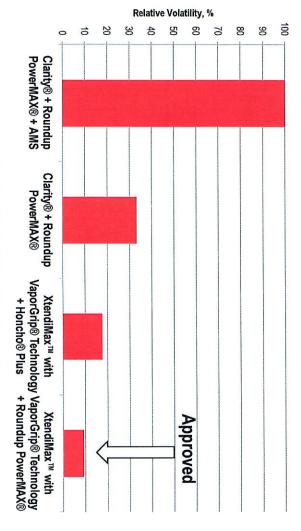
Confidence in XtendiMax® with VaporGrip® Technology

Monsanto is committed to enabling growers with the lowest volatility options

Based on published ASTM humidome methodology



Clarity® and DMA and acid formulations of dicamba are not approved for in-crop use in the Roundup Ready® Xtend Crop System.

Honcho® Plus and Ammonium Sulfate (AMS) are not approved tank mixes with XtendiMax®

Honcho® Plus herbicide = IPA salt of glyphosate tested Roundup PowerMax® herbicide = K salt of glyphosate tested

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Confidence in XtendiMax® with VaporGrip® Technology



Summary - Volatility Research

- XtendiMax® is a low volatility formulation, not a no volatility formulation
- Volatilized dicamba concentrations however are extremely low on fields treated with XtendiMax® and is not sufficient to cause the level of symptomology reported, regardless of the size of the application area
- Of the small amount that volatilizes, 90% of the potential volatility with XtendiMax® occurs within the first 24 hours
- Under typical environmental conditions volatile dicamba dissipates and does not build up concentration in the atmosphere
- After application of XtendiMax®, dicamba air concentrations outside of the treated field does not demonstrate levels that would produce a visual response to the level being reported
- Certain types of tank mix additives can increase volatility potential of dicamba
- For example, ammonium sulfate (AMS) can significantly increase volatility potential of dicamba formulations including XtendiMax® and therefore not an approved tank-mix partner



Updated Label Highlights









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Even More Successfully in 2018 Updated Label to Help Farmers Use Dicamba

Label highlights

- Amended label for all uses (no longer separate conventional & supplemental labels)
- Restricted Use Pesticide (RUP) designation





RECORD KEEPING
Certified applicator MUST keep
records for a period of 2 years





Maintain the required label buffer (Minimum 110 ft. buffer at 22 fl oz/A rate) DOWNWIND BUFFER

Do not apply when wind is blowing toward adjacent susceptible crops SUSCEPTIBLE CROPS



(DO NOT spray during an INVERSION) Only spray between sunrise and sunset APPLICATION TIMING





Ensure that entire sprayer system is properly cleaned before AND after using this product **EQUIPMENT CLEANOUT**

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Applicators can find the following requirements and documentation on the label website

- Master label
- Record keeping form
- Approved list of nozzles & operating pressure ranges for each nozzle
- Approved tank mix products
- e.g. herbicides, adjuvants, and where required, drift reducing adjuvants

www.xtendimaxapplicationrequirements.com



Requirements to apply dicamba in the Roundup Ready® Xtend Crop System

- Use Pesticides is managed at the state level Certified applicator license that covers purchase and use of Restricted
- Retail sale to and use only by Certified Applicators or persons under their direct supervision
- Refer to specific state requirements for certification process
- XtendiMax® label requires annual mandatory dicamba applicator training
- Everyone who applies the product must complete dicamba or auxin-specific training

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Training - Roles and Responsibilities In States Where Monsanto is Conducting Mandatory Applicator

- In-person mandatory training organized and scheduled by CAMs and DSMs (FESs lead training)
- Work with retailers and dealers to schedule events where FES is available to conduct training
- Training events/schedule posted to www.roundupreadyxtend.com
- Promote the training events locally (encourage applicator pre-registration)
- Help facilitate/host and provide laptop/AV equipment
- FES will have software for on-site registration, attendance verification and "certificate of completion" emailed to attendees
- FESs will conduct the training
- On-line Computer Based Training (CBT) option available in December for those who cannot attend in-person sessions (if allowed by state)
- Internal Monsanto employees required to take CBT

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For Each Application of XtendiMax® with VaporGrip® Technology

Record Keeping Requirements

- Record keeping is required for each application of these products
- Certified applicator must keep required documentation for a period of two years
- Records must be generated as soon as practical but no later than 14 days after application
- Example: If 10 fields are sprayed, 10 sets of records are required
- Records must be made available to State Pesticide Control Official(s), USDA, and EPA upon request

