



## 2023 **GRAIN SORGHUM** GUIDE



# TABLE OF CONTENTS

---

---



<b>ALTA SEEDS OVERVIEW</b>	<b>6</b>
<b>igrowth OVERVIEW</b>	<b>10</b>
<b>igrowth HYBRID SUMMARY</b>	<b>14</b>
<b>igrowth GRAIN SORGHUM HYBRIDS</b>	<b>16</b>
<b>IMIFLEX SUMMARY</b>	<b>24</b>
<b>GRAIN SORGHUM HYBRID SUMMARY</b>	<b>26</b>
<b>ALTA SEEDS GRAIN SORGHUM HYBRIDS</b>	<b>28</b>
<b>GRAIN SORGHUM SELECTION &amp; STAND GUIDE</b>	<b>44</b>
<b>VERTIX SEED TREATMENTS</b>	<b>46</b>

# A CUTTING-EDGE, CLIMATE-SMART SUPER CROP

Sorghum is a versatile crop that can be grown as a grain, forage or sweet crop. It was originally domesticated in Africa and has since spread throughout the globe to be one of the top five cereals in the world.

- » **The “new super grain”** Sorghum is an incredible nutrient source and is a non-GMO gluten-free cereal.
- » **Nutrition for animals** Sorghum is used in the beef, swine, dairy and poultry industries, as well as an ingredient in pet food. Due to its high nutritional value, starch and good tolerance to mycotoxins, sorghum offers a safeguard for animal nutrition.
- » **Bioenergy** Sorghum, rich in fiber, is used in the production of biofuel, biogas and ethanol.
- » **Biomaterials** Sorghum is an excellent fibrous raw material to produce industrial pulp that is used for biomass-based materials like bio-plastic and paper.

**Sorghum is one the most efficient crops in conversion of solar energy and use of water, and is known as a high-energy, drought-tolerant, resource-conserving grain.**



**Efficient water use** Thanks to its  $\text{CO}_2$  absorption mechanism and complex root system, sorghum extracts and uses water and nutrients from the soil more efficiently than other crops. It can adapt to heat and drought, requiring 30% less water than other grains.



**Limited fertilization** Sorghum can use fertilizers from the soil efficiently, requiring no additional fertilization. In addition, it is rarely exposed to diseases and pests so requires little phytosanitary treatment.



**Improved soil health** Sorghum increases organic matter, recycles nutrients, captures and retains moisture and reduces soil erosion.



**Reduced carbon footprint** Sorghum no-tillage practices and nitrogen-use efficiency helps to reduce the carbon footprint. Sorghum's high sequestration ability helps remove harmful carbon from the atmosphere.



# HYBRIDS FOR EVERY ENVIRONMENT AND OPERATION

AT ALTA SEEDS, WE DON'T JUST  
PROVIDE QUALITY HYBRIDS.  
WE PROVIDE INNOVATIVE SOLUTIONS.

Our carefully developed, high-performing hybrids are designed to meet your individual challenges. From the full lineup of grain and forage sorghum to sorghum-sudangrass, sudangrass and pearl millet, our portfolio offers top-producing seeds with cutting-edge characteristics — all to enhance and streamline your operation from planting to harvest.

**In the groundbreaking Global Biotechnology Center in Texas and across the world, our breeders are setting the standards for herbicide tolerance, seed treatments and aphid, drought and other stress tolerance while developing new solutions to tackle tough challenges on the farm. Our global pipeline allows us to more efficiently meet your needs, and our expansive team of sorghum experts is always at the ready to offer assistance and help you make the best choices for your acreage and environment.**

The world's first commercially available herbicide-tolerant non-GMO technology specifically for grain sorghum, **igrowth**® allows you to apply the powerful companion herbicide **IMIFLEX**™ from UPL without causing damage to your crops so you can realize your sorghum acres' full potential. To continue to meet the needs of more growers, Alta Seeds also offers groundbreaking products like **Aphix**™ elite sugarcane aphid tolerance, **Vertix**™ seed treatments and a line of top-performing hybrids with the **EMPYR**™ **Premier Forages** that include the world's first herbicide-tolerant forage sorghum, **EMPYR igrowth ADV F8484IG**.

