



## Best Practices for XtendiMax<sup>®</sup> Herbicide with VaporGrip<sup>®</sup> Technology (Restricted USE Pesticide) for Cotton

*XtendiMax<sup>®</sup> herbicide with VaporGrip<sup>®</sup> Technology is a systemic herbicide which can have up to 14 days of soil activity on certain small-seeded broadleaf weeds, including waterhemp, marestail, and Palmer pigweed, depending on rainfall and soil type.*

**The [XtendiMax with VaporGrip Technology label](#) MUST be read and followed.\* Applicators MUST attend mandatory training and receive certification prior to any applications. Per label, applicators must adhere to federal label and any state restrictions regarding application timing, record keeping, protection of sensitive crops and endangered species, and proper downwind buffer.**

*\*Growers/applicators MUST read and follow the labels of ALL products applied to XtendFlex<sup>®</sup> cotton. XtendiMax with VaporGrip Technology and products with XtendFlex<sup>®</sup> Technology may not be approved in all states and may be subject to use restrictions in some states. XtendiMax with VaporGrip Technology can be used as a preplant burndown in conventional cotton east of the Rockies in geographical areas with greater than 25 inches of annual rainfall (allow a minimum of 21 days between application and cotton planting).*

XtendiMax with VaporGrip Technology can be applied in-crop when Bollgard II<sup>®</sup> XtendFlex<sup>®</sup> Technology and Bollgard<sup>®</sup> 3 XtendFlex<sup>®</sup> Technology dicamba-resistant cotton products are planted. Following application of XtendiMax with VaporGrip Technology and a minimum accumulation of 1 inch of rainfall or overhead irrigation, allow a minimum of 21 days between application and cotton planting per application of 11 fl oz/acre or less. **DO NOT** apply XtendiMax with VaporGrip Technology in-crop to cotton products without dicamba resistance.

XtendiMax with VaporGrip Technology has specific requirements. XtendiMax with VaporGrip Technology has specific requirements for approved nozzles, additives and all tank-mix partners. Some products approved for tank mixing with XtendiMax with VaporGrip Technology require the use of an approved DRA. **For a complete list of approved nozzles and tank-mix products, visit [www.xtendimaxapplicationrequirements.com](http://www.xtendimaxapplicationrequirements.com).**

To optimize the spray pattern and herbicide delivery within the recommended parameters for XtendiMax with VaporGrip Technology, applicators need to follow the proper order of mixing herbicides and additives. Additional requirements include 15 MPH maximum ground speed, approved nozzle types, adequate spray pressure, minimum of 15 gallons per acre (GPA) delivery, and a boom height not exceeding 24 inches above the target pest or crop canopy and ensuring the entire sprayer system is properly cleaned before and after an application of XtendiMax with VaporGrip Technology.

**Guidelines to help optimize herbicide delivery when applying a DRA with XtendiMax Herbicide with VaporGrip Technology:**

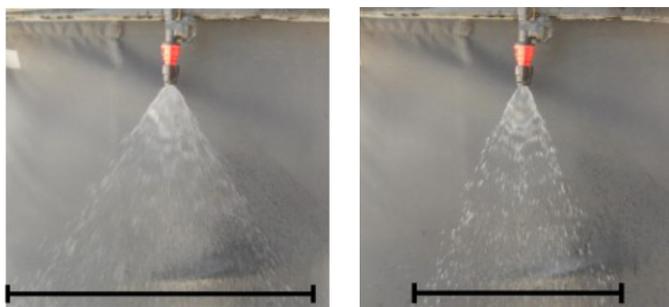
**DRA rate.** When using an approved DRA for tank-mix products, as required by the XtendiMax with VaporGrip Technology label, the lowest rate allowed by the DRA label is recommended. Only use approved DRAs.

**Mixing products.** Using the proper order of mixing multiple products can help avoid incompatibility that may reduce product efficacy or increase drift. Start with 1/2 to 3/4 volume of water in the tank and constant agitation prior to adding a product directly to the tank or through an inductor. Add and mix each product individually. If an inductor is used, add one product to the inductor at a time and pump it into the spray tank. Rinse the inductor thoroughly after each component has been added.

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Refer to the tank-mix product labels to confirm that the respective products are registered for use in the specific crop. Refer to all individual product labels, supplemental labels, and fact sheets for all products in a tank mixture. Observe all precautions and limitations on each label. Use according to the most restrictive precautionary language statements for each product in the tank mixture.

**Nozzle type and pressure.** Nozzle pressure can influence droplet size and spray pattern. Use the higher operating spray pressures, within the approved range for the specific nozzle, when using a DRA with a tank mixture to improve coverage (visit [www.xtendimaxapplicationrequirements.com](http://www.xtendimaxapplicationrequirements.com) for the most up-to-date information).



