Kauffman SEEDS

2027 PRODUCT GUIDE

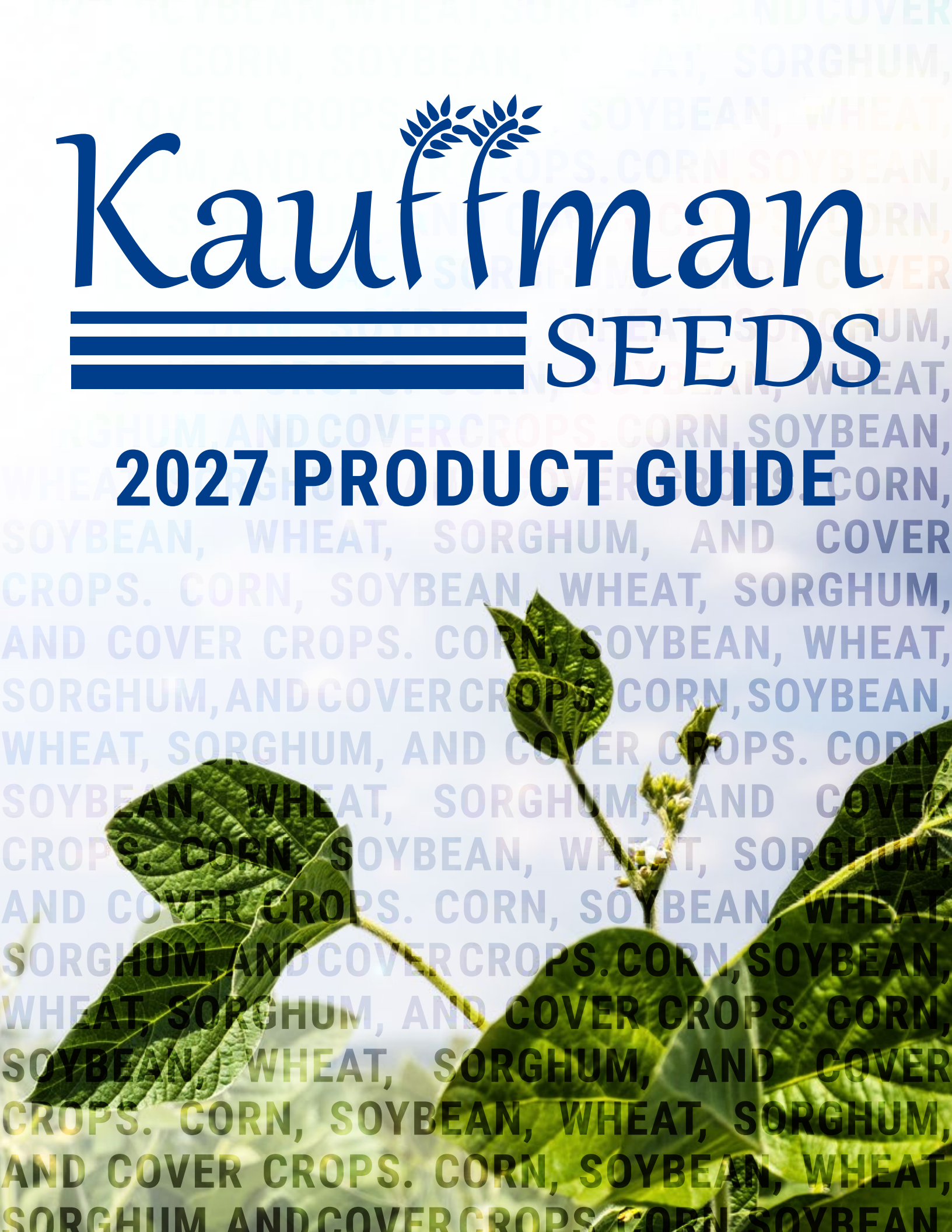


TABLE OF CONTENTS

Kauffman Seeds

As agriculture has adapted and changed over the decades, so has Kauffman Seeds. For over 60 years we have made it our mission to change and adapt to the shifting landscape in agriculture in the plains. We began humbly as an alfalfa seed processing company that has grown into one of the most trusted seed providers in Kansas and Oklahoma.

We have brought new traits and genetics into the marketplace in corn, soybeans, sorghum, alfalfa, and wheat with our partnerships. These technologies have helped revolutionize how farmers across the plains manage their operations. As technology in agriculture keeps progressing, we strive to keep bringing the newest technology in traits and genetics that farmers in our region need to meet the current market challenges.

We also recognize that offering financial terms through programs like JDF and other programs are important to your farm. It allows for the confidence to know you can source locally adapted products you trust with the financial backing to operate year after year.

As we all look ahead at what is next in agriculture, we know that there are certain table stakes that we will not change. We will continue our focus on bringing locally adapted products, knowledge, and support that allows you to flourish in a new era of agriculture. We are also staying true to our roots as a humble, local supplier who truly understands our customers. Thank you for your continued partnership and trust with Kauffman Seeds to supply your product needs.

WE OFFER JOHN DEERE FINANCIAL FOR YOUR FARM'S SEED PURCHASE NEEDS.

MEET THE TEAM

Front Row Left to Right: Kris Young, Kilee Klausmeyer, Megan Miller, Dustin Miller, Don Miller

Back Row Left to Right: Todd Miller, Brian Pauly, John "Bubba" Welch, Charles McCormick, Chris Hansen

KAUFFMAN SEEDS NEW NUMBERING SYSTEM

CORN HYBRIDS: 112-34 PCE

112 First Three Digits is Relative Maturity of Hybrid	**3** Random Number	**4** Signifies Last Digit in Year of Release	**PCE** Trait Package

SOYBEAN VARIETIES: 39-23 XFS

39 Signifies Maturity of the Soybean is a 3.9 RM, scale of 00-70	**2** Random Number	**3** Signifies Last Digit in Year of Release	**XFS** Trait Package

GRAIN SORGHUM: 5643

5 Highly Tolerant to Sugar Cane Aphid Grain Sorghum	**64** Days to Mid Bloom	**3** Signifies Last Digit in Year of Release

All Other Grain Sorghum's Starting Numeral is "4" *(Sugar Cane Aphid Susceptible to Moderately Tolerant)*

KAUFFMAN SEEDS OLD NUMBERING SYSTEM

CORN: 662 TRE

6 Maturity 1 - 9	**6** Sequence 0 - 9	**2** Release Year	**TRE** Traits

SOYBEAN: 4660 E3S

46 Signifies Maturity of the Soybean is a 4.6 RM, scale of 00-70	**6** Sequence 0 - 9	**0** Release Year	**E3S** Traits

GRAIN SORGHUM: 5710

5 Grain Sorghum	**7** Sequence 0 - 9	**1** Sequence 0 - 9	**0** Release Year

The numeral 5 indicates Highly Tolerant to Sugar Cane Aphids.

NOTES

CORN TECHNOLOGIES

		GLYPHOSATE TOLERANCE	GLUFOSINATE TOLERANCE
AGRISURE VIPTERA® 3110 / 3110 Agrisure Viptera®, Agrisure® CB/LL, and Agrisure® GT	Agrisure Viptera 3110 LIBERTY LINK	✔	✔
DURACADEVIPTERA™ E-Z REFUGE® / DV EZR GT DuracadeViptera™ E-Z Refuge®	DuracadeViptera	✔	✔
DURACADEVIPTERA™ ARTESIAN® / DVA EZR GT DuracadeViptera™ E-Z Refuge® + Artesian®	DuracadeViptera Artesian	✔	✔
Viptera® / V EZR GT Viptera® E-Z Refuge®	Viptera	✔	✔
TRE RIB / TRE Trecepta® RIB Complete® Corn Blend	Trecepta RIB COMPLETE	✔	✘
PR RIB / PR VT Double PRO® RIB Complete® Corn Blend	VTDoublePRO RIB COMPLETE	✔	✘
VT4P VT4PRO™ RIB Complete® Corn Blend	VT4PRO RIB COMPLETE	✔	✘
SS RIB / SS SmartStax® RIB Complete® Corn Blend	SmartStax RIB COMPLETE	✔	✔
SSP SmartStax® PRO RIB Complete® Corn Blend	SmartStax PRO RIB COMPLETE	✔	✔
POWERCORE ENLIST / PCE PowerCore® Enlist® Refuge Advanced® Corn	POWERCORE Enlist REFUGE ADVANCED	✔	✔

SOYBEAN TECHNOLOGIES

		GLYPHOSATE TOLERANCE	GLUFOSINATE TOLERANCE
XFS XtendFlex® Soybeans with Sulfonylurea-Tolerant Soybean herbicide tolerant trait	XTENDFLEX SOYBEANS	✔	✔
E3S Enlist E3® Soybeans with STS® herbicide tolerant trait	Enlist E3 SOYBEANS STS herbicide tolerant trait	✔	✔
E3 Enlist E3® Soybeans	Enlist E3 SOYBEANS	✔	✔

Contact your Kauffman Seeds, Inc. Representative to ask any other questions on herbicide tolerances for specific corn or soybean traits.

NEW PRODUCT

101-27

101 RM | *Available As: V EZR GT*

CHARACTERISTICS	
Stalk	3
Root	3
Early Growth	3
Stay Green	3

ENVIRONMENT	
Central Dryland	✓
Western Dryland	✓
Limited Irrigation	✓
Full Irrigation	

- New 101 RM Viptera® hybrid that is widely adapted
- Good ear flex and adaptability to multiple soil types for the region
- Moves south well for an early RM corn
- Good ratings for most diseases in Kansas; watch for Southern Rust on this hybrid
- Potential to be an early silage option
- Excellent choice for an early dryland corn hybrid in Kansas and Oklahoma

105-85

105 RM | *Available As: TRE*

CHARACTERISTICS	
Stalk	5
Root	4
Early Growth	4
Stay Green	4

ENVIRONMENT	
Central Dryland	✓
Western Dryland	✓
Limited Irrigation	✓
Full Irrigation	

- 105 RM Trecepta® hybrid that excels across Kansas
- Semi-determinate ear type that is typically 16-18 kernels around
- Handles heat and drought stress well for an earlier maturity for Central Kansas
- Use caution with growth regulator herbicides for post spray application
- Plan to harvest timely due to late season stalk integrity after reaching maturity
- Excellent choice for an early hybrid planted in early spring for early fall harvest

NEW PRODUCT

108-07

108 RM | *Available As: TRE*

CHARACTERISTICS	
Stalk	3
Root	3
Early Growth	4
Stay Green	5

ENVIRONMENT	
Central Dryland	✓
Western Dryland	✓
Limited Irrigation	✓
Full Irrigation	✓

- New 108 RM Trecepta® hybrid that excels in Kansas and the Western Cornbelt
- Adapted to both irrigated and dryland acres
- Good drought tolerant hybrid that flowers early for maturity
- Girthy ears with excellent grain quality
- Moderately statured plant with strong stalks and roots
- Very good Goss's Wilt and Grey Leaf Spot tolerance

111-16

111 RM | *Available As: PR, SSP*

CHARACTERISTICS	
Stalk	4
Root	4
Early Growth	4
Stay Green	4

ENVIRONMENT	
Central Dryland	✓
Western Dryland	
Limited Irrigation	✓
Full Irrigation	✓

