



2018 SPRING AGRONOMY GUIDE



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Spring Spraying Recommendations

Soybeans

Blanket 4F	4-6 ounces/acre
Sonic	4 ounces/acre
Metribuzin	8 ounces/acre
Valor XLT	3 ounces/acre

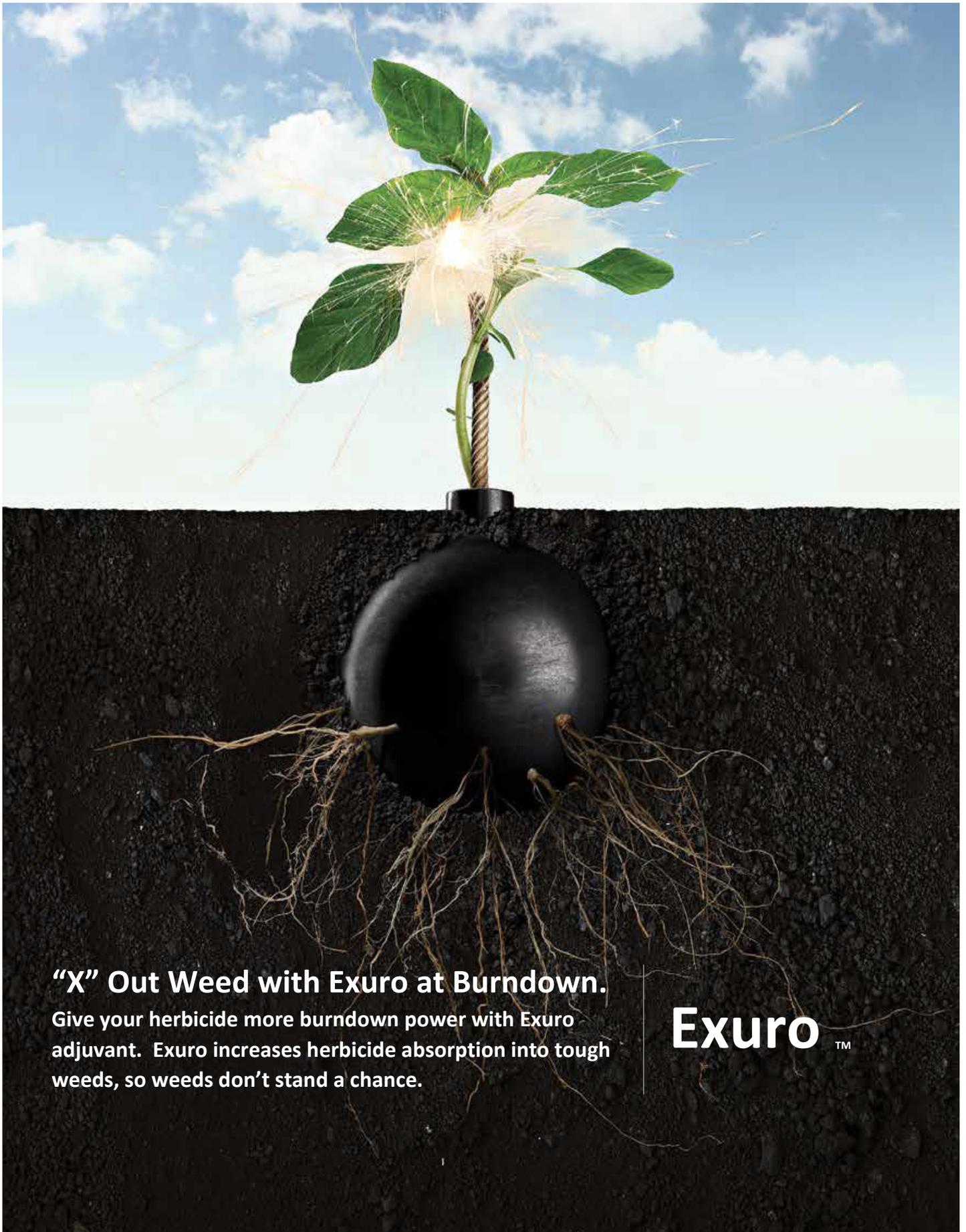
Corn

Atrazine 4L	1 quart/acre
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Soybeans or Corn

Autumn Super	.5 ounces/acre
Valor SX	2 ounces/acre





“X” Out Weed with Exuro at Burndown.

Give your herbicide more burndown power with Exuro adjuvant. Exuro increases herbicide absorption into tough weeds, so weeds don't stand a chance.

Exuro TM



GT Corn Acres

1. 3.0 qts/ac Lexar® EZ
2. 1.3 qts/ac Lexar® EZ 3.6 pts/ac Halex GT POST
3. 3.6 pts/ac Halex® GT POST
4. 1.3 qts/ac Acuron®



Apply Acuron® from 14 days Pre-plant up to 12" corn
Apply Lexar® from 14 days Pre-plant up to 12" corn
Apply Halex® GT from spike corn to 30" corn



Insect Control



Warrior® – Corn

1.92 oz of Warrior® II will provide 45 days of residual control of cutworms. Add 1.92 oz of Warrior® II when applying Powermax® Total to kill yield robbing insects.

RoundUp Ready Beans

1. 1 qt/ac Prefix at PLANTING followed by Powermax® Total
2. 1 qt/ac Prefix tank mixed with Powermax® Total applied POST on soybeans.



Prefix can be applied post emerge to soybeans in the 1st – 3rd trifoliate stage of growth



MONSANTO



Corn



Degree® Xtra 3.0 qts/ac – pre or post emergent to corn

As soil temperature rises, this technology will release the right amount of weed control as needed.

Soybean



Warrant Ultra - 50 oz/ac

Warrant herbicide - 3 pts/ac

Can be applied preplant, preemergence, postemergence up to R2 in soybeans.

Ideal for post residual control to canopy.

