHNOLOGY

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

#### 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.

#### ARTESIAN™ ADVANTAGE (LEFT)



Elkville, III., 2012

#### VIPTERA™ TRAIT STACKS

More control of more above-ground insects for more yield potential.

Viptera™ provides 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, Viptera™ offers better crop stands and lower levels of disease, resulting in increased yield and profit potential. The Viptera™ trait stack offers dual modes of action against above-ground insects, with a 5% single-bag refuge, and is available in combination with Artesian™ technology for maximized yield in water-stressed environments.

# VIPTERA™ PERFORMANCE ON WESTERN BEAN CUTWORM¹

1. Viptera<sup>™</sup> on western bean cutworm vs. competitive





Hybrid with Viptera™ trait

Hybrid without Viptera™

hybrid. Sterling, Colo., 2014.

#### DURACADE™

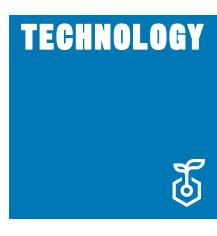
The Duracade™ trait stack provides multiple modes of action against corn rootworm and corn borer, as well as suppression of ear-feeding insects. This trait stack includes a novel, alternate mode of action to help preserve trait durability and delay insect adaptation for long-term field health, and the convenience of an integrated E-Z Refuge® seed blend.

Pests controlled: European corn borer, southwestern corn borer, black cutworm, beet armyworm, southern cornstalk borer, lesser cornstalk borer, sugarcane borer, western corn rootworm, northern corn rootworm and Mexican corn rootworm.

**Pests suppressed:** Corn earworm, western bean cutworm, fall armyworm and common stalk borer.

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. For grain marketing information, visit http://www.biotradestatus.com/.





# 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 highperforming 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<sup>®</sup> Roundup Ready 2 Xtend<sup>®</sup> in over 2,100 observations<sup>1</sup>

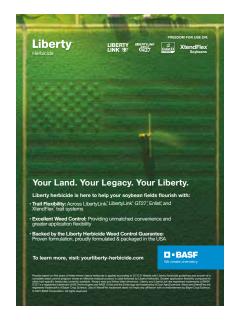
#### ► LibertyLink® Corn

The LibertyLink® system enables growers to use the powerful Liberty® herbicide, a nonselective herbicide effective on toughto-control grasses and broadleaf weeds, for over-the-top use on over 50 million LibertyLink®-enabled corn hybrid acres with Herculex®, 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.

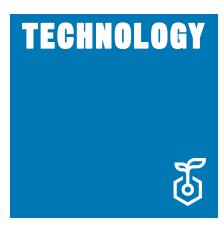
#### ► LibertyLink® Canola

The LibertyLink® system is the simply better solution built upon high-performing genetics and excellent weed control that delivers real yield. 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® RRXtend varieties entered across the Midwest, Delta, Northeast and the Southwest.







#### CALIBRATE® TECHNOLOGIES

#### KNOW THE QUALITY OF YOUR FORAGES

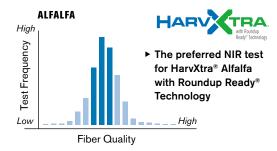
Variation in any dairy feeding program can cause underperformance: lost milk production, lower feed efficiency and lower profit potential. Calibrate® fiber and starch quality tests are designed to reduce the impact of nutrition variation in feedstuffs and allow more value to be obtained from forages,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

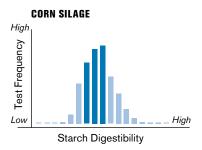
Calibrate® patented forage quality tests are designed to:

- · 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 lowerquality 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.

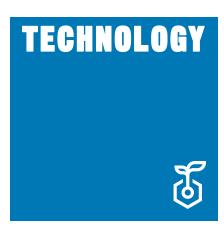
#### CALIBRATE® HIGH QUALITY FORAGE ANALYSIS FOR ALFALFA

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. 2021 brought 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.







