

# ADV S6218

## Medium-Early Maturity Sorghum-Sudangrass

- Dry stalk for less moisture and spoilage
- Game-changing blend of maturity and yield advantages
- Excellent multicut regrowth potential
- Season-long high tonnage production



### CHARACTERISTICS & RATINGS

**Photoperiod Sensitive** Relative Maturity

**Varied** Days to Boot Stage

**BMR-6** Midrib

**24-26** Seeds/Lb (1,000) – check seed bag

Yield for Maturity	1
Forage Yield Potential	1
Palatability	1
Digestibility	1
Seedling Vigor	2
Recovery After Cutting	1
Plant Uniformity	1
Standability	1
Drought Tolerance	3
Downy Mildew	2
Anthraco	2

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

**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	1
Rotational Grazing	2

ADV S6218 brings a new approach to the sorghum-sudangrass lineup, with dry stalk for less moisture, a shorter maturity to help shorten the season and the yield potential to fit every geography. Southern environments will benefit from the advantages of dry stalk and the versatility of a grazing option as well as dry hay production. Northern and short season scenarios will find an advantage as a haylage and baleage option for high-quality, high-moisture feed.

### FIELD POSITIONING

Tough Dryland	S
High Yield Dryland	HS
Limited Irrigation	HS
Full Irrigation	S
Early Planting/Cold Soils	HS
No-Till	S
Poorly Drained Soils	MA
Anthraco Prone Area	HS
Fusarium Prone Area	MA

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability



ADV

S6218

## SUDANGRASS MANAGEMENT AND PRODUCTION GUIDE

### STRENGTHS:

- Excellent yield for maturity and standability
- Photoperiod sensitive characteristic provides an extended window of harvest and consistent quality in the growing season
- BMR-6 characteristic offers excellent nutrition for high-quality forage that is highly digestible

### SEEDING:

- Soil temperature should be at least 60° F.
- Avg. seeds per pound: 15,000-17,000.
- Planting depth should be 1".
- Seeding rate is important. Follow recommended plant populations for your area.
- Do not plant in soils with pH greater than 7.5-8.0 as iron chlorosis can be a severe problem.
- Can be no-tilled into the stubble of winter and spring crops.

### FERTILITY:

- A soil test is highly recommended to establish a baseline of fertility requirements.
- Under favorable growing conditions, apply 1 to 1.25 lbs. of nitrogen per day of planned growth. For example, for a planned 60-day harvest, apply 50 to 75 lbs. of nitrogen; for a subsequent planned 30-day cutting, reapply 30 to 37 lbs. of nitrogen.

- Reduce nitrogen rates for less than optimum growing conditions.
- Potassium levels should be kept up, particularly if the soil pH is lower than 6.2.
- If soil pH is above 7.0, a foliar application of iron may be necessary or iron chlorosis (yellowing of the leaves) may be a problem. This can be reduced by foliar feeding iron while plants are still young.

### HARVEST:

- Harvest schedules vary on the basis planting date, geographic location and weather.
- For the best quality and yield under a multicut program, harvest at 40 days or 40" of growth, whichever comes first.
- Protein will decline as harvest is delayed. Energy will increase upon heading due to continued sugar formation in the sorghum stalks and leaves, and carbohydrate deposition in the developing grain.
- Careful attention should be paid to the cutting height. For regrowth, two nodes or 6" of stubble is optimal. Sharp blades provide for a clean cut and enhance regrowth.
- Sorghum species dry slowly because of their drought tolerance. One method of managing dry-down in silage is to swath the crop, allow it to wilt to the desired moisture level, and then pick up the windrows with a silage chopper.

## AVOIDING NITRATE AND PRUSSIC ACID POISONING FROM SORGHUM

- Avoid large nitrogen applications prior to expected drought periods which can increase prussic acid concentration for several weeks after application.
- Do not harvest drought-damaged plants within four days following a good rain.
- Do not greenchop within seven days of a killing frost.
- Cut at a higher stubble height – nitrates tend to accumulate in the lower stalk.
- Wait one month before feeding silage to give prussic acid enough time to escape.

Note: Ratings are based on testing over a number of years in numerous locations. Adverse environmental conditions and planting dates may alter a hybrid's performance, maturity and resistance to certain diseases and insects.



ADV F8484IG



## Medium-Late Season Silage with Grain

- Contains the high-performing genetics of EMPYR along with non-GMO **igrowth**® technology for first-ever grass weed control
- Excellent season-long standability
- Ideal selection for producers looking for next-generation technology

**NEW**

## CHARACTERISTICS & RATINGS

**Medium-Late** Relative Maturity

**105** Days to Soft Dough Stage

**Non-BMR conventional midrib**

**Brachytic dwarf**

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

Yield for Maturity	1
Forage Quality Potential	2
Palatability	2
Digestibility	2
Seedling Vigor	1
Recovery After Cutting	3
Plant Uniformity	1
Standability	1
Downy Mildew	3
Anthraco	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	Not Rated
Continuous Grazing	Not Rated
Rotational Grazing	Not Rated

Ideal selection for producers looking for next-generation technology and superior yield potential. Conventional midrib with brachytic dwarf characteristic brings great standability and harvest performance for those looking to feed silage. **igrowth**® herbicide-resistant technology allows for a clean stand establishment for maximum early season growth and weed suppression.

## FIELD POSITIONING

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

HT = High Tolerance

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



ADV F8484IG



## FORAGE SORGHUM MANAGEMENT AND PRODUCTION GUIDE

### STRENGTHS:

- Strong-yielding hybrid with excellent season-long standability
- **igrowth**<sup>®</sup> herbicide resistance provides first-ever grass weed control
- Strong agronomics for those looking to push production with new technology

### SEEDING:

- Avg. seeds per pound: 13,000-15,000.
- Soil temperature must be at least 60° F.
- Planting depth should be 1-1.5" (into moisture).
- Seeding rate is important. Follow recommended plant populations for your area.
- Can be no-tilled into the stubble of winter and spring crops.

### FERTILITY:

- A soil test is highly recommended to establish a baseline of fertility requirements.
- Nitrogen fertility should not exceed 125 pounds per acre including available nitrogen in the soil.
- Potassium levels should be kept up, particularly if the soil pH is lower than 6.2.
- If soil pH is above 7.5, a foliar application of iron may be necessary or iron chlorosis (yellowing of the leaves) may be a problem. This can be corrected by foliar feeding iron while plants are still young.