Has up to 30 days residual control on waterhemp, lambsquarters and other small-seeded grasses and broadleaves.

Powermax® Roundup® burndown & post: ask about Roundup®

Ready Plus Incentives

Rowel FX 4.5 oz/ac

Can be applied preplant or preemergence in soybeans. Provides residual control of weeds for up





Corn

Post-Emerge

Status® 2.5-10 fl oz/ac



Add atrazine and glyphosate + adjuvants with both pre & post applications.

Zidua® is a preplant, preemergent, early post herbicide for grass, nutsedge, and annual broadleaf control.



Soybeans

Pre-Plant

Optill® PRO at 20 ac/jug



Or

Zidua® 2-3oz/ac

Zidua® is a preplant, preemergent, early post herbicide for grass, nutsedge, and annual broadleaf control.



Or

Sharpen® – Preplant burndown





Corn

Pre emergence

Surestart®

1 ½-2 ½ pt



Post emergence

Hornet® WDG 2-3 oz



Atrazine 1-2 lb or Dicamba 2-4 oz

Durango® 36 oz



Soybean

Pre emergence

Sonic® 3-6 oz

+ 24D herbicide 1-2 pt

FirstRate® .3-.6 oz



Post emergence

Consider

FirstRate® .3 oz



And/or

Durango® 36 oz





Soybean

Preemergence

Select Max[®] used to control volunteer corn in beans, 6 fl oz up to 12" or V5.



Fierce[®] 3-3.75 oz/ac early preplant burndown or up to 3 days after planting.



Valor[®] XLT 3-5 oz as a preplant, preemergence.

Tough on waterhemp, giant ragweed, and marestalk.

Tank partners- Roundup[®], 24D, Ignite[®], dicamba



Postemergence

Resource[®] burndown or post emergent additive, adds speed with glyphosate 2-6 oz/ac



Cobra[®] use 8-10 oz/ac from preemergence to R6.

Tests also show Cobra[®] suppresses white mold.





Bayer CropScience

Corn

Preemergence

Corvus® 3.33 oz- 5.6 oz

Corn herbicide uses the unique power of reactivation to solidify its three levels of defense against weeds, providing consistent performance you can count on.

- Burndown takes out early weeds
- Residual prevents new weeds
- Reactivation gets late weeds



Soybeans

Burndown - Preemergence
Postemergence

Liberty® 29-36 oz

Herbicide is a non-selective herbicide that provides control of a broad spectrum of broadleaf and grassy weeds



Postemergence

Capreno® 3 oz

With the longest-lasting residual of any post, Capreno® postemergence corn herbicide delivers season-long control of the toughest broadleaf and grass weeds to deliver an amazing end-of-season clean.



DIFLEXX® 8-16 oz

Herbicide which brings together dicamba and a highly effective CSI™ Safener from Bayer. DiFlexx controls tough weeds like Palmer amaranth, waterhemp, ragweed and lambsquarters, plus over 100 more annual and perennial weeds, including those resistant to glyphosate-, PPO- and ALS-based herbicides.



CORN PRODUCTS*

CORN INCENTIVES

INSECTICIDE

ASANA
ALL INSECTICIDE
9.6 fl oz
EARN UP TO **\$0.50/A**
CASH BACK IN CORN

ZEAL
ON UP
4 fl oz
EARN UP TO **\$2.00/A**
CASH BACK IN CORN

CORN HERBICIDES

Incentives Are Not Available for the Herbicides Listed Below



SPECIALTY PRODUCTS*

HOW TO QUALIFY FOR INCENTIVES: Use 32 oz of Roundup PowerMAX® or Roundup WeatherMAX® along with a qualifying residual herbicide endorsed by Roundup Ready PLUS® Crop Management Solutions on your sorghum and sugarbeets acres.

SORGHUM INCENTIVES

SUGARBEETS INCENTIVES

QUALIFYING HERBICIDE



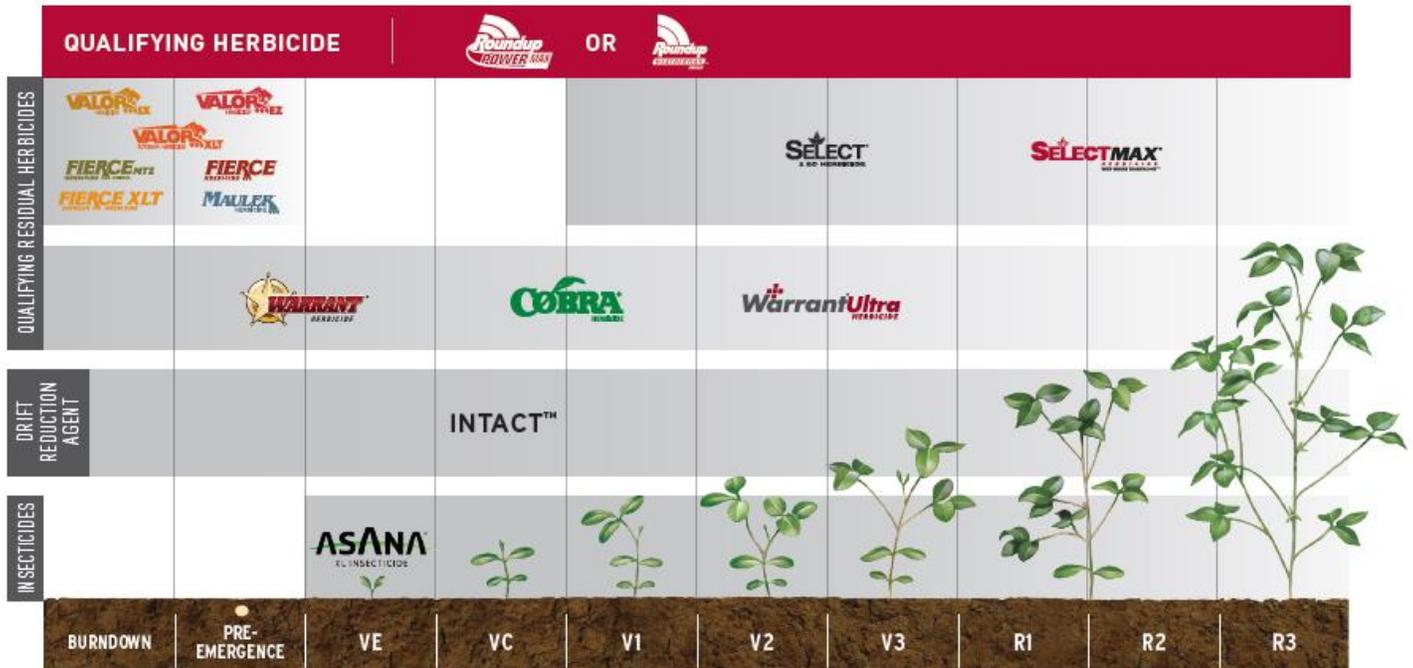
EARN UP TO **\$4.00/A**
CASH BACK
IN SORGHUM

