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Roundup PowerMax @ Herbicide = 1% of Glyphosate Tested

Herbicide Plus = 1% of Glyphosate Tested

 veröffentlicht

Based on published ASTM Humidity Methodology

MONSANTO is committed to enabling growers with the lowest volatility options

Confidence in Xtrimimax with Vaportech Technology

Xtrimmax in Roundup Ready®

AMX PowerMax® + Roundup

Approved

Dichlorimid and DMA

PowerMax® + Roundup

Vaportech Technology

Rounded to Ready®

Ammonium sulfate

Herbicide Plus and

Approved tank mixes

AMX (AMS) are not

Roundup Ready®

Xtrimmax in Roundup Ready®

For in-crop use in the

Roundup Ready®

Crop System.

Monosantos is not

 formulations of

and acid

Xtrimmax and DMA

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- Xtendimax® and therefore not an approved tank-mix partner

- For example, ammonium sulfate (AMS) can significantly increase volatility potential of dicamba formulations including Table 3a. The levels of AMS in the tank-mix may be reduced.

- Certain types of tank mix additives can increase volatility potential of dicamba

- Would produce a visual response to the level being reported after application of Xtendimax®. Dicamba air concentrations outside of the treated field does not demonstrate levels that not build up concentration in the atmosphere

- Under typical environmental conditions volatility dicamba dissipates and does not

- Of the small amount that volatilizes, 90% of the potential volatilizability with Xtendimax® occurs within the first 24 hours

- Cause the level of symptoms to reported, regardless of the size of the application area

- Volatilized dicamba concentrations however are extremely low on fields treated with Xtendimax® and is not sufficient to

• Xtendimax® is a low volatility formulation, not a no volatility formulation

Summary - Volatility Research

Conformance in Xtendimax® With VaporTrap® Technology
Even More Successfully in 2018

Updated Label to Help Farmers Use Decamba

Restricted Use Pesticide (RUP) designation
Amended label for all uses (no longer separate conventional & supplemental labels)
www.xtendimaxmaxapplicatorrequirements.com

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

Documentation on the label website
Applicators can find the following requirements and
Xtendimaxx with VaporGrind Technology

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Everyone who applies the product must complete dicamba or auxin-specific training.

- Xtendimax® label requires annual mandatory applicator training

- Refer to specific state requirements for certification process

- Supervision

- Retail sale to and use only by Certified Applicators or persons under their direct

- Use Restricted is managed at the state level

- Certified applicator license that covers purchase and use of Restricted

Roundup Ready® Xtend Crop System

Requirements to apply dicamba in the Xtendimax® with VaporGrip® Technology
- Internal Monsanto employees required to take CBT
  who cannot attend in-person sessions (if allowed by state)
- On-line Computer-Based Training (CBT) option available in December for those
  - FESS will conduct the training
  - FESS will have software for on-site registration, attendance verification, and "certificate of completion"
  - Help facilitate/host and provide laptop/AV equipment
  - Promote the training events locally (encourage applicator pre-registration)
  - On-line events/schedule posted to www.RoundupReadyXtend.com
  - FESS lead training (in-person mandatory training organized and scheduled by Cams and DSMs)

Training - Roles and Responsibilities
In States Where Monsanto Is Conducting Mandated Applicator
XtendMaxx with Vaporgrip Technology
USDA, and EPA, upon request.

Records must be made available to State Pesticide Control Official(s).

- Example: If 10 fields are sprayed, 10 sets of records are required.
- Records must be generated as soon as practicable but no later than 14 days after application.
- Certified applicator must keep required documentation for a period of two years.

Record Keeping Requirements for Each Application of These Products.
and after use
Confirmation of sprayer cleanout procedure both before
1.2

Brands and EPA registration #s for all tank mix
20.

Nozzle manufactured/brand, type, orifice size and
19.

Wind speed at boom at start and finish
18.

Air temperature (F°) at start and finish
17.

Application timing (e.g., pre, post) and/or days after
16.

Time of application start and finish
15.

Crops
14.

Document survey of neighboring fields for susceptible

Record that a sensitive crop registry was consulted or

Included within (e.g., road)
13.

Record of buffer distance calculation and any areas
12.

Product label
11.

Receipts of purchased product
10.

Decide training date, provider, and product of completion
9.

Certification # of applicator
8.

Name of certified applicator
7.

Size of treated area
6.

Crop, commodity, stored product or site (e.g., DT soy)
5.

Location of application (e.g., GPS coordinates)
4.

Month, day, year applied
3.

Total amount applied
2.

EPA registration # (e.g., 524-617)
1.

Brand or product name

Record Keeping Requirements

For each application of XtendiMax® with VaporMax® Technology

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- Guidence to applicator for prevention for potential water runoff when excessive rain may occur.

- Do not make application of these products if rain is expected in the next 24 hours.

- Do not apply through any type of irrigation equipment. Do not treat irrigation temperatues as injury may result.

