

grain + forage
SORGHUM PRODUCT GUIDE

altaseeds.com



Alta
seeds®

301 Polk Street, Suite #860
Amarillo, TX 79101
877-806-7333

Global Biotechnology Center
1500 Research Pkwy.
Centeq Bldg. A, Suite 255
College Station, TX 79045



Alta Seeds is a trademark of Advanta US, an operating unit of Advanta Seeds, a global company.
©Advanta US, LLC 746-1905

Alta
seeds®



HYBRIDS FOR EVERY ENVIRONMENT AND OPERATION



Alta Seeds delivers a variety of high-performance hybrids to tackle your agronomic issues. From the full lineup of grain and forage sorghum to sorghum-sudangrass, sudangrass and pearl millet, the Alta Seeds portfolio offers top-producing seeds with cutting-edge characteristics.

In the groundbreaking Global Biotechnology Center in Texas and across many locations, our breeders are setting the standards for disease, pest and stress tolerance while developing new solutions to tackle tough challenges on the farm. The first to introduce Aphix™ high tolerance to sugarcane aphid, Alta Seeds is continually introducing unique innovations such as the proprietary Vertix™ Seed Treatments and the Empyr™ Premier Forages line of top-performing hybrids.



CONTENTS

- Grain Sorghum Hybrid Summary 6
- Grain Sorghum 8
- Grain Sorghum Selection & Stand 30
- Sorghum for Forage 32
- Empyr Premier Forages 34
- Empyr Selection Guide 36
- Empyr Forage Sorghum 38
- Empyr Sorghum-Sudangrass 44
- Empyr Sudangrass 48
- Forage Selection Guide 52
- Forage Sorghum 54
- Sorghum-Sudangrass 58
- Pearl Millet 66
- Vertix Seed Treatment 68



Working in the largest office in the world, Alta Seeds plant breeders select hybrids from many locations throughout the sorghum-producing areas to ensure performance in local conditions.

*Sugarcane aphid tolerance rating conducted by the Agricultural Research Division of the USDA. Testing conducted in field trials by the Agricultural Research Division of the USDA, Louisiana State University and Texas AgriLife.

Performance of our seed may be adversely affected by environmental conditions, cultural practices, diseases, insects or other factors beyond our control. All information concerning the varieties and their performance given orally or in writing by Advanta or its employees or its agents is given in good faith, but is not to be taken as a representation by Advanta as to performance and suitability of the varieties sold. Performance may depend on local climatic conditions and other causes. Advanta assumes no liability for the given information.

Continuous Improvement

For Top Performing Hybrids

Alta Seeds continues to develop and introduce new grain hybrids with trial-topping yields along with sorghums for forage capable of delivering high tonnage, digestibility and palatability to lower input costs and exceed production goals per acre and per cow. The BMR-6, brachytic dwarf, dry stalk and photoperiod sensitive traits add versatility to the natural drought tolerance and water use efficiency characteristics of sorghum.

When considering hybrids, check pest tolerance ratings. Selecting high tolerance to sugarcane aphid is the first step to prevent crop losses from the sooty mold and lodging caused by this destructive pest. Additional pest management practices also may be required to help sorghum continue to grow and produce under heavy pressure.

The latest introduction of Aphix sugarcane aphid tolerance is in a mid-season silage forage sorghum. One of the first forage sorghums with high tolerance ratings to sugarcane aphid, this new **ADV F8322** is a single-cut, high-tonnage hybrid.



Trials near Gypsum, Kansas, show Alta Seeds AG1203 continuing to grow and produce under heavy sugarcane aphid pressure in a field that was not sprayed. Sooty mold and lodging plagued the susceptible hybrids.

The new ADV F8322 forage sorghum adds to the Aphix lineup of five grain sorghums:

AG1201 Early Bronze

widely adapted hybrid even for double crop

AG1203 Medium-Early Bronze

delivers trial-topping yields in dryland or irrigated conditions

AG1301 Medium-Early Cream

for excellent staygreen and standability for dryland or irrigated fields

ADV G3247 Medium-Late Bronze

with top yields and high test weights

NEW ADV G1329 Early Cream performs well in dryland conditions and responds very favorably to irrigation



Alta Seeds AG1203 (left) under heavy SCA pressure vs. trial competitor (right).



Grain Sorghum Hybrid Summary

Alta Seeds offers five Aphix™ grain sorghum hybrids with high tolerance to sugarcane aphids* These hybrids offer outstanding performance with the added confidence of proven pest tolerance.

Select from hybrids with top yield potential, drought tolerance, excellent standability and seed treatment options to meet your needs.

	NEW		Aphix SCA Tolerance		
CHARACTERISTIC RATINGS	ADV G1329	AG1201	AG1203	AG1301	ADV G3247
Relative Maturity	E	E	M/E	M/E	M/L
Yield for Maturity	3	3	1	2	2
Days to Mid Bloom	58	60	63	63	69
Grain Color	CRM	BRZ	BRZ	CRM	BRZ
Head Type	S/O	S/O	S/O	S/C	S/O
Approx. Seeds/Lb (1,000)	14-16	13-15	12-14	17-18	12-14
Plant Height (inches)	30-36	30-36	34-40	40-46	46-50
Head Exertion	2	4	3	3	4
Plant Uniformity	1	2	–	1	3
Plant Color	Red	Red	Red	Red	Red
Seedling Vigor	3	3	2	1	3
Root Lodging	1	2	2	1	2
Drought Tolerance	1	1	2	2	2
Test Weight	2	4	2	5	3
Threshability	2	2	2	1	2
Charcoal Rot	–	4	–	–	4
Downy Mildew (Race 3)	5	6	–	–	3
Head Smut	–	4	–	–	4
MDMV	–	5	–	–	2
Sugarcane Aphid*	HT	HT	HT	HT	HT
Tough Dryland	HS	HS	HS	HS	X
High Yield Dryland	HS	S	HS	HS	S
Limited Irrigation	HS	S	HS	HS	HS
Full Irrigation	S	S	HS	S	HS
Early Planting/Cold Soils	S	X	S	X	S
Poorly Drained Soils	S	S	S	S	S
Anthracnose Prone Areas	S	S	–	–	HS
No-Till	HS	S	S	MA	S

	ADV G1150	AG1401	ADV G2106	AG2115	ADV G2275
AG1101	ADV G1150	AG1401	ADV G2106	AG2115	ADV G2275
E	M/E	M/E	MED	MED	MED
3	1	2	1	2	2
55	63	61	64	65	68
BRZ	RED	WHT	RED	RED	BRZ
S/O	S/O	S/O	S/O	S/O	S/O
13-15	18	14-16	12-14	15	12-14
28-34	40-46	30-36	44-48	36-42	48-54
4	3	6	1	5	1
2	1	2	2	3	1
Red	Red	Tan	Purple	Red	Purple
3	5	3	1	3	3
1	1	2	2	2	1
1	1	2	2	2	1
4	2	3	3	2	2
2	4	3	2	2	2
–	–	3	4	4	–
–	–	5	5	5	–
–	–	4	4	6	–
–	–	4	4	7	–
MA	MA	MA	MT	MT	MT
HS	HS	HS	S	HS	HS
S	HS	S	HS	HS	HS
S	S	S	HS	HS	HS
S	S	S	S	S	S
X	S	X	S	S	S
S	S	S	S	S	S
–	–	S	HS	X	S
S	S	X	S	S	HS

Characteristic Ratings Key

E = Early M/E = Medium-Early MED = Medium
M/L = Medium-Late L = Late
BRZ = Bronze WHT = White CRM = Cream
S/O = Semi-Open S/C = Semi-Compact

Trait Ratings Scale:

1 = Excellent 10 = Poor

Crop Use & Adaptation Key

HS = Highly Suitable
S = Suitable
MA = Manage Appropriately
X = Poor Suitability
HT = High Tolerance
MT = Medium Tolerance

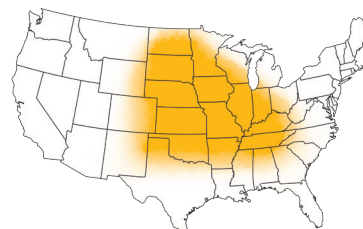
*Sugarcane aphid tolerance rating conducted by the Agricultural Research Division of the USDA.