EARN UP TO **\$4.00/A**
CASH BACK
IN SUGARBEETS

*Qualifying products must be purchased from a participating retailer between August 1, 2017 and August 15, 2018. See participating retailer for details. Program subject to change.



SOYBEAN PRODUCTS & APPLICATION WINDOWS



The application windows shown are meant to be a guide based on product labels for your area. For additional options talk to your Monsanto Representative or visit RoundupReadyPLUS.com

SOYBEAN PRODUCTS*

HOW TO QUALIFY FOR INCENTIVES: Apply 32 fl oz of a Roundup® brand agricultural glyphosate only herbicide with a residual herbicide endorsed by Roundup Ready PLUS® Crop Management Solutions.

MAXIMIZE YOUR INCENTIVES by adding 22 fl oz of XtendiMax® herbicide with VaporGrip® Technology to your weed management program.

HERBICIDE	VALOR [®] 2 oz	MAULEK ¹ 8 fl oz	SELECT [®] 4 fl oz SELECTMAX [®] 6 fl oz	FIERCE [®] HTZ 3 oz VALOR [®] HTZ 2 fl oz	FIERCE [®] 3 oz VALOR [®] HTZ 3 oz	FIERCE XLT [®] 4 oz CONTRA [®] 10 fl oz	WarrantUltra [®] 50 fl oz	WARRANT [®]
32 fl oz Roundup Ready Plus or Roundup Ready Xtend or Roundup Xtend	\$1.00	\$0.50	\$1.00	\$2.00		\$3.00	1 ST 4 pts	2 ND 4 pts
XTENDIMAX [®] 22 fl oz	-	\$0.50	\$0.50	\$1.00		\$2.00	-	\$2.00
TOTAL INCENTIVE	\$1.00/A	\$1.00/A	\$1.50/A	\$3.00/A		\$5.00/A	\$4.00/A	\$4.00/A²
INSECTICIDE	ASANA [®] 9.6 fl oz	\$0.50/A	DRA	INTACT ^{™3} 7.7 fl oz	\$0.50/A			

LibertyLink® and Roundup Ready® 1 soybeans do not qualify for incentives.

¹ Maulek™ rebate will only be paid when applied with Valor®, Fierce® or Warrant® Herbicide

² Up to 2 applications of Warrant® Herbicide will be eligible for incentives

³ Use of an approved Drift Reduction Agent is now required for certain tank-mix combinations within the Roundup Ready Xtend Crop System. Visit XtendiMaxApplicationRequirements.com for approved tank-mix partners and nozzles

*Qualifying products must be purchased from a participating retailer between August 1, 2017 and August 15, 2018. See participating retailer for details. Program subject to change.

SOYBEAN TRAIT



Below is an example herbicide recommendation and incentive calculation when using this trait

Use the area below to create a customized recommendation and calculate your incentive

PRE	USE RATE	\$/A		USE RATE	\$/A
	22 fl oz	—			
	32 fl oz	—			
	4 pt	\$4.00			
	8 fl oz	\$1.00			
INTACT™	7.7 fl oz	\$.50			
SUBTOTAL		\$5.50/A	SUBTOTAL	\$	

POST	USE RATE	\$/A		USE RATE	\$/A
	22 fl oz	—			
	32 fl oz	—			
	4 pt	\$4.00			
	6 fl oz	\$1.50			
INTACT™	7.7 fl oz	\$.50			
SUBTOTAL		\$6.00/A	SUBTOTAL	\$	

TOTAL INCENTIVE \$11.50/A

TOTAL

\$

Incentives are pro-rated based on chemistry usage at the recommended rates

HOW TO QUALIFY FOR INCENTIVES: Apply 32 fl oz of a Roundup® brand agricultural glyphosate only herbicide with a residual herbicide endorsed by Roundup Ready PLUS® Crop Management Solutions.

MAXIMIZE YOUR INCENTIVES by adding 22 fl oz of XtendiMax® herbicide with VaporGrip® Technology to your weed management program.

Qualifying products must be purchased from a participating retailer between August 1, 2017 and August 15, 2018. See participating retailer for details. Program subject to change.

XtendiMax® herbicide with VaporGrip® Technology is part of the Roundup Ready® Xtend Crop System and is a restricted use pesticide for retail sale to and use only by Certified Applicators or persons under their direct supervision.

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. NOT ALL formulations of dicamba or glyphosate are approved for in-crop use with Roundup Ready 2 Xtend® soybeans. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USES AND APPROVED FOR SUCH USE IN THE STATE OF APPLICATION. Check with your local Monsanto 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.

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

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. This product has been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product 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.

Not all products may not be registered in all states. Check with your Monsanto representative for the registration status in your state.