- 111 RM VT Double PRO® RIB Complete® hybrid
- Excellent yield potential product for areas growing 110-115 RM hybrids
- Medium-tall plant with medium ear height
- Good stalks, roots, and Green Snap ratings
- Excellent heat and stress tolerance in early testing
- Good Southern movement for a 111 RM hybrid

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor | **Trait Key:** V EZR GT = Viptera® E-Z Refuge, TRE = Trecepta® RIB Complete® Corn Blend, PR = VT Double PRO® RIB Complete® Corn Blend, SSP = SmartStax® PRO RIB Complete® Corn Blend

NOTES

112-26

112 RM | *Available As: C, PCE*

CHARACTERISTICS	
Stalk	4
Root	4
Early Growth	4
Stay Green	3

ENVIRONMENT	
Central Dryland	✓
Western Dryland	
Limited Irrigation	✓
Full Irrigation	✓

- 112 RM hybrid PowerCore® Enlist® Refuge Advanced® hybrid
- Excellent yield upside allows for it to be planted in 115-120 RM hybrid zone
- Great ability for ear flex, allowing to be planted at lower populations
- Solid plant health, Stay Green, and Green Snap ratings
- Has the ability to be a solid silage option
- Stalks and roots are good, but not excellent

112-34

112 RM | *Available As: C, PCE*

CHARACTERISTICS	
Stalk	4
Root	4
Early Growth	4
Stay Green	5

ENVIRONMENT	
Central Dryland	✓
Western Dryland	✓
Limited Irrigation	✓
Full Irrigation	✓

- 112 RM hybrid PowerCore® Enlist® Refuge Advanced® hybrid
- Widely adapted to Western Cornbelt Environments
- Great Ear Flex potential and Test Weight
- Built to handle stressful dryland conditions and performs well on irrigated acres
- Good Goss's Wilt and Green Snap Tolerance

NEW PRODUCT

112-47

112 RM | *Available As: VT4P, TRE*

CHARACTERISTICS	
Stalk	3
Root	4
Early Growth	4
Stay Green	4

ENVIRONMENT	
Central Dryland	✓
Western Dryland	
Limited Irrigation	✓
Full Irrigation	✓

- New 112 RM hybrid VT4Pro™ hybrid that is widely adaptable
- Solid Agronomic traits for the west; watch the average Goss's Wilt rating
- Flexibility to be a continuous corn hybrid or be planted on rotated acres
- Works as a dual purpose product for both grain and silage
- Green Snap and Stalk ratings are good for the west
- A fungicide application could be beneficial under irrigated conditions

NEW PRODUCT

113-97

113 RM | *Available As: C, TRE, PR*

CHARACTERISTICS	
Stalk	4
Root	3
Early Growth	4
Stay Green	5

ENVIRONMENT	
Central Dryland	✓
Western Dryland	✓
Limited Irrigation	✓
Full Irrigation	✓

- New 113 RM Trecepta® hybrid that excels in Kansas and the Western Cornbelt
- Adapted to excel on both dryland and irrigated acres
- Proven performance over multiple years of testing before launch
- Consistent, girthy ears with excellent test weight
- Adapts well to moderate to lower seeding rates for the agronomic environment
- Very good heat tolerance increases adaptability of this hybrid across the region

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor | **Trait Key:** C = Conventional, PCE = PowerCore® Enlist® Refuge Advanced® Corn, VT4P = VT4PRO™ RIB Complete® Corn Blend, TRE = Trecepta® RIB Complete® Corn Blend, PR = VT Double PRO® RIB Complete® Corn Blend

NOTES

662

113 RM | *Available As: TRE*

CHARACTERISTICS	
Stalk	4
Root	3
Early Growth	4
Stay Green	5

ENVIRONMENT	
Central Dryland	✓
Western Dryland	
Limited Irrigation	✓
Full Irrigation	✓

- 113 RM Trecepta® hybrid that excels in Central Kansas on dryland
- Consistent performance in Central Kansas dryland ever since its product launch
- Medium-tall plant type with medium-high ear placement
- Very good roots and good stalks; excels in moderate plant populations
- Semi-determinate ear that is 16-18 kernels around on average
- Does not move into Western Kansas with average Goss's Wilt and Green Snap rating

114-25

114 RM | *Available As: TRE*

CHARACTERISTICS	
Stalk	3
Root	5
Early Growth	5
Stay Green	3

ENVIRONMENT	
Central Dryland	✓
Western Dryland	
Limited Irrigation	✓
Full Irrigation	✓

- 114 RM Trecepta® hybrid that performs on irrigated acres and dryland
- Great performance in testing on silty loam to clay soils
- Does not move into Western Kansas due to Goss's Wilt and Green Snap ratings
- Girthy, flex ear type that performs well at lower to moderate populations
- Good ratings for stalks, test weight, and drydown

116-36

116 RM | *Available As: PCE*

CHARACTERISTICS	
Stalk	3
Root	4
Early Growth	4
Stay Green	3

ENVIRONMENT	
Central Dryland	
Western Dryland	
Limited Irrigation	✓
Full Irrigation	✓

- 116 RM hybrid PowerCore® Enlist® Refuge Advanced® hybrid
- Excellent irrigated corn hybrid for Kansas with a history of very good test weight and yield
- Excellent performance as a dual purpose hybrid for silage
- Semi-flex ear type allows for it to work at lower populations for irrigated acres
- Solid disease tolerance overall; still will respond to a fungicide application
- Stalk strength is very good and the roots are solid

118-95

118 RM | *Available As: TRE*

CHARACTERISTICS	
Stalk	3
Root	4
Early Growth	4
Stay Green	3

ENVIRONMENT	
Central Dryland	
Western Dryland	
Limited Irrigation	✓
Full Irrigation	✓

- 118 RM hybrid with proven performance for grain or silage production
- Excels in high yield potential environments; handles stressful soils and heat
- Excellent performance on sandy loam to clay soils under irrigation
- Caution on western movement in later plantings due to Green Snap rating
- Full flex hybrid that can handle moderate up to medium high plant populations
- Good tolerance for Southern Rust

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor | **Trait Key:** TRE = Trecepta® RIB Complete® Corn Blend, C = Conventional, 3110 = Agrisure Viptera® 3110, DV EZR GT = DuracadeViptera™ E-Z Refuge®, PCE = PowerCore® Enlist® Refuge Advanced® Corn

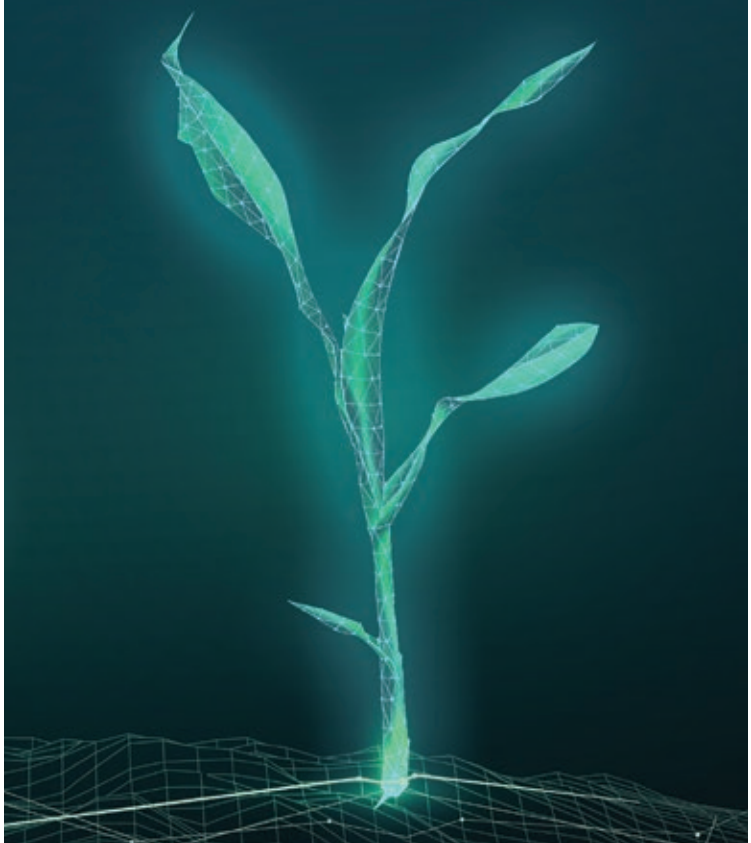
NOTES

ACTIVATE THE

ULTIMATE

IN *PYTHIUM*

PROTECTION



Scan to Make a Stand Against *Pythium*

Vayantis®

syngenta®

ELITE

FROM THE ROOT UP

BEST-IN-CLASS, EARLY-SEASON DISEASE AND INSECT PROTECTION FOR CEREAL CROPS

Scan for Elite Protection

CruiserMaxx® Vibrance® Elite

syngenta®

CORN

	PRODUCT	RELATIVE MATURITY	TRAITS	GDD-BLACK LAYER	DRYDOWN	DROUGHT TOLERANCE	EARLY GROWTH	PLANT HEIGHT	EAR HEIGHT
NEW	**101-27**	101	V EZR GT	2424	4	4	3	MT	MH
	105-85	105	TRE	2546	3	3	4	M	M
	350	108	DVA EZR GT	2592	3	3	3	MT	M
NEW	**108-07**	108	TRE	2600	5	2	4	M	M
	111-16	111	PR, SSP	2664	4	4	4	MT	M
	112-26	112	C, PCE	2676	5	4	4	MT	M
	112-34	112	C, PCE	2701	4	2	4	MT	M
NEW	**112-47**	112	VT4P, TRE	2712	4	4	4	MT	MH
NEW	**113-97**	113	C, TRE, PR	2724	4	2	4	M	MH
	662	113	TRE	2712	3	4	4	MT	MH
	114-25	114	TRE	2764	3	4	5	MT	M
	672	114	C, 3110, DV EZR GT	2752	7	4	4	T	MH
	116-36	116	PCE	2750	5	5	4	T	MH
	116-65	116	TRE	2796	4	5	4	MT	MH
	117-23	117	PR, SS	2808	7	4	5	MT	MH
	118-95	118	TRE	2815	4	4	4	T	MH

Trait Key: 3110 = Agrisure Viptera® 3110, DV EZR GT = DuracadeViptera™ E-Z Refuge®, DVA EZR GT = DuracadeViptera™ E-Z Refuge® + Artesian®, V EZR GT = Viptera® E-Z Refuge, TRE = Trecepta® RIB Complete® Corn Blend, PR = VT Double PRO® RIB Complete® Corn Blend, VT4P = VT4PRO™ RIB Complete® Corn Blend, SS = SmartStax® RIB Complete® Corn Blend, SSP = SmartStax® PRO RIB Complete® Corn Blend, PCE = PowerCore® Enlist® Refuge Advanced® Corn, C = Conventional

