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Today's Acre

VOLUME 01 | ISSUE 01

WINTER 2018

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Results Drive Confidence in Dicamba *pg. 3*

Good Stewardship, Good Control

Farm Feature: Soybeans

Farm Feature: Cotton

Spray Early With Confidence Program

Dicamba Myths Busted

Today's Acre

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EDITORIAL & DESIGN

Al Fava, *Cotton Editor*
Nancy Hallahan, *Soybean Editor*
Chris Young, *Contributing Author*
Matt Reedy, *Designer*

SUBMIT FEEDBACK

Today's Acre
7711 Bonhomme Ave.
St. Louis, MO 63105
email: Editor@TodaysAcre.com

VISIT US

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Dear Readers,

“A real game changer.”

“The biggest agricultural innovation since agricultural herbicides.”

“An essential tool in a farmer’s toolbox.”

Pretty impactful statements and ones I’ve heard from numerous farmers across the U.S. when I’ve asked them how important the Roundup Ready® Xtend Crop System has been for them.

The fact is, this technology has allowed farmers to take back control of their fields from tough-to-control weeds that were driving cost upwards and yield downwards. The Roundup Ready Xtend Crop System has made weed management more timely, cost-efficient and effective for farmers. In cotton and soybeans, farmers are adopting the Roundup Ready Xtend Crop System because it works.



Ryan Rubischko
North American
Dicamba Portfolio Lead

XtendiMax® herbicide with VaporGrip® Technology (a restricted use pesticide), a labeled dicamba formulation for use in the Roundup Ready Xtend Crop System, is an essential part of getting good weed control. XtendiMax with VaporGrip Technology has been proven on millions of acres to help farmers manage weeds effectively and support yield potential.

Many new innovations come with their share of questions, but questions breed misperceptions and possibly even fear. This magazine is designed to answer questions and to build confidence in applying labeled formulations safely and correctly in the Roundup Ready Xtend Crop System.

In these pages, we share with you real farmer experiences with the technology. We will provide our best recommendations for optimal weed management and give you the information you need to successfully plant, spray and maximize yield potential with the Roundup Ready Xtend Crop System in 2019.

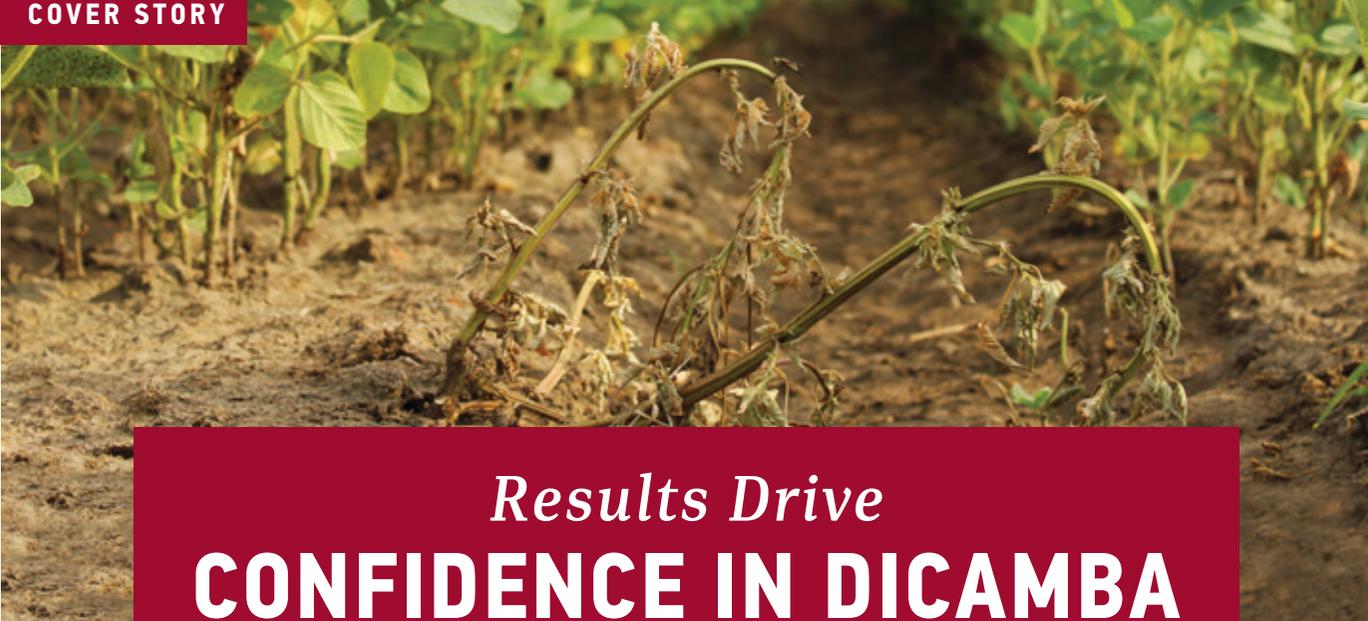
You can hear from other farmers, from Texas to Iowa, and read their personal accounts with the system. You may even learn that you have a misperception or two about dicamba; we debunk some common myths on page 13.

As you gear up for the 2019 growing season, I hope you’ll find this magazine to be a useful resource.

Best wishes,

A handwritten signature in black ink that reads "Ryan Rubischko". The signature is written in a cursive, flowing style.

Ryan Rubischko
North American Dicamba Portfolio Lead
Bayer Crop Science



Results Drive CONFIDENCE IN DICAMBA

Across U.S. farm country, weed management is a top concern of farmers, driving seed and herbicide decisions as they seek effective weed control to preserve yield potential.