Our grain sorghum products include innovations like these along with an array of traits that give you the flexibility to choose just the variety to suit your growing environment — and make the most of your seed investment.

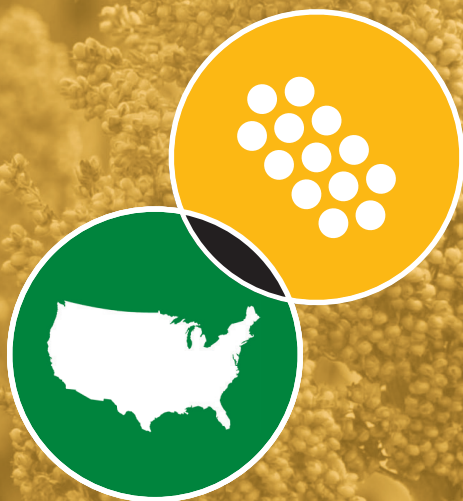


# EVER-ADVANCING PERFORMANCE

BECAUSE AGRICULTURE  
IS CONSTANTLY CHANGING,  
**ALTA SEEDS IS**  
CONSTANTLY INNOVATING.

We are always working to develop and introduce new grain hybrids with trial-topping yields, outstanding yield for maturity and excellent uniformity so you can be sure your crop will perform at the highest standard. Choose hybrids with traits ranging from drought tolerance, improved seedling vigor and enhanced standability to suit even the toughest growing conditions. And with options like **Aphix** elite sugarcane aphid tolerance, **Vertex** seed treatments and **igrowth** herbicide tolerance, you have even more opportunity to select from top seed hybrids that will give you growth flexibility and convenience while preventing crop losses.





# TAKE WEED CONTROL TO THE NEXT LEVEL

---

---



**igrowth** is the first commercially available non-GMO, herbicide-tolerant innovation for grain sorghum in the world. The technology allows for pre-emergent or post-emergent control of broadleaf and grass weeds without causing damage to the crop, helping growers improve crop production and achieve better returns on their investments. The **igrowth** companion herbicide from UPL called **IMIFLEX™** (imazamox) is the only imazamox herbicide registered for use with **igrowth**. In 2021, Alta Seeds introduced **EMPYR igrowth ADV F8484IG**, the first herbicide-tolerant forage commercially available in the U.S.

Advanta Seeds was the first to discover the technology in 2007, and since then, **igrowth** has been successfully introduced in Argentina, Australia and multiple other countries. Through its premium seed brand Alta Seeds, the company was the first to commercialize herbicide-tolerant sorghum in the United States.





## **igrowth Geography**

**igrowth** hybrids are well-adapted to the broad U.S. sorghum growing areas to provide flexibility for growers. The five grain sorghum **igrowth** varieties offer weed control benefits that will appeal to growers of both high- and low-input acres. Additional hybrids are in development. See hybrid overviews in this guide for the geography where each is best suited.

## **Non-GMO**

**igrowth** is a non-GMO product. There was no insertion of DNA from other species or plants into the sorghum genome. **igrowth** is a naturally occurring tolerance found by screening many lines of germplasm and has global market acceptance with no export or other restrictions.

## **Purchasing igrowth**

Growers wanting to purchase **igrowth** seed for the upcoming growing season will need to register and sign the **igrowth** WEED CONTROL SORGHUM GROWER AGREEMENT at **AgCelerate.com**. Then, visit **SorghumPotential.com** to reach a representative about purchasing **igrowth** and **IMIFLEX herbicide** for your operation. Alta Seeds will provide registered **igrowth** users with additional stewardship documents in the future.





# igrowth HYBRID SUMMARY



TRAIT RATINGS SCALE 1 = EXCELLENT 10 = POOR

	Relative Maturity	Yield for Maturity	Grain Color	Head Type	Approx Seeds per Bag	Plant Height	Head Exertion	Plant Uniformity	Plant Color
<b>ADV G1120IG</b>	M/E	2	RED	S/C	600K	45-55"	3	2	RED
<b>ADV G2132IG</b>	MED	2	RED	S/C	600K	45-55"	3	2	PPL
<b>ADV G2168IG</b>	M/E	2	RED	S/C	600K	36-44"	1	2	PPL
<b>ADV G2193IG</b>	MED	2	RED	S/O	600K	40-48"	1	2	PPL



Meet the **igrowth** lineup of non-GMO, herbicide-tolerant grain sorghum hybrids. Each hybrid offers outstanding flexibility and weed control benefits for growers. Choose from a variety of hybrids that are well-adapted to broad sorghum growing areas in the U.S., so you can rest assured you'll get the most out of your investment no matter what the growing conditions.