NOTES

EAR FLEX	TEST WEIGHT	STAY GREEN	STALK	ROOT	SILAGE	GREY LEAF SPOT	GOSS'S WILT	SOUTHERN RUST	GREEN SNAP	PRODUCT	
SF	4	3	3	3	3	4	4	7	3	**101-27**	NEW
SD	5	4	5	4	7	4	6	5	3	**105-85**	
SF	5	4	4	4	3	3	4	5	4	**350**	
SD	2	5	3	3	6	4	4	6	3	**108-07**	NEW
SF	3	4	4	4	4	4	5	3	3	**111-16**	
F	4	3	4	4	3	3	3	7	3	**112-26**	
SF	2	5	4	4	3	7	4	4	3	**112-34**	
SD	4	4	3	4	4	6	5	4	3	**112-47**	NEW
SD	2	5	4	3	5	4	5	5	3	**113-97**	NEW
SD	3	5	4	3	5	4	6	7	5	**662**	
SF	4	3	3	5	5	3	5	3	5	**114-25**	
SF	3	3	4	4	3	3	4	3	3	**672**	
SF	3	3	3	4	2	4	3	7	3	**116-36**	
SF	3	3	3	2	2	5	5	4	5	**116-65**	
SF	2	4	2	3	2	4	5	7	4	**117-23**	
SF	3	3	3	4	2	4	6	3	4	**118-95**	

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor, N/A = Rating Not Available
Plant Height: T = Tall, MT = Medium-Tall, M = Medium | **Ear Height:** MH = Medium-High, M = Medium
Ear Flex: SD = Semi-Determinate, SF = Semi-Flex, F = Full-Flex

NOTES

SOYBEAN

38-15
3.8 RM | *E3*

CHARACTERISTICS			
Height	MT	P.R.R.	3
Emergence	2	S.D.S.	2
Standability	3	I.D.C.	5
Shatter	1	Cyst	PI88788

- Late Group III Maturity
- Medium-tall plant height
- Strong agronomic package with great Western Cornbelt movement
- Excellent emergence and stress tolerance
- Salt excluder trait for tolerance to high salinity water

NEW PRODUCT

43-37
4.3 RM | *E3S*

CHARACTERISTICS			
Height	MT	P.R.R.	4
Emergence	3	S.D.S.	5
Standability	3	I.D.C.	-
Shatter	1	Cyst	PI88788

- New Early Group IV Maturity
- Medium-tall, semi bush plant type
- "Stacked" with STS® tolerance
- Good standability and emergence scores
- Excluder trait for salt tolerance

4660
4.6 RM | *E3S*

CHARACTERISTICS			
Height	M	P.R.R.	4
Emergence	4	S.D.S.	4
Standability	3	I.D.C.	5
Shatter	1	Cyst	PI88788

- Mid Group IV Maturity
- Medium plant height
- "Stacked" with STS® tolerance
- Good standability
- Good performance on sandy loam soils

48-96
4.8 RM | *E3S*

CHARACTERISTICS			
Height	M	P.R.R.	4
Emergence	3	S.D.S.	4
Standability	5	I.D.C.	6
Shatter	1	Cyst	PI88788

- Late Group IV Maturity
- Medium plant height and semi bush plant type
- "Stacked" with STS® tolerance
- Improved SDS over 4880E3S
- Good standability rating

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor | **Height:** MT = Medium-Tall, M = Medium
Trait Key: E3 = Enlist E3® Soybeans, E3S = Enlist E3® Soybeans with STS® herbicide tolerant trait

NOTES

38-06
3.8 RM | *XFS*

CHARACTERISTICS			
Height	M	P.R.R.	5
Emergence	2	S.D.S.	4
Standability	3	I.D.C.	4
Shatter	1	Cyst	PI88788

- Late Group III Maturity
- Medium plant height
- "Stacked" with Sulfonylurea-Tolerant Soybean tolerance and salt "excluder" gene
- Good rating for IDC
- Adapted to narrow row spacing and no-till

39-23
3.9 RM | *XFS*

CHARACTERISTICS			
Height	MT	P.R.R.	5
Emergence	4	S.D.S.	4
Standability	4	I.D.C.	5
Shatter	1	Cyst	PI88788

- Late Group III Maturity
- Medium-tall plant type
- Has shown ability to excel in narrow row spacing
- Reliable performance across Kansas over multiple years
- Ability to be used on dryland and irrigated acres

42-46
4.2 RM | *XFS*

CHARACTERISTICS			
Height	M	P.R.R.	5
Emergence	3	S.D.S.	4
Standability	5	I.D.C.	7
Shatter	1	Cyst	Peking

- Early Group IV Maturity
- Medium height plant
- Partial Peking Soybean Cyst Nematoda Tolerance
- Strong performance history in Kansas
- Adapted to narrow row spacing and no-till

45-66
4.5 RM | *XFS*

CHARACTERISTICS			
Height	MT	P.R.R.	3
Emergence	3	S.D.S.	4
Standability	4	I.D.C.	5
Shatter	1	Cyst	PI88788

- Mid Group IV Maturity
- Medium-tall plant type
- Salt excluder trait for tolerance to high salinity water
- Great performance in multiple Kansas trial locations
- Good performance on multiple soil types

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor | **Height:** MT = Medium-Tall, M = Medium
Trait Key: XFS = XtendFlex® Soybeans with Sulfonylurea-Tolerant Soybean herbicide tolerant trait

NOTES

SOYBEAN

46-45
4.6 RM | *XFS*

CHARACTERISTICS			
Height	MT	P.R.R.	3
Emergence	3	S.D.S.	5
Standability	4	I.D.C.	6
Shatter	1	Cyst	PI88788

- Late Group IV Maturity
- Medium-tall plant type
- Full bush plant that branches aggressively
- Performs well on loam to heavy clay soils
- Do not use on sandy soils and fields that need a Salt "excluder"

47-65
4.7 RM | *XFS*

CHARACTERISTICS			
Height	T	P.R.R.	4
Emergence	3	S.D.S.	5
Standability	4	I.D.C.	4
Shatter	1	Cyst	PI88788

- Late Group IV Maturity
- Tall plant type
- Salt excluder trait for tolerance to high salinity water
- Excellent double crop option
- Adapts to narrow row and no-till practices well

48-85
4.8 RM | *XFS*

CHARACTERISTICS			
Height	MT	P.R.R.	4
Emergence	2	S.D.S.	6
Standability	4	I.D.C.	5
Shatter	1	Cyst	PI88788

- Late Group IV Maturity
- Medium-tall plant type
- Salt excluder trait for tolerance to high salinity water
- Adapts well to no-till and narrow row spacing
- Excellent option for double crop acres

C49-21S
4.9 RM | *Conventional STS®*

CHARACTERISTICS			
Height	MT	P.R.R.	3
Emergence	3	S.D.S.	4
Standability	3	I.D.C.	-
Shatter	1	Cyst	-

- Late Group IV Maturity
- Conventional Sulfonylurea-Tolerant Soybean
- Medium-tall plant type with excellent standability
- Strong yield performance year over year in Kansas
- Adaptable to multiple agronomic environments in Kansas

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor | **Height:** T = Tall, MT = Medium-Tall
Trait Key: XFS = XtendFlex® Soybeans with Sulfonylurea-Tolerant Soybean herbicide tolerant trait

NOTES

	PRODUCT	STS®/SR	RM	HEIGHT	EMERGENCE	STANDABILITY	SHATTER	P.R.R.	S.D.S.	I.D.C.	CYST	HIGHLIGHT
	Enlist E3® Soybeans | Enlist E3® Soybeans with STS® herbicide tolerant trait											
	38-15		3.8	MT	2	3	1	3	2	5	PI88788	Versatile product with salt "excluder" gene
NEW	**43-37**	✓	4.3	MT	3	3	1	4	5	-	PI88788	New Enlist E3® variety with yield potential and solid traits
	4660	✓	4.6	M	4	3	1	4	4	5	PI88788	Works on light soils, "stacked" with STS®, salt "excluder"
	48-96	✓	4.8	M	3	5	1	4	4	6	PI88788	Double crop option, "stacked" with STS®
	Xtendflex® Soybeans with Sulfonylurea-Tolerant Soybean herbicide tolerant trait											
	38-06	✓	3.8	M	2	3	1	5	4	4	PI88788	Widely adaptable late group three maturity
	39-23	✓	3.9	MT	4	4	1	5	4	5	PI88788	Salt "excluder" line adapted to irrigated and dryland
	42-46	✓	4.2	M	3	5	1	5	4	7	Peking	Partial Peking SCN tolerant line for Central Kansas
	45-66	✓	4.5	MT	3	4	1	3	4	5	PI88788	Salt "excluder" line adapted to irrigated and dryland
	46-45	✓	4.6	MT	3	4	1	3	5	6	PI88788	Variety "stacked" with Sulfonylurea-Tolerant Soybean that performs on dryland
	47-65	✓	4.7	T	3	4	1	4	5	4	PI88788	Salt "excluder" line that excels under irrigation
	48-85	✓	4.8	MT	2	4	1	4	6	5	PI88788	Salt "excluder" line adapted to dryland or irrigated
	Conventional											
	C49-21S	✓	4.9	MT	3	3	1	3	4	-	-	"Stacked" with Sulfonylurea-Tolerant Soybean, excellent emergence rating

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor
Height: T = Tall, MT = Medium-Tall, M = Medium

NOTES

ENLIST® WEED CONTROL SYSTEM
OVERVIEW

ON-TARGET APPLICATIONS:
90% less drift than traditional 2,4-D
96% less volatile than 2,4-D ester

Enlist Duo® and Enlist One® herbicides with Colex-D® technology are the only herbicides containing 2,4-D that are labeled for preemergence and postemergence use on Enlist® crops.

Enlist E3® SOYBEANS
- 2,4-D choline
- Glyphosate
- Glufosinate

POWERCORE® Enlist
- 2,4-D choline
- Glufosinate
- Glyphosate
- FOP Herbicides

HERBICIDE

Enlist Duo® COLEX-D® technology
- Convenient proprietary blend of 2,4-D choline and glyphosate
- The two modes of action work together to deliver control of yield-robbing weeds and help prevent resistance

Enlist One® COLEX-D® technology
- Straight goods 2,4-D choline with additional tank-mix flexibility
- Provides additional tank-mix flexibility with glyphosate, glufosinate and other qualified tank-mix products, allowing for a customized weed control program to fit each farm

NOTES

Think Before You **Bin Run**

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

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

Yield Loss Roundup Ready 2 Yield® 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 Road, Suite 150, Creve Coeur, MO 63141
3. Submit a contact request at cropscience.bayer.us/contact or scan the QR code

SIPA™ Seed Innovation & Protection Alliance

LIBERTY LINK®

Roundup Ready 2 YIELD® TECHNOLOGY

Bayer is a member of the Seed Innovation and Protection Alliance. Visit www.seedipalliance.com to learn more. SIPA™ is a trademark of the Seed Innovation and Protection Alliance.

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.

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.

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

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

Rev 01/2022

EXCEED®

Superior Legume Inoculant

With Exceed® brand inoculant you can always count on quality, reliable products at a great price with exceptional service.

Whichever crop you are planting, Visjon Biologics manufactures inoculant formulations for all legumes.

Soybeans

Exceed® SAR for Soybeans with Cell Armor Technology

- An increase of 3.8 bushels over the non-inoculated control was demonstrated in replicated Midwest trial locations.
- By disrupting the life cycle of the J1 and J2 soybean cyst nematode, Exceed® SAR can alter the effect the nematode has on young soybean plants.
- Enables the seed to germinate quickly and stimulates plant hormones responsible for root formation and development.

