APPROVED DICAMBA FORMULATIONS

FOR USE IN THE ROUNDUP READY® XTEND CROP SYSTEM

2019

US EPA LABEL EDUCATION

ON APPLICATION REQUIREMENTS

IMPORTANT INFORMATION

This presentation is **for educational purposes only**. Attendance or participation does **NOT** satisfy the need for mandatory dicamba or auxin-specific training as required by the U.S. EPA labels for dicamba products labeled for use in the Roundup Ready® Xtend Crop System

> **You will NOT receive a completion certificate following this training**
>
> To find and register for a mandatory dicamba training event that will meet the label requirement for training, please go to:

RoundupReadyXtend.com/Training

REQUIREMENTS FOR MANDATORY TRAINING

The U.S. EPA labels for dicamba products labeled for use in the Roundup Ready® Xtend Crop System require that **prior** to applying these products in the 2019 growing season and each growing season thereafter, all applicators applying these products must complete dicamba or auxin-specific training:

If training is available and required by the state where the applicator intends to apply these products, the applicator must complete that training

If the state where the application is intended does not require dicamba or auxin-specific training, the applicator must complete training provided by one of the following sources:

- A registrant of a dicamba product approved for in-crop use with dicamba-tolerant crops, or
- A state or state-authorized provider

The above required training is not a substitute for the state-specific Certified Applicator training which is required to purchase and use Restricted Use Pesticides

- Retail sale to and use only by Certified Applicators
- Refer to specific state and local requirements for certification process
- Check with your state pesticide regulatory agency for additional training and application requirements imposed by your state

APPROVED FORMULATIONS OF DICAMBA COVERED IN THIS PRESENTATION

AS OF NOVEMBER 2018

The following formulations of dicamba are approved for use in the Roundup Ready® Xtend Crop System:

- XtendiMax® herbicide with VaporGrip® Technology **(Monsanto)**
- **DuPont**™ FeXapan™ herbicide Plus VaporGrip® Technology
- Engenia® Herbicide **(BASF)**

The application requirements discussed apply to all labeled uses of these products.

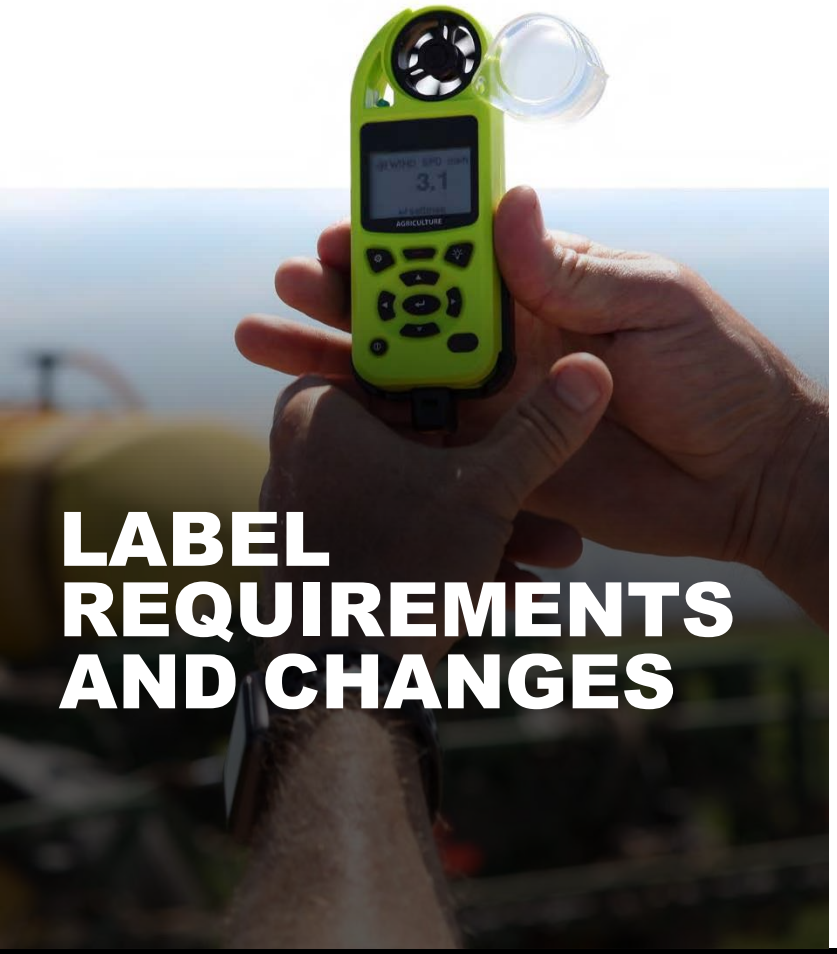
Some slides contain language from XtendiMax®/FeXapan™ labels; Engenia® label language may vary. Always read and follow the specific product label.