### HARVEST:

- ADV F8484IG is usually harvested 100 days after emergence.
- Harvest at soft dough stage for optimal yield and nutrition.

## AVOIDING NITRATE AND PRUSSIC ACID POISONING FROM SORGHUM

- Avoid large nitrogen applications prior to expected drought periods which can increase prussic acid concentration for several weeks after application.
- Do not harvest drought-damaged plants within four days following a good rain.
- Do not greenchop within seven days of a killing frost.

- Cut at a higher stubble height – nitrates tend to accumulate in the lower stalk.
- Wait one month before feeding silage to give prussic acid enough time to escape.

Note: Ratings are based on testing over a number of years in numerous locations. Adverse environmental conditions and planting dates may alter a hybrid's performance, maturity and resistance to certain diseases and insects.



# 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
Anthracoese	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
Anthracoese 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



# AS9301

## SUDANGRASS MANAGEMENT AND PRODUCTION GUIDE

### STRENGTHS:

- Excellent early season vigor and regrowth
- Dark green plant color
- Improved overall disease package

### SEEDING:

- Soil temperature should be at least 60° F.
- Avg. seeds per pound: 21,000–24,000.
- Planting depth should be 1"
- Seeding rate is important. Follow recommended plant populations for your area.
- Do not plant in soils with pH greater than 7.5–8.0 as iron chlorosis can be a severe problem.
- Can be no-tilled into the stubble of winter and spring crops.

### FERTILITY:

- A soil test is highly recommended to establish a baseline of fertility requirements.
- Under favorable growing conditions, apply 1 to 1.25 lbs. of nitrogen per day of planned growth. For example, for a planned 60-day harvest, apply 50 to 75 lbs. of nitrogen; for a subsequent planned 30-day cutting, reapply 30 to 37 lbs. of nitrogen.

- Reduce nitrogen rates for less than optimum growing conditions.
- Potassium levels should be kept up, particularly if the soil pH is lower than 6.2.
- If soil pH is above 7.0, a foliar application of iron may be necessary or iron chlorosis (yellowing of the leaves) may be a problem. This can be reduced by foliar feeding iron while plants are still young.

### HARVEST:

- AS9301 is usually harvested 45 to 55 days after emergence.
- For the best quality and yield under a multicut program, harvest at 40 days or 40" of growth, whichever comes first.
- Protein will decline as harvest is delayed. Energy will increase upon heading due to continued sugar formation in the sorghum stalks and leaves, and carbohydrate deposition in the developing grain.
- Careful attention should be paid to the cutting height. For regrowth, two nodes or 6" of stubble is optimal. Sharp blades provide for a clean cut and enhance regrowth.

## AVOIDING NITRATE AND PRUSSIC ACID POISONING FROM SORGHUM

- Avoid large nitrogen applications prior to expected drought periods which can increase prussic acid concentration for several weeks after application.
- Do not harvest drought-damaged plants within four days following a good rain.
- Do not greenchop within seven days of a killing frost.
- Cut at a higher stubble height – nitrates tend to accumulate in the lower stalk.
- Wait one month before feeding silage to give prussic acid enough time to escape.

Note: Ratings are based on testing over a number of years in numerous locations. Adverse environmental conditions and planting dates may alter a hybrid's performance, maturity and resistance to certain diseases and insects.



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
Fusarium 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
Fusarium Prone Area	S

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability



ADV F7232

## FORAGE SORGHUM MANAGEMENT AND PRODUCTION GUIDE:

### STRENGTHS:

- BMR-6 characteristic offers excellent nutrition for high quality forage that is highly digestible
- Great yield for maturity
- Brachytic dwarf trait adds a much tighter distance between internodes, allowing for better standability
- Adaptable and well-suited for full or limited irrigation or high yield dryland

### SEEDING:

- Dryland Rows: 70,000-90,000 Seeds/Acre  
Irrigated 30" Rows: 80,000-100,000 Seeds/Acre  
Drilled (Dryland or Irrigated): 80,000-100,000 Seeds/Acre
- Avg. Seeds per Pound: 14,000-18,000
- Soil temperature must be at least 60° F
- Planting depth should be 1.5" (into moisture)
- Seeding rate is important. Follow recommended plant populations for your area.
- Can be no-tilled into the stubble of winter and spring crops

### FERTILITY:

- A soil test is highly recommended to establish a baseline of fertility requirements.
- Nitrogen fertility should not exceed 125 pounds per acre including available nitrogen in the soil.
- Potassium levels should be kept up, particularly if the soil pH is lower than 6.2.
- If soil pH is above 7.5, a foliar application of iron may be necessary or Iron Chlorosis (yellowing of the leaves) may be a problem. This can be corrected by foliar feeding iron while plants are still young.

### HARVEST:

- ADV F7232 is usually harvested 95-100 days after emergence.
- Harvest at soft dough stage for optimal yield and nutrition.

## AVOIDING NITRATE AND PRUSSIC ACID POISONING FROM SORGHUM:

- Avoid large nitrogen applications prior to expected drought periods which can increase Prussic Acid concentration for several weeks after application.
- Do not harvest drought-damaged plants within four days following a good rain.
- Do not greenchop within seven days of a killing frost.
- Cut at a higher stubble height – nitrates tend to accumulate in the lower stalk.
- Wait one month before feeding silage to give Prussic Acid enough time to escape.



ADV F8322



## Premium Medium Season Silage with Grain

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

NEW

## 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
Anthraco-nose	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.

### 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

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
Anthraco-nose 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.



ADV F8322

## FORAGE SORGHUM MANAGEMENT AND PRODUCTION GUIDE

### STRENGTHS:

- Aphix SCA Tolerance offers a high tolerance rating for sugarcane aphid.
- Great yield for maturity.
- Adaptable and well-suited for full or limited irrigation or high yield dryland.

### SEEDING:

- Avg. seeds per pound: 12,000-14,000.
- Soil temperature must be at least 60° F.
- Planting depth should be 1-1.5" (into moisture).
- Seeding rate is important. Follow recommended plant populations for your area.
- Can be no-tilled into the stubble of winter and spring crops.