Roundup Technology® includes Monsanto's glyphosate-based herbicide technologies. 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 vary. Growers should evaluate data from multiple locations and years whenever possible.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Degree®, Degree Xtra®, Harness® brand products, TripleFLEX® II Herbicide, Warrant® Herbicide and Warrant® Ultra Herbicide are not registered in all states and may be subject to use restrictions. Degree Xtra® and Harness® are restricted use pesticides and are not registered in all states. 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 Monsanto dealer or representative for the product registration status in your state. Degree®, Degree Xtra®, Harness®, Roundup PowerMAX®, Roundup Ready 2 Xtend®, Roundup Ready PLUS®, Roundup Ready®, Roundup Technology®, Roundup WeatherMAX®, Roundup®, TripleFLEX®, VaporGrip®, Warrant® and XtendiMax® are trademarks of Monsanto Technology LLC. Asana®, Cobra®, Fierce®, Mauler™, Select®, Select MAX®, Valor® and Zeal® are registered trademarks of Valent U.S.A. Corporation. Some of the product(s) discussed herein are restricted use pesticide(s) and may not be registered in all states. 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 product representative for the product registration status in your state. INTACT™ is a trademark of Precision Laboratories. All other trademarks are the property of their respective owners. ©2018 Monsanto Company. All Rights Reserved. 109H186320

Wheat Programs

Greenup

	<u>Rate/Acre</u>
Urea	80 lbs. N + NutriSphere
Finesse	.3 oz/ac
Harmony Extra	.6 -.9 oz/ac

At Flag Leaf

Quilt Xcel	Fungicide
or	
Twinline	Fungicide



Wheat Hi-Yield Program

1st topdress 70 lbs. N + NutriSphere

2nd trip: Fungicide

Wheat Fungicide Application Timing

<u>Fungicides</u>	<u>Apply at</u>	<u>Rate</u>
Headline	Feekes 4-6	6 fl oz/ac
Priaxor	Feekes 4-6	4 fl oz/ac
Twinline	Feekes 9	7-9 fl oz/ac
Caramba	Feekes 10.5	13.5 fl oz/ac

Quilt Xcel 10.5 oz from full flag leaf emergence (10 Feekes) through full head emergence (10.5 Feekes)

Fungicides

Plant Performance

Why Use Fungicides

Corn

- Improved health helps plant during times of stress(drought).
- Provides stronger stalks for a more efficient harvest and less potential for volunteer corn the following season.
- Ears grow bigger with more kernels around and better tip fill.
- Tank-mixes with post herbicide at V-5 for a convenient one – pass application.
- Boosts yield an average of 6 to 8 bu/ac at early (V4-V8) timing and 10 to 18 bu/ac at R1.

Application

In-Furrow use Headline® at 3-6 fl oz



Pre-tassel Priaxor® (V5-V8) 4 fl oz/ac



Tassel Headline® Amp (VT-R3) 10 fl oz/ac



TriVapro® 13 oz/ac



Application timing

Apply 10.5 oz of Quilt Xcel® at V5 thru V8 for early season disease control and plant performance.



Corn

Apply 10.5 oz of Quilt Xcel® from tassel emergence through brown silk. Provides both curative and preventative control.



Fastac 3.5-4 oz/ac or Warrior® at VT-R3 for Japanese Beetle control.



Fungicides

Plant Performance

Why Use Fungicides

Soybeans

- Produces larger beans and fuller pods with better retention for superior soybean harvests.
- Tank mixes easily with Endigo® ZC or Fastac EC® insecticide for a one – pass application to target both insects and diseases, a combination shown to boost yield over untreated.
- Boosts yield an average of 4 to 8bu/ac.

Application stage: (R2-R3)

Priaxor® 4-8 oz/ac

Or

Quilt Xcel® 10.5 oz/ac

Fastac® & Endigo® to fungicides for maximum disease & insect control.

TriVapro® 13 oz/ac

Protects against disease and the impacts of unpredictable weather. With 3 active ingredients, including Solatenol fungicide, Trivapro delivers long-lasting disease control and crop enhancement benefits to maximize yield potential.

priaxor®
WITH XEMUM

 QuiltXcel®

Fastac® EC
Insecticide

 Endigo® ZC

 Trivapro™

Why Stabilize your Nitrogen?

- More nitrogen available for plant uptake by slowing the conversion of nitrogen into forms that can be lost through *volatilization*, *leaching* and *denitrification*
- Ensures longer period of increased nitrogen availability for plant uptake
- Maintaining N improves potential for maximizing yield
- Stabilizing N protects the environment
 - Prevents leaching nitrate into surface and ground water
- Protects applied nitrogen for a full 10-12 months
- Provides flexibility in application schedules

OUR UREA IS 100% TREATED



Nitrogen Stabilizers

N-Serve Nitrogen Stabilizer for Anhydrous

What it does:

- Reduces Nitrogen loss
- Improves standability
- Provides healthier corn and consistently higher yields
- Reduces risk of stalk rot
- Enables quicker crop dry down
- Reduces leaching of nitrates and denitrification
- Keeps nitrogen available for corn crop and helps protect water quality

When to use it:

- Add with anhydrous ammonia in fall and spring
- Rates: Add 1 qt. per acre



With N-Serve

Without N-Serve

NutriSphere Nitrogen Stabilizer for Urea

- Add NutriSphere to urea to keep the nitrogen from leaching, volatilization and denitrification
- Topdress corn with urea + NutriSphere at V4 to V8 stages

LAND O'LAKES SUSTAIN™

A WIN FOR FARMERS. A WIN FOR THE PLANET.

WHAT IS LAND O'LAKES SUSTAIN™?

Land O'Lakes SUSTAIN™ is making stewardship matter by leveraging our farm-to-fork footprint and farmer ownership to drive meaningful, quantifiable on-farm conservation. In partnership with WinField United, we provide farmers with the tools to best protect the planet's air, soil and water. In short, better management and care for the production of crops helps ensure a more sustainable future.