These products are Restricted Use Pesticides for retail sale to and use **only by Certified Applicators** and only for those uses covered by the Certified Applicator's certification.

These labels are valid for two years, expiring 12/20/2020.

AGENDA

TOPICS COVERED IN THIS PRESENTATION



LABEL REQUIREMENTS AND CHANGES

KEEPING PESTICIDES ON-TARGET

EFFECTIVE WEED MANAGEMENT

PRODUCT LABELS

ALWAYS FOLLOW ALL LABELING FOR PRODUCT BEING APPLIED

XtendiMax® herbicide with VaporGrip® Technology **(Monsanto)**	xtendimaxapplicationrequirements.com
DuPont™ FeXapan™ herbicide Plus VaporGrip® Technology	fexapanapplicationrequirements.dupont.com
Engenia® Herbicide **(BASF)**	**Stewardship:** engeniastewardship.com **Tank Mix:** engeniatankmix.com

WISE USE OF PESTICIDES

BEGINS WITH GOOD STEWARDSHIP

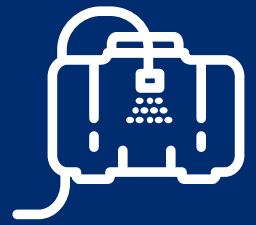
UNDERSTAND AND FOLLOW THE LABEL

IDENTIFY SURROUNDINGS

CONTROL THE CONTROLLABLE

USE APPROPRIATE TANK-MIXES

GET UP TO SPEED ON THE WEATHER



KEEP IT CLEAN

LABEL FRONT

USE CLASSIFICATION

EPA Definition of Restricted Use Products (RUP)

RUPs are not available for purchase or use by the general public. RUPs have the potential to cause unreasonable adverse effects to the environment and injury to applicators or bystanders without added restrictions. The "Restricted Use" classification restricts a product, or its uses, to use by **a certified applicator** or someone under the certified applicator's direct supervision.

Specific to dicamba products covered in this presentation:
For retail sale and use only by Certified Applicators

Source: EPA website (https://www.epa.gov/pesticide-worker-safety/restricted-use-products-rup-report)

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS (3.1)

PHYSICAL AND CHEMICAL HAZARDS (3.3)

ENVIRONMENTAL HAZARDS (3.2)

- Point source contamination
- Movement by surface runoff
- Movement through soil
- Movement through erosion

Endangered species concerns*
www.epa.gov/endangered-species
844-447-3813

*Engenia® label directs to http://www.epa.gov/espp/; both URLs direct to the same website

PRODUCT USE INSTRUCTIONS

- **DIRECTIONS FOR USE - TRAINING AND RECORDKEEPING (4)**
- **STORAGE AND DISPOSAL (5)**
- **PRODUCT INFORMATION - RESTRICTIONS (6)**
- **WEED RESISTANCE MANAGEMENT (7)**
- **TANK MIXING INSTRUCTIONS (8)**
- **APPLICATION EQUIPMENT AND TECHNIQUES (9)**