AG1101

Earliest Bronze Grain Sorghum

- Excellent yield for maturity
- Very uniform
- Strong drought tolerance
- Excellent for areas needing early maturity or for double cropping situations
- Intense bronze-colored grain

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CHARACTERISTICS & RATINGS

Early Relative Maturity

55 Days to Mid Bloom

13-15 Seeds/Lb (1,000) – check seed bag

Bronze Grain Color

Semi-Open Head Type

28-34" Plant Height

Red Plant Color

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland Environments	S
Limited Irrigation	S
Full Irrigation	S
Early Planting / Cold Soils	X
No-Till	S
Poorly Drained Soils	S
Sugarcane Aphid	MA

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

HT = High Tolerance

MT = Medium Tolerance

Yield for Maturity	3
Head Exertion	4
Plant Uniformity	2
Seedling Vigor	3
Root Lodging	1
Drought Tolerance	1
Test Weight	4
Threshability	2

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

NOTES:

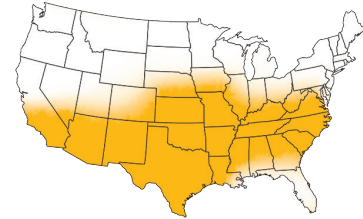
GRAIN SORGHUM

ADV G1150

Medium-Early Red Grain Sorghum

- Very uniform and attractive
- Fairly short plant stature with excellent stalks
- Ideal choice for dryland areas with excellent yield for maturity
- Produces semi-open heads of pale red grain

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



Primary area of adaptation

CHARACTERISTICS & RATINGS

Medium-Early Relative Maturity

63 Days to Mid Bloom

18 Seeds/Lb (1,000) – check seed bag

Pale Red Grain Color

Semi-Open Head Type

40-46" Plant Height

Red Plant Color

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland Environments	HS
Limited Irrigation	S
Full Irrigation	S
Early Planting / Cold Soils	S
No-Till	S
Poorly Drained Soils	S
Sugarcane Aphid	MA

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

HT = High Tolerance

MT = Medium Tolerance

Yield for Maturity	1
Head Exertion	3
Plant Uniformity	1
Seedling Vigor	5
Root Lodging	1
Drought Tolerance	1
Test Weight	2
Threshability	4

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

NOTES:

GRAIN SORGHUM

AG1201

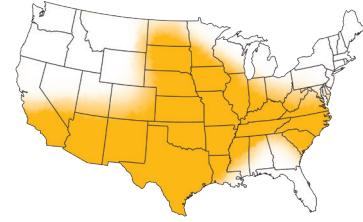


Early Bronze Grain Sorghum

- Very uniform
- Excellent yield for maturity
- Strong drought tolerance
- Adaptable across a wide range of growing conditions
- Sugarcane aphid tolerance

Recommended Seeding Rates:

Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CHARACTERISTICS & RATINGS

Early Relative Maturity

60 Days to Mid Bloom

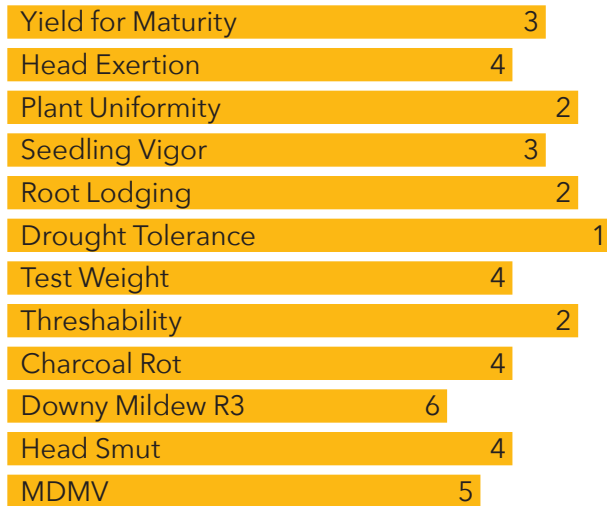
13-15 Seeds/Lb (1,000) – check seed bag

Bronze Grain Color

Semi-Open Head Type

30-36" Plant Height

Red Plant Color



10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland Environments	S
Limited Irrigation	S
Full Irrigation	S
Early Planting / Cold Soils	X
No-Till	S
Poorly Drained Soils	S
Anthraxnose Prone Area	S
Downy Mildew (Race 3) Area	X
Head Smut Prone Area	MA
Sugarcane Aphid*	HT

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

HT = High Tolerance

MT = Medium Tolerance

*Tolerance confirmed in third-party testing conducted by the Agricultural Research Division of the USDA in Stillwater, OK.

NOTES:

AG1203



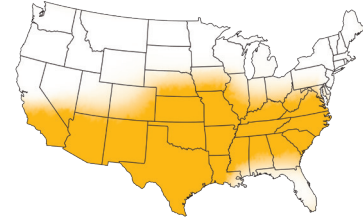
Medium-Early Bronze Grain Sorghum

- Outstanding yield for maturity
- Strong standability
- Excellent drought tolerance and dryland option
- Widely adaptable
- Sugarcane aphid tolerance

Recommended Seeding Rates:

Vary depending on local growing conditions.

Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland Environments	HS
Limited Irrigation	HS
Full Irrigation	HS
Early Planting / Cold Soils	S
No-Till	S
Poorly Drained Soils	S
Sugarcane Aphid*	HT

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

HT = High Tolerance

MT = Medium Tolerance

*Tolerance confirmed in third-party testing conducted by the Agricultural Research Division of the USDA in Stillwater, OK.

NOTES:

CHARACTERISTICS & RATINGS

Medium-Early Relative Maturity

63 Days to Mid Bloom

12-14 Seeds/Lb (1,000) – check seed bag

Bronze Grain Color

Semi-Open Head Type

34-40" Plant Height

Red Plant Color

Yield for Maturity	1
Head Exertion	3
Seedling Vigor	2
Root Lodging	2
Drought Tolerance	2
Test Weight	2
Threshability	2

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

AG1301



Medium-Early Cream Grain Sorghum

- Performs well in dryland conditions and responds very favorably to irrigation
- Excellent staygreen
- Good standability
- Very good plant uniformity
- Widely adaptable
- Sugarcane aphid tolerance

CHARACTERISTICS & RATINGS

Medium-Early Relative Maturity

63 Days to Mid Bloom

17-18 Seeds/Lb (1,000) – check seed bag

Cream Grain Color

Semi-Compact Head Type

40-46" Plant Height

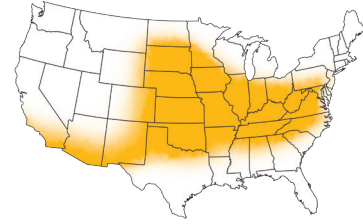
Red Plant Color

Yield for Maturity	2
Head Exertion	3
Plant Uniformity	1
Seedling Vigor	1
Root Lodging	1
Drought Tolerance	2
Test Weight	5
Threshability	1

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland Environments	HS
Limited Irrigation	HS
Full Irrigation	S
Early Planting / Cold Soils	X
No-Till	MA
Poorly Drained Soils	S
Sugarcane Aphid*	HT

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

HT = High Tolerance

MT = Medium Tolerance

*Tolerance confirmed in third-party testing conducted by the Agricultural Research Division of the USDA in Stillwater, OK.