**Figure 1. Spray distribution pattern of water plus a DRA at the maximum psi (left) versus the minimum psi (right).**

Figure 1 shows how the spray distribution pattern is improved with higher pressure (the maximum psi) versus lower pressure (the minimum psi). Nozzle selection is one of the most important parameters for drift control. Not all DRAs are compatible with every nozzle type and pesticide/adjuvant combination. Check with the additive manufacturer to ensure that the DRA will work properly with the spray nozzle, spray pressure, and specific spray solution.

The applicator needs to consider that operating pressure readings may be different “in the cab” (prior to screens and strainers) and at the boom where the pressure should be in the recommended range. During the initial application pass, with the sprayer operating at the desired speed and pressure, verify that the boom height is appropriate for

the spray pattern overlap, not exceeding 24 inches above the target pest or crop canopy, and nozzles are providing coverage of the target pests for effective control.

## Application rate.

The use of DRAs result in the formation of ultra-coarse droplets and higher application volumes are needed for adequate coverage. A minimum application rate of 15 GPA is required to improve coverage, especially when higher weed populations are present.

Applicators are required to consult [www.xtendimaxapplicationrequirements.com](http://www.xtendimaxapplicationrequirements.com) no more than 7 days before application for a complete list of nozzles, DRAs, and other herbicides, pesticides, and additives approved for use with XtendiMax with VaporGrip Technology.

## Legal Statements

For additional agronomic information, please contact your local seed representative. Developed in collaboration with Technology Development & Agronomy by Bayer Group.

XtendiMax<sup>®</sup> herbicide with VaporGrip<sup>®</sup> Technology is part of the Roundup Ready<sup>®</sup> Xtend Crop System and is a restricted use pesticide. ALWAYS READ AND FOLLOW DIRECTIONS FOR USE ON PESTICIDE LABELING. It is a violation of federal and state law to use any pesticide product other than in accordance with its labeling. XtendiMax<sup>®</sup> herbicide with VaporGrip<sup>®</sup> Technology and products with XtendFlex<sup>®</sup> Technology may not be approved in all states and may be subject to use restrictions in some states. Check with your local product dealer or representative or U.S. EPA and your state pesticide regulatory agency for the product registration status and additional restrictions in your state. For approved tank-mix products and nozzles visit [XtendiMaxApplicationRequirements.com](http://XtendiMaxApplicationRequirements.com). Monsanto Company is a member of Excellence Through Stewardship<sup>®</sup> (ETS). Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. This product has 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 Excellence Through Stewardship.

ALWAYS READ AND FOLLOW DIRECTIONS FOR USE ON PESTICIDE LABELING. IT IS A VIOLATION OF FEDERAL AND STATE LAW to use any pesticide product other than in accordance with its labeling. NOT ALL formulations of dicamba, glyphosate or glufosinate are approved for in-crop use with cotton with XtendFlex<sup>®</sup> Technology. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USES AND APPROVED FOR SUCH USE IN THE STATE OF APPLICATION. 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 cotton with XtendFlex<sup>®</sup> Technology. Cotton with XtendFlex<sup>®</sup> Technology contains genes that confer tolerance to glyphosate, glufosinate and dicamba. Glyphosate will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Glufosinate will kill crops that are not tolerant to glufosinate. Contact your seed brand dealer or refer to the Monsanto Technology Use Guide for recommended weed control programs. **B.t. products** may not yet be registered in all states. Check with your seed brand representative for the registration status in your state. **Performance may vary**, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields. ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. **Tank mixtures:** The applicable labeling for each product must be in the possession of the user at the time of application. Follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. Not all tank mix product formulations have been tested for compatibility or performance other than specifically listed by brand name. Always predetermine the compatibility of tank mixtures by mixing small proportional quantities in advance. Bayer, Bayer Cross Design, Bollgard II<sup>®</sup>, Bollgard<sup>®</sup>, Respect the Refuge and Cotton Design<sup>®</sup>, Roundup Ready<sup>®</sup>, VaporGrip<sup>®</sup>, XtendFlex<sup>®</sup> and XtendiMax<sup>®</sup> are registered trademarks of Bayer Group. LibertyLink<sup>®</sup> and the Water Droplet Design<sup>®</sup> is a trademark of BASF Corporation. Some of the product(s) discussed herein are restricted use pesticide(s) and may not be registered in all states. The distribution, sale, or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited. Check with your local dealer or product representative for the product registration status in your state. Insect control technology provided by Vip3A is utilized under license from Syngenta Crop Protection AG. All other trademarks are the property of their respective owners. ©2019 Bayer Group. All rights reserved. 1004\_S3