### FERTILITY:

- A soil test is highly recommended to establish a baseline of fertility requirements.
- Nitrogen fertility should not exceed 125 pounds per acre including available nitrogen in the soil.
- Potassium levels should be kept up, particularly if the soil pH is lower than 6.2.
- If soil pH is above 7.5, a foliar application of iron may be necessary or iron chlorosis (yellowing of the leaves) may be a problem. This can be corrected by foliar feeding iron while plants are still young.

### HARVEST:

- ADV F8322 is usually harvested 100 days after emergence.
- Harvest at soft dough stage for optimal yield and nutrition.

## AVOIDING NITRATE AND PRUSSIC ACID POISONING FROM SORGHUM

- Avoid large nitrogen applications prior to expected drought periods which can increase prussic acid concentration for several weeks after application.
- Do not harvest drought-damaged plants within four days following a good rain.
- Do not greenchop within seven days of a killing frost.

- Cut at a higher stubble height – nitrates tend to accumulate in the lower stalk.
- Wait one month before feeding silage to give prussic acid enough time to escape.

Note: Ratings are based on testing over a number of years in numerous locations. Adverse environmental conditions and planting dates may alter a hybrid's performance, maturity and resistance to certain diseases and insects.



ADV S6404

## Medium Maturity Sorghum-Sudangrass

- High-yielding multicut sorghum-sudangrass
- Strong nutritional value for feed quality
- Broad adaptability for more uniform acres
- Responds to increased resources
- Brachytic dwarf trait provides stout stalks for excellent standability

## CHARACTERISTICS & RATINGS

**Medium** Relative Maturity

**70** Days to Boot Stage

**BMR-6** Midrib

**15.5** 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	2
Downy Mildew	3
Anthraco nose	1
Fusarium 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	1
Dry Hay	1
Continuous Grazing	3
Begin Height 24" • Stop Height 6"	
Rotational Grazing	1
Begin Height 24" • Stop Height 6"	

ADV S6404 is a high-level sorghum-sudangrass with brachytic dwarf that provides versatility to a producer's forage operation. It has the ability to fill a bunk or a hay bale to meet feed requirements with fewer inputs. High-quality plant with improved palatability, this elite multicut hybrid will make excellent dry hay.

## FIELD POSITIONING

Tough Dryland	S
High Yield Dryland	HS
Limited Irrigation	HS
Full Irrigation	S
No-Till	HS
Poorly Drained Soils	S
Anthraco nose Prone Area	HS
Fusarium Prone Area	S

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability



ADV S6404

## SORGHUM-SUDANGRASS MANAGEMENT AND PRODUCTION GUIDE

### STRENGTHS:

- High yield potential sorghum-sudangrass.
- Great versatility for multicut operations.
- Excellent heat and drought stress tolerance.
- Produces a quality grazing option for producers.

### SEEDING:

- Soil temperature should be at least 60 °F.
- Avg. seeds per pound: 15,500.
- Planting depth should be 1".
- Seeding rate is important. Follow recommended plant populations for your area.
- Do not plant in soils with pH greater than 7.5-8.0 as iron chlorosis can be a severe problem.
- Can be no-tilled into the stubble of winter and spring crops.

### FERTILITY:

- A soil test is highly recommended to establish a base line of fertility requirements.
- Under favorable growing conditions, apply 1 to 1.25 lbs of nitrogen per day of planned growth. For example, for a planned 60-day harvest, apply 50 to 75 lbs of nitrogen; for a subsequent planned 30-day cutting, reapply 30 to 37 lbs of nitrogen.

- Reduce nitrogen rates for less than optimum growing conditions.
- Potassium levels should be kept up, particularly if the soil pH is lower than 6.2.
- If soil pH is above 7.0, a foliar application of iron may be necessary or iron chlorosis (yellowing of the leaves) may be a problem. This can be reduced by foliar feeding iron while plants are still young.

### HARVEST:

- For the best quality and yield under a multicut program, harvest at 40 days or 40" of growth, whichever comes first.
- Protein will decline as harvest is delayed. Energy will increase upon heading due to continued sugar formation in the sorghum stalks and leaves, and carbohydrate deposition in the developing grain.
- Careful attention should be paid to the cutting height. For regrowth, two nodes or 4" of stubble is optimal. Sharp blades provide for a clean cut and enhance regrowth.
- Sorghum species dry slowly because of their drought tolerance. One method of managing dry-down in silage is to swath the crop, allow it to wilt to the desired moisture level and then pick up the windrows with a silage chopper.

## AVOIDING NITRATE AND PRUSSIC ACID POISONING FROM SORGHUM

- Avoid large nitrogen applications prior to expected drought periods, which can increase prussic acid concentration for several weeks after application.
- Do not harvest drought-damaged plants within four days following a good rain.
- Do not greenchop within seven days of a killing frost.
- Cut at a higher stubble height – nitrates tend to accumulate in the lower stalk.
- Wait one month before feeding silage to give prussic acid enough time to escape.

Note: Ratings are based testing over a number of years in numerous locations. Adverse environmental conditions and planting dates may alter a hybrid's performance, maturity, and resistance to certain diseases and insects.

# SORGHUM-SUDANGRASS

## AS6501

### Late Maturity Sorghum-Sudangrass

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

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



■ Primary area of adaptation

## CHARACTERISTICS & RATINGS

**Late** Relative Maturity

**Varied** Days to Boot Stage

**BMR-6** Midrib

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



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

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



## 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
Anthraco nose 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

# AS6501



AltaSeeds.com  
877-806-7333

## Multi-Year Quality Data

Variety	DM yield	%CP	%ADF	%NDF	%IVTD	Beef / ton	\$/acre	
<b>AS6501</b>	<b>15,600</b>	<b>9.84</b>	<b>28.57</b>	<b>50.23</b>	<b>78.99</b>	<b>303.70</b>	<b>1539.61</b>	<b>ADF = Acid Detergent Fiber</b>
<b>AS6201</b>	<b>12,138</b>	<b>8.75</b>	<b>25.65</b>	<b>45.49</b>	<b>81.70</b>	<b>333.60</b>	<b>1315.93</b>	<b>CP = Crude Protein</b>
Nutri Plus	11,898	9.23	29.78	51.34	78.69	300.69	1155.35	<b>DM = Dry Matter</b>
Megagreen	13,476	8.74	26.99	47.66	75.78	281.20	1121.54	<b>IVTD = In Vitro True Digestibility</b>
<b>AS5201</b>	<b>12,078</b>	<b>9.03</b>	<b>32.31</b>	<b>53.14</b>	<b>72.16</b>	<b>249.20</b>	<b>978.03</b>	<b>NDF = Neutral Detergent Fiber</b>

