

## Volatility Reducing Agent

### What factors contribute to volatility?

The availability of protons (H+) in solution, significantly increases the potential for dicamba acid to be formed. Dicamba acid is the volatile form and can potentially volatilize. The availability of protons is influenced by a number of factors including salt of dicamba, tank-mix partners, and overall solution pH. Therefore, it is important to only utilize approved low-volatility dicamba and approved tank-mix partners for applications.

### How does VaporGrip<sup>®</sup> Technology work?

VaporGrip<sup>®</sup> Technology binds protons (H+) and removes them from the spray solution to significantly limit the formation of dicamba acid.

### What is VaporGrip<sup>®</sup> Xtra Agent?

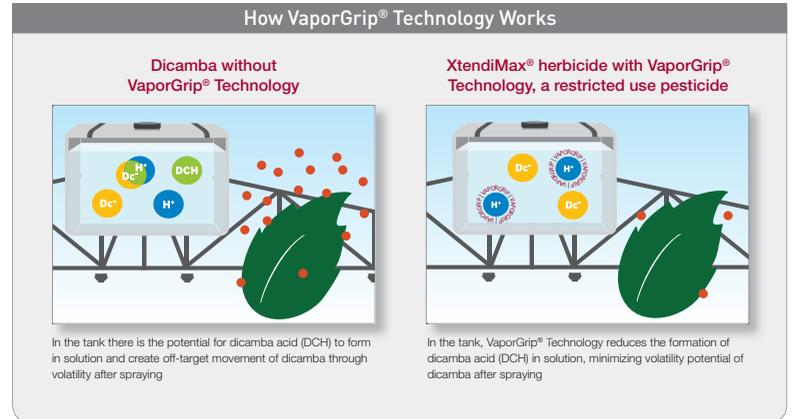
VaporGrip<sup>®</sup> Xtra Agent is a tank mix adjuvant that delivers VaporGrip<sup>®</sup> Technology to spray tanks for further reduction of potential dicamba volatility.

### What is the use rate of VaporGrip<sup>®</sup> Xtra Agent?

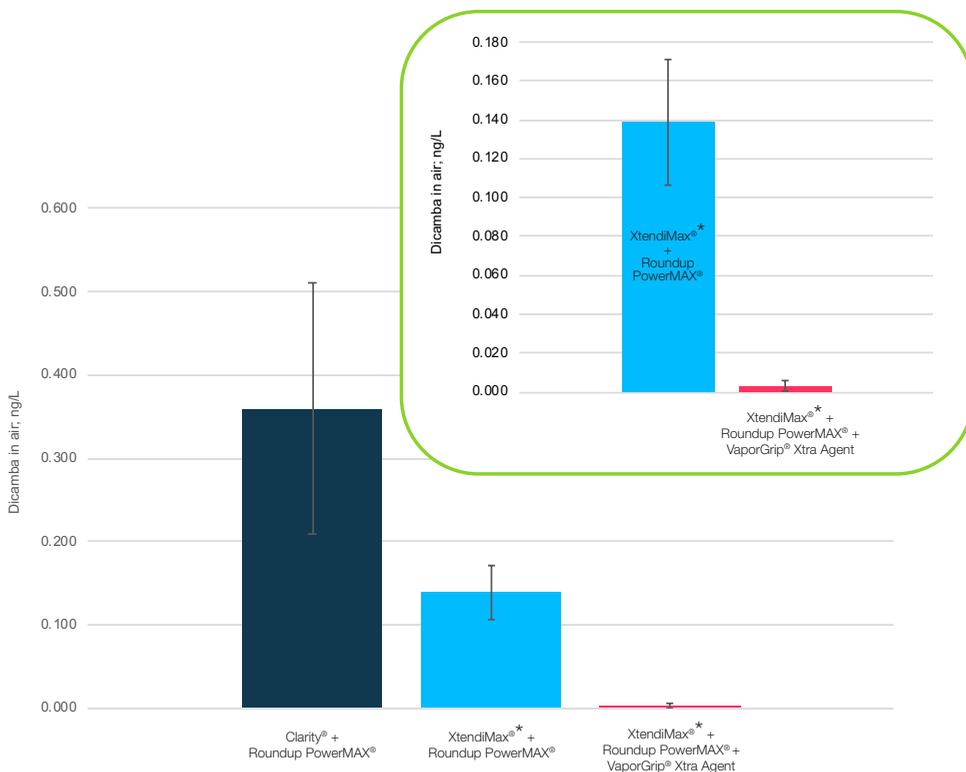
VaporGrip<sup>®</sup> Xtra Agent should be used at a minimum rate of 20 oz/A.

### Has VaporGrip<sup>®</sup> Xtra Agent been tested?

VaporGrip<sup>®</sup> Xtra Agent has been thoroughly tested\* in field trials by Bayer and US academic weed scientists.



## Bayer Humidome<sup>\*\*</sup> Trials - VaporGrip<sup>®</sup> Xtra Agent Performance



Black brackets in the middle of the bars represent error bars that take into account the differences between various measurements and replications in each test to assign levels of confidence to the results.

- **Humidome<sup>\*\*</sup>** studies measuring the air concentration of dicamba demonstrate that VaporGrip<sup>®</sup> Xtra Agent provides additional volatility reduction.