This is true of almost every state that grows soybeans, from North to South. Farmers have been using multiple modes of action, pulling out the plows and even hiring chopping crews to try to manage resistant weeds in their fields.

Five years ago, Dennis Wentworth, who farms soybeans in central Illinois, began having waterhemp break through, despite his standard weed control program of pre-emergence residual herbicide followed by Roundup PowerMAX® herbicide in Roundup Ready® soybeans. Watching the problem get worse in subsequent seasons, he and his farming partners made adjustments to the herbicide program in an attempt to get a handle on things.

“Finally, in 2017, weed control was below our expectations and our threshold of tolerance,” says Wentworth. “The issue with waterhemp, versus all the other weeds we have, is that waterhemp produces many more seeds on one plant than other weeds, and the sheer number of seeds left in a field over the winter creates a problem next season.”

This volume of weed seed is what makes waterhemp so daunting, according to Wentworth. “We were once satisfied with

95 percent control,” he recalls. “Ninety-five percent control is just not acceptable in resistant waterhemp because you’re building the seed bank up rapidly, even with just a few plants left in the field.”

In hopes of getting cleaner fields, Wentworth and his farming partners walked every acre to pull waterhemp from the fields where their herbicide program did not provide control. Prior to the introduction of the



Seth Taylor, Obion County, Tennessee

Roundup Ready Crop System in the late 1990s, walking fields and pulling weeds was standard practice. Today, with thousands of acres of soybeans, plus corn to manage, the time spent pulling weeds from fields has become cost-prohibitive.

“Whether you practice tillage or walk fields to pull weeds, you’ll see those things cause time management issues, as well as mechanical issues, that we don’t need to

spend time dealing with,” says Wentworth. “Our large farming operation is built on a management system, taking into account machinery needs, seed, herbicides, fertility. They are all part of a management system, and once things get outside of the system, they get expensive really quick.”

In order to get back to timely, effective weed management, farmers are adopting new herbicide technologies such as the Roundup Ready Xtend Crop System.

Effective Control Builds Demand

Acreage planted to Roundup Ready 2 Xtend® soybeans doubled from upwards of 20 million in 2017 to more than 40 million in 2018, indicating the strong need farmers have for this technology.

“We’ve planted all Roundup Ready 2 Xtend soybeans the last two seasons, and we have had the cleanest crops we’ve had,” says Seth Taylor, who farms in Obion County, Tennessee, a hotbed for resistant Palmer amaranth (pigweed) and marehail. “It’s a lot more cost-effective to use. Without the system, our weed control costs would increase significantly because of the other herbicides we’d have to use.”

The technology has helped Ben Buesing get resistant waterhemp and giant ragweed under control on his farm in Richards, Missouri. Flexibility and weed control are the big advantages he has experienced with the technology. The ability to make dicamba

applications right up to planting offers both a planting time burndown as well as up to 14 days of soil activity on certain small-seeded broadleaf weeds, he says.¹

An early postemergence application that includes XtendiMax® herbicide with VaporGrip® Technology, a restricted use pesticide, helps set the table for a clean field early in the life of the plants.

“Having an effective herbicide option that provides great control of the tough-to-kill weeds we have has helped us considerably. One of the biggest benefits of the herbicide



Ben Buesing, Richards, Missouri

“The system provides good weed control, and good yield is there at the end of the year.”

we have experienced is the broad application window from pre-emergent up to the day we plant and on through our early post application that gives us flexibility when the weather doesn't cooperate,” says Buesing.

“It's a great tool. I've gotten excellent weed control, and the genetics of the soybeans are outstanding. The system provides good weed control, and good yield is there at the end of the year.”

The Roundup Ready Xtend Crop System includes XtendiMax with VaporGrip Technology, one of the primary labeled dicamba formulations for use in Roundup Ready 2 Xtend soybeans and Bollgard® 3 XtendFlex® cotton. Using XtendiMax with VaporGrip Technology, along with pre-emergence and postemergence residual herbicides and Roundup® brand agricultural herbicides in the postemergence application, has been proven on millions of acres to help farmers improve weed management and set the crop up for maximum yield potential.

Together, dicamba and glyphosate can control more than 270 species of weeds, especially tough-to-control broadleaf weeds such as Palmer amaranth, waterhemp, marehail, lambsquarters and velvetleaf. XtendiMax with VaporGrip Technology offers up to 14 days of soil activity on certain small-seeded broadleaf weeds.

“The Roundup Ready Xtend Crop System allows farmers to be timely with herbicide applications,” says Ty Witten, North American Crop Protection Lead, Bayer Crop Science. “It offers farmers flexibility with the opportunity for in-season,

over-the-top dicamba applications and precise, on-target applications. Farmers also tell us they've seen a decrease in the number of trips made across fields, especially tillage trips.”

Steve Boland planted Roundup Ready 2 Xtend soybeans on his Iowa farm for the second season in 2018 and made applications of XtendiMax with VaporGrip Technology.

“I've been very satisfied with the weed control that I received from XtendiMax with VaporGrip Technology,” he says. “I saw clean fields. I would definitely recommend the program to other farmers who struggle with weed problems. I think it's a great system.”

Weed control and yield are key factors farmers consider when making planting decisions. In nationwide herbicide systems trials in 2017, Roundup Ready 2 Xtend soybeans held an average 5.7 Bu/A advantage over LibertyLink® soybeans.² Farmers are advised to base planting decisions on profitability, and that begins with yield potential. The Roundup Ready 2 Xtend soybean lineup offers diverse genetics, tested and proven over many seasons.