NOTES:

GRAIN SORGHUM

ADV **G1329**

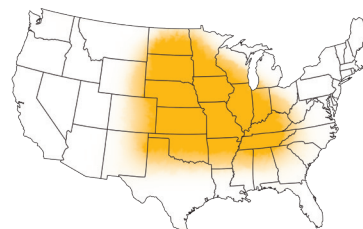


Early Cream Grain Sorghum

- Drought tolerant
- Very uniform with excellent standability
- Performs well in dryland conditions
- Sugarcane aphid tolerance
- Performs well in high pH soils

NEW

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CHARACTERISTICS & RATINGS

Early Relative Maturity

58 Days to Mid Bloom

14-16 Seeds/Lb (1,000) – check seed bag

Cream Grain Color

Semi-Open Head Type

30-36" Plant Height

Red Plant Color

Yield for Maturity	3
Head Exertion	2
Plant Uniformity	1
Seedling Vigor	3
Root Lodging	1
Drought Tolerance	1
Test Weight	2
Threshability	2

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland Environments	HS
Limited Irrigation	HS
Full Irrigation	S
High pH Soils Iron Chlorosis	HS
Early Planting	S
No-Till	HS
Poorly Drained Soils	S
Anthraxnose Prone Area	S
Downy Mildew Area	MA
Head Smut Prone Area	MA
Sugarcane Aphid	HT

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

HT = High Tolerance

MT = Medium Tolerance

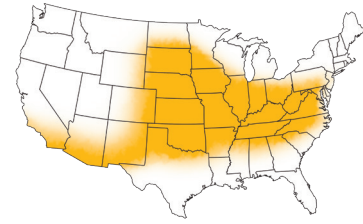
NOTES:

AG1401

Medium-Early White Grain Sorghum

- Food-grade, white-seeded hybrid with tan plant color
- Good yield potential under stress
- Uniform short plant with good head exertion

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CHARACTERISTICS & RATINGS

Medium-Early Relative Maturity

61 Days to Mid Bloom

14-16 Seeds/Lb (1,000) – check seed bag

White Grain Color

Semi-Open Head Type

30-36" Plant Height

Tan Plant Color

Yield for Maturity	2
Head Exertion	6
Plant Uniformity	2
Seedling Vigor	3
Root Lodging	2
Drought Tolerance	2
Test Weight	3
Threshability	3
Charcoal Rot	3
Downy Mildew R3	5
Head Smut	4
MDMV	4

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland Environments	S
Limited Irrigation	S
Full Irrigation	S
Early Planting / Cold Soils	X
No-Till	X
Poorly Drained Soils	S
Anthraxnose Prone Area	S
Downy Mildew (Race 3) Area	X
Head Smut Prone Area	MA
Sugarcane Aphid	MA

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable S = Suitable
MA = Manage Appropriately X = Poor Suitability
HT = High Tolerance MT = Medium Tolerance

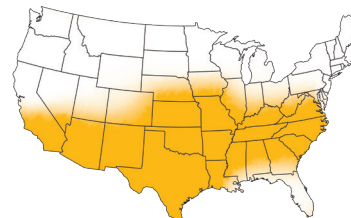
NOTES:

ADV G2106

Vivid Red Grain Sorghum

- 64 days to mid bloom
- Good plant uniformity
- Highly adaptable
- Responds well to irrigation

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



Primary area of adaptation

CHARACTERISTICS & RATINGS

Medium Relative Maturity

64 Days to Mid Bloom

12-14 Seeds/Lb (1,000) – check seed bag

Red Grain Color

Semi-Open Head Type

44-48" Plant Height

Purple Plant Color

Yield for Maturity	1
Head Exertion	1
Plant Uniformity	2
Seedling Vigor	1
Root Lodging	2
Drought Tolerance	2
Test Weight	3
Threshability	2
Charcoal Rot	4
Downy Mildew R3	5
Head Smut	4
MDMV	4

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

FIELD POSITIONING

Tough Dryland	S
High Yield Dryland Environments	HS
Limited Irrigation	HS
Full Irrigation	S
Early Planting / Cold Soils	S
No-Till	S
Poorly Drained Soils	S
Anthraxnose Prone Area	HS
Sugarcane Aphid*	MT

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

HT = High Tolerance

MT = Medium Tolerance

*Tolerance confirmed in third-party testing conducted by the Agricultural Research Division of the USDA in Stillwater, OK.

NOTES:

AG2115

Medium Red Grain Sorghum

- Dependable, proven performer
- Medium height, good uniformity, superior stalks
- Maintains agronomics and yields well under drought stress and produces exceptional yields under more ideal conditions

CHARACTERISTICS & RATINGS

Medium Relative Maturity

65 Days to Mid Bloom

15 Seeds/Lb (1,000) – check seed bag

Pale Red Grain Color

Semi-Open Head Type

36-42" Plant Height

Red Plant Color

Yield for Maturity	2
Head Exertion	5
Plant Uniformity	3
Seedling Vigor	3
Root Lodging	2
Drought Tolerance	2
Test Weight	2
Threshability	2
Charcoal Rot	4
Downy Mildew R3	5
Head Smut	6
MDMV	7

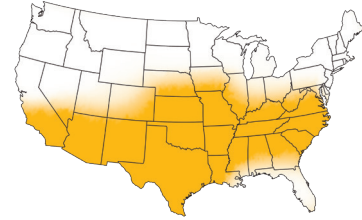
10 9 8 7 6 5 4 3 2 1
 Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:

Vary depending on local growing conditions.

Please see your Alta Seeds retailer for local recommendations.



Primary area of adaptation

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland Environments	HS
Limited Irrigation	HS
Full Irrigation	S
Early Planting / Cold Soils	S
No-Till	S
Poorly Drained Soils	S
Anthraco-nose Prone Area	X
Downy Mildew (Race 3) Area	MA
Head Smut Prone Area	MA
Sugarcane Aphid*	MT

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable S = Suitable
 MA = Manage Appropriately X = Poor Suitability
 HT = High Tolerance MT = Medium Tolerance

*Tolerance confirmed in third-party testing conducted by the Agricultural Research Division of the USDA in Stillwater, OK.

NOTES:

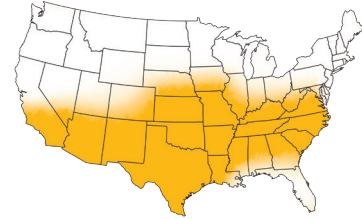
GRAIN SORGHUM

ADV G2275

Medium Bronze Grain Sorghum

- Strong drought tolerance
- Great plant uniformity
- High test weights
- Excellent root lodging
- Very good yield for maturity

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CHARACTERISTICS & RATINGS

Medium Relative Maturity

68 Days to Mid Bloom

12-14 Seeds/Lb (1,000) – check seed bag

Bronze Grain Color

Semi-Open Head Type

48- 54" Plant Height

Purple Plant Color

Yield for Maturity	2
Head Exertion	1
Plant Uniformity	1
Seedling Vigor	3
Root Lodging	1
Drought Tolerance	1
Test Weight	2
Threshability	2

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland Environments	HS
Limited Irrigation	HS
Full Irrigation	S
Early Planting / Cold Soils	S
No-Till	HS
Poorly Drained Soils	S
Anthraxnose Prone Area	S
Sugarcane Aphid*	MT

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

HT = High Tolerance

MT = Medium Tolerance

*Tolerance confirmed in third-party testing conducted by the Agricultural Research Division of the USDA in Stillwater, OK.

NOTES:

GRAIN SORGHUM

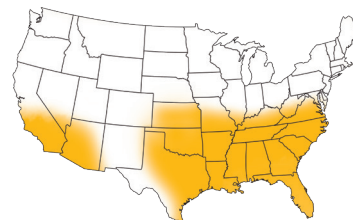
ADV **G3247**



Medium-Late Bronze Grain Sorghum

- High top-end yield
- Intense bronze-colored grain
- High test weights
- Sugarcane aphid tolerance

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CHARACTERISTICS & RATINGS

Medium-late Season Relative Maturity

69 Days to Mid Bloom

12-14 Seeds/Lb (1,000) – check seed bag

Bronze Grain Color

Semi-Open Head Type

46-50" Plant Height

Red Plant Color

Yield for Maturity	2
Head Exertion	4
Plant Uniformity	3
Seedling Vigor	3
Root Lodging	2
Drought Tolerance	2
Test Weight	3
Threshability	2
Charcoal Rot	4
Downy Mildew R3	3
Head Smut	4
MDMV	2

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

FIELD POSITIONING

Tough Dryland	X
High Yield Dryland Environments	S
Limited Irrigation	HS
Full Irrigation	HS
Early Planting / Cold Soils	S
No-Till	S
Poorly Drained Soils	S
Anthraxnose Prone Area	HS
Sugarcane Aphid*	HT

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

HT = High Tolerance

MT = Medium Tolerance

*Tolerance confirmed in third-party testing conducted by the Agricultural Research Division of the USDA in Stillwater, OK.

