

# **SORGHUM - PREPLANT APPLICATION (ANNUAL AND PERENNIAL)**

## General Information

### PRODUCT INFORMATION

XtendiMax With VaporGrip Technology is approved by U.S. EPA for all uses specified on this label in the following states, subject to county restriction as noted: Alabama, Arkansas, Arizona, Colorado, Delaware, Florida (excluding Palm Beach County), Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee (excluding Wilson County), Texas, Virginia, West Virginia, Wisconsin.

Additional state restrictions and requirements may apply. The applicator must comply with any additional state requirements and restrictions.

This product is a water-soluble formulation intended for control and suppression of many annual, biennials, and perennial broadleaf weeds, as well as woody brush and vines listed in the WEEDS CONTROLLED section of this label. This product may be used for control of these weeds in asparagus, corn, cotton, conservation reserve programs, fallow cropland, grass grown for seed, hay, proso millet, pasture, rangeland, general farmstead (noncropland), small grains, sod farms and farmstead turf, sorghum, soybean, sugarcane, Cotton with XtendFlex Technology, Roundup Ready 2 Xtend Soybean, and XtendFlex Soybean.

XtendiMax With VaporGrip Technology is a contact, systemic herbicide, which can have moderate residual control on small seeded broadleaf weeds, including waterhemp, lambsquarters and Palmer pigweed, depending on rainfall and soil type.

XtendiMax With VaporGrip Technology is readily absorbed by plants through shoot and root uptake, translocates throughout the plant's system, and accumulates in areas of active growth. XtendiMax With VaporGrip Technology interferes with the plant's growth hormones (auxins) resulting in death of many broadleaf weeds.

Failure to properly clean the entire spray system can result in inadvertent contamination of the spray system. You must ensure that the spray system used to

apply this product is clean before using this product.

Rainfast period: Rainfall or irrigation occurring within 4 hours after postemergence applications may reduce the effectiveness of this product.

Refer to the CROP-SPECIFIC INFORMATION and CROPS WITH XTEND TECHNOLOGY sections for application timing and other crop-specific details

#### Restrictions

The applicator must read the entire label, including product labeling and follow all restrictions for XtendiMax With VaporGrip Technology. Restrictions included, but are not limited to:

- DO NOT APPLY THIS PRODUCT AERIALY.
- DO NOT TANK MIX WITH PRODUCTS CONTAINING AMMONIUM SALTS SUCH AS AMMONIUM SULFATE (AMS) AND UREA AMMONIUM NITRATE. Small quantities of AMS can greatly increase the volatility potential of dicamba. Read the TANK MIXING INSTRUCTIONS of this label (Section 8.0) for instructions regarding other tank mix products.
- DO NOT APPLY TO CROPS UNDER STRESS DUE TO LACK OF MOISTURE, HAIL DAMAGE, FLOODING, HERBICIDE INJURY, MECHANICAL INJURY, INSECTS, OR WIDELY FLUCTUATING TEMPERATURES AS INJURY MAY RESULT.
- DO NOT APPLY THROUGH ANY TYPE OF IRRIGATION EQUIPMENT. DO NOT TREAT IRRIGATION DITCHES OR WATER USED FOR CROP IRRIGATION OR DOMESTIC PURPOSES.
- DO NOT MAKE APPLICATION OF THIS PRODUCT IF RAIN THAT MAY EXCEED SOIL FIELD CAPACITY AND RESULT IN SOIL RUNOFF IS EXPECTED IN THE NEXT 24 HOURS.

Review the entire label including, specific crop use direction sections for additional restrictions.

## WEED RESISTANCE MANAGEMENT

Dicamba mimics auxin (a plant hormone) resulting in a hormone imbalance in sensitive plants that interferes with normal cell division, cell enlargement, and protein synthesis. Dicamba active ingredient is a Group 4 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population can contain plants naturally resistant to Group 4 herbicides. Weed species resistant to Group 4 herbicides can be effectively managed utilizing another herbicide from a different Group, or by using other cultural or mechanical practices.

### Weed Management Practices

Certain agronomic practices can delay or reduce the likelihood that resistant weed populations will develop and can be utilized to manage weed resistance once it occurs.