#### CHARACTERISTIC RATINGS KEY

M/E = Medium Early    S/O = Semi-Open  
M/L = Medium Late    S/C = Semi-Compact  
MED = Medium

#### CROP USE & ADAPTATION KEY

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

Seedling Vigor	Root Lodging	Drought Tolerance	Test Weight	Threshability	Sugarcane Aphid*	Tough Dryland	High Yield Dryland	Limited Irrigation	Full Irrigation	Early Planting/ Cold Soils	Poorly Drained Soils	No-Till
2	3	2	2	2	MT	HS	S	S	MA	MA	MA	HS
2	3	2	2	2	MT	S	HS	HS	HS	MA	MA	HS
3	3	3	2	2	HT  Non-Tolerant	HS	HS	HS	S	MA	MA	HS
3	3	3	2	2	HT	HS	HS	HS	S	MA	MA	HS

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

**ADV**

## MEDIUM-EARLY RED GRAIN SORGHUM

### CHARACTERISTICS

**MEDIUM-EARLY** RELATIVE MATURITY  
**600,000** SEEDS/BAG  
**RED** GRAIN COLOR  
**SEMI-COMPACT** HEAD TYPE  
**45-55"** PLANT HEIGHT  
**RED** PLANT COLOR

- » Drought-hardy producer
- » Great head exertion for efficient harvest
- » Responds to rainfall and irrigation
- » Travels into western environments

### RATINGS



# G112016

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



## FIELD POSITIONING

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

**Hs** = Highly Suitable    **S** = Suitable    **Ma** = Manage Appropriately    **X** = Poor Suitability

**Ht** = High Tolerance    **Mt** = Medium Tolerance





ADV

## MEDIUM-EARLY RED GRAIN SORGHUM

### CHARACTERISTICS

MEDIUM	RELATIVE MATURITY
600,000	SEEDS/BAG
RED	GRAIN COLOR
SEMI-COMPACT	HEAD TYPE
45-55"	PLANT HEIGHT
PURPLE	PLANT COLOR

- » Strong adaptability with elite yield performance
- » High top-end yield potential
- » Superior drought tolerance
- » Responds to rainfall and irrigation
- » Head exertion for efficient harvest

### RATINGS

	POOR	10	9	8	7	6	5	4	3	2	1	EXCELLENT
YIELD FOR MATURITY											2	
HEAD EXERTION										3		
PLANT UNIFORMITY											2	
SEEDLING VIGOR											2	
ROOT LODGING										3		
DROUGHT TOLERANCE											2	
TEST WEIGHT											2	
THRESHABILITY											2	

# 2213216

## RECOMMENDED SEEDING RATES

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



## FIELD POSITIONING

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

**Hs** = Highly Suitable    **S** = Suitable    **Ma** = Manage Appropriately    **X** = Poor Suitability

**Ht** = High Tolerance    **Mt** = Medium Tolerance

**ADV**

## MEDIUM RED GRAIN SORGHUM

### CHARACTERISTICS

<b>MEDIUM</b>	RELATIVE MATURITY
<b>600,000</b>	SEEDS/BAG
<b>RED</b>	GRAIN COLOR
<b>SEMI-COMPACT</b>	HEAD TYPE
<b>45-55"</b>	PLANT HEIGHT
<b>PURPLE</b>	PLANT COLOR

- » Combining Aphix elite SCA tolerance and igrowth
- » High top-end yield potential
- » Superior drought tolerance
- » Responds to rainfall and irrigation
- » Head exertion for efficient harvest

### RATINGS

	POOR									EXCELLENT
	10	9	8	7	6	5	4	3	2	1
YIELD FOR MATURITY									2	
HEAD EXERTION										1
PLANT UNIFORMITY									2	
SEEDLING VIGOR									3	
ROOT LODGING									3	
DROUGHT TOLERANCE									3	
TEST WEIGHT									2	
THRESHABILITY									2	