NOTES:

Grain Sorghum Selection & Stand



Selection of grain sorghum hybrids begins with geography or field location and water resources. Growth and development is driven by heat unit accumulation; sorghum flowering shows little effect of heat up to 100 °F.

Yield potential can increase by 18–20% from early to medium and to late maturities. Planting date should be 2 weeks AFTER last average frost date **IF** the 5-day average soil temperatures are 60 °F at 2" depth. Check the last recommended planting date for grain sorghum in your area when determining the best maturity to fit your field and timing.

Considerations include:

Relative maturity and days to half bloom based on your growing environment; our full line offers early maturing hybrids with mid bloom in 55 days or less to medium-late maturing with mid bloom expected at about 69 days.

Timing of water

- Peak water use is just prior to boot stage. When sharing irrigation water, consider minimizing the overlap of peak water demand for two crops.

Seeds per pound varies by hybrid, and this will impact your seeding rate.

Plant Stand for Sorghum by Seed/Pound						
Population	30,000	40,000	50,000	60,000	70,000	80,000
Seeds/Lb						
11,000	2.7	3.8	4.6	5.5	6.4	7.3
11,500	2.6	3.6	4.4	5.2	6.1	7.0
12,000	2.5	3.3	4.2	5.0	5.8	6.7
12,500	2.4	3.2	4.0	4.8	5.6	6.4
13,000	2.3	3.1	3.9	4.6	5.4	6.2
13,500	2.2	3.0	3.7	4.4	5.2	5.9
14,000	2.1	2.8	3.6	4.3	5.0	5.7
14,500	2.0	2.7	3.5	4.1	4.8	5.5
15,000	2.0	2.6	3.4	4.0	4.7	5.3
15,500	1.9	2.6	3.3	3.9	4.5	5.2
16,000	1.9	2.5	3.2	3.8	4.4	5.0
16,500	1.8	2.4	3.1	3.6	4.2	4.8
17,000	1.7	2.3	3.0	3.5	4.1	4.7
17,500	1.6	2.1	2.8	3.2	3.8	4.3
18,000	1.5	2.0	2.7	3.1	3.6	4.1
18,500	1.4	1.9	2.5	2.9	3.4	3.9
19,000	1.4	1.7	2.4	2.8	3.2	3.7
19,500	1.3	1.6	2.3	2.6	3.0	3.5
20,000	1.2	1.5	2.1	2.4	2.9	3.2

Review the Plant Stand Chart below to calculate your seeding rate by hybrid.

90,000	100,000	110,000	120,000	130,000	140,000	150,000
8.2	9.1	10.0	10.9	11.8	12.7	13.6
7.8	8.7	9.6	10.4	11.3	12.2	13.0
7.5	8.3	9.2	10.0	10.8	11.7	12.5
7.2	8.0	8.8	9.6	10.4	11.2	12.0
6.9	7.7	8.5	9.3	10.0	10.8	11.6
6.7	7.4	8.1	8.9	9.6	10.3	11.1
6.4	7.1	7.9	8.6	9.3	10.0	10.7
6.2	6.9	7.6	8.3	9.0	9.7	10.4
6.0	6.7	7.3	8.0	8.7	9.3	10.0
5.8	6.5	7.1	7.8	8.4	9.1	9.7
5.6	6.3	6.9	7.5	8.1	8.8	9.4
5.5	6.1	6.7	7.3	7.9	8.5	9.1
5.3	5.9	6.5	7.1	7.7	8.3	8.9
4.9	5.5	6.0	6.5	7.1	7.6	8.2
4.7	5.2	5.7	6.2	6.8	7.3	7.8
4.4	5.0	5.4	5.9	6.4	6.9	7.4
4.2	4.7	5.1	5.6	6.1	6.5	7.0
3.9	4.4	4.8	5.3	5.7	6.2	6.6
3.7	4.2	4.5	5.0	5.4	5.8	6.2

Sorghum for Forage

Forage Sorghum

Forage sorghums are generally taller, produce more leaves and are later maturing than typical grain sorghum hybrids. Forage sorghums can produce very high biomass yields but have limited regrowth potential, making them excellent choices for single-cut silage and standing green-chop production uses. For optimum forage with grain, harvest should begin when 80% or more of heading has occurred and 50% of the grain reaches the soft dough stage.

Alta Seeds now offers Aphix™ sugarcane aphid tolerance in new ADV F8322 forage sorghum.



This breakthrough trait helps increase the outstanding performance along with drought tolerance and greater water-use efficiency of the forage sorghums. Select from our proprietary genetics for high tonnage, digestibility and palatability to lower input costs and exceed production goals per acre and per cow. Our hybrids offer versatility of harvest to fit your needs and provide a quality feed option equal to or better than corn silage.

Sorghum-Sudangrass

Sorghum-sudangrass hybrids characteristically reach heights over six feet, have smaller stalks than forage sorghum and strong tillering, and produce more tonnage than sudangrass. They have excellent regrowth potential, but less than sudangrass. The regrowth ability of sorghum-sudangrass hybrids make them well-suited for multiple harvest systems.

Sudangrass

Sudangrass has finer stalks and more tillers and produces more leaves than typical forage sorghum. It possesses excellent regrowth with quick recovery following cutting or grazing. Total biomass tonnage for a single harvest generally will be less than yields of forage sorghum. Sudangrass is primarily utilized for grazing and hay production and can serve as an excellent cover crop.

For the best quality and yield under a multi-cut program, harvest at 40 days or 40" of growth. Mechanical harvesters should be set to leave 2 nodes and 4" for brachytic or 6" of stubble for non-brachytic, whichever is higher. Harvesting at this height will promote more rapid regrowth. At the latest, harvest when 50% of the plants have reached the flag-leaf stage for a one-cut program. Under a one-cut program, cutting height can be lowered to maximize yields. Opening the swather for a wide windrow promotes drying.

If grazing, cattle should be turned in at approximately 24" of growth, and grazing should be stopped when height is reduced to 6" to promote rapid and adequate regrowth.

Forage Characteristics

Brachytic Dwarf:

Four dwarfing genes in sorghum control height. These brachytic dwarfism genes reduce the length of the internodes without affecting other plant characteristics, such as leaf number, leaf size, maturity or yield/biomass production. Brachytic dwarf sorghums have very high leaf-to-stalk ratios, prolific tillering, superior standability and comparable tonnage to normal height sorghums.

For the best quality and yield under a one-cut program, cutting height can be lowered to maximize yields. Opening the swather for a wide windrow promotes drying.

Under a multi-cut program, harvest sorghum-sudangrass or sudangrass at 40 days or 40" of growth. Due to the compressed internode lengths, mechanical harvesters should be set to leave 2 nodes or 4" of stubble, whichever is higher. Harvesting at this height will promote more rapid regrowth. At the latest, harvest when 50% of the plants have reached the flag-leaf stage for a one-cut program.

Grazing: Begin grazing brachytic dwarf sorghum-sudangrass and sudangrass at about 18" of growth, and stop when height is reduced to 4" to promote regrowth.

BMR-6:

BMR-6 sorghums have less lignin than conventional sorghums and are extremely palatable. The high digestibility rivals corn silage as the choice for improved animal performance.

Dry Stalk:

Dry stalk hybrids allow growers to ensile or bale at reduced moisture levels with less opportunity for spoilage. When harvested at the soft dough stage, dry stalk forage sorghums have approximately 64% to 69% moisture content. Dry stalk sudangrass hybrids can be stored much sooner as baleage or haylage than non-dry stalk types and can be harvested as dry hay.

Photoperiod Sensitive (PS) Sorghums:

PS sorghums have a wide window for harvest. The PS sorghums initiate flowering in response to day length and will remain vegetative from mid-March through September, adding new leaves and maintaining very high-quality forage. The flexible harvest window of PS sorghum helps growers manage weather or custom harvest scheduling.