Package size: 1x500, 2x250 and 4x50

Exceed® Traditional Liquid for Soybeans

- Excellent choice for superior inoculation.
- Boasts one of the highest bacteria counts in the industry to maximize soybean yields.

Package size: 1x200 and 4x50

Exceed® Granulated Peat for Soybeans

- The first choice for virgin soils to soybeans, high pH soils, or climates with limited rainfall or irrigation.
- Applied directly into the seed trench furrow.
- Specially formulated to flow evenly and consistently through application equipment.

Package size: 40 lb bag and 520 lb tote

Exceed® STIC for Soybeans

- Created to increase seed adhesion, thus improving nodulation and performance in the field.

Package size: 1500# and 300# Treat size

Exceed® Peat for Soybeans

Package size: 1500# and 300# Treat size

MADE IN THE USA

visjonbiologics.com

Pulse Crops

Exceed® SAR for Garbanzo Beans

- By disrupting the life cycle of the nematode, Exceed® SAR can alter the effect the nematode has on young garbanzo plants.
- The Exceed® SAR mode of action enables the seed to germinate quickly and stimulates plant hormones responsible for root formation and development.

Package size: 1x200 and 4x50

Exceed® Traditional Liquid for Peas & Lentils

- Excellent choice for superior inoculation.
- Boasts one of the highest bacteria counts in the industry to maximize pea & lentil yields.

Package size: 1x200 and 4x50

Exceed® Granulated Peat for Pulse Crops

- The first choice for virgin soils to pulse crops, high pH soils, or climates with limited rainfall or irrigation.
- Applied directly into the seed trench furrow.
- Specially formulated to flow evenly and consistently through application equipment.

Package size: 40 lb bag and 520 lb tote

Exceed® STIC for Pulse Crops

- Created to increase seed adhesion, thus improving nodulation and performance in the field.

Package size: 1500# and 100# Treat size

Exceed® Peat for Pulse Crops

Package size: 1500# and 100# Treat size

Forage Crops

Exceed® PreCoat

Advantages of Exceed® PreCoat

- Increased yields
- Increased nutrient use efficiency
- Superior seed adhesion

Specifications of Exceed® PreCoat

- Exceed® PreCoat for Alfalfa guarantees a minimum of 300 million (3 x 10^8) viable cells per gram.
- Exceed® PreCoat for True Clover and Alfalfa/True Clover Combination guarantees a minimum of 100 million (1 x 10^8) viable cells per gram.
- Compatible with most fungicide and insecticide seed treatment chemistries.
- Compatible with commercial seed treaters.
- Available for: Alfalfa Sweet Clover, True Clover, Alfalfa/True Clover Combination both in Bulk and *100# treat size to increase your flexibility when ordering.

Package size: 5,000# and *100# Treat Size

Alfalfa/True Clover Combination Only

Exceed® Peat

EXCEED® Peat for Alfalfa, True Clover, Bird's Foot Trefoil, Arrowleaf, Subterranean Clover, Sainfoin, Garden Combination, Lupine and Crownvetch. All Visjon Biologics Peat products, excluding Lupine and Crownvetch, are OMRI Listed. *Specialty strains also available.*

Package size: Varies by product

1092 S Graham ST | Henrietta, TX 76365 | 940-264-0343 | Fax 940-264-0344

Visjon Biologics is a family owned and operated company.

Visjon BIOLOGICS

The Inoculant Experts

SORGHUM

5563
100-105 Days | *Grain Sorghum*

CHARACTERISTICS	
Stalk Strength	3
Drought Stress	2
SCA Tolerance	2

- Medium-early maturity
- Excellent Sugar Cane Aphid tolerance
- Semi-open bronze to cream head type in medium-short height plant
- Bred to handle tough environments
- Keep populations 10-15% higher in heavy residue with cooler soil temperatures

5583
100-105 Days | *Grain Sorghum*

CHARACTERISTICS	
Stalk Strength	2
Drought Stress	2
SCA Tolerance	2

- Medium-early maturity
- Excellent Sugar Cane Aphid tolerance
- Semi-open bronze head type in a medium height plant type
- Excels in tougher yield environments
- Stalks and roots are excellent

5603
100-105 Days | *Grain Sorghum*

CHARACTERISTICS	
Stalk Strength	2
Drought Stress	2
SCA Tolerance	2

- Medium-early maturity
- Excellent Sugar Cane Aphid tolerance
- Excellent stalk strength; thrives in tougher environments
- Semi-open head type with above average head exertion
- Potential for double crop in South Central Kansas

5643
105-110 Days | *Grain Sorghum*

CHARACTERISTICS	
Stalk Strength	2
Drought Stress	2
SCA Tolerance	2

- Medium maturity
- Excellent Sugar Cane Aphid tolerance
- Excellent standability and early seedling vigor
- Good performance in stressful environments
- Semi-open head type with good test weight

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor

NOTES

5653IG
100-105 Days | *Grain Sorghum*

CHARACTERISTICS	
Stalk Strength	3
Drought Stress	2
SCA Tolerance	2

- Medium-early maturity iGrowth®
- Excellent Sugar Cane Aphid tolerance
- Tolerant to Imiflex™ herbicide for pre or post control of labeled grassy weeds
- Moves well from tougher yield environments to better producing soils
- Excellent yield history across Kansas and Oklahoma

5710
105-110 Days | *Grain Sorghum*

CHARACTERISTICS	
Stalk Strength	2
Drought Stress	3
SCA Tolerance	2

- Medium maturity
- Excellent Sugar Cane Aphid tolerance
- Excellent top-end yield potential for maturity
- Excellent stalks and roots; FHB tolerance
- Still a top performer in Kansas and Oklahoma

5730
110-115 Days | *Grain Sorghum*

CHARACTERISTICS	
Stalk Strength	3
Drought Stress	2
SCA Tolerance	2

- Medium-late maturity
- Excellent Sugar Cane Aphid tolerance
- Strong yield performance in tough yield environments
- Excellent test weight history; very good stalk and root rating
- Taller plant type leaves plenty of residue after harvest for winter grazing

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor

NOTES

Super Sioux

Medium-Early | *Hay and Grazing Hybrids - Conventional*

CHARACTERISTICS	
Hay Yield	3
Silage	N/A
Drought	2
Regrowth	3

- Sorghum-Sudangrass
- 55 days to boot stage on average
- Semi-sweet stalks
- Excellent regrowth
- Great quality for haying or grazing

Gun Smoke II

Late | *Hay and Grazing Hybrids - Conventional*

CHARACTERISTICS	
Hay Yield	2
Silage	N/A
Drought	1
Regrowth	2

- Sorghum-Sudangrass
- 90 days to boot stage on average
- Good leaf to stem ratio
- Works well planted late
- Shows good tolerance to high salinity soils and irrigation water

Hay N Graze II

PPS | *Hay and Grazing Hybrids - Conventional*

CHARACTERISTICS	
Hay Yield	1
Silage	2
Drought	2
Regrowth	2

- Photoperiod sensitive Sorghum-Sudangrass
- Excellent forage producing product for hay, grazing, or silage
- Drought tolerance is excellent
- Excellent choice for a one cut system; works for multi-cut system too
- Works well for a grazing system; performs better in rotational grazed versus continuous

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor

NOTES

Kritter Kandy II

Medium-Early | *Hay and Grazing Hybrids - BMR*

CHARACTERISTICS	
Hay Yield	3
Silage	N/A
Drought	2
Regrowth	3

- BMR Sorghum-Sudangrass
- 55 days to boot stage on average
- Excellent forage quality
- Excellent regrowth
- Highly palatable forage product for cattle

Shorty II

Medium | *Hay and Grazing Hybrids - BMR*

CHARACTERISTICS	
Hay Yield	3
Silage	2
Drought	1
Regrowth	1

- BMR 6 Sorghum-Sudangrass
- Brachytic dwarf for maximum leaf area and standability
- Medium-late maturity
- BMR for improved digestibility and palatability
- Tonnage surpasses that of many non-brachytic dwarf hybrids

Bossy Bites

Late | *Hay and Grazing Hybrids - BMR*

CHARACTERISTICS	
Hay Yield	2
Silage	2
Drought	1
Regrowth	1

- BMR 12 Sorghum-Sudangrass
- 85-90 days to boot stage on average
- Late maturing hybrid
- Highly palatable hybrid that is also a high tonnage product
- Excellent drought and heat tolerance

Big Bale III

Medium | *Hay and Grazing Hybrids - BMR*

CHARACTERISTICS	
Hay Yield	2
Silage	N/A
Drought	1
Regrowth	3

- BMR 6 Forage Sorghum
- 65-70 days to boot stage on average
- Male sterile hybrid
- Excellent choice for stockpile grazing
- Good drought tolerance

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor

NOTES

SORGHUM

Sensation
PPS | *Hay and Grazing Hybrids - BMR PPS*

CHARACTERISTICS	
Hay Yield	1
Silage	2
Drought	1
Regrowth	2

- Photoperiod sensitive Sorghum-Sudangrass
- BMR 6 for improved hay quality and digestibility
- Excellent drought tolerance
- Works well for haying, grazing, or a silage option
- Good performance as a component in cover crop blends

808 II
Late | *Silage - BMR*

CHARACTERISTICS	
Hay Yield	2
Silage	1
Drought	2
Regrowth	5

- BMR 6 Forage Sorghum
- Consistent yields on irrigated and dryland acres
- High digestibility with BMR 6 trait
- Brachytic dwarf for maximum leaf area and standability
- Very high leaf to stem ratio along with excellent drought tolerance

815
Medium-Early | *Silage - BMR*

CHARACTERISTICS	
Hay Yield	7
Silage	2
Drought	2
Regrowth	5

- BMR 6 Forage Sorghum
- Short statured early maturing silage product
- Excellent standability
- Great option for double crop silage
- Excellent tonnage results compared to later maturing hybrids

816W
Medium-Early | *Silage - Conventional*

CHARACTERISTICS	
Hay Yield	7
Silage	2
Drought	3
Regrowth	5

- Conventional Forage Sorghum
- Grain yield with forage tonnage makes high silage quality
- Widely adaptable to dryland and irrigated acres
- Can be utilized in double crop silage scenarios
- White/cream grain colored head

Ratings: 1-2 = Excellent, 3-4 = Good, 5-6 = Average, 7-8 = Fair, 9 = Poor

NOTES

SORGHUM

PRODUCT	DAYS TO 1/2 BLOOM	RELATIVE MATURITY	HEIGHT	HEAD TYPE	GRAIN COLOR	STALK STRENGTH	DROUGHT STRESS	SCA TOLERANCE
GRAIN SORGHUM								
4595	56-58	95-100 Days	30-36	Semi-Open	Red	3	2	2
5563	56-58	100-105 Days	30-36	Semi-Open	Bronze	3	2	2
5482	58-60	100-105 Days	48-52	Semi-Open	Bronze	3	2	2
5583	54-58	100-105 Days	46-51	Semi-Open	Bronze	2	2	2
5603	58-60	100-105 Days	42-47	Semi-Open	Red	2	2	2
5643	63-65	105-110 Days	47-52	Semi-Open	Bronze	2	2	2
5653IG	62-65	100-105 Days	36-44	Semi-Open	Red	3	2	2
5710	64-66	105-110 Days	49-53	Compact	Bronze	2	3	2
5730	69-71	110-115 Days	49-53	Compact	Red	3	2	2
FOOD GRADE								
5745W	58-62	100-105 Days	40-45	Semi-Open	White	3	2	4