# 621681G

## RECOMMENDED SEEDING RATES

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



## FIELD POSITIONING

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

**Hs** = Highly Suitable    **S** = Suitable    **Ma** = Manage Appropriately    **X** = Poor Suitability

**Ht** = High Tolerance    **Mt** = Medium Tolerance

**ADV**

## MEDIUM RED GRAIN SORGHUM

### CHARACTERISTICS

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

RELATIVE MATURITY  
SEEDS/BAG  
GRAIN COLOR  
HEAD TYPE  
PLANT HEIGHT  
PLANT COLOR

- » Good aphid tolerance
- » Strong yield performance
- » Ideal for rainfed production
- » Strong disease ratings
- » Good uniformity

### RATINGS



# 621931G

## RECOMMENDED SEEDING RATES

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



## FIELD POSITIONING

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

**Hs** = Highly Suitable    **S** = Suitable    **Ma** = Manage Appropriately    **X** = Poor Suitability

**Ht** = High Tolerance    **Mt** = Medium Tolerance





# IMIFLEX™

## HERBICIDE

Always read and follow label directions. Product packaging may be different than pictured here. Visit [upl-ltd.com/ca](http://upl-ltd.com/ca) for product and label detail.

10 L  
NET CONTENT



# MORE SORGHUM, FEWER WEEDS

**Sorghum growers now have an easy way to get the most value from their sorghum acres. IMIFLEX™ herbicide is the only IMI herbicide certified for use in the innovative, non-GMO igrowth® sorghum production system.** Broad-spectrum and residual IMIFLEX herbicide controls even the toughest grass and broadleaf weeds in igrowth sorghum, helping realize the full potential of your sorghum acres. IMIFLEX herbicide is also flexible, as it can be used pre- or post-emergence in conservation and in conventional tillage production systems.







## IMIFLEX Herbicide Product Benefits

- » Broad-spectrum systemic herbicide for use in sorghum containing the Alta Seeds® igrowth® tolerance technology.
- » Excellent crop safety with igrowth sorghum.
- » Consistent performance across geographical regions.
- » Flexible application timing can be used pre- or post-emergence.
- » Long-lasting control of hard-to-kill grassy weeds including Texas panicum, crabgrass and foxtail.
- » Compatibility with traditional sorghum herbicide programs.
- » 0-day pre-harvest interval and no grazing or feed restrictions.



# GRAIN SORGHUM HYBRID SUMMARY

TRAIT RATINGS SCALE 1 = EXCELLENT 10 = POOR

HYBRID		Relative Maturity	Yield for Maturity	Grain Color	Head Type	Approx Seeds/Lb 1,000	Plant Height	Head Exertion	Plant Uniformity	Plant Color	Seedling Vigor	Root Lodging	Drought Tolerance
<b>ADV G1329</b>	 <small>SCA TOLERANCE</small>	E	1	CRM	S/O	14-16	30-36"	2	1	RED	3	1	1
<b>AG1201</b>	 <small>SCA TOLERANCE</small>	E	2	BRZ	S/O	13-15	30-36"	4	2	RED	3	2	1
<b>AG1203</b>	 <small>SCA TOLERANCE</small>	M/E	1	BRZ	S/O	12-14	34-40"	3	-	RED	2	2	2
<b>AG1301</b>	 <small>SCA TOLERANCE</small>	M/E	2	CRM	S/C	17-18	40-46"	3	1	RED	1	1	1
<b>ADV G1153</b>	 <small>SCA TOLERANCE</small>	M/E	1	RED	S/C	12-14	42-46"	3	1	PPL	3	2	1
<b>ADV G2106</b>		MED	1	RED	S/O	12-14	44-48"	1	2	PPL	1	2	2
<b>ADV G2165</b>	 <small>SCA TOLERANCE</small>	MED	1	RED	S/O	14-16	38-46"	2	1	PPL	2	1	2
<b>ADV G3127</b>		M/L	1	RED	S/O	13-15	38-47"	3	3	PPL	2	1	2

Alta Seeds offers seven 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.