IT'S EASY TO GET STARTED.

The single most important part of conservation is for farmers to get started. They can begin by simply selecting a technology, practice and/or product from the Conservation Agronomy framework — always working toward continuous improvement. If desired, they can add new practices each season to build on where they started.

Regardless of how farmers move forward, we'll work with them to make implementation seamless.

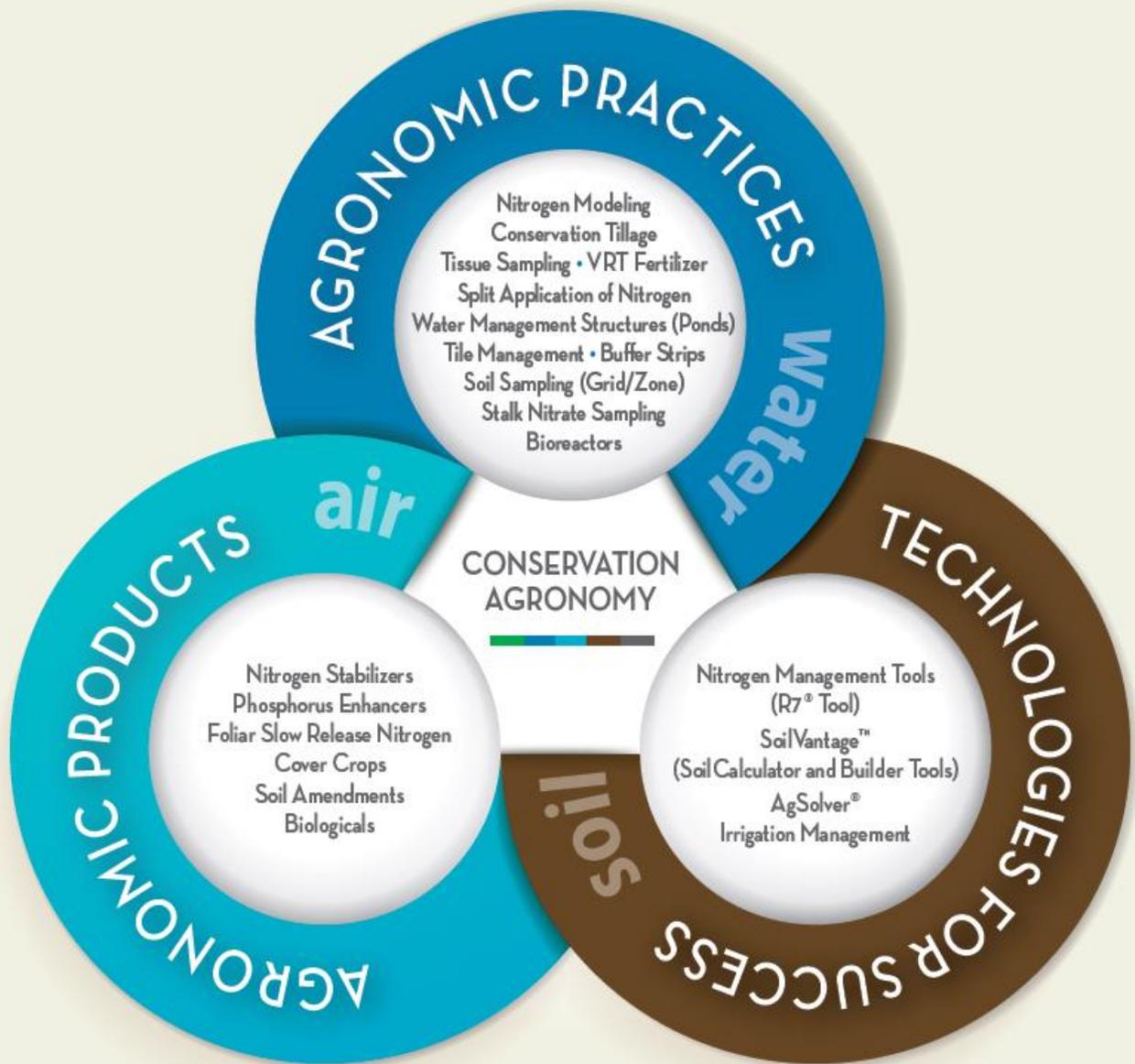
A TRUE MEASURE OF SUCCESS.

Once farmers decide where to start, we provide them with the tools to best measure the impact on the farm and the planet. Timely measuring lets them see how well they're doing. It also helps us make necessary adjustments and modifications to their practices to get the best results.

Ultimately, implementing Conservation Agronomy will help lead to healthier profits for farmers, as well as produce a healthier planet for everyone to enjoy.



HELP BUILD A SUSTAINABLE FUTURE TODAY.



The technologies, practices and products in Conservation Agronomy work in concert with each other. Farmers can start with one or several. They can add practices to build on what they're already doing. We help measure and adjust their field management plan to achieve the best return on investment for the bottom line and the planet.

N-Serve®

PROTECTS NITROGEN AT THE PLANT ROOT ZONE

NITROGEN STABILIZER

N-Serve® Nitrogen Stabilizer

- Active ingredient is nitrapyrin
- Oil based formulation that mixes well with anhydrous ammonia
- Optimizes yield potential of corn when used with anhydrous ammonia
- Proven and trusted technology for over 35 years

How Does N-Serve® Work?

N-Serve® inhibits the Nitrosomonas bacteria in the soil keeping Nitrogen in the stable ammonium form longer and protected from leaching and denitrification.