PRODUCT	TRAIT	USAGE	DAYS TO BOOT	MATURITY	AVERAGE SEED SIZE	PLANTING RATE	HEIGHT AT BOOT	HAY YIELD	SILAGE	DROUGHT	REGROWTH
HAY AND GRAZING HYBRIDS											
Super Sioux	Conventional	H, G	55-60	ME	15-20,000	20-30 lb.	5-6 ft	3	N/A	2	3
Superb Graze	Conventional	H, G	65-70	M	19-24,000	15-25 lb.	7-8 ft	3	N/A	2	3
Gun Smoke II	Conventional	H, G, S	88-93	L	26-30,000	11-16 lb.	11-13 ft	2	N/A	1	2
Hay N Graze II	Conventional	H, G, S	PPS	PPS	12-15,000	20-33 lb.	9-11 ft	1	2	2	2
Kritter Kandy II	BMR	H, G	55-65	ME	19-21,000	18-32 lb.	5-6 ft	3	N/A	2	3
Kandy Graz II	BMR	H, G, S	55-60	ME	14-16,000	17-30 lb.	5-6 ft	3	3	1	2
Shorty II	BMR	H, G, S	65-70	M	13-15,000	18-34 lb.	5-6 ft	3	2	1	1
Bossy Bites	BMR	H, G, S	85-90	L	16-18,000	20-34 lb.	8-9 ft	2	2	1	1
Big Bale III	BMR	H, G	65-70	M	15-17,000	21-35 lb.	7-8 ft	2	N/A	1	3
Sensation	BMR PPS	H, G, S	PPS	PPS	13-15,000	18-32 lb.	9-11 ft	1	2	1	2
Guardian	BMR PPS	H, G, S	PPS	PPS	14-16,000	18-32 lb.	10-12 ft	1	1	2	1
SILAGE HYBRIDS											
808 II	BMR	S, GC	68-74	L	13-16,000	4-10 lb.	7-8 ft	2	1	2	5
815	BMR	S, GC	57-61	ME	17-19,000	4-10 lb.	5-6 ft	7	2	2	5
816W	Conventional	S, GC	60-65	ME	15-17,000	4-10 lb.	5-6 ft	7	2	3	5
HYBRID AND VARIETAL MILLET PRODUCTS											
Hybrid Pearl Millet	Conventional	H, G	40-60	ME	50-60,000	8-15 lb.	5-6 ft	2	N/A	1	2
Graze King BMR HPM*	BMR	H, G	40-65	ME	50-60,000	8-15 lb.	4-6 ft	2	N/A	1	2
German "R" Millet	Conventional	H, G	40-50	E	180-250,000	7.5-15 lb.	2-5 ft	4	N/A	1	9

***HPM:** HYBRID PEARL MILLET

RATINGS: 1-9, 1 = BEST | N/A = RATING NOT AVAILABLE | USAGE: H = HAY, G = GRAZING, S = SILAGE, GC = GREEN CHOP

MATURITY: E = EARLY, ME = MEDIUM-EARLY, M = MEDIUM, ML = MEDIUM-LATE, L = LATE, PPS = PHOTOPERIOD SENSITIVE

COVER CROPS

SPRING

Spring Triticale
- Cool season grass
- Upright plant
- High water use and good salinity tolerance
- Excellent regrowth
- Very good forage quality and quantity
- Will form arbuscular mycorrhizal associations

Spring Barley
- Cool season grass
- Upright plant
- Low water use and good salinity tolerance
- Benefits from arbuscular mycorrhizal association
- Very good forage production
- Very good nitrogen scavenger

Black Oats
- Cool season grass
- Winter cereal for Zone 8 and warmer
- Very fibrous root mass and tillers well
- Very good biomass production
- Works as a spring planted crop in colder climates
- Very durable residue when it reaches maturity

Spring Oats
- Cool season grass
- Upright plant
- Medium water use and fair salinity tolerance
- Will form arbuscular mycorrhizal associations
- Very good nitrogen scavenger
- Very good forage quality

Safflower
- Warm season broadleaf
- Upright plant
- High water use and good salinity tolerance
- Deep rooting plant that can aid in reducing soil compaction
- Effective at reclaiming mobile nutrients deep in the soil profile
- Will form arbuscular mycorrhizal associations and flowers attract pollinators

Lentils
- Cool season legume
- Upright and spreading plant
- Low water use
- Poor salinity tolerance
- Forms arbuscular mycorrhizal associations
- Self pollinated, but flowers may attract pollinators

Yellow Field Peas
- Cool season legume
- Upright plant
- Low water use
- Poor salinity tolerance
- Flowers attract pollinators
- Forms arbuscular mycorrhizal associations

Spring Forage Peas
- Cool season legume
- Upright plant
- Low water use
- Poor salinity tolerance
- Flowers attract pollinators
- Forms arbuscular mycorrhizal associations

AC Greenfix (chickling vetch)
- Cool season legume
- Very good nitrogen producer
- Good forage production
- Very efficient with moisture
- Short season plant, can produce up to 134# at 72 days of growth

SUMMER

Sunn Hemp
- Warm season legume
- Upright plant
- Tolerates poor, sandy, droughty soils and requires good drainage
- Has a strong taproot with many well-developed lateral roots
- Very good nitrogen producer
- Can produce 6-7 tons of dry matter per acre

Laredo Soybeans
- Warm season legume
- Upright and spreading plant
- Medium water use
- Black seeded, pure forage soybean
- Self pollinated, but flowers may attract pollinators
- Forms arbuscular mycorrhizal associations

Cowpeas
- Warm season legume
- Upright and spreading plant (vine)
- Low water use
- Poor salinity tolerance
- Flowers attract pollinators
- Forms arbuscular mycorrhizal associations

Mungbeans
- Warm season legume
- Upright and spreading plant (vine)
- Low to medium water use
- Poor salinity tolerance
- Forms arbuscular mycorrhizal associations
- Self pollinated

Sunflowers
- Warm season broadleaf
- Upright plant
- High water use and fair salinity tolerance
- Deep rooting plant that can aid in reducing soil compaction
- Effective at reclaiming mobile nutrients deep in the soil profile
- Will form arbuscular mycorrhizal associations and flowers attract pollinators

Sorghum Sudangrass
- Warm season grass
- Upright plant
- Medium water use
- Fair salinity tolerance
- Benefits from arbuscular mycorrhizal associations
- Self pollinated by the wind

Pearl Millet
- Warm season grass
- Upright plant
- Low water use
- Good protein content
- Self pollinated by the wind
- Will form arbuscular mycorrhizal associations

Guar
- Warm season legume
- Very good heat tolerance and drought tolerance
- 90-120 day maturity
- Good salinity tolerance
- Forms arbuscular mycorrhizal associations

German “R” Millet
- Warm season, grass
- Annual
- Upright plant type
- Low water use
- Poor salinity tolerance
- Forms arbuscular mycorrhizal associations

FALL

Subterranean Clover
- Legume
- Reseeding cool season annual
- Excellent weed and erosion suppressor
- Prostrate very dense plant growth
- Forms seed pods at, or below ground level

Annual Ryegrass
- Cool season grass
- Annual or perennial types
- Medium water use
- Fair salinity tolerance
- Will form arbuscular mycorrhizal associations
- Very good nitrogen scavenger

Phacelia
- Cool season broadleaf
- Upright plant
- Low water use and low salinity tolerance
- Very fibrous roots and good nitrogen catch crop
- Will form arbuscular mycorrhizal associations
- Attracts beneficial insects

Buckwheat
- Cool season broadleaf with warm season growth characteristics
- Upright plant
- Medium water use and poor salinity tolerance
- Enhances soil P availability
- Does not form arbuscular mycorrhizal associations
- Attracts pollinators very well

Oil Seed Radish
- Cool season broadleaf (Brassica)
- Upright and spreading plant
- High water use and poor salinity tolerance
- Very good nitrogen scavenger
- Can aid in reducing compaction
- Does not form arbuscular mycorrhizal associations

Turnips
- Cool season broadleaf (Brassica)
- Upright and spreading plant
- High water use and poor salinity tolerance
- Good at scavenging nitrogen
- Good forage production
- Does not form arbuscular mycorrhizal associations

Dwarf Essex Rape
- Cool season broadleaf
- Belongs to the cabbage family
- High protein and high energy level feed
- Very cold, heat and drought tolerant
- Valuable feed source when other crops are in a summer slump
- Good nutrient scavenger

Hybrid Forage Brassicas
- Works well in fall and spring plantings, as well as summer
- High protein and high energy level feed
- Usually very cold, heat, and drought tolerant
- Bred specifically for forage production and grazing
- Very good regrowth after grazing
- Very good RFV

Ethiopian Cabbage
- Unique multipurpose brassica cultivar
- Very good biofumigant
- Very fast growing
- Generally flowers in 60 days
- Effective taproot
- Up to 5,000 lb. DM/acre

COVER CROPS

WINTER

Austrian Winter Peas
- Cool season legume
- Upright plant
- Low water use
- Poor salinity tolerance
- Flowers attract pollinators
- Forms arbuscular mycorrhizal associations

Common Vetch
- Cool season legume
- Annual or biennial
- Prostrate plant
- Low to medium water use and poor salinity tolerance
- Forms arbuscular mycorrhizal associations
- Flowers attract pollinators

Hairy Vetch
- Cool season legume
- Annual or biennial
- Prostrate plant
- Low to medium water use and poor salinity tolerance
- Forms arbuscular mycorrhizal associations
- Flowers attract pollinators

Lupins
- Cool season legume
- Upright plant
- Low water use
- Prefers acid soils
- Flowers attract pollinators
- Does not form arbuscular mycorrhizal associations

Winter Barley
- Cool season grass
- Upright plant
- Low water use and good salinity tolerance
- Benefits from arbuscular mycorrhizal associations
- Very good forage production
- Very good nitrogen scavenger

Winter Triticale
- Cool season grass
- Upright plant
- High water use and good salinity tolerance
- Excellent regrowth
- Very good forage quality and quantity
- Will form arbuscular mycorrhizal associations

Winter Oats
- Cool season grass
- Walken oats have enough cold tolerance to survive our winters for the last 6 years
- Very good early and late forage production
- Medium water use and fair salinity tolerance
- Very good nitrogen scavenger
- Will form arbuscular mycorrhizal associations

Cereal Rye
- Cool season grass
- Upright plant
- High water use and good salinity tolerance
- Will form arbuscular mycorrhizal associations
- Very good nitrogen scavenger
- Very good residue builder

Canola
- Cool season broadleaf
- Annual and biennial
- Upright and spreading plant
- Medium water use and good salinity tolerance
- Very good at scavenging nitrogen and other nutrients from the soil
- Flowers attract pollinators, and it does not form arbuscular mycorrhizal associations

PERENNIAL

Alfalfa
- Perennial legume
- Upright plant
- High water use and poor salinity tolerance generally
- Non-dormant cultivators can perform like an annual
- Forms arbuscular mycorrhizal associations
- Flowers attract pollinators

Red Clover
- Legume
- Biennial or short lived perennial
- Upright plant
- Medium water use and poor salinity tolerance
- Forms arbuscular mycorrhizal associations
- Flowers attract pollinators

Crimson Clover
- Legume
- Annual or biennial
- Upright plant
- Thrives well on both well-drained sandy soils and clay type soils
- Does not do well in extreme cold or heat
- Good quick producer of nitrogen

White Clover
- Legume
- Perennial
- Upright plant
- Medium water use and poor salinity tolerance
- Forms arbuscular mycorrhizal associations
- Flowers attract pollinators

Yellow Sweet Clover
- Legume
- Annual/biennial
- Upright plant
- Moderate water use and fair salinity tolerance
- Forms arbuscular mycorrhizal associations
- Flowers attract pollinators

Chicory
- Warm season broadleaf
- Perennial
- Upright and spreading plant (vine)
- Will form arbuscular mycorrhizal associations
- Attracts Pollinators it does not form arbuscular mycorrhizal associations

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.