## SORGHUM SUDANGRASS MANAGEMENT AND PRODUCTION GUIDE:

### Strengths:

- Excellent heat and drought stress tolerance
- Excellent recovery after cutting
- Wide harvest window

### Seeding:

- Soil temperature should be at least 60° F.
- Avg. Seeds per Pound: 13,000-15,000 (see bag for details)
- Planting depth should be 1".
- Seeding rate is important. Follow recommended plant populations for your area.
- Do not plant in soils with pH greater than 7.5 to 8.0 as Iron Chlorosis can be a severe problem.
- Can be no-tilled into the stubble of winter or spring crops.
- AS6501 should be planted after day length reaches 12 hours and 30 minutes

### Fertility

- A soil test is highly recommended to establish a base line of fertility requirements.
- Under favorable growing conditions, apply 1-1.25# of Nitrogen per day of planned growth.

- Reduce Nitrogen rates less optimal growing conditions.
- Potassium levels should be kept up, particularly if the soil pH is lower than 6.2.
- If soil pH is above 7.0, a foliar application of iron may be necessary or Iron Chlorosis (yellowing of the leaves) may be a problem. This can be reduced by foliar feeding iron while plants are still young.

### Harvest:

- AS6501 is usually harvested 70 days after emergence.
- Protein will decline as harvest is delayed, but energy will increase upon heading due to continued sugar formation in the sorghum stalks and leaves, and carbohydrate deposition in the developing grain.
- Careful attention should be paid to the cutting height for re-growth, 2 nodes or 6" of stubble is optimal. Sharp blades provide for a clean cut and enhance re-growth.
- Sorghum species dry slowly because of their drought tolerance; one method of managing drydown in silage is to swath the crop, allow it to wilt to the desired moisture level, and then pick up the wind rows with a silage chopper. (Swath/Wilt/Chop).

## AVOIDING NITRATE AND PRUSSIC ACID POISONING FROM SORGHUM:

- Avoid large nitrogen applications prior to expected drought periods which can increase Prussic Acid concentration for several weeks after application.
- Do not harvest drought-damaged plants within four days following a good rain.
- Do not greenchop within seven days of a killing frost.
- Cut at a higher stubble height, nitrates tend to accumulate in the lower stalk.
- Wait one month before feeding silage to give Prussic Acid enough time to escape.

Note: Ratings are based upon a number of years testing in numerous locations. Adverse environmental conditions and planting dates may alter a hybrid's performance, maturity, and resistance to certain diseases and insects.

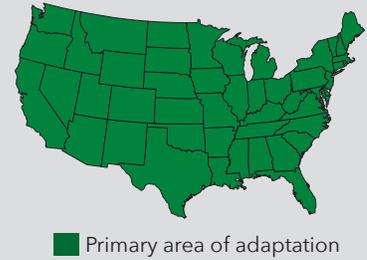
# SORGHUM-SUDANGRASS

## ADV S5501

### Photoperiod Sensitive Sorghum-Sudangrass

- Excellent total yield potential
- Wide harvest window
- Ideal for dryland or limited irrigation production

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



## CHARACTERISTICS & RATINGS

**Photoperiod Sensitive** Relative Maturity  
**Varied** Days to Boot Stage  
**Juicy** Midrib  
**12.5** Seeds/Lb (1,000) – check seed bag



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

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

## CROP USE

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

ADV S5501 has exceptional heat and drought stress tolerance and excellent total yield potential. The photoperiod sensitive characteristic provides an extended window of harvest and consistent quality in the growing season. ADV S5501 is a versatile crop for silage or dry hay.

## 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	S
Anthracoese Prone Area	HS
Fusarium Prone Area	S

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



# ADV S5501



AltaSeeds.com  
877-806-7333

## SORGHUM SUDANGRASS MANAGEMENT AND PRODUCTION GUIDE:

### Strengths:

- Very good dry matter yield potential
- Excellent early season vigor and re-growth
- Dark green plant color
- Small-seeded product
- Thin-stemmed plant type
- Low water requirement
- Versatile crop usage for hay, silage and grazing

### Seeding:

- Soil temperature should be at least 60° F.
- Avg. Seeds per Pound: 15,000-17,000 (see bag for details)
- Planting depth should be 1"
- Seeding rate is important. Follow recommended plant populations for your area. (see bag for details)
- Do not plant in soils with pH greater 7.5-8.0 as Iron Chlorosis can be a severe problem.
- Can be no-tilled into the stubble of winter and spring crops

### Fertility:

- A soil test is highly recommended to establish a base line of fertility requirements.

- Under favorable growing conditions, apply 1 to 1.25 lbs. of nitrogen per day of planned growth. For example, for a planned 60-day harvest, apply 50 to 75 lbs. of nitrogen; for a subsequent planned 30-day cutting, reapply 30 to 37 lbs. of nitrogen.
- Reduce nitrogen rates for less than optimum growing conditions.
- Potassium levels should be kept up, particularly if the soil pH is lower than 6.2.
- If soil pH is above 7.0, a foliar application of iron may be necessary or Iron Chlorosis (yellowing of the leaves) may be a problem. This can be reduced by foliar feeding iron while plants are still young.

### Harvest:

- For the best quality and yield under a multi-cut program, harvest at 40 days or 40" of growth, whichever comes first.
- Protein will decline as harvest is delayed. Energy will increase upon heading due to continued sugar formation in the sorghum stalks and leaves, and carbohydrate deposition in the developing grain.
- Careful attention should be paid to the cutting height. For re-growth, 2 nodes or 6" of stubble is optimal.
- Sharp blades provide for a clean cut and enhance re-growth.