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

#### CHARACTERISTIC RATINGS KEY

M/E = Medium Early

M/L = Medium Late

MED = Medium

S/O = Semi-Open

S/C = Semi-Compact

E = Early

#### CROP USE & ADAPTATION KEY

HS = Highly Suitable

S = Suitable

X = Poor Suitability

MA = Manage Appropriately

HT = High Tolerance

MT = Medium Tolerance

Test Weight	Threshability	Charcoal Rot	Downy Mildew Race 3	Head Smut	MDMV	Sugarcane Aphid* SCA	Tough Dryland	High Yield Dryland	Limited Irrigation	Full Irrigation	Early Planting/Cold Soils	Poorly Drained Soils	Anthraxose Prone Areas	Downy Mildew Area	Head Smut Prone Area	No-Till
2	2	-	5	-	-	HT	HS	HS	HS	S	S	S	S	MA	MA	HS
4	2	4	6	4	5	HT	HS	S	S	S	X	S	S	X	MA	S
2	2	-	-	-	-	HT	HS	HS	HS	HS	S	S	-	-	-	S
5	1	-	-	-	-	HT	HS	HS	HS	S	X	S	-	-	-	MA
2	2	4	5	6	7	HS	HS	S	S	S	MA	S	-	-	-	HS
3	2	4	5	4	4	MT	S	HS	HS	S	S	S	HS	-	-	S
1	1	-	-	-	-	HT	S	HS	HS	HS	S	MA	-	-	-	S
2	1	-	-	-	-	MT	MA	S	HS	HS	S	MA	-	-	-	HS

**ADV**

## EARLY CREAM GRAIN SORGHUM

### CHARACTERISTICS

**EARLY**  
14-16

**RELATIVE MATURITY**  
SEEDS/LB (1,000)  
CHECK SEED BAG

**CREAM**  
**SEMI-OPEN**  
30-36"  
**RED**

**GRAIN COLOR**  
**HEAD TYPE**  
**PLANT HEIGHT**  
**PLANT COLOR**

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

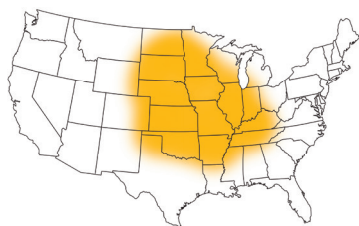
### RATINGS

POOR  
10 9 8 7 6 5 4 3 2 1  
EXCELLENT

YIELD FOR MATURITY	1
HEAD EXERTION	2
PLANT UNIFORMITY	1
SEEDLING VIGOR	3
ROOT LODGING	1
DROUGHT TOLERANCE	1
TEST WEIGHT	2
THRESHABILITY	2
DOWNY MILDEW (RACE 3)	5



# 61329



## RECOMMENDED SEEDING RATES

Please see your Alta Seeds retailer for local recommendations.



PRIMARY AREA OF ADAPTATION

## FIELD POSITIONING

TOUGH DRYLAND	HIGH YIELD DRYLAND	LIMITED IRRIGATION	FULL IRRIGATION	HIGH PH SOILS IRON CHLOROSIS	EARLY PLANTING
Hs	Hs	Hs	S	Hs	S
NO-TILL	POORLY DRAINED SOILS	ANTHRACNOSE PRONE AREA	DOWNY MILDEW AREA	HEAD SMUT PRONE AREA	SUGARCANE APHID
Hs	S	S	Ma	Ma	Ht