- Tempreaturs, herbicidal injury, mechanical injury, insects, or widely fluctuating flooding, herbicidal injury, mechanical injury, insects, or widely fluctuating

- Do not apply to crops under stress due to lack of moisture, hail damage.

- Small quantities of AMS can greatly increase the volatility potential of dicamba.

- Sulfate (AMS) and urea ammonium nitrate.

- Do not tank mix with products containing ammonium salts such as ammonium

- Do not apply this product aerially.

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Highlighted Restrictions

XtendiMax® with VaporGrip® Technology
No in-field buffer

Wind direction

DO NOT SPRAY

Adjacent field examples

Roundup Ready 2

Dicamba

Soybeans

Liberty Link

Xtend Soybeans

Roundup Ready 2

Diatomaceous earth

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2110.com or other

crop is the buffer
dicamba-tolerant

Xtend Soybeans

Roundup Ready 2

Diaromaceous earth

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Adjacent field examples (continued)

- Soybeans
- Roundup Ready 2 Xtend
- Decamba
- Soybeans (e.g. Liberty Link
- Roundup Ready 2
- Farm site/tree
- In-field buffer
- 110'

Wind direction

DO NOT SPRAY

Wind direction
Available Spray Days (hours) for XtraMax® in June 2017

XtraMax® with VaporGrip® Technology

Assumptions:
- Considered spray day if minimum of 3 consecutive hours during day
- Incorporate rainfall and drying time
- No temperature inversion
- Wind speed 3-10 mph
- Spray hours between sunrise and sunset
Process, which will be described in a subsequent communication, is complete. "The relabeling has obtained any necessary state-level approvals AND (2) the relabeling process, which will be described in a subsequent communication, is complete. Monsanto has informed you that it has obtained any necessary state-level approvals.

Monsanto will send additional details once confirmation of the state regulatory process has been completed to:

- Monitor the approved relabeling process in more detail.
- Monsanto will send additional details once confirmation of the state regulatory process has been completed to.

This process may begin in each state after the state approves the revised XtendiMax labeling.

Re-labeling process will require sticking of inventory and providing customers with new paper labels.

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.

Important Compliance Notification Regarding XtendiMax®
Looking Forward

- Designed to simply offer
  - Tank mix combinations
  - Further reduces dicamba volatility potential as compared to corresponding approved dicamba and glyphosate pre-mix with Vapogrip Technology

- ANTICIPATED Launch of Roundup Xtend with Vapogrip Technology

>70% of soybean & cotton acres are grower applied
Offering discounts on Redballâ® Hooded Sprayers with qualifying Xtendimax® purchase

Developing retailer operations best management practices initiative

Supporting Ag the technology by offering the Roundup Readyâ® X-tend Crop System flags to growers to achieve on-label applications

Working to develop Spray App for applicators to help them avoid problematic weather conditions

Setting up technical support call center to help applicators easily access information on best practices

Continuing to offer an incentive of up to $6 per acre when applying Xtendimax® through Roundup Readyâ® Crop Management Solutions

Distributing spray nozzles at no cost that are compliant with product label

Evolving and tailoring our trainings based on learnings from 2017

Customers use Xtendimax® Successfully in 2018

Additional steps Monsanto is taking to help

Xtendimax® with VaporGrip® Technology
Monsanto is prepared to provide the following:

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

B) State or Site-authorized provider

a) Registrant of a dicamba product approved for in-crop use with dicamba-tolerant crops, or

Applicant must complete dicamba or aux-in-specific training provided by one of the following sources:
- If the state where the applicant is located does not require auxin or dicamba-specific training, then the applicant must complete such training.
- If state-specific training is available and required by the state where the applicant intends to apply, the applicant must complete such training.

Thereafter, applicant(s) must complete dicamba or aux-in-specific training prior to applying this product in the 2018 growing season and each growing season.
- Website details included on mailers and flyers
- Designated website developed to order nozzles

Redemption Process:
- Customers: Order deadline is January 5th, 2018
- CAMS distribute nozzle flyers containing unique redemption code to retailers for their
- ununique redemption code. Order deadline is December 31st, 2017

Implementation Plan:
- Send direct mailer to Monsanto soybean, cotton and chemisty customers that includes
- Monsanto customers who are planning to spray XtendiMax® in 2018
- Distribute nozzles that are compliant with the product label to

Objective:

Free Nozzle Giveaway Campaign
XtendiMax® with VaporGrip® Technology
In 2016 over 70,000 growers were reported more than 5100M

Roundup Ready PLUS® Crop Management Solutions

Less than 60% of growers are aware of the

Roundup Ready PLUS® Crop Management Solutions

is a great opportunity to drive use of residuals
Recent market research indicates an additional 10% share point increase in adoption of Roundup Ready 2 Xtend® soybeans when offered to growers! Roundup Ready PLUS Crop Management Solutions earn up to $6 per acre when applying XtendMax® through.