For Each Application of XtendiMax® with VaporGrip® Technology



Record Keeping Requirements

- N -Brand or product name
- S EPA Registration # (e.g., 524-617)
- Month, day, year applied Total amount applied
- Location of application (e.g., GPS coordinates)
- 70 5 Crop, commodity, stored product or site (e.g., DT soy)
- Size of treated area
- Name of certified applicator

00

- Certification # of applicator
- 9 Dicamba training date, provider and proof of completion
- Receipts of purchased product
- Product label
- included within (e.g., road) Record of buffer distance calculation and any areas

document survey of neighboring fields for susceptible Record that a sensitive crop registry was consulted or

14.

- Time of application start and finish
- Application timing (e.g., pre, post) and # of days after planting if post
- Air temperature (F°) at start and finish
- Wind speed at boom at start and finish

8 19

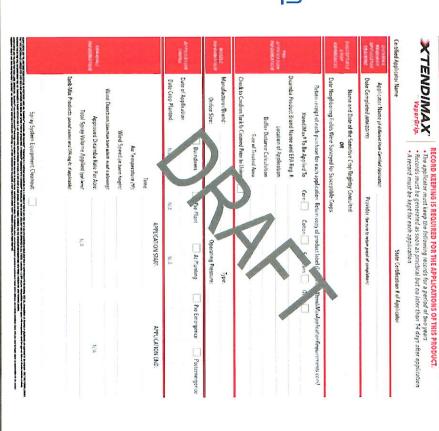
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- operation pressure Nozzle manufacturer/brand, type, orifice size and
- 20. products Brand names and EPA registration #'s for all tank mix
- and after use Confirmation of sprayer cleanout procedure both before

Record Keeping Form

- Form will be available on www.xtendimaxapplicationrequirements.com
- Applicator can print, fill out and retain



4

Highlighted Restrictions

- DO NOT APPLY THIS PRODUCT AERIALLY.
- 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
- 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 THESE PRODUCTS IF RAIN IS EXPECTED IN THE NEXT 24 HOURS.
- Guidance to applicator for prevention for potential water runoff when excessive rain may occur

Susceptible Crop (e.g. Liberty Link® soybeans)

Dicamba

crop is the buffer dicamba-tolerant Wind direction

No in-field buffer

Roundup Ready 2 Xtend® soybeans

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Adjacent field examples (continued)



110' in-field buffer

Wind direction

Susceptible Crop (e.g. Liberty Link® soybeans) Dicamba

susceptible crops, etc.

road

Roundup Ready 2 Xtend[®] soybeans

> Roundup Ready line containing no Farm site/Tree

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Available Spray Days (hours) for XtendiMax® in June 2017 XtendiMax® with VaporGrip® Technology

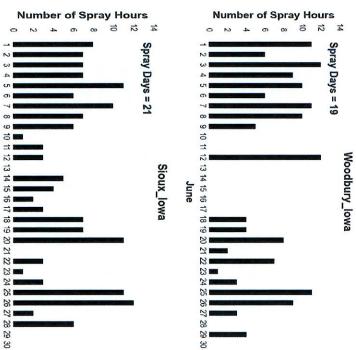


Assumptions:

- Spray hours between sunrise and sunset
- Wind speed 3-10 mph
- No temperature inversion
- Incorporated rainfall and drying time

*Considered spray day if minimum of 3 consecutive hours during day

2000
Apply when wind is blowing away from adjacent sensitive areas (e.g. residential areas, bodies of water, known habitats for T&E species, non-target grons)
When making applications in low relative humidity or temperatures above 91F, set up equipment to produce larger droplets to compensate for evaporation Apply during warm temperatures, high humidity and bright sunlight. Apply during warm temperatures, high humidity and bright sunlight. Avoid spraying during conditions of low humidity and/or high temperatures
Between dawn & 2 hours before sunset





Important Compliance Notification Regarding XtendiMax®

Per EPA requirements:

- (1) A process to relabel retail inventory will be necessary before any new sales or distribution can occur
- (2) New sales will be restricted to Certified Applicators or persons under their direct supervision
- Relabeling process will require stickering of inventory and providing customers with new paper labels
- This process may begin in each state after the state approves the revised XtendiMax labeling
- Monsanto will send additional details once confirmation of the state regulatory process has been completed to describe the approved relabeling process in more detail