  - Spray drift management
  - Buffers
  - Spray System Cleanout

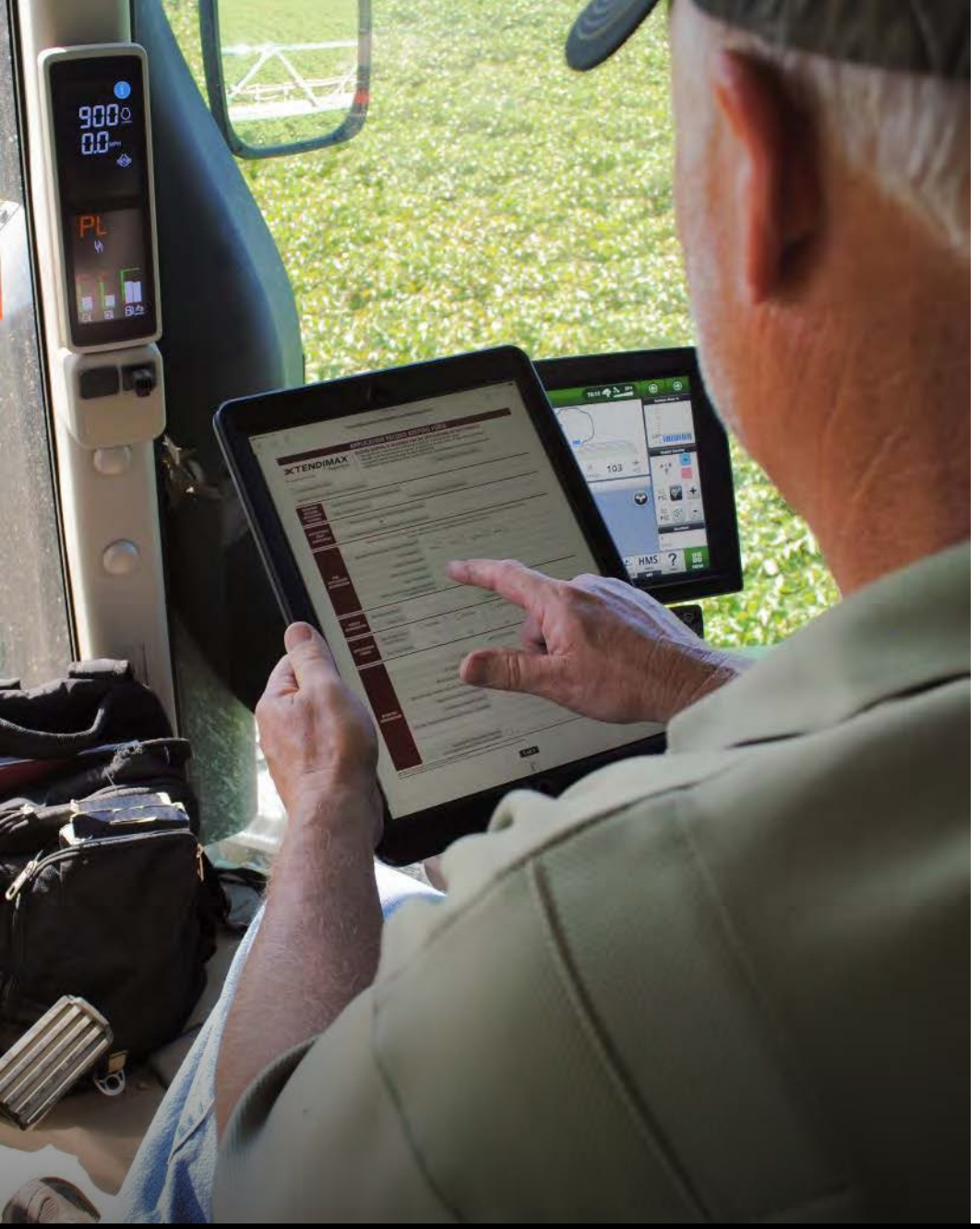
TRAINING

4.1

TRAINING IS REQUIRED ANNUALLY

ALL APPLICATORS MUST COMPLETE DICAMBA OR AUXIN SPECIFIC TRAINING

- State-Provided Mandatory Training
- OR
- State-Authorized Provider
- OR
- Registrant Provided Training



RECORD KEEPING 4.2

REQUIREMENTS

Record keeping is required for each application of these products. The certified applicator must keep required documentation for a period of two years; records must be generated as soon as practical but no later than **72 hours** after application.