\* Testing of VaporGrip<sup>®</sup> Xtra Agent was done in combination with XtendiMax<sup>®</sup> Herbicide with VaporGrip<sup>®</sup> Technology. Expect similar trends with other dicamba products.

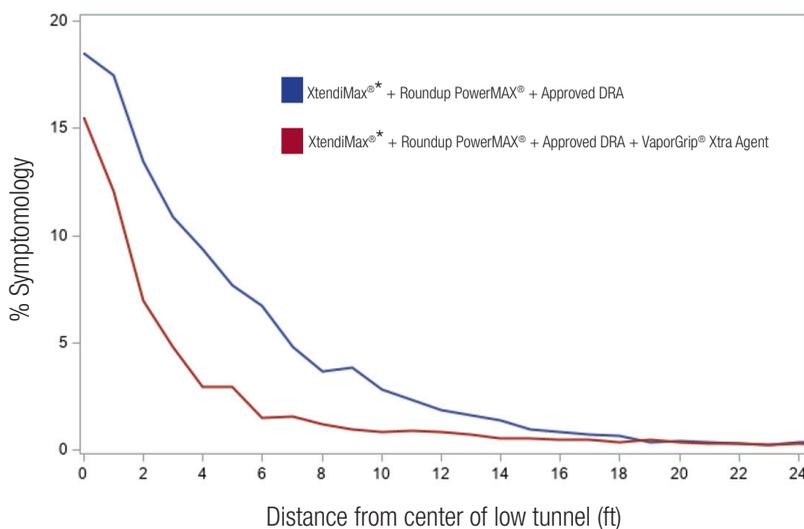
\*\* Gavlick, W.K., D.R. Wright, A. MacInnes, J.W. Hemminghaus, J.K. Webb, V.I. Yermolenka, W. Su. 2016. A method to Determine the Relative Volatility of Auxin Herbicide Formulations, *Pesticide Formulation and Delivery Systems: 35th Volume, ASTM STP1587*, pp 24-32G. R. Goss, Ed. ASTM International, West Conshohocken, PA.

## VaporGrip® Xtra Agent Performance Validated Through Low-Tunnel Trials - Conducted in cooperation with US Academic Weed Scientists across key soybean growing areas

- Low tunnel trials provide field evaluation of soybean plant response due to dicamba volatility
- The method was developed and executed by Bayer and US academic weed scientists
  - Treatments are conducted at 4X field use rate to separate low volatility treatments (see detail below)
  - Each treatment was applied to 2 flats of soil
  - Soil was treated at a remote location and transported to the test site
  - Soil flats wetted to field capacity the night before the trial
  - Flats exposed to the crop for 48 hours
  - Crop injury ratings taken 14 and 28 days after treatment
  - Temperature under the hoop house monitored with a weather station (in many cases, air temperature was 100-120 degrees)

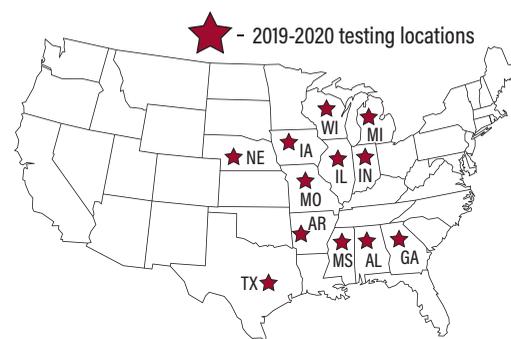


### Low-Tunnel Trials 14 Days After Treatment Trials conducted by US Academic Weed Scientists in 2019-2020



#### 4x Use Rate Detail

- 128 oz/A: Roundup PowerMAX® Herbicide
- 88 oz/A: XtendiMax® Herbicide with VaporGrip® Technology
- 2% v/v: Approved DRA
- 80 oz/A: VaporGrip® Xtra Agent



To learn about the Roundup Ready® Xtend Crop System and education opportunities, visit [RoundupReadyXtend.com](http://RoundupReadyXtend.com) or contact your Bayer representative or retailer.

\* Testing of VaporGrip® Xtra Agent was done in combination with XtendiMax® Herbicide with VaporGrip® Technology. Expect similar trends with other dicamba products.

XtendiMax® herbicide with VaporGrip® Technology is part of the Roundup Ready® Xtend Crop System, is a restricted use pesticide and must be used with VaporGrip® Xtra Agent (or an equivalent vapor reducing agent). For approved tank-mix products (including VRAs and DRAs), nozzles and other important label information visit [XtendiMaxApplicationRequirements.com](http://XtendiMaxApplicationRequirements.com). **ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.** 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. XtendiMax® is a restricted use pesticide. Not all products are registered in all states and may be subject to use restrictions. 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 representative for the product registration status in your state. Bayer, Bayer Cross, Roundup PowerMAX®, Roundup Ready®, VaporGrip® and XtendiMax® are registered trademarks of Bayer Group. All other trademarks are the property of their respective owners. For additional product information call toll-free 1-866-99-BAYER (1-866-992-2937) or visit our website at [www.BayerCropScience.us](http://www.BayerCropScience.us). Bayer CropScience LP, 800 North Lindbergh Boulevard, St. Louis, MO 63167. ©2021 Bayer Group. All rights reserved. Updated 1/28/21