Do not use less than the labeled rate of this product in a single application. Using the appropriate application rate can minimize the selection for resistant weeds.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To aid in the prevention of developing weeds resistant to this product:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small (less than 4 inches).
- Apply full rates of XtendiMax With VaporGrip Technology for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Avoid tank mixtures with other herbicides that reduce the efficacy of this product (through antagonism), or with ones that encourage application rates of this product

below those specified on this label.

- Scout fields after application to detect weed escapes or shifts in weed species.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed species to your retailer or Bayer representative or call 1-844-RRXTEND (1-844-779-8363).
- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 4 and/or use non-chemical methods to remove escapes, as practical, with the goal of preventing further seed production. EPA defines suspected herbicide resistance as the situation where the following three indicators occur at a site or location:
  - o Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - o A spreading patch of non-controlled plants of a particular weed species; and
  - o Surviving plants mixed with controlled individuals of the same species.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative sites of action.
- Rotate the use of this product with non-Group 4 herbicides.
- Avoid making more than two applications of dicamba and any other Group 4 herbicides within a single growing season unless mixed with an herbicide with a different mechanism of action with an overlapping spectrum for the difficult to control weeds.
- Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

Contact the local agricultural extension service, Bayer representative, agricultural

retailer or crop consultant for further guidance on weed control practices as needed.

#### Management of Dicamba-Resistant Biotypes

Appropriate testing is critical in order to determine if a weed is resistant to dicamba. Contact your Bayer representative to determine if resistance in any particular weed biotype has been confirmed in your area, or visit on the Internet [www.iwilltakeaction.com](http://www.iwilltakeaction.com) or [www.weedscience.org](http://www.weedscience.org).

Monsanto Company is not responsible for any losses that result from the failure of this product to control dicamba-resistant weed biotypes.

The following good agronomic practices can reduce the spread of confirmed dicamba-resistant biotypes:

- If a naturally occurring resistant biotype is present in your field, this product may be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control (read Section 8.0 for more information on tank mixing).
- Cultural and mechanical control practices (e.g., crop rotation or tillage) can also be used as appropriate.
- Scout treated fields after herbicide application and control weed escapes, including resistant biotypes, before they set seed.
- Thoroughly clean equipment, as practical, for all weed seeds before leaving fields known to contain resistant biotypes.

#### APPLICATION EQUIPMENT AND TECHNIQUES

**DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT.**

XtendiMax With VaporGrip Technology can be applied to actively growing weeds as broadcast, band, or spot spray applications using water as a carrier. For best results, treat weeds early when they are relatively small (less than 4 inches). Timely application to small weeds early in the season will improve control and reduce weed competition. Refer to Table 1 for XtendiMax With VaporGrip Technology application rates for control or suppression by weed type and growth stage. For crop-specific application timing and other details, refer to the CROP-SPECIFIC INFORMATION section of this label.

APPLY THIS PRODUCT USING PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING THE REQUIRED VOLUMES.

Using a hooded sprayer or other drift reduction technology in combination with approved nozzles may further reduce drift potential.

Cultivation: Do not cultivate within 7 days after applying this product.

#### Ground Application (Banding)

When applying XtendiMax With VaporGrip Technology by banding, determine the amount of herbicide and water volume needed using the following formula in the label.

#### Ground Application (Broadcast)

Water Volume: Use a minimum of 15 gallons of spray solution per broadcast acre for optimal performance. Use 20 gallons per acre when treating dense or tall vegetation.

Application Equipment: Select nozzles (refer to section 9.1.1 Nozzle type of this product label) designed to produce minimal amounts of fine spray particles. Spray with nozzles as close to the weeds as practical for good weed coverage.

Using a hooded sprayer or other drift reduction technology in combination with approved nozzles may further reduce drift potential.

#### Ground Application (Wipers)

XtendiMax With VaporGrip Technology may be applied through wiper application equipment to control or suppress actively growing broadleaf weeds, brush and vines. Use a solution containing 1 part XtendiMax With VaporGrip Technology to 1 part water. Do not apply greater than 1 lb dicamba acid equivalent (44 fluid ounces of this product) per acre per application. Do not contact desirable vegetation with herbicide solution. Wiper application may be made to crops (including pastures) and non-cropland areas described in this label except for non-dicamba-tolerant cotton, sorghum, and non-dicamba-tolerant soybean.