The way to keep the technology available is to remain on-label, says Iowa farmer Rodney Greiner.

“Keeping this technology well into the future means staying on-label with weed height [and] herbicide rates and using required surfactants that go with it,” he says.

Back in McLean County, Illinois, all the soybean acres at Wentworth Family Farms were planted to Roundup Ready 2 Xtend soybeans in 2018.

“As far as weed control, it has done what it is advertised to do, and we want to keep that going as long as possible,” Wentworth explains. “You have to respect the technology, and you also have to respect the restrictions on the label that this technology has, so we are trying to be good stewards of the technology.”

By: Al Fava



¹ On certain small-seeded broadleaf weeds. Results may vary, depending on rainfall and soil type. Always use dicamba with traditional residual herbicides in pre-emergence and postemergence applications that have different, effective sites of action, along with other Diversified Weed Management Practices including the use of glyphosate. XtendiMax® herbicide with VaporGrip® Technology and in crop use may not be approved in all states.

² Source: 2017 Monsanto and University Systems Trials (27 locations in 2017 reporting yield data). Significant at P ≤ 0.05 LSD of 1.6 Bu. Data as of November 13, 2017. Roundup Ready® Xtend Crop System data = Roundup Ready 2 Xtend soybeans treated with dicamba, glyphosate and various residual herbicides. LibertyLink® system data = LibertyLink® soybeans treated with Liberty® herbicide and various residual herbicides.



Why Farmers NEED DICAMBA

Chad Fullerton on his family farm in Malden, Missouri

Chad Fullerton works on a 9,000-acre family farm located near Malden, Missouri, where his family farms soybeans and cotton on both sides of the Missouri-Arkansas state line. For many, this region is Ground Zero for resistant Palmer amaranth (pigweed) and marehail. What was once a near disaster for farmers in this region has finally become manageable, thanks to dicamba.

“The Roundup Ready® Xtend Crop System is very cost-efficient and easy to use,” says Fullerton. “It has allowed us to become more timely with our weed control applications than what we were able to

be in the past. I am very confident in the product we have on the table right now.”

Fullerton’s confidence in the system is so high that he has become an advocate for the system, speaking to state regulatory groups, talking with farmers and preaching stewardship of the technology on social media. He and his local group of system supporters are responsible for the “Farmers Need Dicamba” signs that cropped up along rural roads last summer.

“I promote this technology wherever I go, to whomever I can promote it,” he says. “We have many pigweed problems here, along with sandy soils, and our

pre-emerge products perform poorly many times due to lack of activation. We need XtendiMax® herbicide with VaporGrip® Technology (a restricted use pesticide) to keep farming.”

“I promote this technology wherever I go, to whomever I can promote it.”

In 2018, there were spray-ban dates in Arkansas (April 16) and in the Missouri Bootheel (June 10), which limited farmers’ ability to use dicamba in-crop, allowing weeds to flourish in many fields.

“Where we were able to use it early in the crop, before the spray-ban, the fields are clean and look great,” Fullerton says. “Where we had later-planted beans and were not able to get in with dicamba before the spray-ban date, the fields look terrible. The majority of the acres in this area are planted to Roundup Ready 2 Xtend® soybeans and XtendFlex® cotton, and the majority of us support having this technology for the future because it works.”

By: Al Fava



GOOD STEWARDSHIP, GOOD CONTROL

MFA Incorporated is a cooperative serving farmer/rancher owners with more than 140 retail locations in Missouri, southern Iowa, eastern Kansas and northeast Arkansas. Giant ragweed, marehail, waterhemp and Palmer amaranth are the weeds driving farmers in these areas to new technologies for control measures.

"The Roundup Ready® Xtend Crop System allows us to do a good job of starting clean and staying clean," says Dr. Jason Weirich, director of agronomy at MFA Incorporated. "The system gives us a platform on a technology that is a different mode of action needed to control those tough-to-control weeds."

Yield potential is another reason MFA farmers are planting Roundup Ready 2 Xtend® soybeans.

"Looking at our in-house genetics and the Asgrow® product lineup, the yield is there," Weirich says. "Farmers are getting good control using overlapping residuals early in the season, and while we depend on Mother Nature to provide some activation with our residuals, the Roundup Ready Xtend Crop System provides us a control option for those weeds that we've had trouble controlling."

In 2018, MFA worked with more than 1,200 applicators, chemical handlers and retail staff to train on and reinforce regulations and application requirements regarding dicamba and proper use of the Roundup Ready Xtend Crop System. Topics included awareness of surroundings, placement of Roundup Ready 2 Xtend soybeans, monitoring of weather conditions, boom height and other integral stewardship practices.

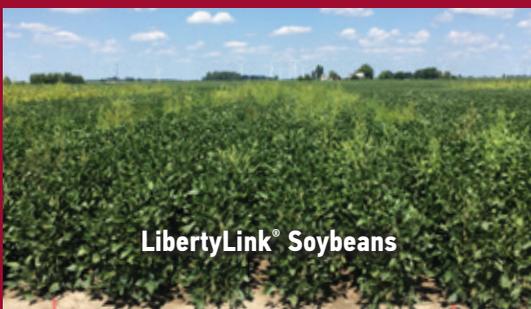
"Stewardship is the key to keeping this technology effective and viable for farmers," says Weirich.



Dr. Jason Weirich, Director of Agronomy, MFA, Inc.

SEEING *Is* BELIEVING

The Roundup Ready® Xtend Crop System combines high-yielding genetics with effective weed control. The result? A product that controls more weeds than any other soybean crop system on the market. But don't take our word for it — compare competing systems for yourself.