Application Rates

Fall applications

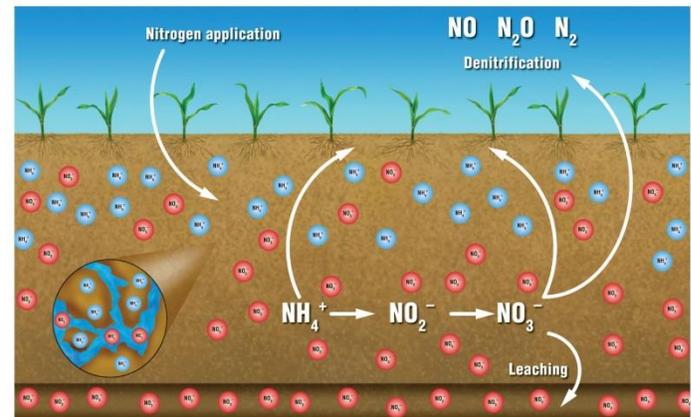
1 quart per acre

Spring applications

Pre-emerge: 1 quart per acre

Sidedress: 0.5 to 1 quart per acre

What Happens to Unstabilized Nitrogen?



When Do Nitrogen Losses Occur?

Most Nitrogen Losses occur during the Spring:

- Spring Rains and warm soil temperatures lead to heavy losses through both leaching and denitrification.
- Stabilizing with N-Serve® greatly reduces both leaching and denitrification protecting nitrogen in the root zone.

Stronger, Healthier Plants

- Increased yield
- Improved standability
- Reduced risk of stalk rot
- Increased grain protein
- Faster crop drydown

For more information about N-Serve® visit www.NitrogenStabilizers.com or contact your local Dow AgroSciences sales representative.



More usable nitrogen means better use of your fertilizer investment.



NutriSphere-N® Nitrogen Fertilizer Manager provides advanced protection of applied nitrogen

Give your sidedress nitrogen the protection it needs with **NutriSphere-N® Nitrogen Fertilizer Manager**. NutriSphere-N provides long-lasting protection of applied nitrogen from volatilization, leaching and denitrification. Multiple formulations offer flexibility to fit any program.

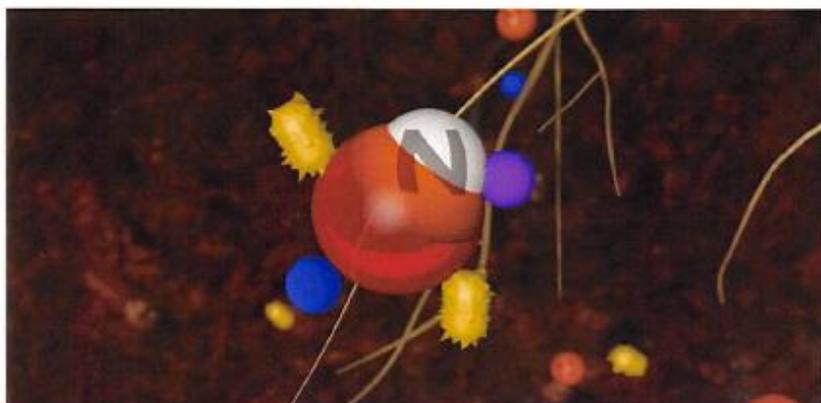
HOW IT WORKS

Nitrogen fertilizer can be lost to volatilization, leaching and denitrification. This happens as a result of bacterial enzymes converting the urea in applied nitrogen fertilizer into gasses or nitrates, which are susceptible to loss. As a long chain, water soluble polymer, NutriSphere-N holds a powerful negative charge that slows bacterial enzymes' ability to break down nitrogen. This keeps more nitrogen in the stable ammonium form for longer.

BOTTOM LINE

More usable nitrogen means better use of your fertilizer investment.

NUTRISPHERE-N SIDEDRESS CORN TRIALS



Tomorrow's Science Delivering Today's Returns

*Data on file.





AVAIL[®] increases availability of applied phosphorus.



The strongest phosphorus protection available

HELP YOUR CORN REACH ITS FULL POTENTIAL

AVAIL[®] Phosphorus Fertilizer Enhancer increases the efficiency of your phosphorus (P) fertilizer no matter how - or when - you apply it. This gives you application flexibility and a better return on your phosphorus investment. When as much as 75-95% of untreated phosphorus can become fixed in the soil, AVAIL keeps it more available to your corn.

AVAIL PROVIDES:

- Increased efficiency of applied P in your soil for increased P uptake in the plant
- Stronger roots, healthier start and stronger finish
- More flexibility in your application schedule
- Effective protection for both dry and liquid phosphorus fertilizers

Contact your local **Ottawa Coop** location to ask how to add AVAIL to your fertility program today.

AVAIL CORN TRIALS



vlsci.com | 800.868.6446

Tomorrow's Science Delivering Today's Returns

*Data on file.
Important: Always read and follow label use directions.
AVAIL is a registered trademark of Verdesian Life Sciences.
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Wake up your crops.

Good morning sunshine. It's time to wake up your crops with Advantage Plus® a complete starter, with more vital nutrients than 10-34-0. Protect your yield, have more consistent emergence and start strong.



Advantage Plus™

092215 Advantage Plus is a trademark of United Suppliers, Inc.



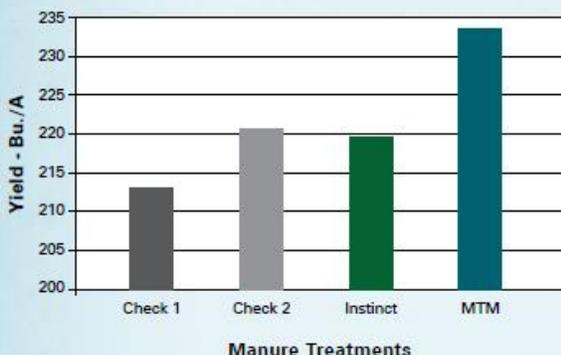
**HOG
MANURE**

m more than manure®

Nutrient Manager

More Than Manure® (MTM®) Nutrient Manager is the only product on the market proven to reduce phosphorus (P) lock-up and nitrogen (N) loss from leaching, volatilization and denitrification when applied to hog manure. By reducing valuable nutrient loss from your manure applications, it can help you see better overall crop performance and increased yield potential.