#### ADDITIONAL RESTRICTIONS

Maximum Application Rates: The maximum application or use rates stated throughout this label are given in units of volume (fluid ounces or quarts) of this product per acre. However, the maximum allowed application rates apply to this

product combined with the use of any and all other herbicides containing the active ingredients dicamba, whether applied separately or as a tank mixture, on a basis of total pounds of dicamba (acid equivalents) per acre. If more than one dicamba-containing product is applied to the same site within the same year, you must ensure that the total use of dicamba (pounds acid equivalents) does not exceed 2 pounds per Acre per year from all applications. See the INGREDIENTS section of this label for necessary product information.

Maximum seasonal use rate: Refer to Table 2. Crop-Specific Restrictions for crop-specific maximum seasonal use rates. Do not exceed 88 fluid ounces of XtendiMax With VaporGrip Technology (2 pounds acid equivalent) per acre, per year

Preharvest Interval (PHI): Refer to the CROP-SPECIFIC INFORMATION section for preharvest intervals.

Restricted Entry Interval (REI): 24 hours

#### Crop Rotational Restrictions

No rotational cropping restrictions apply when rotating to Roundup Ready 2 Xtend Soybeans, XtendFlex Soybeans, or cotton seed with XtendFlex Technology (including Bollgard 3 XtendFlex Cotton, Bollgard II XtendFlex Cotton, or XtendFlex Cotton). For other crops the interval between application and planting rotational crop is given below. When counting days from the application of this product, do not count days when the ground is frozen. Planting at intervals less than specified below may result in crop injury. Moisture is essential for the degradation of this herbicide in soil. If dry weather prevails, use cultivation to allow herbicide contact with moist soil.

Planting/replanting restrictions at application rates of 33 fluid ounces of this product per acre per season or less: Follow the planting restrictions in the directions for use for Preplant application in the Crop Specific Information section of this label. For corn, cotton (except cotton seed with XtendFlex Technology), sorghum, and soybean (except Roundup Ready 2 Xtend Soybean and XtendFlex Soybean), follow the planting restrictions in the directions for use for preplant application in CROP-SPECIFIC INFORMATION. Crop-Specific Information of this label. Do not plant barley, oat, wheat, and other grass seedings for 15 days for every 11 fluid ounces of this product applied per acre east of the Mississippi River and 22 days for every 11 fluid ounces per acre applied west of the Mississippi River. No planting restrictions apply

beyond 120 days after application of this product.

Planting/replanting restrictions at application rates of more than 33 fluid ounces and up to 88 fluid ounces of this product per acre per season: Wait a minimum of 120 days after application of this product before planting corn, sorghum and cotton (except cotton seed with XtendFlex Technology) east of the Rocky Mountains and before planting all other crops (except Roundup Ready 2 Xtend Soybean and XtendFlex Soybean) grown in areas receiving 30 inches or more rainfall annually. Wait a minimum of 180 days before planting crops in areas with less than 30 inches of annual rainfall. Wait a minimum of 30 days for every 22 fluid ounces of this product applied per acre before planting barley, oat, wheat, and other grass seedings east of the Mississippi River and 45 days for every 22 fluid ounces of this product applied per acre west of the Mississippi River.

## Limitations, Restrictions, and Exceptions

### Sorghum

XtendiMax With VaporGrip Technology may be applied preplant, postemergence, or preharvest in sorghum to control many annual broadleaf weeds and to reduce competition from established perennial broadleaf weeds, as well as control their seedlings.

Do not graze or feed treated sorghum forage or silage prior to mature grain stage. If sorghum is grown for pasture or hay, refer to Pasture, Hay, Rangeland, and General Farmstead section of this label for specific grazing and feeding restrictions.

Do not apply XtendiMax With VaporGrip Technology to sorghum grown for seed production.

### Preplant Application:

Up to 11 fluid ounces of XtendiMax With VaporGrip Technology may be applied per acre if applied at least 15 days before sorghum planting.

### Method

[Broadcast/Foliar Ground](#)

[Band application](#)

### Rates



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Restricted Entry Interval

24 hours

Timings

At least 15 days before sorghum planting.