> e.g., if 10 fields are sprayed, 10 sets of records are required, including if the same field is sprayed twice

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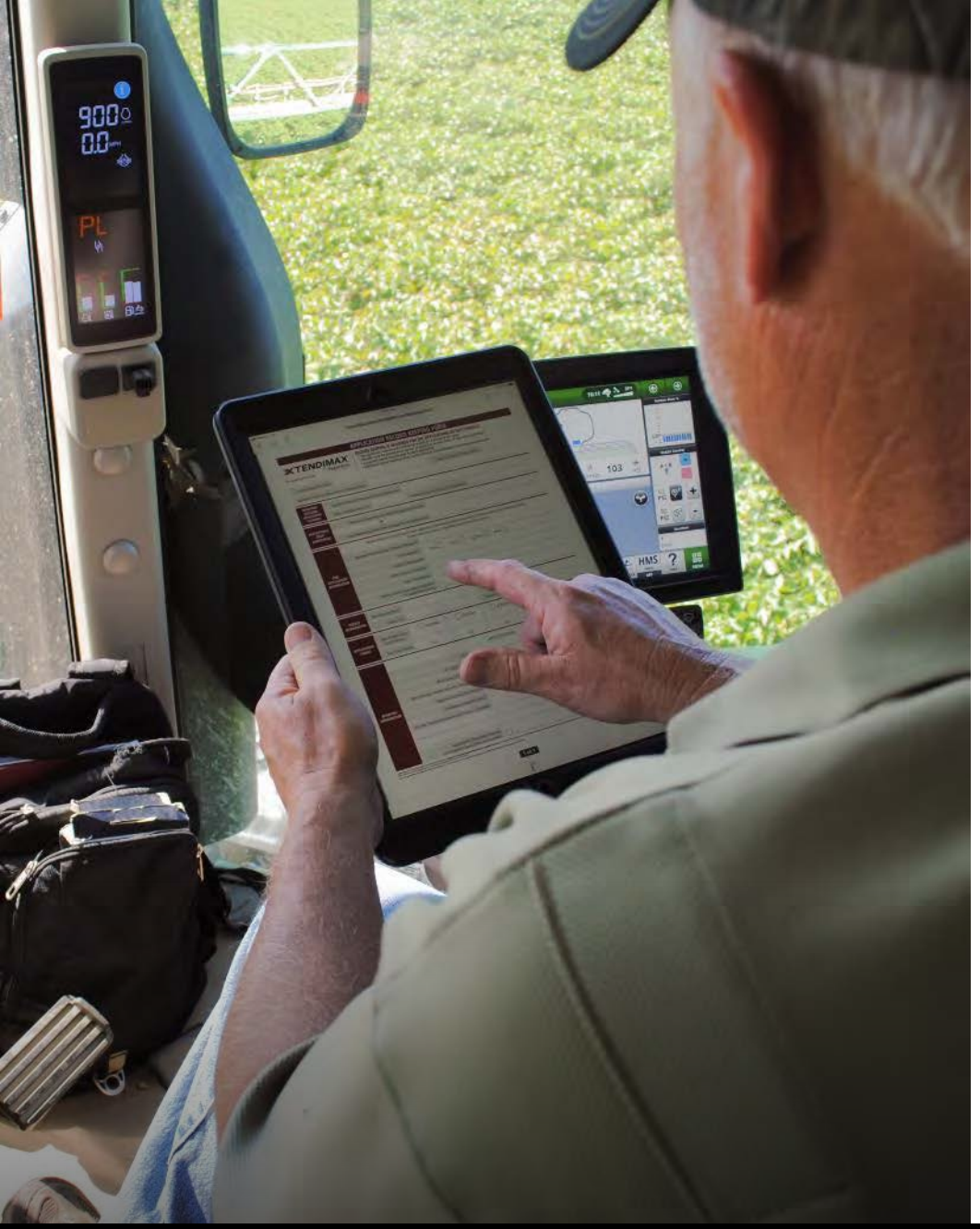
Records must be made available to State Pesticide Control Official(s), USDA and EPA upon request.