SOYBEAN INCENTIVES

2018 Regional Guide Midwest Region

MAXIMIZE YOUR INCENTIVES by applying 32 oz of Roundup Ready PLUS Crop Management Solutions. Apply any two of Roundup Ready PLUS Crop Management Solutions with a residual herbicide endorsed by Roundup Ready 2 Xtend for maximum soybean yields and 32 oz of Roundup PowerMax® with a residual herbicide endorsed by Roundup Ready 2 Xtend. 

HOW TO QUALIFY FOR INCENTIVES: Use Genotype Roundup Ready 2 Yield® Seeds. Roundup Ready 2 Yield Genotypes are approved as Roundup Ready 2 Xtend® Seeds. 

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HOW TO QUALIFY FOR INCENTIVES: Use Genotype Roundup Ready 2 Yield® Seeds. Roundup Ready 2 Yield Genotypes are approved as Roundup Ready 2 Xtend® Seeds.
Must complete all 3 steps

Soybeans

Ready 2 Xtend®

Asgrow® Roundup®

Earn $2 per acre on

Asgrow® Acro Plus

Ptts-0167.0054
During the spray season (March thru August):

- Plan to have agronomic specialists available 7 days/week from 6:00 am – 8:00 pm CST
- Management practices
  X-tendimax® label including application requirements, rates, general sprayer set up and best
  Option will connect the caller to a trained agronomic specialist to answer questions on the
- Access via 1-844-RRXTEND (additional option)
  Application requirements related to X-tendimax® with VaporGrip® Technology

Objective: to help applicators more easily access information on best practices and

Technical Support Call Center (1-844-RRXTEND)
X-tendimax® with VaporGrip® Technology
Opportunity to partner with retailers & industry associations

Retail Operations Best Management Practices Initiative

- Detailed review in progress; initial opportunities identified
- Recognize regional and operational differences will influence best practices
- Focus when handling dicamba product
- Provide support to retail by identifying opportunities for enhanced stewardship
For approved tank-mix partners, nozzles/specificed pressure range and label

Visit ExtendMaxxApplicationRequirements.com

- Testing will be conducted with ExtendMaxx® and Roundup® X-trend® (pending regulatory approvals)

- Product options include herbicides, adjuvants, micronutrients and foliar fertilizers

- Opportunity to test ~1,000 products per quarter

- Wind tunnel and volatility testing to be conducted

Quarterly Submission Process

- Provides a seamless and efficient process to enable tank-mixes moving forward

- Ability to complete wind tunnel and humidity testing

Tank Mix and Nozzle Testing Process

Monsanto has exclusive partnership with Battleline Agribusiness
It's the System that Makes the Difference
Performance weighted by 2018 sales volume. Average at 1.797 compared to per year.

Data from Monsanto 2015-2016 Head to Head comparisons. MON brands vs. Pioneer® and NK® within +/- 0.4RM

2016 - 2017 - 2018

MG1 MG2 MG3 MG4 MG5-7

Bushels/Acre Advantage

Roundup Ready 2 Xtend® Soybeans

Industry Leading Genetics in Roundup Ready 2 Xtend® Soybeans
SU Research Farm - Belleville, IL. Planting date 6/1/17

**Library @ 2 oz**
- Liberty @ 2 oz
- MAXX @ 6.4 oz
- PRE + Authority

**Roundup Ready® 2 Xtend**
- PRE + Valor SX @ 2 oz
- PRE - Roundup

**System comparisons: Weed Control at Canopy (7-13-17)**
SIU Research Farm - Belleville, IL, Planting date 6/11/17

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

Liberty Link®
Roundup Ready® 2 Xtend

Liberty @ 2oz
Liberty @ 2oz
Maxx® @ 4.0oz
Maxx® @ 6.0oz
Pre - Authority
Pre - Authority

PowerMax® @ 32oz
Roundup
Roundup
Roundup
Roundup Max® @ 22oz
XtendiMax® @ 22oz
FP Post
FP Post
FP Post
FP Post
Pre - Rover @ 2oz
Pre - Rover @ 2oz
Pre - Rover @ 2oz
Pre - Rover @ 2oz

Liberty Link®

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[Image of a blackboard with calculations and text]

Profit Advantage
$40.00 / A

System Cost Difference (seed + harvest)

Revenue
$13.00 / A

Commodity Price
$5.00 / bu

Yield Advantage
$9.75 / bu

5.4 bu/A average advantage vs.

Step 1:

14 locations in 2015

19 locations in 2016

Roundup Ready® Xtend Crop System vs. LibertyLink® System

LibertyLink® in herbicide system trials

Plant for Yield. Plan for Profit.
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Key Reasons Demand for Roundup Ready® Xtend®

Crop System Expected to More than Double in 2018

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

XtendFlex® Technology

Industry leading genetics in Roundup Ready® Ready 2 Xtend® soybeans and cotton with