## AVOIDING NITRATE AND PRUSSIC ACID POISONING FROM SORGHUM:

- Avoid large nitrogen applications prior to expected drought periods which can increase Prussic Acid concentration for several weeks after application.
- Do not harvest drought-damaged plants within four days following a good rain.
- Do not greenchop within seven days of a killing frost.
- Cut at a higher stubble height, nitrates tend to accumulate in the lower stalk.
- Wait one month before feeding silage to give Prussic Acid enough time to escape.

Note: Ratings are based upon a number of years testing in numerous locations. Adverse environmental conditions and planting dates may alter a hybrid's performance, maturity, and resistance to certain diseases and insects.

# Green Graze

## Medium Maturity Sorghum Sudangrass

- Excellent yield potential
- Good early seedling vigor
- BMR-12 for excellent digestibility, palatability
- Good drought tolerance and heat stress resistance



### CHARACTERISTICS & RATINGS

Relative Maturity	Medium
Midrib	BMR-12
Seeds/lb (check seed bag)	16,000
Yield for Maturity	Excellent
Early Seedling Vigor	Good
Growth Habit	Upright
Palatability	Very Good
Digestibility	Very Good
Seedling Vigor	Very Good
Recovery After Cutting	Good
Plant Uniformity	Very Uniform Stand
Downy Mildew	Resistant
Anthraco nose	Moderate Resistance
<i>Fusarium</i> Wilt	Moderate Resistance

### ADAPTATION RATINGS

Photosynthetic Type	Warm Season
Soil Temperature	Warm (60 °F)
Water Requirement	Very Low

### CROP USE

Silage	Good
Dry Hay	Very Good
Continuous Grazing	Not Recommended
Rotational Grazing	Good
Drought Stress	Very Good
Water Requirements	Very Low
Wet Soil	Not Recommended
Low pH Tolerance	Moderate
Minimum pH	6.0
Saline Soils (White Alkali)	Fair
Saline-Sodic Soils (Black Alkali)	Fair
Cautions	Nitrate and Prussic Acid Concerns

Green Graze is a sorghum sudangrass hybrid with excellent yield potential and good medium-season seedling vigor. This hybrid can be grown throughout the United States and will be ready for harvest at 40 days or 40 inches, whichever comes first. It has good drought tolerance and heat stress resistance to weather's hot, dry conditions. Green Graze has a very uniform stand. This hybrid features BMR-12 genetics for excellent digestibility and palatability, in addition to a solid disease resistance profile. Green Graze is an excellent economic choice for producers wanting a good quality feed.



# Green Graze

## FORAGE SORGHUM MANAGEMENT AND PRODUCTION GUIDE

### STRENGTHS:

- Superb balance of economical and high-quality feed.
- Strong drought tolerance for reduced water usage.
- Good yield potential in tough growing conditions.

### FERTILITY:

- A soil test is highly recommended to establish a base line of fertility requirements.
- Under favorable growing conditions, apply 1 to 1.25 lbs of nitrogen per day of planned growth. For example, for a planned 60-day harvest, apply 50 to 75 lbs of nitrogen; for a subsequent planned 30-day cutting, reapply 30 to 37 lbs of nitrogen.
- Reduce nitrogen rates for less than optimum growing conditions.
- Potassium levels should be kept up, particularly if the soil pH is lower than 6.2.
- If soil pH is above 7.0, a foliar application of iron may be necessary or iron chlorosis (yellowing of the leaves) may be a problem. This can be reduced by foliar feeding iron while plants are still young.

### SEEDING:

- Soil temperature should be at least 60 °F.
- Green Graze can be no-tilled into the stubble of winter and spring crops.
- Planting depth should be ¾"-1".
- Do not plant in soils with pH greater than 8.0.
- Chlorosis can be a severe problem.

### HARVEST:

- For the best quality and yield under a multicut program, harvest at 40 days or 40" of growth, whichever comes first.
- Protein will decline as harvest is delayed. Energy will increase upon heading due to continued sugar formation in the sorghum stalks and leaves, and carbohydrate deposition in the developing grain.
- Careful attention should be paid to the cutting height. For regrowth, two nodes or 4" of stubble is optimal. Sharp blades provide for a clean cut and enhance regrowth.
- Sorghum species dry slowly because of their drought tolerance. One method of managing dry-down in silage is to swath the crop, allow it to wilt to the desired moisture level and then pick up the windrows with a silage chopper.

## AVOIDING NITRATE AND PRUSSIC ACID POISONING FROM SORGHUM

- Avoid large nitrogen applications prior to expected drought periods which can increase prussic acid concentration for several weeks after application.
- Do not harvest drought-damaged plants within four days following a good rain.
- Do not greenchop within seven days of a killing frost.
- Cut at a higher stubble height – nitrates tend to accumulate in the lower stalk.
- Wait one month before feeding silage to give prussic acid enough time to escape.

Note: Ratings are based on testing over a number of years in numerous locations. Adverse environmental conditions and planting dates may alter a hybrid's performance, maturity and resistance to certain diseases and insects.

# Graze It

## 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 Yield Potential	4
Palatability	4
Digestibility	4
Seedling Vigor	2
Recovery After Cutting	1
Plant Uniformity	3
Standability	1
Downy Mildew	4
Anthrachnose	4
Fusarium Wilt	4

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

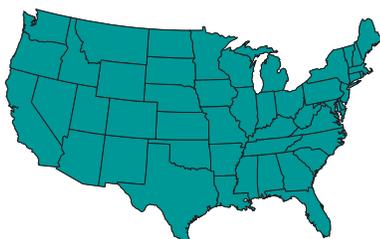
Based on Alta Seeds research trials relative to other Alta Seeds products.

#### 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"	

Graze It is a versatile hybrid capable of producing a high tonnage of dry matter for grazing, hay, silage, green manure or organic matter. Graze It 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
Anthrachnose Prone Area	MA
Fusarium Prone Area	MA

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability



# Graze It

## SORGHUM-SUDANGRASS MANAGEMENT AND PRODUCTION GUIDE

### STRENGTHS:

- Very good dry matter yield potential
- Excellent early season vigor and regrowth
- Dark green plant color
- Small-seeded product
- Thin-stemmed plant type
- Low water requirement
- Versatile crop usage for hay, silage and grazing

### SEEDING:

- Soil temperature should be at least 60 °F.
- Avg. seeds per pound: 15,000-17,000.
- Planting depth should be 1".
- Seeding rate is important. Follow recommended plant populations for your area.
- Do not plant in soils with pH greater than 7.5-8.0 as iron chlorosis can be a severe problem.
- Can be no-tilled into the stubble of winter and spring crops.