# 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<sup>®</sup> 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. Highquality 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

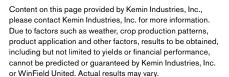
- Acid-based products for all forage applications.
- Helps reduce shrinkage and spoilage of dry matter.
- · Reduces growth of mold and wild yeast.
- · Promotes faster fermentation or curing.
- Extends aerobic stability at feedout.
- Supports optimal animal performance.

# 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.

© Kemin Industries, Inc. and its group of companies 2023. All rights reserved.

\*\*\* Trademarks of Kemin Industries, Inc., U.S.A. Certain statements may not be applicable in all geographical regions. Product labeling and associated claims may differ based upon government requirements.





# **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.

#### 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 Corteva Agriscience have developed IRM guidelines that must be incorporated by everyone purchasing and planting insect-protected crops.



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® soybean, Roundup Ready 2 Xtend® soybean, 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 a list of Bayer's trait patents go to cs.bayerpatents.bayer.com

For questions regarding seed intellectual property, or to anonymously report a saved seed tip, you can contact Bayer in the following ways:

- 1. Call 1-866-99-BAYER
- 2. Send a letter: Trait Stewardship, 622 Emerson Rd., Suite 150, Creve Coeur, MO 63141
- Submit a contact request at cropscience.bayer.us/contact or scan the QR code







Bayer is a member of the Seed Innovation and Protection Alliance. Visit www.seedipalliance.com to learn more. SIPATA is a transported of the Seed Innovation and Protection Alliance.

Bayer is a member of Excellence Through Stewardship\* (FES, Bayer products are commercialed in accordance with FES Podu. Launch Stewardship Caladrace, and in complexe with Bayers FeSy for Commercialed and of Bioderdrough Center Plant Products in Commodity Coops. Commercialed products have been approved for import in lavy export markets with functioning regulatory systems Any orp or markets produced from the product can only be exported to, or used, proceeded or soil in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to more market containing blotch that some boundaries into nations where import in one permitted. Clowers should lake to their grain handler or product produces to confirm their

AUMAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. It is a violation of federal and state law to use any pesticide product of the first in accordance with its basing, NDT ALL Invalidations of claims to epighnosise or exposed for in-rop use with product Read and the product of the first individual productions of claims, algorithms for glucionates are approach for in-rop use with product with Read Read Personage, NDT USE PROBLILATIONS THAN RES PERCIPACITY LABELED FOR SULFURS AND APPROVED FOR SUCH LISE IN THE STATE OF APPLICATION. Contact the LIS. EPA and your state persistod regulatory agency with any questions about the approved distant of claims have bridged products for in-rop use with Prounding Ready 2-Parter "supheres or products with the approved distant of claims have bridged products for in-rop use with Prounding Ready 2-Parter "supheres or products with

Roundup Ready\* Technology contains genes that confer biderance to dyphosate. Roundup Ready\* 2 Technology contains genes that confer biderance to dyphosate contains the tiderance to dyphosate and down Products with Renderfee\* Technology contains genes that confer biderance to dyphosate, glublarists and discriberably compared to the products with Renderfee\* Technology contain genes that confer biderance to dyphosate, glublarists and discriberable dyphosate. Discriberably all discripe that even to discribe the discriberable will do crops that even to discribe the duction to discribe the contraction contains a contain the discriberable discriberable will be discribed to the commended weed contains operation.

Contact your Bayer retailer, refer to the Bayer Technology Use Guide, or call the technical support line at 1-888-283-6847 for recommend Roundup Ready® Xtend Crop System weed control programs.

Bayer, Bayer Cross, Roundup Ready 2 Xtend\*, Roundup Ready 2 Yield\*, Roundup Ready\* and XtendFlex\* are registered trademarks of Bayer Group. LibertyLink\* and the Water Droplet Design\* is a trademark of BASIF Corporation. ©2022 Bayer Group. All rights reserved.

Rev 01/2022

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.