LibertyLink® Soybeans

PRE:

Authority® MAXX Herbicide

POST:

Liberty® 280 SL Herbicide + Anthem® MAXX Herbicide
+ Amisol® Herbicide



Roundup Ready 2 Xtend® Soybeans

PRE:

Warrant® Herbicide + Tricor® 4F Herbicide

POST:

XtendiMax with VaporGrip Technology + Roundup PowerMAX® Herbicide
+ Warrant® Herbicide + Intact™ + DRA

Elwood, IN, June 2018

XtendiMax® herbicide with VaporGrip® Technology

HELPED IOWA FARMER WIN “The Battle of Waterhemp”

Drew Mummelthei, an Iowa farmer, takes great pride in his soybean fields. Then suddenly, six or seven years ago, his fields became infested by waterhemp, which seemed to grow worse and become more difficult to kill each year in his area of northeast Iowa.

“I tried chemicals with the burndown, but it didn’t control the waterhemp to my standards,” he recalls. He planted Roundup Ready 2 Xtend® soybeans and conducted a 2017 trial in which he treated several hundred acres with XtendiMax® herbicide with VaporGrip® Technology, a restricted use pesticide.

“I tell them the system works. If they can manage it properly and train on it, they’re going to love it.”

“Nothing’s 100 percent, but we’re extremely happy with XtendiMax with VaporGrip Technology. It’s really helped us win the battle of waterhemp,” he says.

Just how clean were his fields, after spraying XtendiMax with VaporGrip Technology?

“I sprayed it last year and that field was almost weed-free,” Mummelthei states. “You had to look really hard to see weeds in 160 acres. Nothing is ever 100 percent effective, but it came very close.”

Mummelthei isn’t the only one impressed with the effectiveness of XtendiMax with VaporGrip Technology — his neighbors are also taking notice.

“They’re asking how I liked it and how it worked,” he says. “I tell them the system works. If they can manage it properly and train on it, they’re going to love it.”

The 2018 growing season may be over, but Mummelthei’s already planning to plant 100 percent of his soybean acres to Roundup Ready 2 Xtend soybeans next year — and to treat them all with XtendiMax with VaporGrip Technology.

“I’m extremely happy with my weed control, and I’m looking forward to seeing my Roundup Ready 2 Xtend soybeans flourish,” he says. “As seed-bean growers, clean fields are really important to us. I’m excited for the yield potential this year, and I’m not looking back — I’m going all in again next year.”

Early Application, Strong Foundation

Mummelthei follows timelines by the book, closely adhering to stewardship guidelines when applying herbicides.

“Guidelines exist for a reason,” he says. “You want to hit a plant every time, and you want

to hit it before it’s up or when it’s very small, when you have less canopy.”

That early postemergent application of XtendiMax with VaporGrip Technology with a residual herbicide laid a strong foundation for his 2018 growing season. “My brother and I walked the fields once a week,” he says. “All summer, we noticed that weeds were dying and the beans look great!”

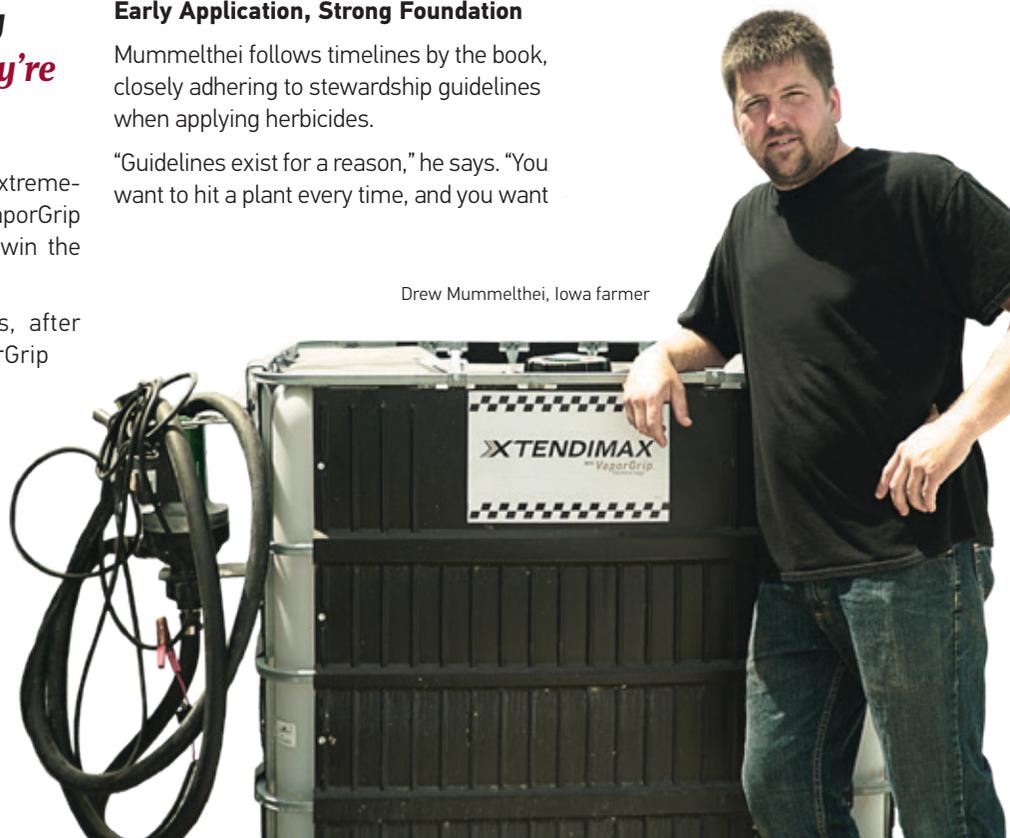
Technology isn’t only in Mummelthei’s fields — with the RRXtend Spray App, it’s also in the palm of his hand.