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 applicable 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.

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

Refuge seed may not always contain the DroughtGard® trait. IMPORTANT IRM INFORMATION: Certain products are sold as RIB Complete® corn blend products, and do not require the planting of a structured refuge except in the Cotton-Growing Area where corn earworm is a significant pest. Products sold without refuge in the bag (non-RIB Complete) require the planting of a structured refuge. 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. Plants that are not tolerant to glyphosate may be damaged or killed if exposed to those herbicides. Insect control technology provided by Vip3A is utilized under license from Syngenta Crop Protection AG. Herculex® is a registered trademark of Dow AgroSciences LLC. Agrisure Viptera® is a registered trademark of a Syngenta group company. Respect the Refuge and Corn Design® and Respect the Refuge® are registered trademarks of National Corn Growers Association. Acceleron®, DroughtGard®, RIB Complete®, Roundup Ready 2 Technology and Design®, Roundup Ready®, SmartStax®, Trecepta®, VT Double PRO®, and VT4PRO™ are trademarks of Bayer Group.

Seed containing a patented trait can only be used to plant a single commercial crop. It is unlawful to save and replant Roundup Ready 2 Yield® soybeans, Roundup Ready 2 Xtend® soybeans, and XtendFlex® soybeans. Additional information and limitations on the use of these products are provided in the Technology Stewardship Agreement and the Bayer Technology Use Guide: **tug.bayer.com.** U.S. patents for Bayer technologies can be found at the following webpage: **cs.bayerpatents.bayer.com**

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.

No dicamba may be used in-crop with seed with Roundup Ready® Xtend Technology, unless and until approved or specifically permitted in the state of application. Please follow www.roundupreadyxtend.com/pages/xtendimax-updates.aspx for status updates. Dicamba may harm plants that are not tolerant to dicamba.

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 products with XtendFlex® Technology.

Roundup Ready® Technology contains genes that confer tolerance to glyphosate. Roundup Ready® 2 Technology contains genes that confer tolerance to glyphosate. Roundup Ready 2 Xtend® soybeans contain genes that confer tolerance to glyphosate and dicamba. Products with XtendFlex® Technology contains genes that confer tolerance to glyphosate, glufosinate and dicamba. Plants that are not tolerant to glyphosate, dicamba, and/or glufosinate may be damaged or killed if exposed to those herbicides. Contact your seed brand dealer or refer to the Bayer Technology Use Guide for recommended weed control programs.

Acceleron®, Roundup Ready 2 Xtend®, Roundup Ready 2 Yield®, Roundup Ready® and XtendFlex® are registered trademarks of Bayer Group. LibertyLink logo® and LibertyLink® are trademarks of BASF Corporation.

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 grower's fields.

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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, 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.

Corn trait technology incorporated into these seeds is commercialized under license from Syngenta Seeds, LLC. Herculex® Technology incorporated into these seeds is commercialized under license from Corteva Agriscience LLC. HERCULEX® and the HERCULEX Shield are trademarks of Corteva Agriscience LLC.

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Seeds containing the PowerCore® Enlist®, PowerCore® Enlist® Refuge Advanced®, Enlist® Corn - REFUGE and Enlist E3® traits are protected under one or more U.S. patents which can be found at www.traitstewardship.com. The purchase of this traited seed includes a limited license to produce a single crop in the United States. The use of seed from such a crop and/or the progeny thereof for propagation or seed multiplication or for production or development of a hybrid or different variety of seed is strictly prohibited. You acknowledge and agree to be bound by the terms and conditions of the following documents in effect at the time of planting of this seed: (i) the Corteva Agriscience Technology Use Agreement and (ii) the Product Use Guides for all technologies in this seed, including the Herbicide Resistance Management (HRM), and Use requirements.

To plant PowerCore Enlist, PowerCore Enlist Refuge Advanced, Enlist Corn - REFUGE and Enlist E3 seed, you must have a limited license from Corteva Agriscience (or other appropriate affiliates). In consideration of the foregoing, Corteva Agriscience grants to the Grower a limited license to use its technology to produce only a single commercial crop in the United States under the terms and conditions set forth in the Technology Use Agreement in effect at the time of planting of this seed.

Enlist E3® soybean seeds containing the Enlist® trait can only be used to plant a single commercial crop. It is unlawful to save and replant Enlist E3 soybeans. Additional information and limitations on the use of these products are provided in the Corteva Agriscience Technology Use Agreement and Enlist® Soybean Product Use Guide. U.S. patents for Corteva Agriscience technologies can be found at www.traitstewardship.com

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Properly managing trait technology is key to preserving it as a long term crop protection tool. **Growers who fail to comply with 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 Bt technology, including refuge examples and important information on the use of insecticides on refuge and Bt corn acres, please consult appropriate Product Use Guide. Go to www.traitstewardship.com to download the latest Corteva Agriscience Corn Product Use Guide.

Enlist Duo® and Enlist One® herbicides with Colex-D® technology are the only herbicides containing 2,4-D that are authorized for preemergence and postemergence use with Enlist® crops. Enlist Duo and Enlist One herbicides are not registered for use or sale in all states and counties; are not registered in AK, CA, CT, HI, ID, MA, ME, MT, NH, NV, OR, RI, UT, VT, WA and WY. Contact your state pesticide regulatory agency if you have questions about the registration status of Enlist® herbicides in your area. ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USE IN THE STATE AND COUNTY OF APPLICATION. USE OF PESTICIDE PRODUCTS, INCLUDING, WITHOUT LIMITATION, 2,4-D-CONTAINING PRODUCTS NOT AUTHORIZED FOR USE WITH ENLIST CROPS, MAY RESULT IN OFF-TARGET DAMAGE TO SENSITIVE CROPS/AREAS AND/OR SUSCEPTIBLE PLANTS. Additional product-specific stewardship requirements for Enlist crops, including the Enlist Product Use Guide, can be found atwww.traitstewardship.com.

The transgenic soybean event in Enlist E3® soybeans is jointly developed and owned by Corteva Agriscience and M.S. Technologies, L.L.C.

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Varieties with BOLT® technology provide excellent plant-back flexibility for soybeans following application of sulfonylurea (SU) herbicides such as DuPont™ LeadOff® or DuPont™ Basis® Blend as a component of a burndown program or for double-crop soybeans following SU herbicides such as DuPont™ Finesse® applied to wheat the previous fall.

This variety contains a trait providing enhanced tolerance to labeled specific sulfonylurea soybean herbicides. The STS® gene will not safeguard this variety against other herbicide chemistries which are labeled to be used only over-the-top of crops that have a different and specified herbicide resistant gene. Always read and follow herbicide directions prior to use.

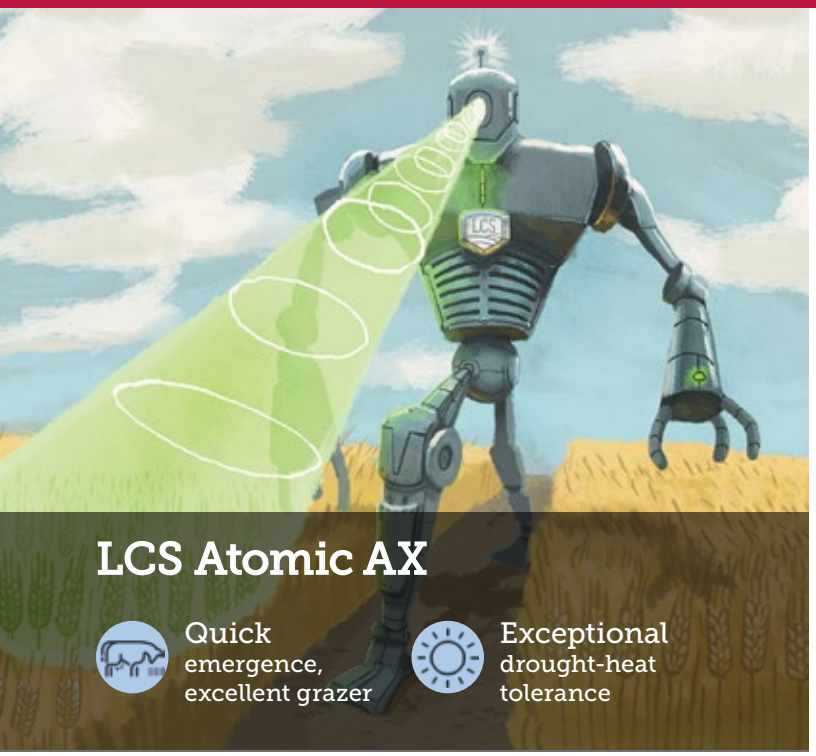
Not all herbicides are registered for sale or use in all states or counties in the United States or all provinces in Canada. Contact your local regulatory agency to determine if a product is registered for sale or use in your area. Always read and follow label directions.

ACCIDENTAL APPLICATION OF INCOMPATIBLE HERBICIDES TO THIS VARIETY COULD RESULT IN TOTAL CROP LOSS. YOU MUST SIGN A TECHNOLOGY USE AGREEMENT AND READ THE PRODUCT USE GUIDE PRIOR TO PLANTING.