Do not sell or distribute any XtendiMax product until (1) Monsanto has informed you process, which will be described in a subsequent communication, is complete that it has obtained any necessary state-level approvals AND (2) the relabeling

Pending Regulatory Approvals - For Educational Purposes Only



Looking Forward

- ANTICIPATED Launch of Roundup Xtend® with VaporGrip® Technology
- Dicamba and glyphosate pre-mix with VaporGrip® Technology
- Further reduces dicamba volatility potential as compared to corresponding approved tank mix combinations
- Designed to simplify offering
- >70% of soybean & cotton acres are grower applied



including successful conclusion of the regulatory process. It is a violation of federal law to promote or offer to sell an unregistered pesticide product is not yet registered or approved for sale or use anywhere in the United States. Commercialization is dependent on multiple factors, This information is for educational purposes only and is not an offer to sell Roundup Xtend™ herbicide with VaporGrip® Technology. This



>>> What Can You Expect for 2018









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Additional Steps Monsanto is Taking to Help Customers Use XtendiMax® Successfully In 2018

- Evolving and tailoring our trainings based on learnings from 2017
- Distributing spray nozzles at no cost that are compliant with product label
- Continuing to offer an incentive of up to \$6 per acre when applying XtendiMax® through Roundup Ready PLUS® Crop Management Solutions
- and application requirements Setting up technical support call center to help applicators easily access information on best practices
- achieve on-target applications Working to develop spray App for applicators to help them avoid problematic weather conditions to
- Supporting flag the technology by offering free Roundup Ready® Xtend Crop System flags to growers
- Developing retailer operations best management practices initiative
- Offering discounts on Redball®-Hooded Sprayers with qualifying XtendiMax® purchase



Mandatory Applicator Training

- Prior to applying this product in the 2018 growing season and each growing season thereafter, applicator(s) must complete dicamba or auxin-specific training
- If training is available and required by the state where the applicator intends to apply this product, the applicator must complete that training.

If the state where the application is intended does not require auxin or dicamba-specific training, then the

- applicator must complete dicamba or auxin-specific training provided by one of the following sources: Registrant of a dicamba product approved for in-crop use with dicamba-tolerant crops, or
- b) Other or state prison provider
- State or state-authorized provider

Monsanto is prepared to provide the following:

- Develop dicamba-specific training materials based on key learnings in 2017 & provide proof of completion
- Conduct in-person trainings facilitated by Field Engagement Specialists and Monsanto personnel
- Offer on-line computer based training (CBT) option
- Website outlining the dates & locations of trainings by state or Monsanto



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Free Nozzle Giveaway Campaign

Objective:

 Distribute nozzles that are compliant with the product label to Monsanto customers who are planning to spray XtendiMax® in 2018



mplementation Plan:

- Send direct mailer to Monsanto soybean, cotton and chemistry customers that includes unique redemption code. Order deadline is December 1st, 2017
- CAMs distribute Nozzle fliers containing unique redemption code to retailers for their customers. Order deadline is January 5th, 2018

Redemption Process:

- Designated website developed to order nozzles
- Website details included on mailers and fliers

Approved Nozzle Options Offered

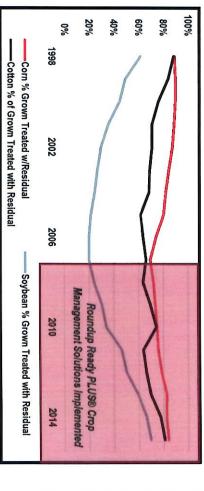
TTI11006	TT111005	TTI11004	TTI11003	TeeJet®
UR110-10	UR110-08	UR110-06	UR110-05	Wilger
		ULD120-05	ULD120-04	Hypro

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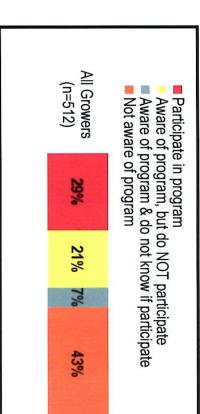
is a great opportunity to drive use of residuals Roundup Ready PLUS® Crop Management Solutions







Less than 60% of growers are aware of the Roundup Ready PLUS® Crop Management Solutions



