

# Asgrow<sup>®</sup> Soybeans

# AG23X9 Brand

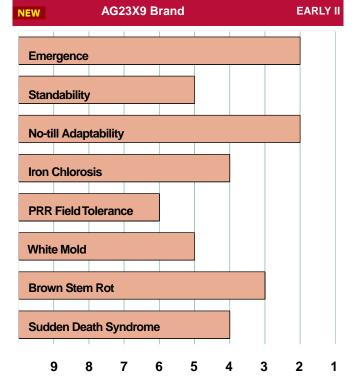
Asgrow AG23X9 brand is a 2.3 RM soybean with Peking type SCN resistance and excellent yield potential. This product is adapted across early maturity group II growing regions. In addition to SCN resistance, AG23X9 offers resistance to Phytophthora and tolerance to sudden death syndrome and iron deficiency chlorosis.

Product Brand Characteristics           Category         Characteristic         Value           Maturity Group         2           MANAGEMENT         Relative Maturity         2.3           Herbicide Tolerant Trait         RR2X/SR           Canopy         M           Growth Habit         I           Flower Color         P           Pubescence Color         G           Hilum Color         IB           Pod Wall Color         BR           Plant Height Category         MT           Protein Content @ 13%         33.3           Oil Content @ 13%         17.7           Emergence         2           Standability         5           No-till Adaptability         2           Iron Chlorosis         4           Soybean Cyst Nematode         R1, R3
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Part
Flower Color
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PRODUCTION  No-till Adaptability  Iron Chlorosis  4
No-till Adaptability 2 Iron Chlorosis 4
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Soybean Cyst Nematode R1, R3
, -
PRR Resistance Rps1 <sup>c</sup>
PRR Field Tolerance 6
White Mold 5
Brown Stem Rot 3
DISEASES/INSECTS Sudden Death Syndrome 4
Southern Stem Canker -
Frogeye Leaf Spot -
Aerial Blight -
Southern Root Knot (M. incognita)
SENSITIVITY Chloride Sensitivity Inc.

Based on Asgrow conducted trials. Relative to other Asgrow brand products. Rating Scale: 1=Excellent, 9=Poor.

Tolerance ratings refer to PRR races not covered by specific PRR resistant genes.





# **Key Strengths**

- · Medium tall to tall plant with medium canopy
- · Peking-type SCN resistance
- Moderate tolerance to SDS and iron deficiency chlorosis

# **Management Tips**

- Lodging potential with increasing productivity levels and higher plant populations
- Average tolerance to white mold

Patented germplasm is licensed only to grow a single commercial crop of harvested material for use or sale for food, feed, processing or fiber. No license is granted for subsequent generations of seed or plants for any purpose.

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<sup>•</sup> As of this printing no dicamba herbicide product has been approved for commercial in-crop use with Roundup Ready 2 Xtend® soybeans.

DO NOT APPLY DICAMBA HERBICIDE IN-CROP TO Roundup Ready 2 Xtend® Soybeans IN 2016 unless you use a dicamba herbicide product that is specifically labeled for that use in the location where you intend to make the application.

# Asgrow Brand Soybean Legend

#### Rating Scale:

1-2 = Excellent 3-4 = Very Good

5-6 = Good 7-8 = Fair

9 = Poor N/A = Not Available

A rating of "1" in standability is a soybean product with excellent standability. A rating of "1" in brown stem rot is a product with excellent tolerance to brown stem rot.

## Soybean Cyst Nematode

R = Resistance

MR = Moderate Resistance

MR/MS = Moderate Resistance to

Moderately Susceptible

S = Susceptible

# = Race 1, 3, 5, 9 or 14

A recent publication suggests that soybean cyst nematode populations should be described by a different method called HG type, instead of races. The Race 3 population used in our evaluations would be equivalent to "HG Type 0" and the Race 14 population would be equivalent to "HG Type 1.3" under the direction of the paper.

#### White Mold

White mold, caused by Sclerotinia sclerotiorum, is a soybean disease for which there is currently no known form of complete genetic resistance. Scores represent relative levels of tolerance to the disease, as outlined below.

<4 = Very Good

4 = Good

5 = Above Average

6 = Average

7 = Below Average

>7 = Poor

#### Canopy

Th = Thin

M = Medium

MB = Medium Bushy

B = Bushy

## Phytophthora Gene Specific Resistance

Susc. = Susceptible

Rps1<sup>a</sup> denotes resistance to Races 1, 2, 10, 11, 13-18, 24,

26, 27, 31, 32 & 36. Rps1<sup>c</sup> denotes resistance to Races 1-3, 6-11, 13, 15, 17,

21, 23, 24, 26, 28-30, 32, 34 & 36. Rps1<sup>k</sup> denotes resistance to Races 1-11, 13-15, 17, 18,

Rps1" denotes resistance to Races 1-11, 13-15, 17, 18, 21-24, 26, 36 & 37.

Rps2 denotes resistance to Races 1-5, 9-29, 33, 34, 36-39. Rps3<sup>a</sup> denotes resistance to Races 1-5, 8, 9, 11, 13, 14, 16, 18, 23, 25, 28, 29 & 31-35.