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



## EARLY BRONZE GRAIN SORGHUM

### CHARACTERISTICS

**EARLY**  
13-15

**RELATIVE MATURITY**  
SEEDS/LB (1,000)

CHECK SEED BAG

**BRONZE**

**GRAIN COLOR**

**SEMI-OPEN**

**HEAD TYPE**

**30-36"**

**PLANT HEIGHT**

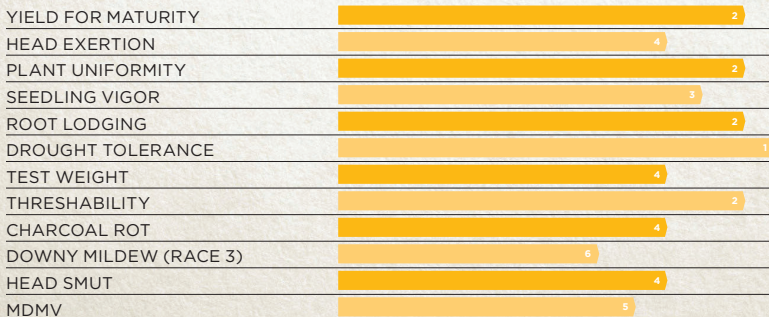
**RED**

**PLANT COLOR**

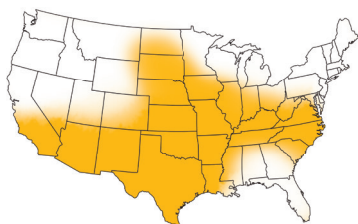
- » Very uniform
- » Excellent yield for maturity
- » Strong drought tolerance
- » Adaptable across a wide range of growing conditions
- » Aphix-level sugarcane aphid tolerance

### RATINGS

POOR  
10 9 8 7 6 5 4 3 2 1  
EXCELLENT



# AG1201



## RECOMMENDED SEEDING RATES

Please see your Alta Seeds retailer for local recommendations.



PRIMARY AREA OF ADAPTATION

## FIELD POSITIONING

TOUGH DRYLAND	HIGH YIELD DRYLAND	LIMITED IRRIGATION	FULL IRRIGATION	EARLY PLANTING/ COLD SOILS	NO-TILL
Hs	S	S	S	X	S
POORLY DRAINED SOILS	ANTHRACNOSE PRONE AREA	DOWNY MILDEW (RACE 3) AREA	HEAD SMUT PRONE AREA	SUGARCANE APHID*	
S	S	X	Ma	Ht	

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

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





## MEDIUM-EARLY BRONZE GRAIN SORGHUM

### CHARACTERISTICS

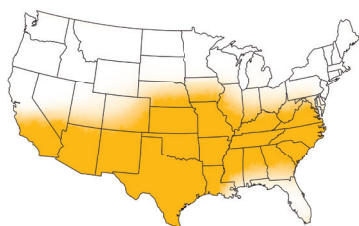
**MEDIUM-EARLY** **RELATIVE MATURITY**  
**12-14** **SEEDS/LB (1,000)**  
**BRONZE** **CHECK SEED BAG**  
**SEMI-OPEN** **GRAIN COLOR**  
**34-40"** **HEAD TYPE**  
**RED** **PLANT HEIGHT**  
**RED** **PLANT COLOR**

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

### RATINGS

	POOR	10	9	8	7	6	5	4	3	2	1	EXCELLENT
YIELD FOR MATURITY												1
HEAD EXERTION											3	
SEEDLING VIGOR											2	
ROOT LODGING											2	
DROUGHT TOLERANCE											2	
TEST WEIGHT											2	
THRESHABILITY											2	

# AG1203



## 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

TOUGH DRYLAND	HIGH YIELD DRYLAND	LIMITED IRRIGATION	FULL IRRIGATION
Hs	Hs	Hs	Hs
EARLY PLANTING/ COLD SOILS	NO-TILL	POORLY DRAINED SOILS	SUGARCANE APHID*
S	S	S	Ht

**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.



## MEDIUM-EARLY CREAM GRAIN SORGHUM

### CHARACTERISTICS

**MEDIUM-EARLY** **RELATIVE MATURITY**  
**17-18** **SEEDS/LB (1,000)**  
**CREAM** **CHECK SEED BAG**  
**SEMI-COMPACT** **GRAIN COLOR**  
**40-46"** **HEAD TYPE**  
**RED** **PLANT HEIGHT**  
**RED** **PLANT COLOR**

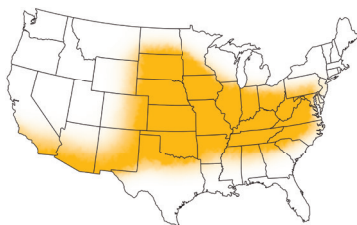
- » Performs well in dryland conditions and responds very favorably to irrigation
- » Excellent staygreen
- » Very good plant uniformity
- » Widely adaptable
- » Elite sugarcane aphid tolerance

