

# Effectively Reduce Volatility.



## TIE DOWN™, a VaporGrip<sup>®</sup> Xtra Agent

TIE DOWN, a VaporGrip Xtra Agent, is a tank mix adjuvant that delivers additional VaporGrip Technology to spray tanks for further reduction of potential dicamba volatility.

### 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 TECHNOLOGY WORK?

VaporGrip Technology buffers against significant changes in solution pH and prevents the formation of dicamba acid by scavenging extraneous protons.

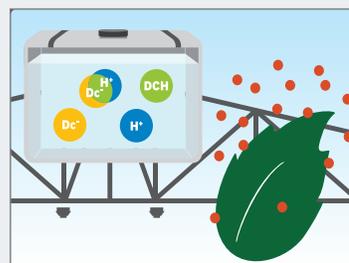
### WHAT IS THE USE RATE OF TIE DOWN, A VAPORGRIP XTRA AGENT?

TIE DOWN, a VaporGrip Xtra Agent, should be used at a minimum rate of 20 oz/A.

### HAS TIE DOWN, A VAPORGRIP XTRA AGENT, BEEN TESTED?

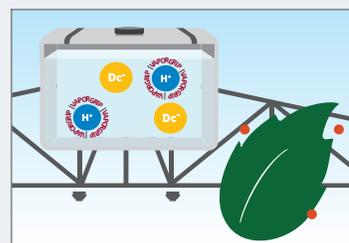
TIE DOWN, a VaporGrip Xtra Agent, has been thoroughly tested\* in field trials by Bayer and US academic weed scientists.

### How VaporGrip<sup>®</sup> Technology Works



Dicamba without VaporGrip<sup>®</sup> Technology

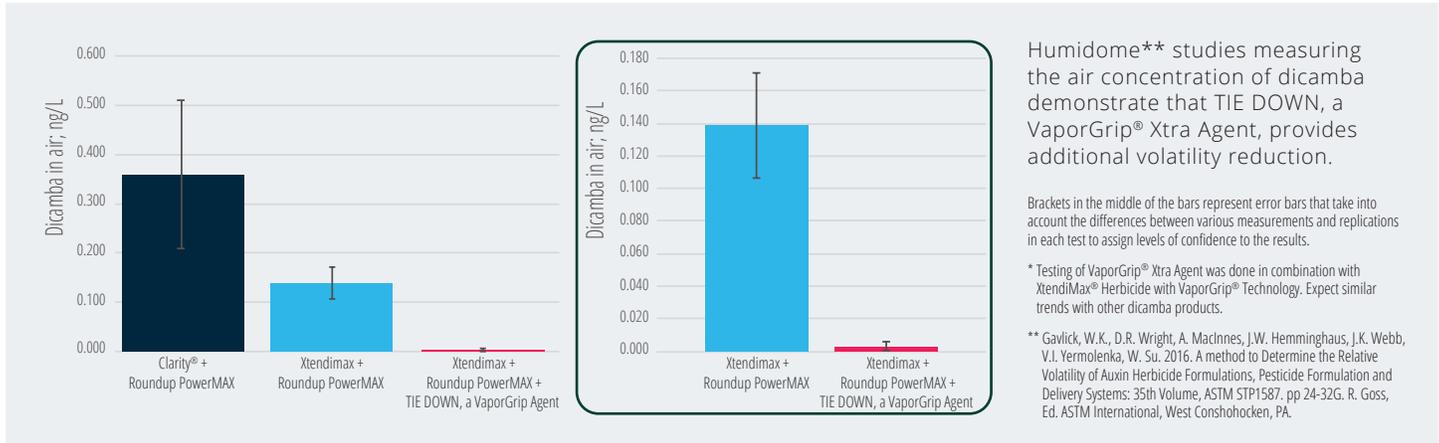
In the tank there is the potential for dicamba acid (DCH) to form in solution and create off-target movement of dicamba through volatility after spraying



XtendiMax<sup>®</sup> herbicide with VaporGrip<sup>®</sup> Technology, a restricted use pesticide

In the tank, VaporGrip<sup>®</sup> Technology reduces the formation of dicamba acid (DCH) in solution, minimizing volatility potential of dicamba after spraying

## BAYER HUMIDOME\*\* TRIALS - TIE DOWN, A VAPORGRIP XTRA AGENT PERFORMANCE

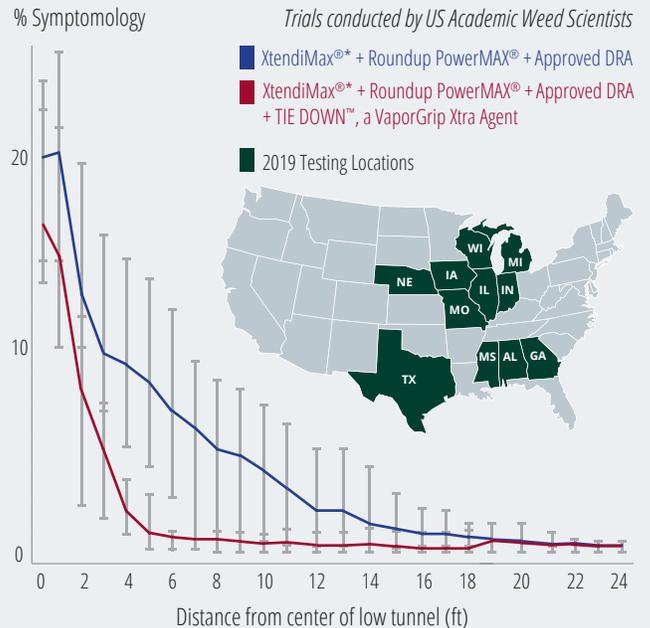


## TIE DOWN, A VAPORGRIP® XTRA AGENT, PERFORMANCE VALIDATED THROUGH LOW-TUNNEL TRIALS

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 details 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



#### 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: TIE DOWN, a VaporGrip® Xtra Agent

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.

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