The purchase of these seeds includes a limited license to produce a single soybean crop in the United States (or other applicable country). The use of seed from such a crop or the progeny thereof for propagation or seed multiplication or for production or development of a hybrid or different variety of seed is strictly prohibited. Resale or transfer of the seed is strictly prohibited. ® Trademarks of Corteva Agriscience and its affiliated companies. © 2025 [Seed Company]

Maximize your wheat acres

Say goodbye to feral rye, cheatgrass and other grassy weeds with CoAXium® varieties

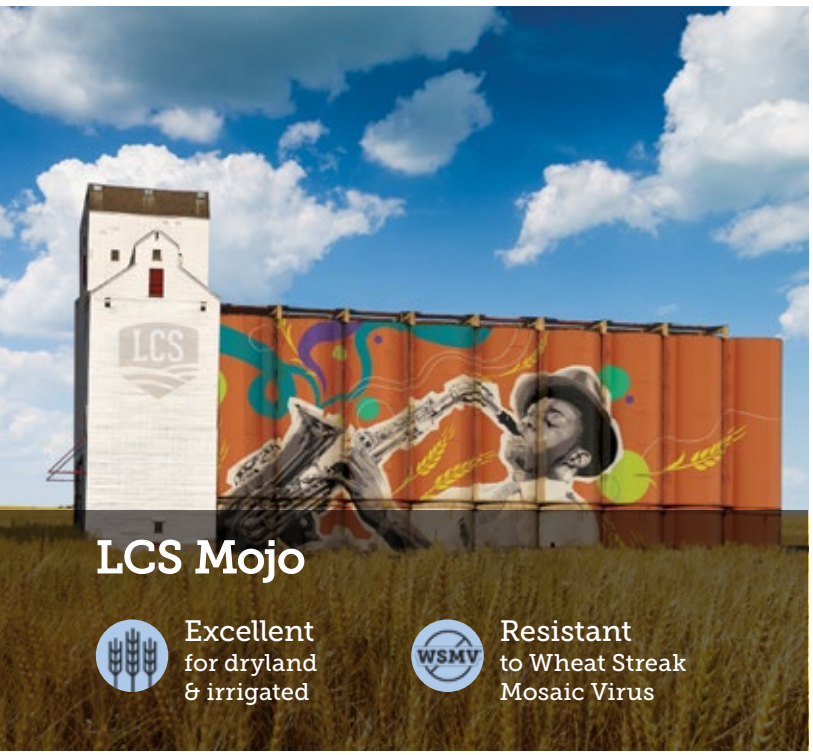


LCS Atomic AX

- Quick emergence, excellent grazer
- Exceptional drought-heat tolerance

LCS Steel AX

- Similar to LCS Chrome
- Very good straw strength



LCS Mojo

- Excellent for dryland & irrigated
- Resistant to Wheat Streak Mosaic Virus

LCS Aries

- Strong disease package
- High yield potential

Reserve your LCS seed today,

Dig into the data at LimagrainCerealSeeds.com/CP

Limagrain

WHEAT ALLIANCE

KSWHEATALLIANCE.ORG

KS FLINTLOCK

NEW!

Central into Western Irrigated

- VERY HIGH YIELD POTENTIAL, WITH TOP PERFORMANCE IN CENTRAL KSU BREEDER TRIALS
- GOOD LEAF RUST RESISTANCE WITH SOLID STRAW STRENGTH & GRAIN QUALITY

NEW!

KS TRADITION

Western Dryland/Irrigated, into Central

- STRONG OVERALL AGRONOMICS WITH GOOD RUST RESISTANCE & EXCELLENT VIRUS COMPLEX TOLERANCE
- GOOD STRAW STRENGTH, DROUGHT TOLERANCE, & ACID SOIL TOLERANCE

KS BILL SNYDER

Central & Western Dryland/Irrigated

- FLEXIBLE FIT ACROSS CENTRAL & WESTERN REGIONS UNDER BOTH DRYLAND & IRRIGATED SYSTEMS
- STRONG DUAL-PURPOSE OPTION THAT MAINTAINS YIELD POTENTIAL POST GRAZING

KS PROVIDENCE

Widely adapted across the Great Plains

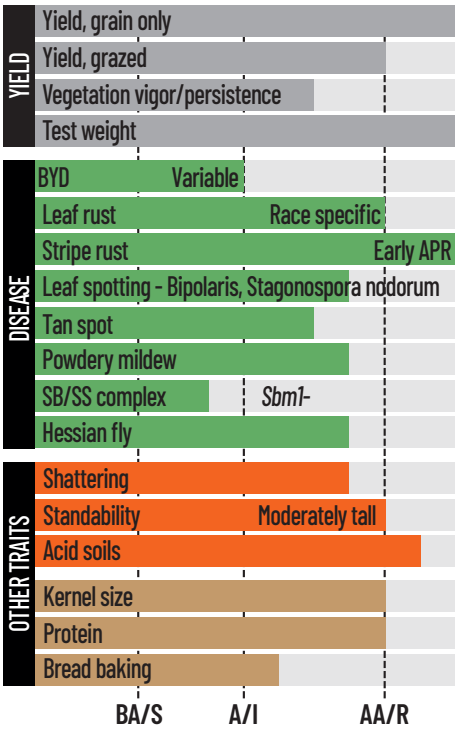
- WELL-SUITED ACROSS A WIDE RANGE OF ENVIRONMENTS WITH PROVEN YIELD STABILITY
- A RELIABLE OPTION FOLLOWING CORN WITH ITS DECENT SCAB TOLERANCE

ELITE GENETICS. **MADE FOR THE PLAINS.**

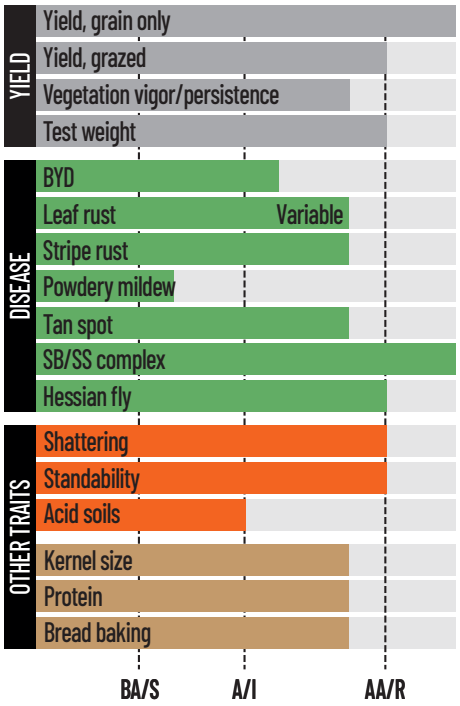
K-STATE Research and Extension

NEW RELEASE

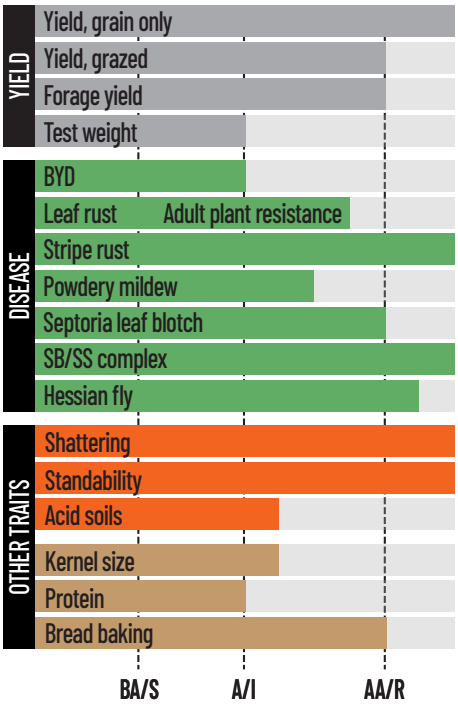
Orange Blossom CL+*



High Cotton*



OK Corral*



BA/S=Below Average or Susceptible | A/I=Average or Intermediate | AA/R=Above Average or Resistant

* Graze 'N' Grain | † Gold 'N' Grain

It pays to plant OGI Certified Wheat.

HIGH WHEAT PROTEIN

Butler's Gold
Doublestop CL+
Firebox
Green Hammer
Orange Blossom CL+
Skydance
Strad CL+

GRAZING TOLERANCE

Bentley
Big Country
Doublestop CL+
High Cotton
OK Corral
Orange Blossom CL+
Showdown
Smith's Gold
Strad CL+
Uncharted

BEST FUNCTIONALITY

Baker's Ann
Bentley
Big Country
Butler's Gold
Doublestop CL+
Firebox
Green Hammer
Ruby Lee
Skydance
Smith's Gold
Strad CL+

HESSIAN FLY RESISTANCE

Breadbox
Duster
Gallagher
Green Hammer
High Cotton
OK Corral
Paradox
Showdown
Smith's Gold

BEST DISEASE PROTECTION

Big Country
Doublestop CL+
Green Hammer
High Cotton
OK Corral
Orange Blossom CL+
Skydance
Smith's Gold
Strad CL+
Uncharted

ACID-SOIL TOLERANCE

Baker's Ann
Bentley
Butler's Gold
Doublestop CL+
Green Hammer
Orange Blossom CL+
Skydance
Strad CL+
Uncharted

OKLAHOMA GENETICS, INC.

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or give us a call at 405-744-4347

WestBred®

WB4422 • WB4445CLP • WB4347 • WB4569 • WB4792

CONDITIONS CHANGE. STANDARDS DON'T.

You don't lower expectations just because growing conditions across the Central Plains don't cooperate. Neither does WestBred® Wheat. Our regionally proven varieties deliver top-yield potential for Central Plains growers like you, who prioritize performance — no matter what the season throws at them. Elite seed for elite wheat growers.
We're 'Bred Differently. Just like you.

Seize the Season at WestBred.com

BAYER

#1 For Planted Acres in Kansas Six Years in a Row

AgriPro®

From 2021 to 2026, Kansas farmers grew AgriPro® brand wheat varieties on more acres each year than any other brand.

2021–2026 USDA NASS Reports

AP Sunbird
Great Plains Yield

AP Prolific
Yield with FHB Tolerance

SY Wolverine
Versatile Performance

AP Bigfoot
Dryland Durability

SY Monument
Time-Tested Consistency

Variety	Agronomics							Disease and Pest											
	Relative Maturity	Plant Height	Coleoptile Length	Test Weight	Straw Strength	Winter Hard.	Alum. Tol.	Stem Rust	Leaf Rust	Stripe Rust	Soil Borne Complex	BYDV	Leaf Blotch	Tan Spot	Powdery Mildew	Hessian Fly	Bacterial Leaf Disease	Wheat Streak Mosaic	FHB*
AP Sunbird	E	S	L	2	6	3	3	5	2	8	2	4	5	3	—	8	2	3	7
AP Prolific	M	M	L	2	5	4	1	2	2	5	1	4	4	3	—	8	4	4	4
AP Bigfoot	E	M	M	1	3	3	3	2	2	6	5	5	4	3	—	8	4	4	6
SY Wolverine	M	S	S	2	2	3	8	2	2	7	1	4	2	3	6	8	2	4	7
SY Monument	L	M	M	3	5	2	2	2	1	6	2	4	4	3	5	8	5	8	8

GENERAL:
1-2 = Excellent
3-4 = Very good
5 = Good
6-7 = Fair
8-9 = Poor
— = Not available

Relative Maturity:
E = Early
M = Medium
L = Late

Plant Height:
S = Short
M = Medium
T = Tall

Coleoptile Length:
S = Short
M = Medium
L = Long

Note: these agronomic assessments are updated annually by Syngenta scientists. The current values reflect each variety's relative performance within these characteristics through the 2025 crop year. Specific conditions may cause variations. These relative protection values are based on current pest and disease populations, known to shift periodically potentially changing specific evaluations. Resistance to many other diseases and pests is sensitive to environmental conditions, plant development stages and the presence and intensity of other diseases which may result in specific evaluation inconsistencies.