RECORD KEEPING 4.2

CROP PLANTING DATE

SENSITIVE CROP AWARENESS

Name of Sensitive Crop Registry and Date Consulted

AND

Survey and Document Adjacent Crops/Areas with Date Completed

BUFFER DISTANCE CALCULATIONS

RESTRICTIONS

6.1

HIGHLIGHTED LABEL RESTRICTIONS

DO NOT APPLY THIS PRODUCT:

Aerially

Through any type of irrigation equipment. Do not treat irrigation ditches or water used for crop irrigation or domestic purposes.

DO NOT TANK MIX WITH:

Products containing ammonium salts such as ammonium sulfate (AMS) and urea ammonium nitrate.

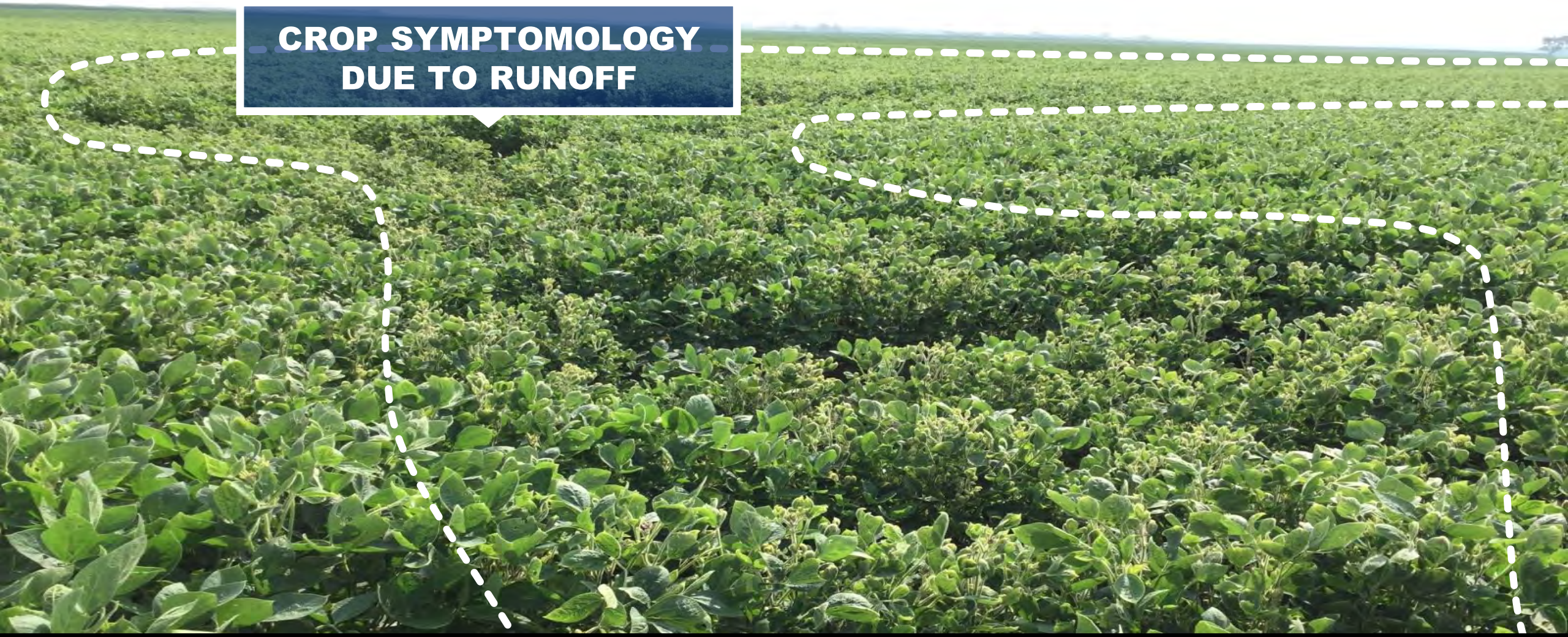
DO NOT MAKE APPLICATION:

If rain that may exceed soil field capacity and result in soil runoff is expected in the next 24 hours.