#### 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®, Trecepta® 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**

Traited corn hybrid<sup>2</sup> Refuge

#### ► In-Field Configuration Examples

Perimeter

Strips

Minimum of four rows

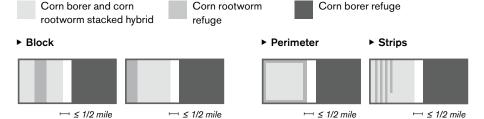
Block

#### ► Adjacent-Field Configuration Examples



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

#### **SEPARATE REFUGE CONFIGURATIONS**



- 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.





#### REFUGE REQUIREMENTS FOR BIOTECH CORN PRODUCTS<sup>1, 2</sup>

	% 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
TRECEPTA® RIB COMPLETE® CORN BLEND	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® TOTAL	5% in the bag, 20% supplemental cotton- growing areas	Block, Perimeter, Strips, Adjacent	Within or adjacent to Agrisure® Total
VIPTERA"	5% in the bag 20% supplemental cotton-growing areas	Block, Perimeter, Strips, Adjacent	Within, adjacent to or within 1/2 mile away from Viptera <sup>™</sup> field
DURACADE™	5% in the bag 20% supplemental cotton- growing areas	Block, Perimeter, Strips, Adjacent	Within or adjacent to Duracade" field
AGRISURE VIPTERA® 3111	20% corn- and cotton- growing areas	Block, Perimeter, Strips, Adjacent	Within or adjacent to Agrisure Viptera® 3111 field; if adjacent, may be separated by a road, path, ditch, etc., but not another field
AGRISURE® 3000GT	20% corn-growing areas; 50% cotton-growing areas	Block, Perimeter, Strips, Adjacent	Within or adjacent to Agrisure® 3000GT field; if adjacent, may be separated by a road, path, ditch, etc., but not another 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®, Trecepta® 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

Corn trait technology incorporated into these seeds is commercialized under license from Syngenta Seeds, LLC. Herculex  $^{\scriptsize @}$  Technology incorporated into these seeds is commercialized under license from Corteva Agriscience LLC. HERCULEX® and the  $\label{thm:herculex} \mbox{HERCULEX Shield are trademarks of Corteva Agriscience LLC}.$ 

Seed products with the LibertyLink  $^{\tiny{\circledR}}$  (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, post-emergent weed control of Liberty® herbicide for optimum yield and excellent weed control. LibertyLink®, Liberty® and the Water Droplet logo are registered trademarks of BASF.

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® and Viptera™ are trademarks of a Syngenta Group Company.

Content on this page provided by Bayer, Corteva Agriscience and Syngenta Group Company, please contact them for more information. Due to factors such as weather, crop production  $% \left( 1\right) =\left( 1\right) \left( 1\right$ 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, Corteva Agriscience and Syngenta Group Company or WinField United. Actual results may vary.



#### **EXCELLENCE THROUGH STEWARDSHIP**

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. Commercialized 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 handler or product purchaser to confirm their buying position for this product. Excellence Through Stewardship® is a registered trademark of Excellence Through Stewardship.

Forage Genetics International, LLC ("FGI") is a member of Excellence Through Stewardship® (ETS). FGI products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with FGI's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. Any crop or material produced from this product can only be exported to, or used, processed or sold only in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotechnology traits 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. Growers should refer to biotradestatus.com for any updated information on import country approvals. Excellence Through Stewardship<sup>®</sup> is a registered trademark of Excellence Through Stewardship.

#### 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<sup>®</sup> is a registered trademark of Dow AgroSciences LLC. Agrisure Viptera<sup>®</sup> is a registered trademark of a Syngenta group company. LibertyLink<sup>®</sup> and the Water Droplet Design<sup>®</sup> is a trademark of BASF Corporation. Respect the Refuge and Corn Design<sup>®</sup> and Respect the Refuge are registered trademarks of National Corn Growers Association. Acceleron<sup>®</sup>, DroughtGard<sup>®</sup>, RIB Complete<sup>®</sup>, Roundup Ready 2 Technology and Design<sup>™</sup>, Roundup Ready 2 Xtend<sup>®</sup>, Roundup Ready 2 Yield<sup>®</sup>, Roundup Ready 2 Yield<sup>®</sup>, Roundup Ready 5 SmartStax<sup>®</sup>, Trecepta<sup>®</sup>, TruFlex<sup>™</sup>, VT Double PRO<sup>®</sup> and XtendFlex<sup>®</sup> 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 lowvolatility 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

#### ΔLFΔLFΔ

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.