syngenta®

AMERICA'S ALFALFA

VARIETY LINEUP

AmeriStand 482 HVXRR

HARVXTRA with Roundup Ready® Technology | ULTRACUT Alfalfa Disease Package

FALL DORMANCY: 4.2
WINTERHARDINESS: 1.9

A Technology Powerhouse: HarvXtra® Alfalfa Paired with the UltraCut® Alfalfa Disease Package

- Latest advancement in disease resistance, featuring the UltraCut® alfalfa disease package with a DRI of 40/40, which includes High Resistance to Aphanomyces Root Rot Race 1, 2 and evolving strains[1]; and includes multi-race resistance to Anthracnose[2]
- HarvXtra® Alfalfa gives growers the ability to better manage the yield-versus-quality tradeoff. It offers more flexibility in cutting schedule to achieve improved forage quality or greater yield potential, when compared to conventional alfalfa at the same stage of maturity

AmeriStand 423TQ RR

ULTRACUT Alfalfa Disease Package | Roundup Ready® ALFALFA

FALL DORMANCY: 4.4
WINTERHARDINESS: 1.3

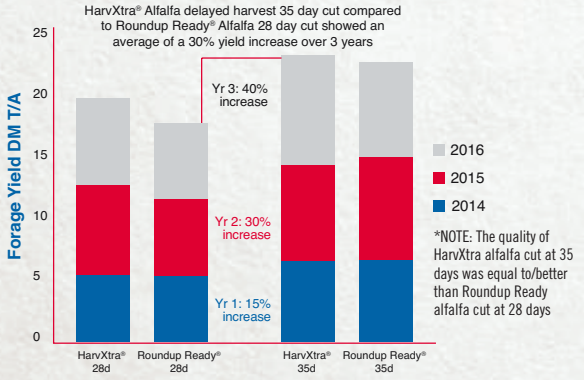
High Quality Traffic Tested® Alfalfa with UltraCut® Alfalfa Disease Package and Roundup Ready® Technology

- Highly resistant to multiple races of Aphanomyces for protection during establishment and early season cool and wet soil conditions
- Highly resistant to multiple races of Anthracnose for protection during warm and humid weather conditions

HARVXTRA with Roundup Ready® Technology

28 DAY VS. 35 DAY FORAGE YIELD

3 YEAR SUMMARY | WEST SALEM, WI (F13 SEEDING)



*NOTE: The quality of HarvXtra alfalfa cut at 35 days was equal to/better than Roundup Ready alfalfa cut at 28 days

AmeriStand 446NT

TRAFFIC TESTED

FALL DORMANCY: 4.4
WINTERHARDINESS: 1.8

Excellent Yield Potential with High Nematode Resistance

- Ideal 4 to 5 cut variety adapted for western US areas with nematode pressure
- High resistance to diseases and pests, including stem nematode
- Excellent rotation variety for nematode resistance

AmeriStand 428TQ

ULTRACUT Alfalfa Disease Package | TRAFFIC TESTED

FALL DORMANCY: 4.4
WINTERHARDINESS: 1.3

UltraCut® Alfalfa Disease Package Ups Ante on Yield and Persistance Leader

- Outstanding yield potential and agronomic performance under 4 to 5-cut harvest management systems (FD=4.4) in various locations throughout dormant alfalfa use areas
- A new day in disease resistance greatly affecting establishment and in-crop performance, AmeriStand 428TQ features the UltraCut® alfalfa disease package with a perfect Disease Resistance Index (DRI) of 40/40 including HR (high resistance) to aphanomyces race 1, race 2, and evolving strains[1], and HR to anthracnose race 1 and race 5[2]
- Superb winterhardiness (WH=1.3); AmeriStand 428TQ delivers excellent cold tolerance and persistence

AmeriStand 518NT

TRAFFIC TESTED

FALL DORMANCY: 5.2
WINTERHARDINESS: 2

High Yield Potential with Nematode Resistance

- Widely adapted variety with excellent winter hardiness
- High resistance to yield-robbing diseases and pests
- Very fast recovery for frequent harvest schedules under intensive management

ULTRACUT Alfalfa Disease Package

The UltraCut® alfalfa disease package helps you grow a healthy alfalfa crop even in field conditions susceptible to Anthracnose and Aphanomyces disease strains.

The UltraCut alfalfa disease package can help deliver an advantage through improved agronomic performance and yield potential.

*In tests established by the NAAIC Review Board, this variety demonstrated improved salt tolerance of germinating seeds (Ger) as compared to the industry salt tolerant checks in each category. References available upon request.

[1]Includes race 1 and race 2 protection. In addition, Forage Genetics International, LLC (FGI) has identified a novel source of Aphanomyces resistance in the greenhouse and field that visibly outperforms unrelated varieties on the market when grown under natural or artificial disease pressure. FGI researchers have been working cooperatively with universities collecting and testing the most virulent strains of Aphanomyces to help determine the level of resistance to this novel source.

[2]Includes race 1 protection, along with Anthracnose Race 5, which was recently confirmed by USDA's Agricultural Research Service.

PRODUCTION TIPS

Use these tips to help you establish a great stand of high yielding, high quality alfalfa.

SOIL SELECTION

- Choose a field with good drainage
- Test the soil for pH and fertility
- Soils should have a pH of 6.5 or above
- If soil pH is below 6.5, an application of lime may be required 12 months ahead of seeding to raise soil pH

SOIL TEST

- Soil test for phosphorus (P), potassium (K) and other elements like sulfur
- Your local soil testing lab can make best recommendations for fertility
- P and K can be applied anytime prior to and/or at seeding
- Soil and plant tissue tests can also guide ongoing topdressing ratios throughout the life of the stand

SEEDING

- With proper management, alfalfa can be seeded conventionally, into reduced tillage or into no-till
- Seed a minimum of 15 pounds per acre
- Spring seedings can begin as soon as frost is out of the ground, seeding early will help improve first year yields
- Fall seedings should occur at least 6 weeks before the historic freeze date for performance the following year

SEEDING DEPTH

- Start with a firm seed bed
- Seed to soil contact and proper seeding depth makes the difference in stand performance
- Plant 1/4 to 1/2 inch deep in heavier soils
- Plant 1/2 to 3/4 inch deep in sandy soils

HARVEST

- Cut first year spring seeded stands at early to mid-bloom (about 70-80 days after seedings)
- Subsequent harvests can be made 25 to 28 days later
- Established stands (second year or older) can be harvested more frequently without severe stand damage
- Most growers like to start first harvest on established stand with a bud cut and following harvests at early bloom (about 26-30 days in most areas)
- Traffic Tested® varieties have been proven to withstand more frequent harvests

Variety Characteristics	Fall Dormancy	Traffic Tested®	Salt Tolerance*	Phytophthora Root Rot	Anthracnose Race 1	Anthracnose Race 5[2]	Verticillium Wilt	Fusarium Wilt	Bacterial Wilt	Aphanomyces Root Rot Race 1	Aphanomyces Root Rot Race 2	Evolving Aphanomyces Strains[1]	Stem Nematode	Root Knot Nematode	Pea Aphid	Spotted Alfalfa Aphid
AmeriStand 482 HVXRR	4.2	—	Ger	HR	HR	R	HR	HR	HR	HR	HR	HR	R	—	R	R
AmeriStand 423TQ RR	4.4	EX	Ger	HR	HR	HR	HR	HR	HR	HR	HR	HR	R	—	R	R
AmeriStand 446NT	4.4	EX	Ger	HR	HR	—	HR	HR	HR	R	—	—	HR	—	HR	R
AmeriStand 428TQ	4.4	EX	Ger	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	—	R	R
AmeriStand 518NT	5.2	EX	Ger	HR	HR	—	HR	HR	HR	HR	—	—	HR	HR	HR	HR

HR = >51% Resistance, R = 31-50% Resistance, MR = 15-30% Resistance, LR = 6-14% Resistance

*In tests established by the NAAIC Review Board, this variety demonstrated improved salt tolerance of germinating seeds (Ger) as compared to the industry salt tolerant checks in each category. References available upon request.

[1]Includes race 1 and race 2 protection. In addition, Forage Genetics International, LLC (FGI) has identified a novel source of Aphanomyces resistance in the greenhouse and field that visibly outperforms unrelated varieties on the market when grown under natural or artificial disease pressure. FGI researchers have been working cooperatively with universities collecting and testing the most virulent strains of Aphanomyces to help determine the level of resistance to this novel source.

[2]Includes race 1 protection, along with Anthracnose Race 5, which was recently confirmed by USDA's Agricultural Research Service.

Kauffman SEEDS

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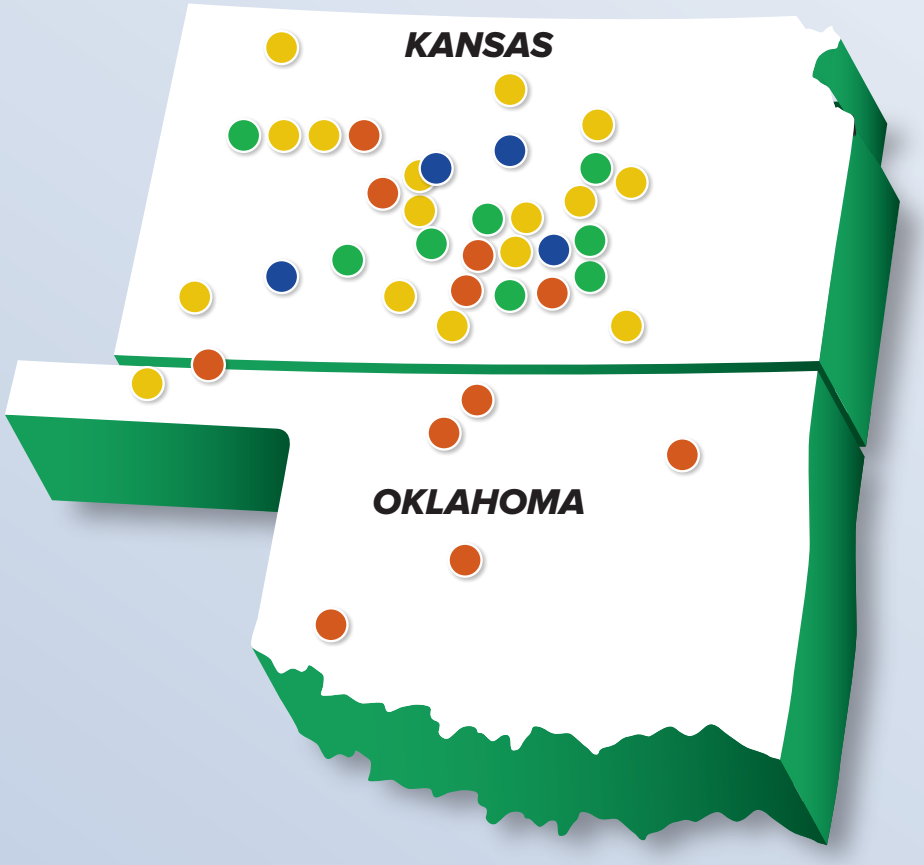
RESEARCH TRIAL LOCATIONS



CORN LOCATIONS
SOYBEAN LOCATIONS
SORGHUM LOCATIONS
MULTI CROP LOCATIONS