### FERTILITY:

- A soil test is highly recommended to establish a baseline of fertility requirements.
- Reduce nitrogen rates for less than optimum growing conditions.
- Under favorable growing conditions, apply 1 to 1.25 lbs of nitrogen per day of planned growth. For example, for a planned 60-day harvest, apply 50 to 75 lbs of nitrogen; for a subsequent planned 30-day cutting, reapply 30 to 37 lbs of nitrogen.
- Potassium levels should be kept up, particularly if the soil pH is lower than 6.2.
- If soil pH is above 7.0, a foliar application of iron may be necessary or iron chlorosis (yellowing of the leaves) may be a problem. This can be reduced by foliar feeding iron while plants are still young.

### HARVEST:

- For the best quality and yield under a multicut program, harvest at 40 days or 40" of growth, whichever comes first.
- Protein will decline as harvest is delayed. Energy will increase upon heading due to continued sugar formation in the sorghum stalks and leaves, and carbohydrate deposition in the developing grain.
- Careful attention should be paid to the cutting height. For regrowth, two nodes or 6" of stubble is optimal.
- Sharp blades provide for a clean cut and enhance regrowth.

## AVOIDING NITRATE AND PRUSSIC ACID POISONING FROM SORGHUM

- Avoid large nitrogen applications prior to expected drought periods, which can increase prussic acid concentration for several weeks after application.
- Do not harvest drought-damaged plants within four days following a good rain.
- Do not greenchop within seven days of a killing frost.
- Cut at a higher stubble height – nitrates tend to accumulate in the lower stalk.
- Wait one month before feeding silage to give prussic acid enough time to escape.

Note: Ratings are based on testing over a number of years in numerous locations. Adverse environmental conditions and planting dates may alter a hybrid's performance, maturity and resistance to certain diseases and insects.

# AF7102

## Early Maturity Forage Sorghum

- Harvest 85–89 days after emergence
- Short stature genetics provide stout stalks for excellent standability
- Excellent for silage
- Double crop silage option



### CHARACTERISTICS & RATINGS

**Early** Relative Maturity

**85-89** Days to Soft Dough

**BMR-6** Midrib

**17-19** Seeds/Lb (1,000) – check seed bag

Yield for Maturity	2
Forage Yield Potential	1
Palatability	1
Digestibility	2
Seedling Vigor	2
Recovery After Cutting	4
Plant Uniformity	2
Standability	2
Downy Mildew	1
Anthracoese	2

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

**Recommended Seeding Rates:**  
 Seeding rates may 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

AF7102 is an early BMR-6 forage sorghum with great standability. Northern producers are able to reach high yield potential with tremendous forage quality of a BMR-6 without the issues of lodging. This hybrid works best in areas north of I-70 where humidity and the shorter growing season tend to be a challenge. AF7102 can be used in southern states for late planting or early harvest situations. The tillering capabilities of this hybrid are unsurpassed, allowing for increased yields and ground cover.

### FIELD POSITIONING

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

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable      S = Suitable  
 MA = Manage Appropriately      X = Poor Suitability



# AF7102

## FORAGE SORGHUM MANAGEMENT AND PRODUCTION GUIDE

### STRENGTHS:

- Highly digestible and consistent form of quality silage.
- 40 percent greater IVTD forage quality rating over standard forage sorghum.
- Requires approximately 30 to 35 percent less water than corn for similar productivity.
- Much improved standability compared to early release BMR products.
- Excellent heat and drought stress tolerance.
- Performs well on less productive soils, including soils with high pH.
- Potential to equal or exceed corn silage in milk production.
- Excellent choice for dryland production.

### SEEDING:

- Soil temperature should be at least 60 °F.
- Average seeds per pound: 17,000-19,000. Maximum 100,000 plants/acre (see bag for details).
- Planting depth should be 1"-1.5"
- Seeding rate is important. Follow recommended plant populations for your area.
- Can be no-tilled into the stubble of winter and spring crops.

### FERTILITY:

- A soil test is highly recommended to establish a base line of fertility requirements.
- Nitrogen fertility should not exceed 100 units per acre including available nitrogen in the soil.
- Potassium levels should be kept up, particularly if the soil pH is lower than 6.2.
- If soil pH is above 7.5, a foliar application of iron may be necessary or iron chlorosis (yellowing of the leaves) may be a problem. This can be corrected by foliar feeding iron while plants are still young.

### HARVEST:

- AF7102 is usually harvested between 90 to 95 days after emergence.
- For highest foliage protein levels, cut prior to heading.
- Protein levels will decline as harvest is delayed, however energy will increase upon heading. This energy increase is due to continued sugar formation in the sorghum stalks and leaves and carbohydrate deposition in the developing grain.
- Optimum harvest recommendation is when 80 percent or more of heading has occurred to soft dough stage of the grain.

## AVOIDING NITRATE AND PRUSSIC ACID POISONING FROM SORGHUM

- Avoid large nitrogen applications prior to expected drought periods, which can increase prussic acid concentration for several weeks after application.
- Do not harvest drought-damaged plants within four days following a good rain.
- Do not greenchop within seven days of a killing frost.
- Cut at a higher stubble height, nitrates tend to accumulate in the lower stalk.
- Wait one month before feeding silage to give prussic acid enough time to escape.

Note: Ratings are based on testing over a number of years in numerous locations. Adverse environmental conditions and planting dates may alter a hybrid's performance, maturity and resistance to certain diseases and insects.



ADV F7424

## Full-Season BMR-6 with SCA Tolerance

- Top-yielding hybrid in high quality classification
- Combines BMR-6 and Aphix™ for game-changing management options
- Brachytic dwarf to maximize standability

## CHARACTERISTICS & RATINGS

**Full** Relative Maturity

**120** Days to Soft Dough Stage

**BMR-6** Midrib

**18-20** 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	3
Plant Uniformity	1
Standability	1
Downy Mildew	3
Anthracoese	3
Fusarium 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	1
Dry Hay	3
Continuous Grazing	3
Rotational Grazing	3

An improvement on the legendary AF7401. ADV F7424 brings a jump in yield potential while maintaining everything we loved about its predecessor. Excellent standability, top-notch quality feed, and now featuring our Aphix™ SCA tolerance. This is the benchmark of all high-yielding forage sorghum products in the lineup. If you need a product to push the limits of yield and provide superb agronomics, this is the one to try.