“I just downloaded it on my phone, and it gives me wind speed, temperature, inversion risk — all the data points I need to help assist with my decision to spray. It’s peace of mind; the app is very helpful.”

Thanks to technology in his fields and on his phone, Mummelthei once again takes pride in his clean soybean fields.

“Give it a try and you’ll never look back,” he advises.

By: Nancy Hallahan



Drew Mummelthei, Iowa farmer

Soybean Farmers:

“SPRAY EARLY WITH CONFIDENCE” IN 2019

It's been said that “the early bird gets the worm.” This adage was probably not written about weed management, but when it comes to getting weeds under control, earlier is definitely better.

The Roundup Ready® Xtend Crop System has introduced its **2019 Spray Early With Confidence Program** to help soybean farmers start clean and maintain an effective weed resistance management system all season long.¹

THE PROGRAM IS SIMPLE TO USE:

START CLEAN

Use an appropriate burndown herbicide at the labeled rate or tillage.

APPLY A PRE-EMERGENCE RESIDUAL HERBICIDE

Use a qualifying residual product (Group 3, 14 or 15) at the labeled rate within two weeks before planting or prior to soybean emergence to help control broadleaf weeds in soybeans.

POSTEMERGENCE APPLICATION

Apply when weeds are less than 4 inches tall and within 30 days after planting soybeans:

- XtendiMax® herbicide with VaporGrip® Technology, a restricted use pesticide
- Roundup PowerMAX® herbicide or Roundup WeatherMAX® herbicide
- Warrant® Herbicide or Warrant Ultra Herbicide
- An approved DRA



If a farmer experiences an additional flush of broadleaf weeds within 30 days of the postemergence application after following all program requirements stated above, Bayer Crop Science will pay up to \$10/acre to assist in a second postemergence application on the affected acres (only if respray occurs).²

The program is new for the 2019 growing season, but farmers across the soybean belt saw firsthand the benefits of spraying early to control weeds in 2018 with the Roundup Ready Xtend Crop System.³

To learn more about the Roundup Ready Xtend Crop System and the 2019 Spray Early With Confidence Program, and to see a full list of included geographies and seed brands, contact your crop protection representative or retailer or visit: RoundupReadyXtend.com/SprayEarly

Subject to additional terms and conditions. See link above for program details, eligible states and qualifying brands.



¹The Spray Early With Confidence Program is available only to farmers who use products that are part of the Roundup Ready PLUS® Crop Management Solutions platform.

²All claims subject to verification by Bayer Crop Science. Offer is only applicable for the 2019 growing season. Claims deadline is Aug. 15, 2019.

³Eligible states include Colorado, Delaware, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Minnesota, Missouri (excluding Bollinger, Butler, Cape Girardeau, Dunklin, New Madrid, Mississippi, Pemiscot, Ripley, Scott and Stoddard Counties), Nebraska, New Jersey, New York, North Dakota, Ohio, Pennsylvania, South Dakota, Virginia, West Virginia, Wisconsin.

GOOD NEIGHBORS *and* FINE WINES

Row Crops and Wine Grapes Pair Well on Missouri Farm

An hour west of St. Louis sits a picturesque two-acre vineyard that grows a new variety of grapes, Crimson Cabernet, exclusively for Blumenhof Winery.

Wine grapes aren't an easy crop to grow; under the best conditions, it still took owner Joe Sandbrink about three years to harvest his first grape crop. This specialty crop requires a lot of preparation, and it's imperative to keep weeds in check and disease pressure down for grapevines to thrive. Challenges come in many forms, as birds and other animals can also pose a problem.

One challenge that doesn't faze Sandbrink is the XtendiMax[®] herbicide with VaporGrip[®] Technology, a restricted use pesticide, that's

applied in close proximity to his vineyard. In addition to wine grapes and hay, he also has 40 acres he leases to a local farmer. That farmer and neighbor, Craig Hoemann, sprayed XtendiMax with VaporGrip Technology on his Roundup Ready 2 Xtend[®] soybeans last season, as did several other farmers within a one-mile radius of Sandbrink's vineyard.

"We have Roundup Ready 2 Xtend soybeans on our farm, just about 150 feet from the edge of our vineyard," Sandbrink explains. "We work very closely with the farmer who raises them to make sure our wine grapes are not affected."

Communication Is Key

That transparency put Sandbrink at ease, building his confidence in the ability of grapes and row crops to grow in harmony.

"I felt very confident, especially after seeing how diligent Craig and his team were to follow the label and do everything right," he says. "We talked at the beginning of the season and I also read up on the label requirements. We knew that if we worked together to pick the right application day, the right environmental conditions and the right nozzle, along with a drift reduction agent, we would be successful."

"The vines remained very healthy and vigorous with no signs of damage whatsoever," he recalls.

And how did those nearby row crops fare?

"The weed control was excellent," Sandbrink shares. "We've historically had lots of challenges with marehail and waterhemp, but this year, our fields were very clean and the yield was the best we've ever had."

Sandbrink has simple advice for other farmers who grow sensitive crops near Roundup Ready[®] Xtend Crop System crops: "Talk to your neighbors."

He continues, "I think the communication piece of this is very critical, especially around high-value, niche crops. Get to know your neighbors, if you don't already, and discuss the label requirements."