### RATINGS





# AG1301



## 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	HIGH YIELD DRYLAND	LIMITED IRRIGATION	FULL IRRIGATION
Hs	Hs	Hs	S
EARLY PLANTING/ COLD SOILS	NO-TILL	POORLY DRAINED SOILS	SUGARCANE APHID*
X	S	S	Ht

**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.



ADV

## MEDIUM-EARLY RED GRAIN SORGHUM

### CHARACTERISTICS

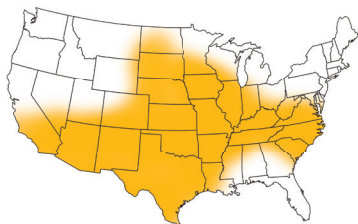
**MEDIUM-EARLY** **RELATIVE MATURITY**  
**12-14** **SEEDS/LB (1,000)**  
**RED** **CHECK SEED BAG**  
**SEMI-COMPACT** **GRAIN COLOR**  
**42-46"** **HEAD TYPE**  
**PURPLE** **PLANT HEIGHT**  
**PURPLE** **PLANT COLOR**

- » Aphix-level sugarcane aphid tolerance
- » High yield potential for maturity
- » Good plant uniformity
- » Strong level of drought tolerance
- » Excellent standability

### RATINGS



# G1153



## 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	HIGH YIELD DRYLAND	LIMITED IRRIGATION	FULL IRRIGATION
Hs	S	S	S
EARLY PLANTING/ COLD SOILS	NO-TILL	POORLY DRAINED SOILS	SUGARCANE APHID
Ma	Hs	S	Hs

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





ADV

## VIVID RED GRAIN SORGHUM

### CHARACTERISTICS

**MEDIUM**  
**12-14**

**RELATIVE MATURITY**  
**SEEDS/LB (1,000)**

CHECK SEED BAG

**RED**

**GRAIN COLOR**

**SEMI-OPEN**

**HEAD TYPE**

**44-48"**

**PLANT HEIGHT**

**PURPLE**

**PLANT COLOR**

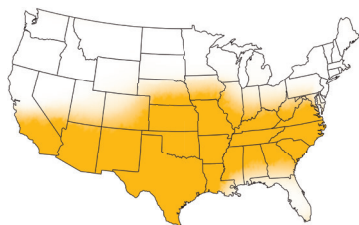
- » Good plant uniformity
- » Highly adaptable
- » Responds well to irrigation

### RATINGS

POOR  
10 9 8 7 6 5 4 3 2 1  
EXCELLENT

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 (RACE 3)	5
HEAD SMUT	4
MDMV	4

# G2106



## 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	HIGH YIELD IRRIGATION	LIMITED IRRIGATION	FULL IRRIGATION	EARLY PLANTING/ COLD SOILS
S	Hs	Hs	S	S
NO-TILL	POORLY DRAINED SOILS	ANTHRACNOSE PRONE AREA	SUGARCANE APHID*	
S	S	Hs	Mt	

**Hs** = Highly Suitable

**S** = Suitable

**Ma** = Manage Appropriately

**Ps** = Poor Suitability

**Ht** = High Tolerance

**Mt** = Medium Tolerance

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



ADV

## MEDIUM RED GRAIN SORGHUM

### CHARACTERISTICS

**MEDIUM**

**14-16**

**RED**

**SEMI-OPEN**

**38-46"**

**PURPLE**

RELATIVE MATURITY

SEEDS/LB (1,000)

CHECK SEED BAG

GRAIN COLOR

HEAD TYPE

PLANT HEIGHT

PLANT COLOR

» Strong agronomics blended with top-tier yield potential

» Great disease package to handle a wide range of environments

» Thrives in high-yield, rainfed environments

### RATINGS

POOR EXCELLENT  
10 9 8 7 6 5 4 3 2 1

YIELD FOR MATURITY	1
HEAD EXERTION	2
PLANT UNIFORMITY	1
SEEDLING VIGOR	2
ROOT LODGING	1
DROUGHT TOLERANCE	2
TEST WEIGHT	1
THRESHABILITY	1