## FIELD POSITIONING

Tough Dryland	S
High Yield Dryland	S
Limited Irrigation	HS
Full Irrigation	HS
Early Planting Cold Soils	HS
No-Till	HS
Poorly Drained Soils	MA
Anthracoese Prone Area	HS
Fusarium Prone Area	S

Observed Suitability and Field-by-Field Positioning

HS = Highly Suitable

S = Suitable

MA = Manage Appropriately

X = Poor Suitability



ADV F7424

## FORAGE SORGHUM MANAGEMENT AND PRODUCTION GUIDE

### STRENGTHS:

- Highly digestible and consistent form of quality silage
- High levels of structural carbohydrates in stalks and leaves for overall increased animal performance
- 40 percent greater IVTD forage quality rating over standard forage sorghum
- Requires approximately 30 to 35 percent less water than corn for similar productivity
- Excellent standability from brachytic dwarf genetics
- Excellent heat and drought stress tolerance
- Performs well on less productive soils
- Potential to equal or exceed corn silage in milk production

### SEEDING:

- Soil temperature must be at least 60 °F.
- Avg. seeds per pound: 18,000-20,000 maximum 100,000 plants/acre.
- Planting depth should be 1"-1.5".
- Seeding rate is important. Follow recommended plant populations for your area.
- Can be no-tilled into the stubble of winter and spring crops.

### FERTILITY:

- A soil test is highly recommended to establish a baseline of fertility requirements.
- Nitrogen fertility should not exceed 115 units per acre including available nitrogen in the soil.
- Potassium levels should be kept up, particularly if the soil pH is lower than 6.2.
- If soil pH is above 7.5, a foliar application of iron may be necessary or iron chlorosis (yellowing of the leaves) may be a problem. This can be corrected by foliar feeding iron while plants are still young.

### HARVEST:

- ADV F7424 is usually harvested 110-115 days after emergence.
- For highest foliage protein levels, cut prior to heading.
- Protein levels will decline as harvest is delayed; however, energy will increase upon heading. This energy increase is due to continued sugar formation in the sorghum stalks and leaves and carbohydrate deposition in the developing grain.
- Optimum harvest recommendation is when 50 percent or more of heading has occurred to soft dough stage of the grain.

## AVOIDING NITRATE AND PRUSSIC ACID POISONING FROM SORGHUM

- Avoid large nitrogen applications prior to expected drought periods, which can increase prussic acid concentration for several weeks after application.
- Do not harvest drought-damaged plants within four days following a good rain.
- Do not greenchop within seven days of a killing frost.
- Cut at a higher stubble height – nitrates tend to accumulate in the lower stalk.
- Wait one month before feeding silage to give prussic acid enough time to escape.

Note: Ratings are based on testing over a number of years in numerous locations. Adverse environmental conditions and planting dates may alter a hybrid's performance, maturity and resistance to certain diseases and insects.

ADV **G1153**



## Medium-Early Red Grain Sorghum

- High SCA tolerance
- High yield potential for maturity
- High plant uniformity
- High level of drought tolerance



### CHARACTERISTICS & RATINGS

**Medium-Early** Relative Maturity

**63** Days to Mid Bloom

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

**Red** Grain Color

**Semi-Compact** Head Type

**42-46"** Plant Height

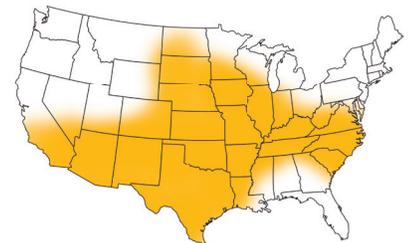
**Purple** Plant Color

Yield for Maturity	1
Head Exertion	3
Plant Uniformity	1
Seedling Vigor	3
Root Lodging	2
Drought Tolerance	2
Test Weight	2
Threshability	2
Charcoal Rot	4
Downy Mildew (Race 3)	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:**  
Seeding rates may 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	S
Limited Irrigation	S
Full Irrigation	S
Early Planting	MA
No-Till	HS
Poorly Drained Soils	S
Sugarcane Aphid	HS

Observed Suitability and Field-by-Field Positioning

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



## Medium Red Grain Sorghum

- Strong agronomics blended with top-tier yield potential
- Great disease package to handle a wide range of environments
- Thrives in high-yield, rain-fed environments



### CHARACTERISTICS & RATINGS

- Medium** Relative Maturity
- 66** Days to Mid Bloom
- 14-16** Seeds/Lb (1,000) – check seed bag
- Red** Grain Color
- Semi-Open** Head Type
- 38-46"** Plant Height
- Purple** Plant Color

Yield for Maturity	1
Head Exertion	2
Plant Uniformity	1
Seedling Vigor	2
Root Lodging	1
Drought Tolerance	2
Test Weight	1
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:**  
 Seeding rates may vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.



■ Primary area of adaptation

### FIELD POSITIONING

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

# GRAIN SORGHUM

## 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

**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

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

**Cream** Grain Color

**Semi-compact** Head Type

**40-46"** Plant Height

**Red** Plant Color



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	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 US Department of Agriculture in Stillwater, OK.



AltaSeeds.com

806-364-0560

ADV **G1329**

**aphix**<sup>TM</sup>  
SCA Tolerance

## Early Cream Grain Sorghum

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



### 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



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
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



ADV

# G21931G

## MEDIUM RED GRAIN SORGHUM

### CHARACTERISTICS & RATINGS

**MEDIUM**  
**65**  
**600,000**  
**RED**  
**SEMI-OPEN**  
**40-48"**  
**PURPLE**

RELATIVE MATURITY  
 DAYS TO MID BLOOM  
 SEEDS/BAG  
 GRAIN COLOR  
 HEAD TYPE  
 PLANT HEIGHT  
 PLANT COLOR

- » Strong yield performance in maturity
- » Ideal for rainfed production
- » Strong disease ratings
- » Good uniformity

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



### RECOMMENDED SEEDING RATES

Seeding rates may vary depending on local growing conditions. Please see your Alta Seeds retailer for local recommendations.