WORLD-CLASS FORAGE SORGHUM LINEUP

Not all forage sorghum seeds are equal in their performance. But with EMPYR Premier Forages from Alta Seeds, you can have confidence that your choice of forage will deliver excellent results year after year.

EMPYR Premier Forages are our top-of-the-line, carefully selected hybrids that consistently outperform and outproduce the others in their class in field and in feed. Our team continually evaluates the performance of these products against others in our global pipeline to ensure that only the best of the best are included in the EMPYR group. These forages offer high yield, excellent standability and strong performance even in extreme environments.

The EMPYR line is built on a wide variety of hybrid types that provide solutions for specific grazing or silage needs:

Aphix™ SCA Tolerance, the best-in-class option for combating pressure from sugarcane aphids

BMR-6 for increased palatability and digestibility, supporting more weight gain and milk production

Brachytic Dwarf for superior standability and high leaf-to-stalk ratios

Photoperiod Sensitivity (PS), for a wide harvest window

Dry Stalk for reduced moisture levels, for earlier baling and storage

Discover the world-class hybrids that provide the best value and return on your dollar:

ADV F7232

MID-SEASON BRACHYTIC DWARF FORAGE SORGHUM

The earliest brachytic dwarf on the market with excellent nutritional value and palatability; matures quickly while still maintaining quality and yield; suitable for irrigated and dryland areas

AF7401

FULL-SEASON BMR-6 FORAGE SORGHUM

The original, industry-standard brachytic dwarf with BMR-6 traits for high productivity and palatability, exceptional forage qualities, and excellent standability and plant uniformity

ADV F8322

MID-SEASON APHIX FORAGE SORGHUM

High yielding, excellent for silage, the first forage sorghum with a high tolerance rating for sugarcane aphids and a high degree of versatility in various climates

AS6402

BRACHYTIC DWARF BMR-6 SORGHUM-SUDANGRASS

Compact yet prolific sorghum-sudangrass, with superb tonnage, outstanding nutritional value, excellent forage quality and quick recovery after cutting

ADV S6504

PHOTOPERIOD-SENSITIVE SORGHUM-SUDANGRASS

Consistent quality, high palatability and digestibility, advanced disease tolerance and photoperiod sensitivity for extended harvesting window; ideal for dry hay and rotational grazing

AS9301

MID-SEASON BMR-6 SUDANGRASS

Exceptional palatability and digestibility, quick stalk dry-down and fast recovery after cutting with rapid regrowth; performs well in a wide range of challenging growing conditions

AS9302

MID-SEASON BRACHYTIC DWARF SUDANGRASS

The first BMR-6, brachytic dwarf hybrid sudangrass, with tremendous regrowth, quick dry-down, high palatability and digestibility and adaptability to various climates; risk mitigation due to superior standability

SELECTION GUIDE



Empyr Premier Forages hybrids offer versatility to fit your needs and provide a quality feed option equal to or better than corn silage. With a variety of types, characteristics and harvest times, you can choose the seed that best suits your environment and planting.



Hybrid	Type	BMR-6	Traits	Early Season Silage	Mid-Season Silage
ADV F7232	Forage Sorghum	✓	BD		✓
NEW ADV F8322	Forage Sorghum		Aphix		✓
AF7401	Forage Sorghum	✓	BD		
AS6402	Sorghum-Sudangrass	✓	BD		
ADV S6504	Sorghum-Sudangrass	✓	PS		
AS9301	Sudangrass	✓	DS		
AS9302	Sudangrass	✓	BD & DS		

Full Season Silage	Single Cut, Graze Regrowth	Double Crop	Multiple Cuts	Single Cut, High Yield	Multiple Cut, Rapid Dry-Down	Single Cut, Regrowth Rapid Dry-Down
				✓		
				✓		
✓				✓		
	✓	✓	✓	✓		
✓	✓		✓	✓		
	✓	✓	✓		✓	✓
	✓	✓	✓		✓	✓

Key: BD = Brachytic Dwarf
DS = Dry Stalk
PS = Photoperiod Sensitive

= high tolerance rating to sugarcane aphid

Nitrogen Fertilization Recommendation:
1 to 1.25 Lbs N per Growing Day

FORAGE SORGHUM

ADV **F7232**



Medium Brachytic Dwarf

- Brachytic dwarf genetics provide stout stalks for excellent standability
- Exceptional digestibility from BMR-6
- Great yield for maturity
- Excellent silage choice

CHARACTERISTICS & RATINGS

Medium Relative Maturity

95-100 Days to Soft Dough Stage

BMR-6 Midrib

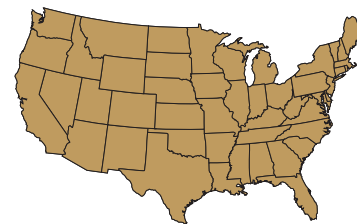
14-18 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	1
Forage Quality Potential	1
Palatability	1
Digestibility	1
Seedling Vigor	2
Recovery After Cutting	3
Plant Uniformity	3
Standability	1
Downy Mildew	4
Anthracoese	2
<i>Fusarium</i> Wilt	1

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CROP USE

Silage	1
Dry Hay	3
Continuous Grazing	Not Rated
Rotational Grazing	Not Rated

ADV F7232 is a medium season forage sorghum with excellent yield for maturity and superior forage quality potential. The BMR-6 forage sorghum provides exceptional nutritional value. The brachytic dwarf trait adds a much tighter distance between internodes, allowing for better standability. ADV F7232 is adaptable and well-suited for full or limited irrigation or high yield dryland.

FIELD POSITIONING

Tough Dryland	MA
High Yield Dryland	HS
Limited Irrigation	HS
Full Irrigation	HS
No-Till	HS
Poorly Drained Soils	S
Anthracoese Prone Area	HS
<i>Fusarium</i> Prone Area	S

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

AF7401



All-Star Full Season Silage with Grain

- High-yielding performance
- BMR-6 for superior forage quality
- Brachytic dwarf genetics provide stout stalks for excellent standability
- Economical performance and efficiency

CHARACTERISTICS & RATINGS

Late Relative Maturity

110-115 Days to Soft Dough Stage

BMR-6 Midrib

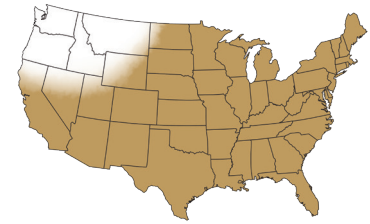
15-20 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	1
Forage Quality Potential	1
Palatability	1
Digestibility	1
Seedling Vigor	4
Recovery After Cutting	3
Plant Uniformity	1
Standability	1
Downy Mildew	3
Anthracoese	2
<i>Fusarium</i> Wilt	1

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



Primary area of adaptation

CROP USE

Silage	1
Dry Hay	4
Continuous Grazing	Not Rated
Rotational Grazing	Not Rated

AF7401 represents the newest generation of hybrid forage sorghums. This product features a genetic combination of BMR-6 and brachytic dwarf that enhances both productivity and efficiency. AF7401 has reduced internode length creating a compact, leafy and prolific plant. However, it will yield with taller sorghums due to the standability and tillering attributes of the brachytic dwarf characteristic. Producers will have the best of both worlds: excellent forage qualities and a dependable high-yielding feedstock.

FIELD POSITIONING

Tough Dryland	MA
High Yield Dryland	HS
Limited Irrigation	HS
Full Irrigation	HS
No-Till	MA
Poorly Drained Soils	S
Anthracoese Prone Area	HS
<i>Fusarium</i> Prone Area	HS

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

FORAGE SORGHUM

ADV **F8322**



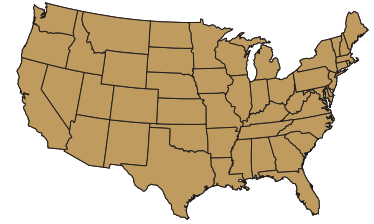
Medium Season Silage with Grain

- Sugarcane aphid high tolerance
- Excellent yield, standability and silage choice
- 100 days to harvest

NEW

Recommended Seeding Rates:

Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CROP USE

Silage	1
Dry Hay	7
Continuous Grazing	Not Rated
Rotational Grazing	Not Rated

CHARACTERISTICS & RATINGS

Medium Relative Maturity

100 Days to Soft Dough Stage

Standard Non-BMR-6 Midrib

12-14 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	1
Forage Quality Potential	3
Palatability	4
Digestibility	3
Seedling Vigor	2
Recovery After Cutting	4
Plant Uniformity	2
Standability	1
Downy Mildew	3
Anthracoese	2
Fusarium Wilt	Not Rated

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

F8322 expands our Aphix lineup as the first forage sorghum with high tolerance rating for sugarcane aphid. It provides excellent seedling vigor and plant uniformity. The hybrid also offers excellent standability and is an exceptional producer in a wide range of growing conditions, consistently outyielding competitors in the same class by up to 20%.