Rps6 denotes resistance to Races 1-4, 10, 12, 14-16, 18-21 & 25.

Rps7 denotes resistance to Races 2, 12, 16, 18, 19, 33, 35 & 36.

## **Phytophthora Field Tolerance**

Phytophthora field tolerance is a form of partial genetic resistance whereby the plant can maintain some level of productivity while infected with the pathogen. Phytophthora field tolerance scores represent relative responses to the following races of Phytophthora sojae.

Reaction to Phytophthora sojae Race 25 for products with Rps1<sup>a</sup>, Rps1<sup>c</sup>, Rps1<sup>k</sup> and Rps7.

Reaction to Phytophthora sojae Race 17 and/or Race 30 for products with Rps2, Rps3<sup>a</sup> and Rps6.

Phytophthora field tolerance scores indicate the following levels of tolerance:

<4 = Very Good

4 = Good

5 = Above Average

6 = Average

7 = Below Average

>7 = Poor

#### **Pubescence**

G = Gray

T = Tawny

LT = Light Tawny

## Flower Color

P = Purple

W = White

### **Traits**

CONV = Conventional

GENRR2Y=Genuity® Roundup Ready 2 Yield®

RR2X = Roundup Ready 2 Xtend<sup>TN</sup>

SR = Sulfonylurea Ready (Sulfonylurea-based Herbicide Tolerance)

VG = Vistive® Gold

## **Chloride Sensitivity**

Inc. = Includer

Exc. = Excluder

Excluder products have increased tolerance to elevated soil chloride levels compared to includers. Excluder products partition chloride in root systems and reduce the amount transported to more sensitive above-ground tissue.

#### Southern Root Knot

R = Resistant

MR = Moderately Resistant

MS = Moderately Susceptible

S = Susceptible

#### **Hilum Color**

BL = Black

G = Gray

IB = Imperfect Black

IY = Imperfect Yellow

BR = Brown

BF = Buff

Y = Yellow

M = Mix

## **Pod Wall Color**

BR = Brown
TN = Tan

As of this printing no dicamba herbicide product has been approved for commercial in-crop use with Roundup Ready 2 Xtend<sup>™</sup> soybeans. DO NOT APPLY DICAMBA HERBICIDE IN-CROP TO Roundup Ready 2 Xtend<sup>™</sup> soybeans IN 2016 unless you use a dicamba herbicide product that is specifically labeled for that use in the location where you intend to make the application. While no in-crop use of dicamba is currently approved, some dicamba products may be labeled for weed control prior to planting a crop and subject to minimum plant back restrictions.IT IS A VIOLATION OF FEDERAL AND STATE LAW TO MAKE AN IN-CROP APPLICATION OF ANY DICAMBA HERBICIDE PRODUCT ON Roundup Ready 2 Xtend Soybeans, OR ANY OTHER PESTICIDE APPLICATION, UNLESS THE PRODUCT LABELING SPECIFICALLY AUTHORIZES THAT USE. Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with Roundup Ready 2 Xtend<sup>™</sup> Soybeans and follow all pesticide product labeling.

Roundup Ready 2 Xtend<sup>™</sup> soybeans has been approved for cultivation in the U.S. and Canada, and for import in Australia/New Zealand, Colombia, China, Japan, Korea, Mexico, Taiwan, and Vietnam. The single events in this product have been approved for import in the EU. As of February 2, 2016, E.U. stack approval is in the final stage of approval and is expected but not guaranteed to be received in the near future. Growers should refer to http://www.biotradestatus.com/ for any updated information on import country approvals.

Roundup Ready 2 Xtend<sup>™</sup> soybeans contains genes that confer tolerance to glyphosate and dicamba. Glyphosate herbicides will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Contact your Monsanto dealer or refer to Monsanto's Technology Use Guide for recommended Roundup Ready<sup>®</sup> Xtend Crop System weed control programs.

At this time, Vistive<sup>®</sup> Gold soybeans have received full approval for planting in the United States but have not yet received import approval in certain export markets. While certain export approvals are pending, Vistive<sup>®</sup> Gold soybeans will be available in limited geographies only to growers who have signed a 2016 Vistive<sup>®</sup> Gold Soybean Grain Production Grower Agreement and agree to follow the stewardship requirements. Upon receipt of appropriate approvals, Monsanto will inform growers and determine whether the stewardship requirements will need to remain in place.

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Derived Plant Products in Commodity Crops. Certain products have been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Excellence Through Stewardship<sup>®</sup> is a registered trademark of Biotechnology Industry Organization.

Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

For more information regarding the intellectual property protection for the seed products identified in this publication, please see www.asgrowanddekalb.com.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready technology contains genes that confer tolerance to glyphosate, an active ingredient in Roundup® brand agricultural herbicides. Agricultural herbicides containing glyphosate will kill crops that are not tolerant to glyphosate. Genuity Design®, Genuity®, Roundup Ready 2 Xtend™, Roundup Ready 2 Yield®, Roundup Ready®, Roundup®, SR and Design®, Vistive and Design® and Vistive® are trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners.

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