Ohio Corn 2013



Sow Barn (Gestation and Farrowing) Deep Pit
Manure treated and applied in October 2012.
6,500 Gals./A Applied
Sabina, Ohio

MTM Benefits

- Crop rotation flexibility
- Non-toxic to livestock and soil bacteria
- No specialized mixing/application equipment required
- Reduces phosphorus lock-up in the soil
- Protects nitrogen from leaching, volatilization and denitrification
- Slowly biodegrades leaving no environmental footprint
- Can reduce ammonia levels in your confinement barns
- Can reduce solids in pits or lagoons

Liquid Manure Systems

Application Rate

18 oz. per acre

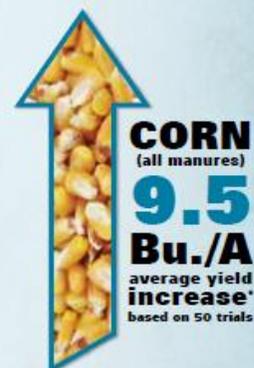
Application Method

Full Pits or Lagoons:

- Add MTM to the pit or lagoon and agitate before pumping.
- If agitation is not available, add product to the load-out truck or honey wagon during fill.

Partially Filled Pits or Lagoons:

- Add all MTM required to treat full pit or lagoon when pit or lagoon is 25% or more full.



Liquid Mixing Equation:

$$\frac{\text{# Gallons in pit, lagoon, load-out truck or honey wagon gallons}}{\text{# Gallons of manure applied per acre}} \times \frac{18 \text{ oz./acre rate}}{128 \text{ oz./gallon mix}} = \text{Gallons of MTM required for pit, lagoon, load-out truck or honey wagon}$$



SEED



Mycogen[®]
SEEDS



Now carrying Round Up Ready 2, Liberty, and Roundup Ready 2x Xtend Soybean Varieties.



Soybean Seed Treatment Options

Rancona XT Plus (Fungicide)

- Protects seed from both seed-borne and soil-born pathogens.
- Better chance of good stand
- Protection up to 3 weeks after planting



Rancona Complete (Fungicide/Insecticide)

- Contains all benefits of Fungicide treatment
- Added broad spectrum insect protection
- Up to 60 days of protection after planting, systemic so the product is absorbed into plant while growing.



Preside CL (Inoculant)

- High count live rhizobia bacteria with up to 90 days on seed out of ground survival
- Increased emergence and nodulation
- Takeoff technology included for increased nitrogen utilization



Calvin Wenger
Seed Manager
calw@ottawacoop.com
620-504-2135

Corn Seed Treatment



TRIPIDITY™ ST

Tripidity ST biostimulant is a uniquely designed seed treatment that provides essential nutrients and biostimulant additives which can maximize early seedling vigor and crop development, for maximizing yield potential.

- Tripidity ST is a unique blend combining essential macro and micro nutrients and a proprietary blend of plant extracts to stimulate seed germination and to maximize early seedling growth and vigor. Tripidity ST also includes a balanced ratio of three hormones designed to work together to enhance seed germination and seedling establishment, provide stress reduction in cold soils, enhance cell elongation, and increase nutrient uptake for higher yield potentials.
- Multiple factors start affecting yield the moment the seed is planted. Treating seeds with an industry leading fungicide and insecticide, coupled with effective biostimulants will drive and increase yield.
- Germinating seedlings can only draw from the energy within the seed until the start of photosynthesis. Tripidity ST provides the building blocks for cell walls, membranes, and the components of key growth processes before the plant can create its own.

Balanced Ratio of Hormones

Cytokinin (Kinetin)

Stimulates cell division, involved in shoot growth, delays leaf senescence and activates dormant buds.

Gibberellic Acid (GA)

Stimulates seed germination, shoot elongation, flowering, and regulates production of hydrolytic enzymes in grains.

Indole-3-Butyric Acid (IBA)

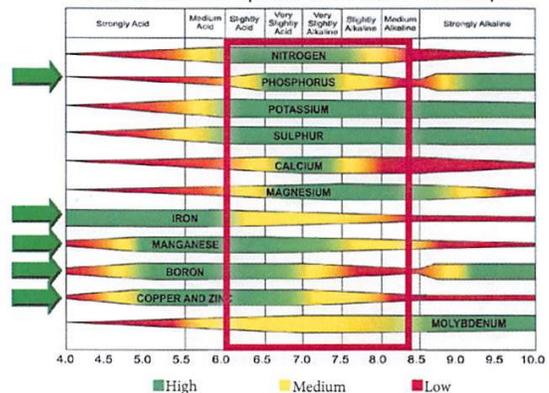
IBA is an auxin that enhances root growth; involved in apical dominance, stimulates cell elongation, enhances fruit and seed development.

GUARANTEED ANALYSIS 0-0.70-0

Available Phosphate (P ₂ O ₅)	0.70%
Manganese (Mn)	0.05%
0.05% EDTA Chelated Manganese	
Boron (B)	0.50%
Iron (Fe)	0.10%
0.10% EDDHA Chelated Iron	
Zinc (Zn)	0.50%
0.50% EDTA Chelated Zinc	

Derived from: Diammonium phosphate, Manganese EDTA, Boron ethanolamine, Ortho-Ortho Iron EDDHA & Zinc EDTA.
EDTA is ethylenediaminetetraacetic acid.

Plant Nutrient Uptake in Relation to Soil pH



Biostimulants can increase yield by allowing the crop to perform at an optimum level, even under stress.