(For prevention for potential water runoff when excessive rain may occur)

RESTRICTIONS

SURFACE RUNOFF CAN RESULT IN SENSITIVE CROP SYMPTOMOLOGY



WEED RESISTANCE MANAGEMENT

7

PRINCIPLES

WEED RESISTANCE MANAGEMENT

Weed control should not be aimed only at minimizing crop loss in a single crop year

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Long-term strategies necessary to prevent development of herbicide resistance

PRINCIPLES

WEED RESISTANCE MANAGEMENT

Your field history may determine necessary steps toward successful management

Existing resistance

Crop rotation allows for rotating chemical control options

PRINCIPLES

WEED RESISTANCE MANAGEMENT

- Competitive crop
- Cultural practices
- Proper scouting
- Effective chemical application
- Systems approach

CULTURAL PRACTICES

ADOPTING SYSTEMS APPROACH

Manage for healthy and competitive crop

Appropriate row spacing to achieve canopy closure

Crop rotation

Cover crops

Tillage as appropriate

CULTURAL PRACTICES

ADOPTING SYSTEMS APPROACH

Manage for healthy and competitive crop

Appropriate row spacing to achieve canopy closure

Crop rotation

Cover crops

Tillage as appropriate

Cover crops provided multiple benefits, including weed management, in this field.

PRINCIPLES

WEED RESISTANCE MANAGEMENT

Before application, ensure proper tank mix and rate

After application, ensure effective control

Ensure effective burndown and activation of residual herbicide for tank mixed residuals

Take ACTION Herbicide-Resistance Management

PRINCIPLES

WEED RESISTANCE MANAGEMENT

Follow up on escaped weeds

Clean equipment before moving to new locations

Hand removal when necessary to prevent weed seed production

PRINCIPLES

WEED RESISTANCE MANAGEMENT

Lifecycle

Emergence patterns

Effective herbicide options

CHEMICAL PRACTICES

ADOPTING SYSTEMS APPROACH

Multiple sites of action that are effective against the most troublesome weeds

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Choosing effective site of action is key

Knowing if herbicide is active preemergence, postemergence, or both is important to understand

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Whenever practical, Multiple Sites of Action should be applied at the same application for PRE and POST weed control