Monsanto Dicamba Grower Survey - Spring 2017 (512 soybean growers)

In 2016 over 70,000 growers were rebated more than \$100M from Roundup Ready PLUS® Crop Management Solutions

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Roundup Ready PLUS® Crop Management Solutions Earn up to \$6 per acre when applying XtendiMax® through



in adoption of Roundup Ready 2 Xtend® soybeans when offered to growers Recent market research indicates an additional 10 share point increase

SOYBEAN INCENTIVES

2018 Regional Guide Midwest Region

HOW TO QUALIFY FOR INCENTIVES: Use Genuity® Roundup Ready 2 Yield® soybeans or Roundup Ready 2 Xtend® soybeans, apply 32 oz of Roundup PowerMAX® or Roundup WeatherMAX® with a residual herbicide endorsed by Roundup Ready PLUS® Crop Management Solutions.

MAXIMIZE YOUR INCENTIVES by using 22 oz of XtendiMax® herbicide with VaporGrip® Technology AND 32 oz of Roundup PowerMAX® or Roundup WeatherMAX® along with a Drift Reduction Agent, such as Intact" at 7.7 ft oz.

MAXIMUM \$1.00/A \$1.1	XTENDIMAX	100	HERBICIDE 202
		\$1.00	20
rts			P
00/A	1.50	1.50	Maries 1
\$1.50/A	š. <u>50</u>	81.00	Self ECT 4 fl ex 6 fl ex
\$3.00/A	1.00	\$2,00	FINACIore MINICA 4 oc 3 oz 3 oz 4 oz 2 fl oz 3 oz 10 fl oz
\$5.00/A	\$2.00	13,00	Warrant Ultra 50 ft oz
\$8.00/A	14.00*	44.00"	4
	\$3.00/A \$5.00/A	\$1.50/A \$3.00/A \$5.00/A	\$1.50/A \$3.00/A \$5.00/A

1Monsanto Grower Survey - September 2017. 717 soybean growers in northern sales regions planning to plant 200+ soybeans in 2018.

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& Asgrow® offering additional incentives Roundup Ready PLUS® Crop Management Solutions





Earn \$2 per acre on Asgrow® Roundup Ready 2 Xtend® Soybeans*

*Must complete all 3 steps to qualify

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Technical Support Call Center (1-844-RRXTEND)

- application requirements related to XtendiMax® with VaporGrip® Technology Objective to help applicators more easily access information on best practices and
- Access via 1-844-RRXTEND (additional option)
- Option will connect the caller to a trained agronomic specialist to answer questions on the management practices XtendiMax® label including application requirements, rates, general sprayer set up and best
- Plan to have agronomic specialist available 7 days/week from 6:00 am 8:00 pm CST during spray season (March thru August)

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Retail Operations Best Management Practices Initiative



- Provide support to retail by identifying opportunities for enhanced stewardship focus when handling dicamba product
- Recognize regional and operational differences will influence best practices
- Detailed review in progress; Initial opportunities identified

Tender Equipment









Opportunity to partner with retailers & industry associations to further develop and refine

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Tank Mix and Nozzle Testing Process

- Monsanto has exclusive partnership with Battelle Agribusiness
- Ability to complete wind tunnel and humidome testing
- Provides a seamless and efficient process to enable tank-mixes moving forward
- Quarterly Submission Process
- Wind tunnel and volatility testing to be conducted
- Opportunity to test ~1,000 products per quarter
- Product options include herbicides, adjuvants, micronutrients and foliar fertilizers

Testing will be conducted with XtendiMax® and Roundup Xtend® (pending regulatory approvals)



TANK-MIX PARTNERS

Use only approved tank-mix partners
Please refer to all product labels
to determine mix order or perform
mix compatibility test.

for approved tank-mix partners, nozzles/specified pressure range and label Visit XtendiMaxApplicationRequirements.com

This information is for educational purposes only and is not an offer to sell Roundup Xtendam herbicide with VaporiCirp® Technology. These products are not yet registered or approved for sale or use anywhere in the United States. Commercialization is dependent on multiple factors including successful conclusion of the regulatory process. It is a violation of federal law to promote or offer to sell an unregistered pestione. For educational purposes only. Monsanto Company Confidential. Internal Use Only. Do not Distribute. © 2017 Monsanto Company

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It's the System that Makes the Difference