Corn Seed Treatment

RAPIDITYTM ST BIOSTIMULANT

RAPIDITY ST BIOSTIMULANT IS A UNIQUELY DESIGNED SEED TREATMENT THAT PROVIDES ESSENTIAL NUTRIENTS AND BIOSTIMULANT ADDITIVES WHICH CAN MAXIMIZE EARLY SEEDLING VIGOR AND CROP DEVELOPMENT, FOR MAXIMIZING YIELD POTENTIAL.

Product Features

Why is This Important?

Germination

- Optimal combination of nutrients to help stimulate germination and offset early growth reducing nutrient deficiencies.
- Germinating seedlings can only draw from the energy within the seed until the start of photosynthesis. Rapidity ST provides the building blocks for cell walls, membranes and the components of key growth processes before the plant can create its own.

Early Seedling Development

- A blend of proprietary growth additive and micronutrients to support enhanced crop establishment and vigor.
- Rapidity ST provides the nutrients, intermediates, and activates the necessary enzymes so the seedling spends more energy on growth, as opposed to sourcing and processing.
- Rapidity ST proprietary growth additives provide the plant with amino acids which are the building blocks of proteins (including enzymes). Photosynthesis and respiration cannot occur without many different types of enzymes.

Application Flexibility

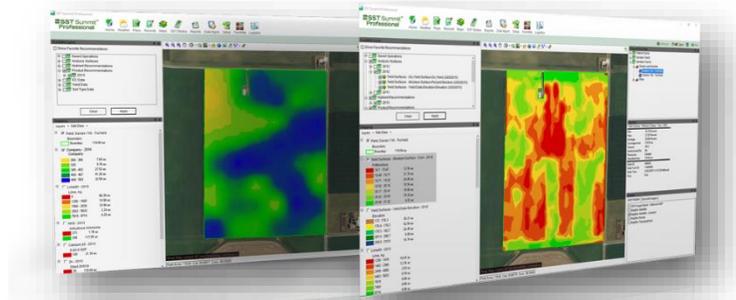
- Flexible formulation designed for use with various production practices.
- Rapidity ST can be mixed with fungicide and insecticide seed treatments. Also compatible with rhizobia/inoculant seed treatments when applied simultaneously and may be applied as an over-treatment.





Field Advantage

OTTAWA COOP



Why Precision Farming?

- Take inventory of fertility on each field.
- Stop throwing fertilizer \$ where it is not needed.
- Variable rate application technologies allow you to place the products only where needed to maximize crop productivity.
- Utilize Yield data and make it useful in fertility, seed, and production.
- Know the right placement of seed hybrids for maximum profitability.
- To be an overall better manager of all farming practices.

Solutions for Better Decision making

- Maximize economic yields by utilizing information based on sound decision making.
- Utilized multi years of information trends for decision making.
- Make hybrid/variety decisions based on your operations performance.
- Utilize multi-layers of information in analysis process.





Field Advantage
OTTAWA COOP

- Monitor fields from preplant burn down applications to dry down for harvest.
- Find problems at a minimal stage before it reaches the Economic Injury Level (EIL)
- Full team of agronomists develops the best treatments/recommendations.
- Best chance to maximize yield by catching problems early.



What's Included?

Weekly field checks

- Weeds, diseases, insects
- Deficiencies
- Growth stages, Population counts, Yield estimates
- Tissue/Soil Sampling for nutrient monitoring
- General crop health monitoring

Call the **Ottawa Coop Production Office** for further information if interested. (785) 242-1032

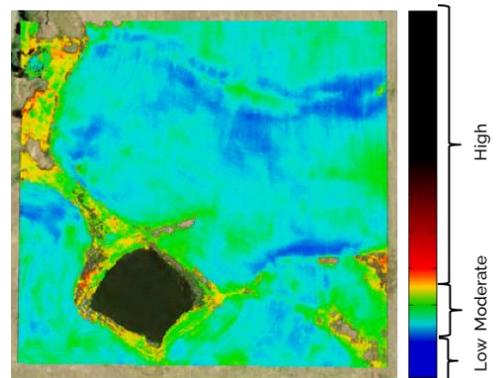
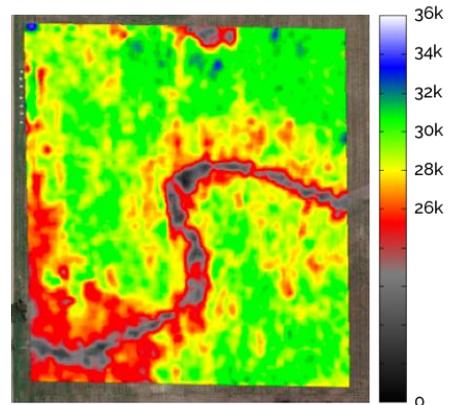


Field Advantage

OTTAWA COOP

UAS Imagery

- Utilizing SlantRange's new 3P field sensor your field imagery data is easier to collect than ever before. Setup, flight, and data analysis for a 160-acre field can be completed in as little as 30 minutes!
- Multiple map layers for different levels of analysis:
 - Post-Emergence
 - Plant Population: Advanced algorithms detect each individual plant providing a true stand count
 - Weed Density: Detects early season weeds by distinguishing between a true row crop and invasive species.
 - Full Season Health Survey's
 - Plant Stress: Uses multiple spectral bands across the near infrared and visible to crop stress (nutrient deficiencies, pest impacts, dehydration areas).
 - Vegetation Fraction: Layer used to determine "canopy closure" across the entire field.
 - Yield Potential: Utilizes multiple layers of imagery to give the grower a high-resolution map for future yield potential. Use this to determine high and low spots in fields for product trials.
 - NDVI: Traditional maps for help in determining problematic areas in the field.



Were yields not as great as you were thinking? Is something hidden to the human eye robbing from your top end yield?

Contact the Field Advantage department with the Ottawa Coop in creating a custom-tailored plan for your acres!

Clean fields mean higher yields
and more money in your pocket.
Let us help you get there with our
selection of industry-leading
herbicide solutions that are tough
on weeds.