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland	HS
Limited Irrigation	HS
Full Irrigation	HS
High pH Soils Iron Chlorosis	S
No-Till	HS
Poorly Drained Soils	MA
Anthracoese Prone Area	HS
Sugarcane Aphid*	HT

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

HT = High Tolerance

*Tolerance confirmed in third-party testing conducted by the Agricultural Research Division of the USDA in Stillwater, OK.

SORGHUM-SUDANGRASS

AS6402



Late Maturity Sorghum-Sudangrass

- Brachytic dwarf characteristic provides high leaf-to-stem ratio
- Superior standability and excellent regrowth
- Superb tonnage under multiple harvest systems
- BMR-6 provides high-quality nutrition

CHARACTERISTICS & RATINGS

Late Relative Maturity

70 Days to Boot Stage

BMR-6 Midrib

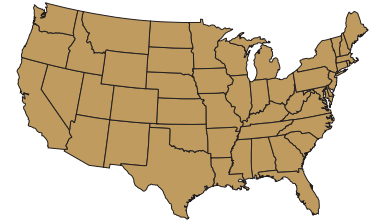
14-16 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	1
Forage Quality Potential	1
Palatability	1
Digestibility	1
Seedling Vigor	3
Recovery After Cutting	1
Plant Uniformity	3
Standability	1
Downy Mildew	3
Anthracoese	3
<i>Fusarium</i> Wilt	3

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CROP USE

Silage	2
Dry Hay	1
Continuous Grazing	4
Rotational Grazing	1

Begin Height 18" • Stop Height 4"

AS6402 represents the newest generation of hybrid sorghum-sudangrass products. AS6402 has reduced internode length, creating a very compact, leafy and prolific plant. However, it will yield with taller sorghum-sudangrass hybrids due to the standability and tillering attributes of the brachytic dwarf trait. Producers will have the best of both worlds: excellent forage qualities from BMR-6 and a dependable high-yielding feedstock.

FIELD POSITIONING

Tough Dryland	S
High Yield Dryland	HS
Limited Irrigation	HS
Full Irrigation	HS
No-Till	S
Poorly Drained Soils	S
Anthracoese Prone Area	S
<i>Fusarium</i> Prone Area	S

Observed Suitability and Field-by-Field Positioning
 HS = Highly Suitable S = Suitable
 MA = Manage Appropriately X = Poor Suitability

SORGHUM-SUDANGRASS

ADV **S6504**



Photoperiod Sensitive Sorghum-Sudangrass

- Exceptional regrowth after harvest
- Superb yield potential
- Extended harvest window
- BMR-6 provides high-quality nutrition
- High sugar content

CHARACTERISTICS & RATINGS

Photoperiod Sensitive Relative Maturity

Varied Days to Boot Stage

BMR-6 Midrib

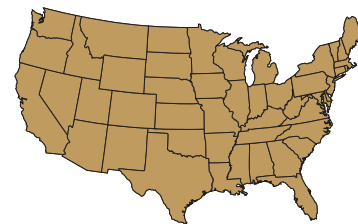
13-15 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	1
Forage Quality Potential	1
Palatability	1
Digestibility	1
Seedling Vigor	3
Recovery After Cutting	2
Plant Uniformity	1
Standability	1
Downy Mildew	2
Anthracoese	2
<i>Fusarium</i> Wilt	4

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



Primary area of adaptation

CROP USE

Silage	3
Dry Hay	1
Continuous Grazing	3
Begin Height 24" • Stop Height 6"	
Rotational Grazing	1
Begin Height 24" • Stop Height 6"	

ADV S6504 has excellent yield for maturity and standability. The BMR-6 characteristic offers excellent nutrition for high-quality forage that is highly digestible. The photoperiod sensitive characteristic provides an extended window of harvest and consistent quality in the growing season. Outstanding regrowth makes this hybrid a top selection for rotational grazing.

FIELD POSITIONING

Tough Dryland	S
High Yield Dryland	HS
Limited Irrigation	HS
Full Irrigation	HS
No-Till	HS
Poorly Drained Soils	S
Anthracoese Prone Area	HS
<i>Fusarium</i> Prone Area	S

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

SUDANGRASS

AS9301



Medium Maturity Sudangrass

- Dry stalk for quick dry-down
- Excellent regrowth after harvest
- Exceptional drought tolerance
- BMR-6 for high digestibility

CHARACTERISTICS & RATINGS

Medium Relative Maturity

60 Days to Boot Stage

BMR-6 Midrib

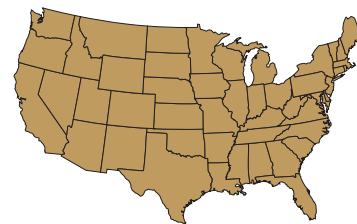
21-24 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	1
Forage Quality Potential	1
Palatability	1
Digestibility	1
Seedling Vigor	1
Recovery After Cutting	1
Plant Uniformity	2
Standability	3
Downy Mildew	3
Anthracnose	3
<i>Fusarium</i> Wilt	Not Rated

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CROP USE

Silage	2
Dry Hay	1
Continuous Grazing	4
Begin Height 24" • Stop Height 6"	
Rotational Grazing	1
Begin Height 24" • Stop Height 6"	

AS9301 is a BMR-6 hybrid sudangrass. The BMR-6 characteristic adds high quality to a plant that has fine stems and quick regrowth. This hybrid will dry down fast so it can be used in areas where putting up dry sudangrass hay is difficult.

FIELD POSITIONING

Tough Dryland	MA
High Yield Dryland	HS
Limited Irrigation	HS
Full Irrigation	HS
No-Till	MA
Poorly Drained Soils	S
Anthracnose Prone Area	MA
<i>Fusarium</i> Prone Area	X

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

AS9302



Medium Maturity Sudangrass

- Brachytic dwarf trait provides stout stalks for excellent standability
- Excellent for dry hay and rotational grazing
- Dry stalk for quick dry-down
- Exceptional regrowth and BMR-6 for high digestibility

CHARACTERISTICS & RATINGS

Medium Relative Maturity

55-65 Days to Boot Stage

BMR-6 Midrib

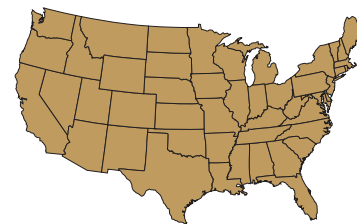
22-25 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	1
Forage Quality Potential	1
Palatability	1
Digestibility	1
Seedling Vigor	2
Recovery After Cutting	1
Plant Uniformity	1
Standability	1
Downy Mildew	4
Anthracnose	4
Wet Soil Tolerance	5
<i>Fusarium</i> Wilt	Not Rated

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



Primary area of adaptation

CROP USE

Silage	2
Dry Hay	1
Continuous Grazing	3
Begin Height 24" • Stop Height 6"	
Rotational Grazing	1
Begin Height 24" • Stop Height 6"	

AS9302 is the first BMR-6, brachytic dwarf hybrid sudangrass to hit the market. The BMR-6 gene adds high digestibility to a plant that has very fine stems and tremendous regrowth. The brachytic dwarf trait adds a much tighter distance between internodes, allowing for a lower cutting/grazing height and better standability. The dry stalk trait allows for quick dry-down, making this one of the most versatile forage products on the market.