This communication worked well for Sandbrink, who has a unique perspective on the Roundup Ready Xtend Crop System and XtendiMax with VaporGrip Technology — he's not only a farmer, he's also a former Technology Development Manager for Monsanto. "I want to be a good neighbor and a good steward of the technology," he says. "I think this is a great tool for farmers; I'm pleased that it worked well for my neighbors, with no effect on my grapes."

Now that's an innovation worth toasting to.

By: Nancy Hallahan



Craig Hoemann and Joe Sandbrink, right, former Technology Development Manager for Monsanto



TOOLS and RESOURCES

The Roundup Ready® Xtend Crop System is an effective weed management tool; so effective, in fact, that its XtendiMax® herbicide with VaporGrip® Technology, a restricted use pesticide, has a 95 percent satisfaction rate on average over the last two years by farmers who use it.* Like any technology, however, it's most effective when used as directed — and we want to help you make sure you're doing just that.

Below are a few tools and resources designed to help you maximize your yields, effectiveness and profit potential.

ROUNDUP READY PLUS® INCENTIVE CALCULATOR



Are you leaving money on the table? With the click of a mouse, this tool will help you calculate available incentives for your herbicide applications.

Simply input your zip code and herbicides that you plan to use for cash-back information.

RoundupReadyPLUS.com/IncentiveCalcMag

MANDATORY DICAMBA TRAINING



You can learn the ins and outs of dicamba and the best practices of applying it safely. These sessions are quick, informative... and required by law for products labeled for over-the-top use.

Before you apply any dicamba product in your fields, visit:

RoundupReadyXtend.com/Training

to locate a training session, or to see if your state provides its own dicamba training. You can register online and, in some cases, participate from the comfort of your own home computer.

ROUNDUP READY® XTEND CROP SYSTEM HOTLINE



Call 1-844-RRXTEND

with product questions, inquiries or to report any symptomology related to XtendiMax with VaporGrip Technology. Questions about application requirements? Experts are on hand to help.

SOYBEAN PROFITABILITY CALCULATOR



Enter a few quick data points about your farm and crops to build a customized crop management plan. Then, compare the profit potential of the Roundup Ready Xtend Crop System against the LibertyLink® system.

This easy-to-use online calculator aggregates the many factors that can impact the profitability of your soybean crops and walks you through them, step by step. It's a quick exercise that could be a big help as you plan for next season.

RoundupReadyXtend.com/SoyCalcMag

RRXTEND SPRAY APP



What can predict the weather, compile and store XtendiMax with VaporGrip Technology application records and provide educational videos at your fingertips? Since its launch in March of 2018, the free app has been downloaded more than 20,000 times.

Available in the Apple Store or on Google Play

APPLICATION REQUIREMENTS GUIDE



Like any pesticide, there are application requirements to help you maximize the safety and effectiveness of an XtendiMax with VaporGrip Technology application.

To find approved tank-mix partners, nozzles and labels, along with a summary of application requirements, visit:

XtendiMaxApplicationRequirements.com

*XtendiMax® herbicide with VaporGrip® Technology grower survey – August 2017 and September 2018 – All growers surveyed were required to have 50+ acres of Roundup Ready 2 Xtend® soybeans or cotton with XtendFlex® Technology and treat at least some acres with XtendiMax with VaporGrip Technology to qualify. Average of 95% based on the results of 97% in 2017 and 93% in 2018.

Better Weed Control, BETTER PERFORMANCE

Resistant weeds were so bad on his farm three years ago that John Malazzo only harvested 80 percent of his cotton crop that season. Today, the Caldwell, Texas, farmer has found a solution to the problem in Bollgard® 3 XtendFlex® cotton.

Fast forward to 2018; Malazzo planted all of his acres to cotton with XtendFlex Technology, keeping an eye on the new Bollgard 3 XtendFlex variety he planted. His weed control program was simple, based

“In our on-farm cotton trials, we are seeing increases in yield potential with each new class of varieties launched. We’ve got good weed control, and the yield keeps getting better.”

on sound recommendations and applied with a focus on detail. About 68 days after planting, he was looking at a field with good weed control.

“You can use this system safely and effectively, but you have to have patience because the time and the conditions have to be right in order to make a dicamba application,” Malazzo says. “Wind speed and direction are important considerations. You also have to be aware of what is sitting downwind from the field, and sometimes that takes talking to your neighbors. Get the information beforehand and follow the label.”

2018 Herbicide Program

This season, Malazzo used a burndown application 30 days prior to planting with Gramoxone® SL 2.0. He applied Treflan™

ahead of the planter and hoped for rainfall to activate. Weather and wind conditions forced him to make the first postemergence application of Warrant® Herbicide, Roundup PowerMAX® herbicide and XtendiMax® herbicide with VaporGrip® Technology, a restricted use pesticide, 45 days after planting, a little later than he’d like to spray.

With the application, he was targeting waterhemp, Palmer amaranth and panicum grass growing in fields. He monitored fields

did a good job of training us this season, before we went into the field, and taught us about temperature inversion risks. I think the training and the app have helped to prevent a lot of issues with off-target movement in the Brazos River Bottoms region this season.”

In the end, it’s about getting good weed control and growing high-yielding cotton — and Malazzo gets both with Bollgard 3 XtendFlex varieties.



for weed emergence for the rest of the summer, making a second application of XtendiMax with VaporGrip Technology, along with Roundup PowerMAX, where needed. Malazzo attended dicamba training and monitored the RRXtend Spray App, both of which greatly helped him, he says.

