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Pipeline of Innovation for Soybean Weed Control Systems

More Than 40 Years of Proven Genetic Breeding

- 1996 — Roundup Ready®
- 2009 — Roundup Ready 2 Yield®
- 2016 — Roundup Ready 2 Xtend® Soybeans
- 2021 — XtendFlex® Soybeans

LIVE PREMIERE

ROUNDUP READY XTEND CROP SYSTEM

ROUNDUP READY 2 XTEND SOYBEANS

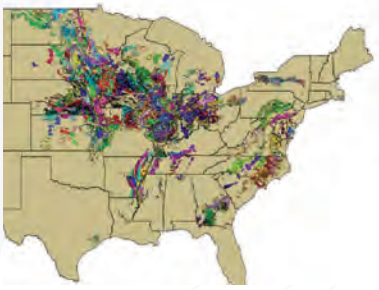
- PowerMAX® Glyphosate
- XtendiMax® Low-Volatility Dicamba

XTENDFLEX SOYBEANS

- PowerMAX® Glyphosate
- XtendiMax® Low-Volatility Dicamba
- Liberty® Glufosinate

NOT all **herbicides** may be tank-mixed with XtendiMax® herbicide with VaporGrip® Technology a restricted use pesticide. Please refer to www.xtendimaxapplicationrequirements.com for a list of approved tank-mixes.

XtendFlex® Soybeans Germplasm Testing Footprint



- Stewarded Market Development and Breeding PCM3/4 trials of all Bayer brands combined
- Each trial is spatially associated with a STATSGO soil unit
- Each polygon represents a STATSGO soil unit with at least one XtendFlex® soybeans trial

ROUNDUP READY XTEND CROP SYSTEM

System Advantages

- Largest pool of genetics with yield and defensive traits
- Varieties with superior plant health and stress tolerance
- Confidence you will have excellent weed control and crop safety
- Control of grasses and tough broadleaves like kochia, marestail, and waterhemp
- Soil activity giving you confidence to spray early before weeds are emerged

New Label Highlights: 2021 Season & Beyond

5-year label | Additional measures to further reduce the potential for off-target movement and further strengthen the registration | Simplified label for increased ease of use

XTENDIMAX® VaporGrip® Restricted Use Pesticide

	2018 Label Requirements	2020 Label Requirements*
Registered Uses	Conventional and DT crop uses	DT crop uses only
Application Window	DT soybeans: Beginning bloom (R1 stage) or 45 days after planting, whichever occurs first	DT soybeans: Up to and including June 30 - Applications occurring after R1 are prohibited as crop response may occur and in no event can applications be made after June 30 regardless of growth stage
	DT cotton: Mid-bloom stage or 60 days after planting, whichever occurs first	DT cotton: Up to and including July 30 - DO NOT apply after July 30 regardless of growth stage.
Drift Reducing Adjuvants (DRA)	Refer to XtendimaxApplicationRequirements.com and use when applicable.	Required for all applications except to the extent as indicated on XtendimaxApplicationRequirements.com
VaporGrip® Technology (Volatility Reducing Agent; VRA)	Included ONLY in XtendiMax® Herbicide with VaporGrip® Technology formulation	In the formulation PLUS Required (a VaporGrip® Xtra Agent product or an equivalent VRA) as a tank mix adjuvant for all applications to further reduce volatility
Adjacent Sensitive Crops & Certain Plants	DO NOT SPRAY this product when wind is blowing toward adjacent sensitive crops and certain plants.	
Downwind Buffer Distance	110 ft.	240 ft.
ESA** Buffer Distances	110 ft. downwind; 57 ft. omnidirectional	310 ft. downwind; 57 ft. omnidirectional (Consult Bulletins Live!)
Optional Use of Drift Reduction Technology (DRT) Qualified Hooded/Shielded Broadcast Sprayers	No reduced use restrictions	Use of qualified DRT results in reduced downwind buffer distances: Non-ESA** Counties: 240 ft. → 110 ft. (On Label); ESA** Counties: 310 ft. → 240 ft. (Consult Bulletins Live!)
Maximum Single Application Rate	Pre-emergence or earlier applications: 44 fl oz / A (1.0 lb a.e. dicamba); In-crop applications (up to 2): 22 fl oz / A (0.5 lb a.e. dicamba); Combined total per year for all applications: 88 fl oz (2.0 lb. a.e. dicamba)	Pre-emergence or earlier applications (up to 2): 22 fl oz / A (0.5 lb a.e. dicamba); In-crop applications (up to 2): 22 fl oz / A (0.5 lb a.e. dicamba); Combined total per year for all applications: 88 fl oz (2.0 lb. a.e. dicamba)
AMS Restriction Language	DO NOT TANK MIX WITH PRODUCTS CONTAINING AMMONIUM SALTS SUCH AS AMMONIUM SULFATE (AMS) AND UREA AMMONIUM NITRATE	DO NOT TANK MIX WITH AMS
Runoff Restriction	DO NOT apply if rain that may exceed soil field capacity and may result in run-off is expected in the next 24 hours	DO NOT apply under conditions that favor runoff. DO NOT apply if soil is saturated with water or when rainfall that may exceed soil field capacity is forecasted to occur within 48 hours
Mandatory Dicamba-Specific Training	Training is required annually	

** Endangered Species Act

*** THIS SUMMARY IS NOT A SUBSTITUTE FOR READING AND FOLLOWING ALL PRODUCT LABELING**

VaporGrip Xtra AGENT

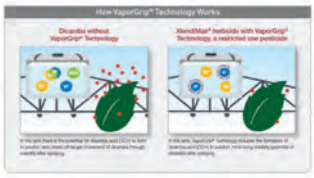
Volatility Reducing Agent

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® Technology work?