CWRF and Limagrain Cereal Seeds, LLC. CoAXium® and Cleaner Fields. Higher Yields™ are trademarks of Albaugh, LLC; CWRF and Limagrain Cereal Seeds, LLC. AXigen® and Think Inside The Seed™ are trademarks of CWRF. Driven by Aggressor® Herbicides® and Aggressor® are trademarks of Albaugh, LLC.; Beyond®, Clearfield®, Liberty®, LibertyLink®, Prowl®, Pursuit®, Stamina® and the Water Droplet Design® are trademarks of BASF Corporation; Bayer®, the Bayer Cross®, Huskie®, Poncho® and VOTiVO® are trademarks of Bayer; Excellence Through Stewardship® is a trademark of Excellence Through Stewardship; Enlist E3®, Enlist E3 Design™, Herculex® and Lumiderm™ are trademarks of Corteva AgriScience LLC; DuPont™, Express®, ExpressSun® and TotalSol® are trademarks of E.I. du Pont de Nemours and Company; BroadAxe®, Ally®, Spartan® and Glean® are registered trademarks of FMC Corporation; Calibrate® and HarvXtra® are trademarks of Forage Genetics International, LLC: G2FLEX™ is a trademark of the University of Idaho; HarvXtra® Alfalfa with Roundup Ready® Technology is enabled with Technology from The Samuel Roberts Nobel Foundation; Fresh CUT®, Kemin®, Kem LAC®, Myco CURB®, NutriSAVE® NS-A<sup>™</sup>, NS-5<sup>™</sup> and Silage SAVOR<sup>®</sup> are trademarks of Kemin Industries, Inc.; Greentreat® is a trademark of Land O'Lakes, Inc.; Lumiderm™ is a trademark of Corteva AgriScience; Acceleron®, Acceleron and Design®, Asgrow®, Asgrow and the A Design®, Bollgard and Design®, Bollgard II and Design®, Bollgard II®, Bollgard®, DroughtGard®, Genuity®, Genuity Design®, NemaStrike®, Respect the Refuge and Cotton Design®, RIB Complete and Design®, RIB Complete®, Roundup PowerMAX®, Roundup Ready 2 Technology and Design®, Roundup Ready 2 Xtend®, Roundup Ready 2 Yield®, Roundup Ready®, Roundup®, SmartStax® Trecepta®, Truflex™, VT Double PRO®, XtendFlex® and YieldGard® are trademarks used under license from Bayer Group; Respect the Refuge and Corn Design® and Respect the Refuge® are trademarks of National Corn Growers Association; NuSun® and ProSize™ are trademarks of National Sunflower Association: OMRI Listed® is a trademark of Organic Materials Review Institute; Pioneer® is a trademark of Pioneer Hi-Bred International, Inc.: Apex™ is a trademark of Seed Enhancements, LLC; Agrisure®, Agrisure Artesian®, Artesian™, Agrisure Viptera®, Apron XL®, Cruiser®, Duracade™, E-Z Refuge®, NK® and Syngenta are trademarks of a Syngenta Group Company; Advanced Coating®, Answer Plot®, Ascend®, Class Act®, CROPLAN®, Destiny®, Fortivent®, Framework®, GroZone®, InterLock®, MasterLock® Maxi Graze®, NG®, R7®, SilageFirst®, StrikeLock®,

State registrations for IMIFLEX™ are pending. Please check registration in your state. Always read and follow label directions. IMIFLEX™ and UPL are trademarks of a UPL Corporation Limited Group Company. Vertix™, igrowth® and its corresponding logos are trademarks owned by Advanta US, LLC. a UPL group company.

Sun Quest<sup>®</sup>, Superb<sup>®</sup>, Warden<sup>®</sup> and WinPak<sup>®</sup> are trademarks of **WinField United**. All other trademarks are the property of their respective owners.

© 2022 WinField United.