“The main feature of the RRXtend Spray App that I like is getting an estimate on temperature inversion chances,” says Malazzo. “Inversion is something I did not know to check for last year. Monsanto

It’s About Performance

“The XtendFlex Technology is very effective, and the varieties perform,” says Malazzo, who has farmed for more than 35 years. “In our on-farm cotton trials, we are seeing increases in yield potential with each new class of varieties launched. We’ve got good weed control, and yield keeps getting better.”

By: Al Fava

Earning Incentives IS AS EASY AS 1, 2, 3

The Roundup Ready PLUS® Crop Management Solutions platform has taken some critical steps to develop an incentives program for farmers that makes sense and will help them earn money back on chemistry.

Step 1

Purchase a qualifying Roundup® brand agricultural herbicide (32 fl oz).

Roundup PowerMAX® herbicide, Roundup PowerMAX® II herbicide or Roundup WeatherMAX® herbicide.

Step 2

Purchase at least one eligible residual herbicide.

These include Warrant® and Warrant® Ultra Herbicides as well as several excellent chemistries from Valent U.S.A.

You'll earn \$2/A on every eligible herbicide purchased, on up to four selections.

Step 3

Purchase XtendiMax® herbicide with VaporGrip® Technology, a restricted use pesticide (22 fl oz).

While you can earn an additional \$2 for this purchase, the real benefit is experiencing optimal weed control.

Ultimately, the best way to learn about this improved incentives program and to get expert recommendations for your acres is to talk to your chemistry retailer and ask for more information on the Roundup Ready PLUS Crop Management Solutions incentives program, or visit:

RoundupReadyPLUS.com

By: Chris Young

Dicamba Myths BUSTED

You know that dicamba is an effective weed management tool, and you have taken the class to ensure you spray safely and effectively. Despite the training and education, like all newer technologies, there are rumors about dicamba's safety. Here, we clarify a few common myths and misperceptions.

Myths

Dicamba and glyphosate basically do the same thing.

Using pesticides is simple. I just need to spray my crops to kill the weeds.

Dicamba has not been safety-tested.

If my spray boom height is correct, then my spray will come out uniformly, and I do not need to worry about wind direction.

Inversion and drift are the same thing.

There's nothing I can do to help ensure that this technology will be available for seasons to come.

Facts

Both dicamba and glyphosate have been used for decades on farms, gardens and lawns. Dicamba is specific to broadleaf weeds, such as dandelions, poison ivy and Palmer amaranth (pigweed), while glyphosate is not specific and can also control grass weeds. Using a combination of the two can help delay the resistance of weeds to herbicides.

Pesticides work best when applied the right way; following the label requirements (timing, amount, placement and more) is key in the safety and effectiveness of pesticide use. Make sure to read and closely follow the pesticide product label before application.

Weed killers, including dicamba, undergo comprehensive safety assessments by regulatory authorities, such as the U.S. Environmental Protection Agency (EPA) and the European Food Safety Authority (EFSA), in addition to independent researchers and global experts.

Height of the spray boom and wind direction are important to any pesticide application. Boom height impacts the efficacy of application by affecting the uniformity of the spray along the length of the boom, and wind direction determines if spray droplets travel toward the target or toward unintended downward areas. The label for XtendiMax® herbicide with VaporGrip® Technology, a restricted use pesticide, includes a maximum boom height. Always spray as directed on the individual product label.

Drift refers to spray droplets traveling away from the intended spray target due to wind conditions and direction. Inversion happens when the air can become too still, which often happens as the sun sets and the ground cools, resulting in a stable, unmoving air mass hanging just above the ground. When herbicides are applied, the spray droplets may become suspended in this inversion until the inversion ends and wind resumes, potentially moving them off target. The best way to avoid inversion is to only spray between sunrise and sunset. The XtendiMax with VaporGrip Technology label has specific requirements not to spray during an inversion and time-of-day restrictions.

It is important that farmers voice the need for this technology to ensure dicamba is available for years to come. The best way to keep dicamba and XtendiMax with VaporGrip Technology working in your favor is to use them properly. Always read and follow the product labels, and be aware of and follow the application requirements.



**Products Use Notice for "This Is My Field"
Advertisement for Roundup Ready® Xtend Crop System**

XtendiMax® herbicide with VaporGrip® Technology is part of the Roundup Ready® Xtend Crop System and is a restricted use pesticide.

ALWAYS READ AND FOLLOW DIRECTIONS FOR USE ON PESTICIDE LABELING.

It is a violation of federal and state law to use any pesticide product other than in accordance with its labeling. XtendiMax® herbicide with VaporGrip® Technology, Roundup Ready 2 Xtend® soybeans and products with XtendFlex® Technology may not be approved in all states and may be subject to use restrictions in some states. Check with your local product dealer or representative or U.S. EPA and your state pesticide regulatory agency for the product registration status and additional restrictions in your state. For approved tank-mix products and nozzles visit XtendiMaxApplicationRequirements.com.

NOT ALL formulations of dicamba or glyphosate are approved for in-crop use with Roundup Ready 2 Xtend® soybeans or Bollgard® 3 XtendFlex® cotton. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USES AND APPROVED FOR SUCH USE IN THE STATE OF APPLICATION. Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with Roundup Ready 2 Xtend® soybeans and Bollgard® 3 XtendFlex® cotton.

Roundup Ready 2 Xtend® soybeans contain genes that confer tolerance to glyphosate and dicamba. Bollgard® 3 XtendFlex® cotton contains genes that confer tolerance to glyphosate, dicamba and glufosinate. Glyphosate will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Glufosinate will kill crops that are not tolerant to glufosinate. Contact your seed brand dealer or refer to Monsanto's Technology Use Guide for recommended weed control programs.