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



What is VaporGrip® Xtra Agent?

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

What is the use rate of VaporGrip® Xtra Agent?

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

Has VaporGrip® Xtra Agent been tested?

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

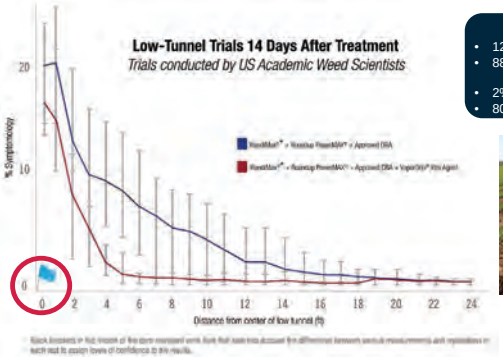
RESTRICTED

Product Confidence

- VaporGrip Xtra Agent (VGX) is the standard (defined by EPA) for qualifying Volatility Reducing Agents
  - Once the tank mix website is up, VGX products will be approved to be used with XtendiMax
- VGX has been thoroughly tested in field trials by Bayer and by US academic weed scientists
  - Humidome Testing
  - Low-Tunnel Trials by US academics weed scientists (tested by 11-12 academics in 2019 & 2020)
  - Large scale field testing through regulatory trials and in collaboration with academics
    - Our regulatory trials are approximately 40 acres and we've done fields trials above 100 acres.
  - Crop Safety and Weed Efficacy Trials
- VGX will be broadly available in the market through retailer private label brands for 2021 season

VaporGrip® Xtra Agent Performance Validated Through Low-Tunnel Trials

Conducted in cooperation with US Academic Weed Scientists across key soybean growing areas



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

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

5 Most Common Questions

- VaporGrip® Xtra Agent (VGX) is NOT limited to just XtendiMax® Herbicide
  - VGX can be used with any dicamba product to further reduce volatility potential.
  - Through our testing program, we have tested VGX with Engenia and Tavium and it does work with these products. However, it is up to the Registrant to determine if they will allow as an approved VRA on their label tank mix website.
- Growers and applicators can purchase VGX through their preferred retailer
- VGX will be available in the market through retailer private label brands
  - Bayer is providing a "royalty-free" VaporGrip® Technology license to distributors to use the technology and trademark
  - Bayer will NOT be manufacturing or selling VGX
- All VGX brands will include "VaporGrip Xtra Agent" as part of their name
  - Example: <Private Label Brand Name>, a VaporGrip Xtra Agent
- Distributors and retailers will determine the selling cost for VGX products; the estimated grower cost is $1.50 - $2.50 per acre

Other Volatility Reducing Adjuvants (VRAs)

- Will Bayer allow other VRAs to be used with XtendiMax® Herbicide?
  - An approved Volatility Reduction Adjuvant (VRA) must be included with all applications of XtendiMax.
  - An approved VRA would be a VaporGrip Xtra Agent product **OR** any VRA product that has a passing result when it undergoes VRA tank mix testing (all approved VRAs must be listed on the XtendimaxApplicationRequirements.com website)
  - At this time NO approved tank-mixes are available as XtendimaxApplicationRequirements.com is not "live". The tank-mix web page tab will become "live" just after the new year.
  - As for the process to add or submit new products, the 1-844-RRXtend call center will still serve as the central processing step for any request. With the requirements for VRAs and DRAs there are some details in the process that need to be finalized; we are working on completing this as soon as possible so we can begin accepting new products and sharing all details on this process.

PRE residuals followed by early POST application of XtendiMax® herbicide with VaporGrip® technology with overlapping residuals provided excellent broadleaf and grass control

Blue Earth County, MN

42 days after POST application

PRE applied: 6/2/2019
POST applied: 6/20/2019

PRE: Fierce® Herbicide (3 oz) + Mauler™ Herbicide (8 fl oz) Followed by POST XtendiMax® (22 fl oz) + Warrant® Herbicide (48 fl oz) + Roundup PowerMAX® Herbicide (32 fl oz) + DRA (0.5% v/v)

PRE: Warrant® (48 fl oz) + Mauler™ (8 fl oz) Followed by POST XtendiMax® (22 fl oz) + Warrant® (48 fl oz) + Roundup PowerMAX® (32 fl oz) + DRA (0.5% v/v)

Picture credit: Lanae Ringler
Bayer Crop Science

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Weed Control Recommendations

Future Traits

Future

- XtendFlex will build on the strength of Xtend. We will follow with additional traits and modes of action in the future.
- The broad and stable platform of genetics will ensure high yield and agronomic leadership.
- We have the best answers and proven track record to stay ahead of weed management.
- Exceptional and consistent weed control is our legacy and new products will focus on that goal.