### FIELD POSITIONING

<b>TOUGH DRYLAND</b>	<b>Hs</b>	<b>HIGH YIELD DRYLAND</b>	<b>Hs</b>
<b>LIMITED IRRIGATION</b>	<b>Hs</b>	<b>FULL IRRIGATION</b>	<b>S</b>
<b>EARLY PLANTING/COLD SOILS</b>	<b>Ma</b>	<b>NO-TILL</b>	<b>Hs</b>
<b>POORLY DRAINED SOILS</b>	<b>Ma</b>	<b>SUGARCANE APHID</b>	<b>Mt</b>

**Hs** = Highly Suitable    **S** = Suitable    **Ma** = Manage Appropriately  
**X** = Poor Suitability    **Ht** = High Tolerance    **Mt** = Medium Tolerance

Observed suitability and field-by-field positioning.

DRAFT



igrowth<sup>®</sup> IMIDAZOLINONE TOLERANT TECHNOLOGY



# NEW TECHNOLOGY FOR WEED CONTROL IN SORGHUM



## WHAT IS IGROWTH TECHNOLOGY?

The igrowth technology in sorghum was developed by Advanta Seeds through mutagenesis methods and provides tolerance to herbicides of the Imidazolinone family. The sorghum created with the igrowth trait is NOT a Genetically Modified Organism (GMO).

This technology allows farmers to apply registered herbicides at the recommended rates to igrowth sorghum plants without causing damage. If this herbicide were to be applied on sorghum without this technology, it could cause death or irreversible damage to the crop.

The igrowth technology will allow sorghum growers the freedom to utilize WSSA Group 2 herbicides to assist in their integrated weed control programs, and will be particularly useful in controlling some common summer grass weeds in their summer crops.

## BE AWARE OF SPRAY DRIFT

Conventional, non-herbicide tolerant sorghum is extremely sensitive to imidazolinone herbicide.

The image to the right demonstrates igrowth sorghum with spray drift onto the buffer crop of conventional treated sorghum.



**APPLIED**



**CONTROL**



The image to the left was taken at the Corpus Christi, TX, igrowth trial sites and clearly demonstrates the weed control achieved in igrowth sorghum when IMIFLEX\* is applied at labeled rates and timings.

Note the equal crop vigor of the igrowth sorghum in both sprayed and untreated control sections.

\*IMIFLEX is pending EPA registration.



# GOOD PRACTICES FOR THE MANAGEMENT OF TOLERANT CROPS TO HERBICIDES

## PROPER MANAGEMENT OF HERBICIDE TOLERANT CROPS

Group 2 herbicides having the ALS inhibitor mode of action are vulnerable to resistant weeds with repeated use. The employment of multiple modes of action should always be a part of the weed control strategy.

The risk of evolution of resistant weed populations is dependent on the frequency of resistant plants in the starting population, the persistence or activity of the applied product, the frequency of application and the history of use of other herbicides sharing the same mode of action prior to the deployment of a new Group 2 herbicide.

In many sorghum growing areas, Group 2 herbicides have been sparingly used because of their incompatibility with farming systems including sorghum and cotton where these are quite susceptible to carryover of more persistent Group 2 herbicides such as metsulfuron, chlorsulfuron, triasulfuron and imazapic.

Even in districts with a longer history of use, there have been limited confirmed instances of evolved resistant weed populations though this risk remains should this practice be maintained uninterrupted.



## BEST PRACTICES FOR HERBICIDE RESISTANT CROPS

Weed resistance to IMI herbicides can be avoided by simultaneously employing other weed control measures and in particular herbicides having differing modes of action. The most prudent approach in incorporating IMI herbicides in conjunction to imidazolinone-tolerant sorghum is to continue use of existing pre and post-emergence herbicides.

This approach has been adopted by successful users of Lightning herbicide in IT corn who found the exclusive use of Lightning often lead to a shift of weed populations that were less susceptible or tolerant to Lightning.

In this instance, the inclusion of a pre-emergence herbicide program including s-metolachlor and atrazine followed by post-emergence applications of Lightning has enhanced a traditional weed control program relying entirely on s-metolachlor and atrazine and post-emergence treatments capable of controlling broadleaf weeds only.

This approach has also ensured a much lower risk of the development of weed populations resistant to IMI herbicides over the longer term and has already reduced the occurrence of a build-up of naturally tolerant weeds to IMIs.

**Source: Andrew Somerville, Jubilee Consulting**





# INTEGRATED WEED MANAGEMENT AND STEWARDSHIP

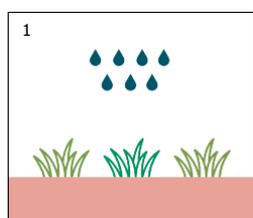
## MANAGING WEED RESISTANCE: BMP

- Crop Rotation
- Rotate chemical modes of action
- Maintain the use of pre-emergent herbicides
- Use more than one chemical mode of action
- Use non-chemical options: crop competition, mechanical weeding
- Control escapes: keep the seed bank low

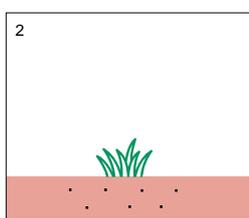
## KEY STEWARDSHIP RULES

- Do not apply to fields with high populations of summer weeds
- Don't apply chemical with this mode of action on target weeds more than once per 12 month period
- Scout for survivors after application, implement control strategies
- Report any serious spray failures
- Control *Sorghum spp.* on edges and fence lines
- Do not plant sorghum the year following growing sorghum designated as igrowth in the same field

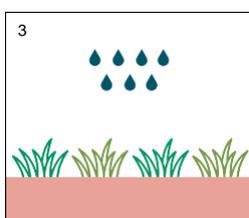
## HOW DO HERBICIDE RESISTANT WEEDS DEVELOP?



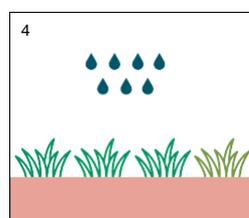
Herbicide application



Resistant plants survive and generate offspring



Repeated use of the same herbicides encourage an increase in herbicide resistant plants



In time, the resistant weeds come to dominate