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

## FIELD POSITIONING

TOUGH DRYLAND	HIGH YIELD DRYLAND	LIMITED IRRIGATION	FULL IRRIGATION
S	Hs	Hs	Hs
EARLY PLANTING/ COLD SOILS	NO-TILL	POORLY DRAINED SOILS	SUGARCANE APHID*
S	S	Ma	Ht

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



ADV

## MEDIUM-LATE RED GRAIN SORGHUM

### CHARACTERISTICS

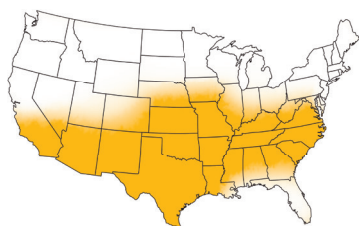
MEDIUM-LATE	RELATIVE MATURITY
68	DAYS TO MID BLOOM
13-15	SEEDS/LB (1,000)
	CHECK SEED BAG
RED	GRAIN COLOR
SEMI-OPEN	HEAD TYPE
38-47"	PLANT HEIGHT
PURPLE	PLANT COLOR

- » Big yield South Texas hybrid
- » Top standability and solid agronomics
- » Exceptional plant health and disease scores
- » Strong performance in highly productive, rainfed environments

### RATINGS

	POOR	10	9	8	7	6	5	4	3	2	1	EXCELLENT
YIELD FOR MATURITY												1
HEAD EXERTION											3	
PLANT UNIFORMITY											3	
SEEDLING VIGOR											2	
ROOT LODGING												1
DROUGHT TOLERANCE											2	
TEST WEIGHT											2	
THRESHABILITY												1

# 63127



## 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	HIGH YIELD DRYLAND	LIMITED IRRIGATION	FULL IRRIGATION
Ma	Hs	Hs	Hs
EARLY PLANTING/ COLD SOILS	NO-TILL	POORLY DRAINED SOILS	SUGARCANE APHID*
S	Hs	Ma	Mt

**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.



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.

## PLANT STAND FOR SORGHUM BY SEEDS/POUND

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

## 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.

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



# 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 >**





**Vertix™ CORE**  
Seed Treatment

**Vertix™ SELECT**  
Seed Treatment

**Vertix™ PREMIER**  
Seed Treatment



**ALL VERTIX SEED  
TREATMENTS  
PROVIDE:**

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

The logo consists of a large, stylized 'V' with a small red triangle at its base. To the right of the 'V' is the word 'ertix' in a grey sans-serif font, followed by a trademark symbol (TM). To the right of 'ertix' is the word 'CORE' in a bold red sans-serif font. Below this, the words 'Seed Treatment' are written in a red sans-serif font.

The logo consists of a large, stylized 'V' with a small green triangle at its base. To the right of the 'V' is the word 'ertix' in a grey sans-serif font, followed by a trademark symbol (TM). To the right of 'ertix' is the word 'SELECT' in a bold green sans-serif font. Below this, the words 'Seed Treatment' are written in a green sans-serif font.

The logo consists of a large, stylized 'V' with a small purple triangle at its base. To the right of the 'V' is the word 'ertix' in a grey sans-serif font, followed by a trademark symbol (TM). To the right of 'ertix' is the word 'PREMIER' in a bold purple sans-serif font. Below this, the words 'Seed Treatment' are written in a purple sans-serif font.

**VERTIX 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.

**VERTIX SELECT** builds on 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

**VERTIX 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





As a grower, your needs are  
ever-evolving. And our team  
is constantly innovating and  
improving our hybrid lineup  
to meet those needs.

---

With options to maximize  
your season even in the  
toughest conditions, Alta Seeds  
develops hybrids with one  
mission in mind:

**TO HELP YOU GROW  
YOUR SUCCESS.**







**altaseeds.com**

301 Polk Street, Suite #860  
Amarillo, TX 79101

**844-529-3420**

Alta Seeds is a trademark of Advanta US, LLC, an operating unit of Advanta Seeds, a global company. **Always read and follow label directions.** IMIFLEX is a trademark of a UPL Corporation Limited Group Company. igrowth<sup>®</sup> and its corresponding logo are trademarks owned by Advanta US, LLC, a UPL group company. ©2022 Advanta Seeds. 746-2212B