B.t. products may not yet be registered in all states. Check with your seed brand representative for the registration status in your state.

Monsanto Company is a member of Excellence Through Stewardship® (ETS). Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. Roundup Ready 2 Xtend® soybeans and Bollgard® 3 XtendFlex® cotton have been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from these products can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Excellence Through Stewardship® is a registered trademark of Excellence Through Stewardship.

Insect control technology provided by **Vip3A** is utilized under license from Syngenta Crop Protection AG.

Roundup Technology® includes glyphosate-based herbicide technologies.

Warrant® Herbicide and Warrant® Ultra Herbicide are not 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.

The RRXtend Spray App provides forecasts for locations within the contiguous United States. Do not use this app for forecasts outside the contiguous United States. Forecasts are for planning purposes only and are not a substitute for checking actual weather conditions at your location at the time of application and complying with the product label and other legal requirements.

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.

Asgrow®, Bollgard®, Respect the Refuge and Cotton Design®, Roundup PowerMAX®, Roundup Ready 2 Xtend®, Roundup Ready PLUS®, Roundup Ready®, Roundup Technology®, Roundup WeatherMAX®, Roundup®, VaporGrip®, Warrant®, XtendFlex® and XtendiMax® are registered trademarks of Bayer Group. Gramoxone® is a registered trademark of a Syngenta group company. Liberty®, LibertyLink®, LibertyLink® and the Water Droplet Design® are trademarks of BASF Corporation. All other trademarks are the property of their respective owners. ©2018 Bayer Group, All Rights Reserved



Roundup Ready® Xtend Crop System BY THE NUMBERS

- » **Satisfaction rate of 95%** on average over the last two years by farmers who used XtendiMax® herbicide with VaporGrip® Technology, a restricted use pesticide¹
- » XtendiMax with VaporGrip Technology **controls more than 220 weed species**, including Palmer amaranth, waterhemp, marestail and other tough-to-kill broadleaf weeds
- » XtendiMax with VaporGrip Technology provides **up to 14 days of soil activity** on certain small-seeded broadleaf weeds²
- » VaporGrip® Technology **reduces volatility by up to 90 percent** compared to Clarity®³
- » **More than 96,000** farmers and applicators completed the mandatory dicamba training prior to making an application in the 2018 season
- » The Roundup Ready® Xtend Crop System showed a **5.7 Bu/A yield advantage** vs LibertyLink® Soybeans in herbicide system trials⁴
- » The RRXtend Spray App has been downloaded more than **20,000 times** since its inception in early 2018

¹XtendiMax® herbicide with VaporGrip® Technology grower survey – August 2017 and September 2018 – All growers surveyed were required to have 50+ acres of Roundup Ready 2 Xtend® soybeans or cotton with XtendFlex® Technology and treat at least some acres with XtendiMax with VaporGrip Technology to qualify. Average of 95% based on the results of 97% in 2017 and 93% in 2018.

²On certain small-seeded broadleaf weeds. Results may vary, depending on rainfall and soil type. Always use dicamba with traditional residual herbicides in pre-emergence and postemergence applications that have different, effective sites of action, along with other Diversified Weed Management Practices including the use of glyphosate. XtendiMax® herbicide with VaporGrip® Technology and in crop use may not be approved in all states.

³Based on published ASTM humidome methodology.

⁴Source: 2017 Monsanto and University Systems Trials (27 locations in 2017 reporting yield data). Significant at $P \leq 0.05$ LSD of 1.6 Bu. Data as of November 13, 2017. Roundup Ready® Xtend Crop System data = Roundup Ready 2 Xtend soybeans treated with dicamba, glyphosate and various residual herbicides. LibertyLink® system data = LibertyLink® soybeans treated with Liberty® herbicide and various residual herbicides. **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.

Out here, I SPRAY EARLY to stay ahead of weeds.

So I CAN KEEP CONTROL, all season long.

THIS IS MY FIELD.

ROUNDUP READY®
XTEND
CROP SYSTEM

IT'S THE SYSTEM THAT MAKES THE DIFFERENCE.

XTEND YOUR WEED CONTROL + XTEND YOUR YIELD

**CONTROLS MORE WEEDS
THAN ANY OTHER SOYBEAN SYSTEM**

**UP TO 14 DAYS SOIL ACTIVITY
ON SMALL-SEEDED BROADLEAF WEEDS***

5.7 Bu/A ADVANTAGE

VS LIBERTYLINK® SOYBEANS IN HERBICIDE SYSTEM TRIALS*

See your seed or ag chem dealer or visit RoundupReadyXtend.com

*Source: 2017 Monsanto and University Systems Trials (27 locations in 2017 reporting yield data). Significant at P ≤ 0.05 LSD of 1.6 Bu. Data as of November 13, 2017. Roundup Ready® Xtend Crop System data = Roundup Ready 2 Xtend® soybeans treated with dicamba, glyphosate and various residual herbicides. LibertyLink® system data = LibertyLink® soybeans treated with Liberty® herbicide and various residual herbicides.

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.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS AND ALL STEWARDSHIP PRACTICES. See the Products Use Notice for "This Is My Field" advertisement for Roundup Ready® Xtend Crop System printed in this publication. All trademarks are the property of their respective owners. ©2018 Bayer Group. All Rights Reserved

ROUNDUP READY 2
XTEND
SOYBEANS

+

XTENDIMAX®
With VaporGrip[®]
Technology

Low-Volatility Dicamba

Restricted Use Pesticide