FIELD POSITIONING

Tough Dryland	MA
High Yield Dryland	HS
Limited Irrigation	HS
Full Irrigation	HS
No-Till	MA
Poorly Drained Soils	S
Anthracnose Prone Area	MA
<i>Fusarium</i> Prone Area	X

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

Forage Selection Guide

Alta Seeds hybrids offer versatility to fit your needs and provide a quality feed option equal to or better than corn silage. With a variety of types, characteristics and harvest times, you can choose the seed that best suits your environment

and planting processes. Our forage selection includes forage sorghum, sorghum-sudangrass and pearl millet – all offering superior quality and tonnage so you can lower input costs and exceed production goals.

Hybrid	Type	BMR-6	Traits	Early Season Silage	Mid-Season Silage
AF7201	Forage Sorghum	✓	DS		✓
AF8301	Forage Sorghum				✓
AS5201	Sorghum-Sudangrass				✓
AS6201	Sorghum-Sudangrass	✓			
AS6401	Sorghum-Sudangrass	✓			
AS6501	Sorghum-Sudangrass	✓			
Wonderleaf	Pearl Millet				

Full Season Silage	Single Cut, Graze Regrowth	Double Crop	Multiple Cuts	Single Cut, High Yield	Multiple Cut, Rapid Dry-down	Single Cut, Regrowth Rapid Dry-down
		✓		✓		
				✓		
			✓		✓	
	✓	✓	✓			
	✓	✓	✓	✓		
✓	✓		✓	✓		
	✓	✓	✓		✓	✓

Key: DS = Dry Stalk

Nitrogen Fertilization Recommendation:
1 to 1.25 Lbs N per Growing Day



AF7201

Medium-Early Silage with Grain

- Harvest 90-95 days after emergence
- BMR-6 provides excellent nutrition
- Great on dryland or limited irrigation
- Dry stalk for quick dry-down
- Excellent double crop choice

CHARACTERISTICS & RATINGS

Medium-Early Relative Maturity

90-95 Days to Soft Dough Stage

BMR-6 Midrib

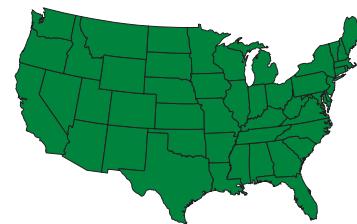
13-15 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	2
Forage Quality Potential	1
Palatability	1
Digestibility	1
Seedling Vigor	3
Recovery After Cutting	5
Plant Uniformity	1
Standability	6
Downy Mildew	4
Anthracoese	4
<i>Fusarium</i> Wilt	Not Rated

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CROP USE

Silage	1
Dry Hay	4
Continuous Grazing	Not Rated
Rotational Grazing	Not Rated

AF7201 is a short-statured, 90- to 95-day BMR-6 forage sorghum. Under most conditions, AF7201 will yield with full-season hybrids and has good standability. This hybrid performs well under dryland conditions with excellent heat and stress tolerance. Due to its early maturity, AF7201 provides forage production options in areas where most full-season products are unable to mature.

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland	HS
Limited Irrigation	HS
Full Irrigation	S
No-Till	MA
Poorly Drained Soils	S
Anthracoese Prone Area	MA
<i>Fusarium</i> Prone Area	MA

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

AF8301

Medium non-BMR Silage with Grain

- Harvest 100 days after emergence
- Tremendous drought tolerance and yield potential
- Good nutritional quality for standard midrib hybrid
- Excellent plant uniformity

CHARACTERISTICS & RATINGS

Medium Relative Maturity

100 Days to Soft Dough Stage

Standard Non-BMR-6 Midrib

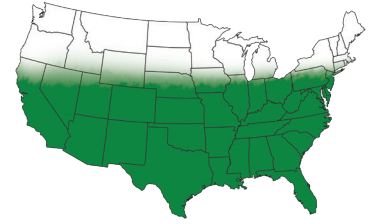
14-16 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	1
Forage Quality Potential	3
Palatability	4
Digestibility	3
Seedling Vigor	2
Recovery After Cutting	5
Plant Uniformity	1
Standability	2
Downy Mildew	4
Anthracoese	4
<i>Fusarium</i> Wilt	Not Rated

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CROP USE

Silage	1
Dry Hay	7
Continuous Grazing	Do Not Graze
Rotational Grazing	Do Not Graze

AF8301 is a non-BMR hybrid with outstanding yield potential. This hybrid has a short plant structure for good standability and will range from 72" to 84" in plant height. This hybrid is drought tolerant and is great for dryland conditions. AF8301 features good nutritional quality for a standard midrib hybrid and will produce a white grain head with high grain yields.

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland	HS
Limited Irrigation	HS
Full Irrigation	HS
No-Till	MA
Poorly Drained Soils	S
Anthracoese Prone Area	HS
<i>Fusarium</i> Prone Area	HS

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

SORGHUM-SUDANGRASS

AS5201

Medium Maturity Sorghum-Sudangrass

- Ideal for dryland or limited irrigation production
- Thin-stemmed plant type
- Versatile crop usage for hay, silage and grazing

CHARACTERISTICS & RATINGS

Medium Relative Maturity

65 Days to Boot Stage

Standard Non-BMR-6 Midrib

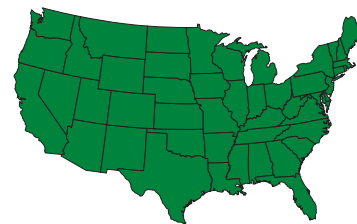
15-17 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	1
Forage Quality Potential	4
Palatability	4
Digestibility	4
Seedling Vigor	2
Recovery After Cutting	1
Plant Uniformity	3
Standability	1
Downy Mildew	4
Anthracoese	4
<i>Fusarium</i> Wilt	4

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CROP USE

Silage	3
Dry Hay	1
Continuous Grazing	4
Begin Height 24" • Stop Height 6"	
Rotational Grazing	1
Begin Height 24" • Stop Height 6"	

AS5201 is a versatile hybrid capable of producing a high tonnage of dry matter for grazing, hay, silage, green manure or organic matter. AS5201 has exceptional heat and drought stress tolerance and fast regrowth.

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland	S
Limited Irrigation	S
Full Irrigation	S
No-Till	S
Poorly Drained Soils	S
Anthracoese Prone Area	MA
<i>Fusarium</i> Prone Area	MA

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

AS6201

Medium-Early Maturity Sorghum-Sudangrass

- Economically priced BMR-6 sorghum-sudangrass
- Exceptional drought tolerance
- Excellent regrowth for multiple quality cuts

CHARACTERISTICS & RATINGS

Medium-Early Relative Maturity

60 Days to Boot Stage

BMR-6 Midrib

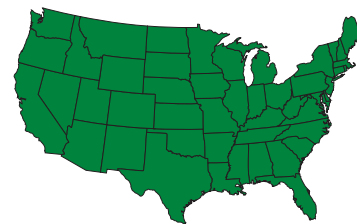
15-17 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	3
Forage Quality Potential	1
Palatability	1
Digestibility	1
Seedling Vigor	3
Recovery After Cutting	1
Plant Uniformity	4
Standability	4
Downy Mildew	4
Anthracoese	4
<i>Fusarium</i> Wilt	4

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CROP USE

Silage 3

Dry Hay 1

Continuous Grazing 4

Begin Height 24" • Stop Height 6"

Rotational Grazing 1

Begin Height 24" • Stop Height 6"

AS6201 is an easy-to-manage sorghum-sudangrass product featuring the BMR-6 characteristics. It has shown an 18.9% average increase in feed value compared to conventional forages. AS6201 is a summer-annual hybrid with the same agronomic characteristics found in a conventional sorghum-sudangrass hybrid. It is widely adapted and features increased utilization and efficiency from the BMR-6 gene.