CHEMICAL PRACTICES

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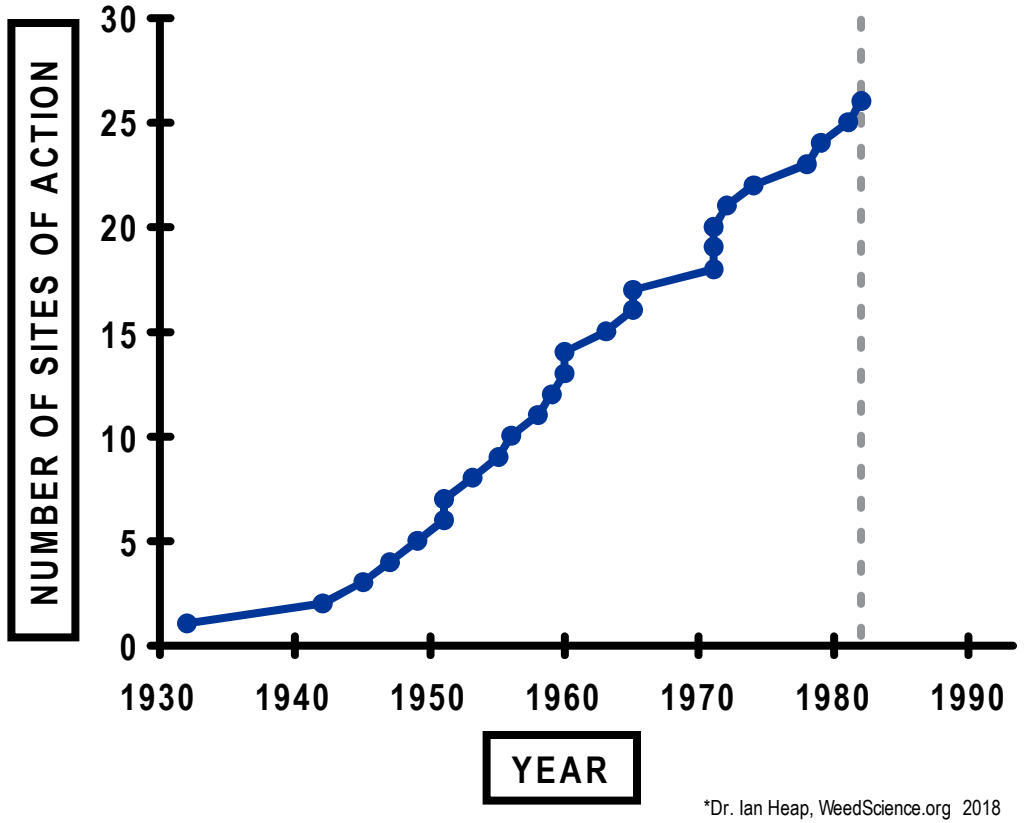
Introduction Time of New Herbicide Sites of Action (HRAC codes)



*Dr. Ian Heap, WeedScience.org 2018

CHEMICAL PRACTICES

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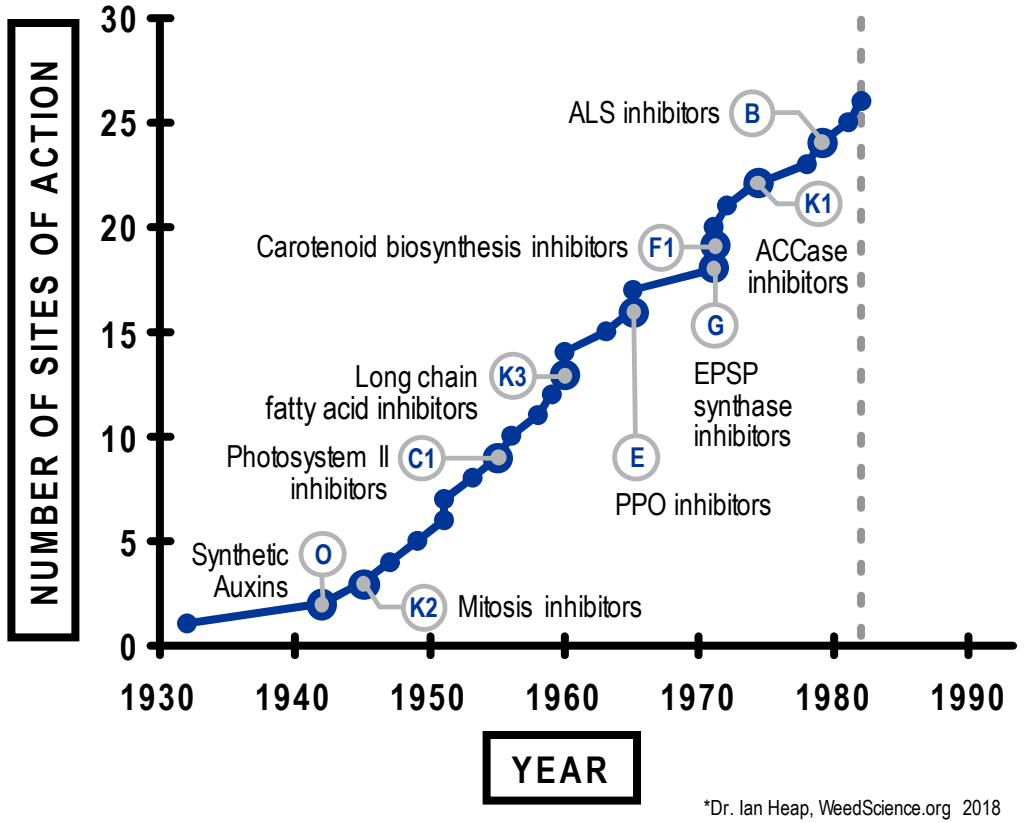