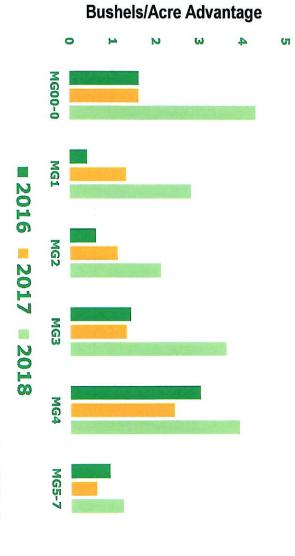




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Industry leading genetics in Roundup Ready 2 Xtend® soybeans





Data from Monsanto 2015-2016 head to head comparisons MON brands vs. Pioneer® and NK® within +/- 0.4RM Performance weighted by 2018 sales volume. Average of 11,797 comparisons per year.

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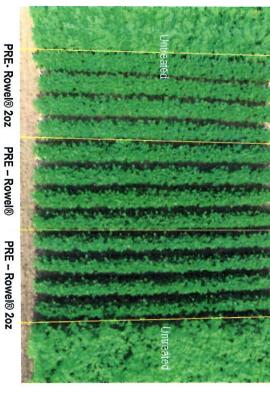
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System comparisons: Weed Control at Canopy (7-13-17)

Roundup Ready® 2 Xtend

Liberty Link®



PowerMAX® 32oz XtendiMax® 22oz XtendiMax® 22oz + Roundup Fb POST PowerMAX® 32oz 2oz + Xtendimax + Roundup Fb POST 22oz + Warrant® 48oz PowerMAX® 32oz + Roundup

PRE - Rowel® 2oz + Xtendimax 22oz Fb POST

XtendiMax® 22oz

PRE - Valor SX® 2oz Liberty® 29oz Fb POST

PRE - Authority Liberty® 29oz MAXX® 6.4oz fb POST

PRE - Authority Liberty® 29oz MAXX® 6.4oz fb POST

+ Zidua® 2oz

SIU Research Farm - Belleville, IL. Planting date 6/1/17

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System comparisons: Pre-Harvest Weed Control (9-21-17)

Roundup Ready® 2 Xtend

Liberty Link®



PowerMAX® 32oz XtendiMax® 22oz + Roundup Fb POST

PRE- Rowel® 2oz

PRE - Rowel® 2oz

XtendiMax® 22oz + + Xtendimax® 22oz Roundup Fb POST

PowerMAX® 32oz

PowerMAX® 32oz + Warrant® 48oz

PRE - Rowel® 2oz + Xtendimax 22oz XtendiMax® 22oz + Roundup Fb POST

PRE - Valor SX® 2oz Fb POST Liberty® 29oz PRE - Authority

Liberty® 29oz MAXX® 6.4oz fb POST

> PRE - Authority MAXX® 6.4oz fb POST

Liberty® 29oz + Zidua® 2oz

SIU Research Farm - Belleville, IL. Planting date 6/1/17

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Plant for Yield. Plan for Profit



Roundup Ready® Xtend Crop System vs LibertyLink® System



LibertyLink® in herbicide system trials¹ 5.4 Bu/A average advantage vs.

- 2015 & 2016 Monsanto System Trials
- √ 14 locations in 2015
- 19 locations in 2016

vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible 1 Source: 2015 & 2016 Monsanto Systems Trials (14 locations in 2015 and 19 locations in 2016 reporting yield data). Significant at P ≤ 0.05 LSD of 1.6 Bu. Data as of November 7, 2016. Roundup Ready® Xtend Crop System data = Roundup Ready 2 Xtend® soybeans treated with dicamba, glyphosate and various residual herbicides. Individual results may vary, and performance may

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Crop System Expected to More than Double in 2018 Key Reasons Demand for Roundup Ready® Xtend



- Industry leading genetics in Roundup Ready 2 Xtend® soybeans and cotton with XtendFlex® Technology
- Provides more weed control and added value than any other weed control system on the market
- Spray with confidence utilizing XtendiMax® with VaporGrip® Technology
- Proprietary VaporGrip® Technology designed to significantly reduce volatility
- Enhanced application requirements and label to support successful use of XtendiMax®
- Expert recommendations and incentives through Roundup Ready PLUS® Crop Management Solutions

individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may van Growes should evaluate data from multiple locations and years whenever possible.

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