FIELD POSITIONING

Tough Dryland	S
High Yield Dryland	S
Limited Irrigation	S
Full Irrigation	S
No-Till	S
Poorly Drained Soils	S
Anthracoese Prone Area	MA
<i>Fusarium</i> Prone Area	MA

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

AS6401

Late Maturity Sorghum-Sudangrass

- Versatile hybrid for hay, silage or grazing
- Highly disease resistant
- Superior forage quality with high palatability and forage fiber digestibility

CHARACTERISTICS & RATINGS

Medium-Late Relative Maturity

North 65/South 100 Days to Boot Stage

BMR-6 Midrib

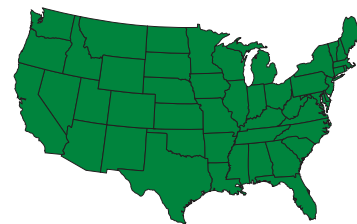
14-16 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	1
Forage Quality Potential	1
Palatability	1
Digestibility	1
Seedling Vigor	3
Recovery After Cutting	1
Plant Uniformity	3
Standability	3
Downy Mildew	2
Anthracnose	2
<i>Fusarium</i> Wilt	2

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CROP USE

Silage	1
Dry Hay	1
Continuous Grazing	4
Begin Height 24" • Stop Height 6"	
Rotational Grazing	1
Begin Height 24" • Stop Height 6"	

AS6401 has a long season in the South (100 days to bloom). This extends the harvest window and allows AS6401 to be used where photoperiod sensitive hybrids are not effective. In northern regions, AS6401 will bloom at approximately 65 days. Due to its tropical genetics, AS6401 has better regrowth in wet or humid conditions.

FIELD POSITIONING

Tough Dryland	MA
High Yield Dryland	S
Limited Irrigation	S
Full Irrigation	S
No-Till	S
Poorly Drained Soils	S
Anthracnose Prone Area	HS
<i>Fusarium</i> Prone Area	HS

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

AS6501

Late Maturity Sorghum-Sudangrass

- Excellent regrowth after harvest
- Exceptional drought tolerance
- BMR-6 provides high-quality nutrition

CHARACTERISTICS & RATINGS

Late Relative Maturity

Varied Days to Boot Stage

BMR-6 Midrib

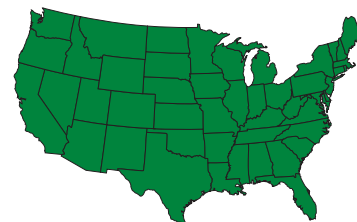
13-15 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	2
Forage Quality Potential	1
Palatability	1
Digestibility	1
Seedling Vigor	4
Recovery After Cutting	1
Plant Uniformity	3
Standability	3
Downy Mildew	3
Anthracnose	6
<i>Fusarium</i> Wilt	6

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Recommended Seeding Rates:
Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CROP USE

Silage	4
Dry Hay	1
Continuous Grazing	4
Begin Height 24" • Stop Height 6"	
Rotational Grazing	1
Begin Height 24" • Stop Height 6"	

AS6501 is an excellent choice for tough and high yield dryland conditions. This hybrid has outstanding recovery after cutting and is a great option for rotational grazing. The BMR-6 characteristic of AS6501 increases feedstock utilization and efficiency.

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland	HS
Limited Irrigation	S
Full Irrigation	S
No-Till	S
Poorly Drained Soils	S
Anthracnose Prone Area	X
<i>Fusarium</i> Prone Area	X

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability

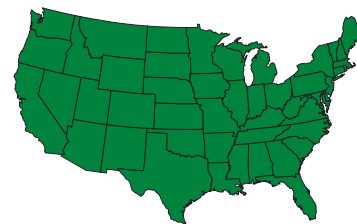
Wonderleaf

Hybrid Pearl Millet

- Bush-type hybrid with high yield potential
- Tall, upright and heavy tillering
- Excellent for warm-season pasture or hay
- Widely adapted to many diverse geographic regions
- No prussic acid concerns

Recommended Seeding Rates:

Vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

CROP USE

Silage	1
Dry Hay	1
Continuous Grazing	Not Rated
Rotational Grazing	1

CHARACTERISTICS & RATINGS

Early Relative Maturity

62 Days to Boot Stage

Dry Midrib

80-110 Seeds/Lb (1,000) – check seed bag

Yield for Maturity	2
Forage Quality Potential	4
Palatability	4
Digestibility	4
Seedling Vigor	2
Recovery After Cutting	1
Plant Uniformity	3
Standability	5

10 9 8 7 6 5 4 3 2 1
Poor Excellent

Based on Alta Seeds research trials relative to other Alta Seeds products.

Wonderleaf is a bush-type hybrid pearl millet with high yield potential. It grows quickly, reaching the boot stage in 62 days. Wonderleaf has a high level of tolerance to many pathogens and high humidity, but cannot tolerate standing surface water. Wonderleaf can be grown on as little as 16" of water; however, greater tonnage will be produced with greater water availability.

FIELD POSITIONING

Tough Dryland	HS
High Yield Dryland	HS
Limited Irrigation	S
Full Irrigation	S
No-Till	S
Poorly Drained Soils	S

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability



GIVE SORGHUM AN EXCEPTIONAL START WITH VERTIX SEED TREATMENTS

Sorghum hybrids from Alta Seeds are designed for resilience. To fully secure your seed investment, it's vital to guard against disease and pests during germination and stand establishment. Vertix™ Seed Treatments give you the protection you need to combat threats to stand establishment so your sorghum gets off to an exceptional start and reaches its genetic potential.

With industry-leading protection against seed- and soil-borne diseases and early season insects, Vertix Seed Treatments create a protective barrier against pathogens and pests that begins in the bag and extends to the field. The innovative solution lineup also includes herbicide safening to increase selectivity to Group 15 herbicides like Moccasin™ II PLUS S-metolachlor. Vertix Seed Treatments allow you to maximize your seed investment and have confidence in knowing that your seed is safeguarded from the very beginning.

Vertix Seed Treatments are available in three different options to meet your unique environmental conditions and growing practices >



All Vertex Seed Treatments provide:

- » Proven, reliable active ingredients
- » Increased stand, uniformity and plant vigor
- » Protection from bag to field
- » Uniform coverage and low dust levels

Vertex™ CORE Seed Treatment

Vertex CORE uses a unique combination of ipconazole and metalaxyl fungicides to control a variety of diseases including seed rots like *Aspergillus* spp. and seedling blights such as *Fusarium* spp. and *Rhizoctonia solani*.

ACTIVE INGREDIENTS: IPCONAZOLE + METALAXYL (fungicides)

DISEASE PROTECTION: *Fusarium* spp., *Rhizoctonia solani*, *Pythium* spp., early season Phytophthora, *Aspergillus* spp., and *Penicillium* spp.

Vertex SELECT builds off of Vertex CORE by adding flurazole as a safener to allow pre-emergent Group 15 herbicides to be safely applied without damaging the seed.

ACTIVE INGREDIENTS: IPCONAZOLE + METALAXYL (fungicides)

FLURAZOLE (herbicide safener)

DISEASE PROTECTION: *Fusarium* spp., *Rhizoctonia solani*, *Pythium* spp., early season Phytophthora, *Aspergillus* spp., and *Penicillium* spp.

CROP PROTECTION: Crop safening from Group 15 herbicides such as Moccasin™ II PLUS S-metolachlor, acetochlor, and dimethenamid

Vertex™ SELECT Seed Treatment

Vertex PREMIER contains all the ingredients found in Vertex SELECT, along with imidacloprid insecticide to combat early season aphids, chinch bugs, imported fire ants and wireworms.

ACTIVE INGREDIENTS: IPCONAZOLE + METALAXYL (fungicides)

FLURAZOLE (herbicide safener)

IMIDACLOPRID (insecticide)

DISEASE PROTECTION: *Fusarium* spp., *Rhizoctonia solani*, *Pythium* spp., early season Phytophthora, *Aspergillus* spp., and *Penicillium* spp.

CROP PROTECTION: Crop safening from Group 15 herbicides such as Moccasin™ II PLUS S-metolachlor, acetochlor, and dimethenamid

INSECT PROTECTION: Early-season aphids, chinch bugs, imported fire ants, and wireworms

Vertex™ PREMIER Seed Treatment

Safeguarding your crop starts before the planting even begins. Vertex Seed Treatments offer a protective boost with powerful formulas designed to enhance performance and increase yields.