*Dr. Ian Heap, WeedScience.org 2018

WEED EXAMPLES

COMMON RAGWEED

Ambrosia artemisiifolia

SEEDS/PLANT

50K

SITE OF ACTION	1 ACCASE INHIBITORS	2 ALS INHIBITORS	3 MICROTUBULE INHIBITORS	4 SYNTHETIC AUXINS	5 6 7 PHOTOSYSTEM II INHIBITORS	8 LIPID SYNTHESIS INHIBITOR (not ACCase)	9 EPSP SYNTHASE INHIBITOR	10 GLUTAMINE SYNTHETASE INHIBITOR	13 DITERPENE BIOSYNTHESIS INHIBITOR	14 PPO INHIBITORS	15 LONG-CHAIN FATTY ACID INHIBITORS	22 PHOTOSYSTEM I ELECTRON DIVERTER	27 HPPD INHIBITORS
PRODUCT EXAMPLES (Trade Name®)	Assure II, Select Max	Classic, Pursuit	Prowl H_2O, Treflan	2,4-D, Clarity®, quinclorac	atrazine, metribuzin, Basagran, Linex	Far-Go	Roundup, (glyphosate)	Liberty®	Command	Flexstar, Cobra®	Dual, Harness	Gramoxone®, (paraquat)	Callisto, Laudis

WEED EXAMPLES

COMMON RAGWEED

Ambrosia artemisiifolia

SEEDS/PLANT

50K

SITE OF ACTION	1 ACCASE INHIBITORS	2 ALS INHIBITORS	3 MICROTUBULE INHIBITORS	2 ALS INHIBITORS	5 PHOTOSYSTEM II INHIBITORS	9 EPSP SYNTHASE INHIBITOR	14 PPO INHIBITORS	14 PPO INHIBITORS	15 LONG-CHAIN FATTY ACID INHIBITORS	22 PHOTOSYSTEM I ELECTRON DIVERTER	27 HPPD INHIBITORS
PRODUCT EXAMPLES (Trade Name®)	Assure II, Select Max	Classic, Pursuit	Prowl H_2O, Treflan	KNOWN RESISTANCE				Exxstar, Cobra®	Dual, Harness	Gramoxone®, (paraquat)	Callisto, Laudis

TakeACTION Herbicide-Resistance Management

WEED EXAMPLES

COMMON WATERHEMP

Amaranthus rudis

SEEDS/PLANT

250K

SITE OF ACTION	1 ACCASE INHIBITORS	2 ALS INHIBITORS	3 MICROTUBULE INHIBITORS	4 SYNTHETIC AUXINS	5 6 7 PHOTOSYSTEM II INHIBITORS	8 LIPID SYNTHESIS INHIBITOR (not ACCase)	9 EPSP SYNTHASE INHIBITOR	10 GLUTAMINE SYNTHETASE INHIBITOR	13 DITERPENE BIOSYNTHESIS INHIBITOR	14 PPO INHIBITORS	15 LONG-CHAIN FATTY ACID INHIBITORS	22 PHOTOSYSTEM I ELECTRON DIVERTER	27 HPPD INHIBITORS
PRODUCT EXAMPLES (Trade Name®)	Assure II, Select Max	Classic, Pursuit	Prowl H_2O, Treflan	2,4-D, Clarity®, quinclorac	atrazine, metribuzin, Basagran, Linex	Far-Go	Roundup, (glyphosate)	Liberty®	Command	Flexstar, Cobra®	Dual, Harness	Gramoxone®, (paraquat)	Callisto, Laudis

WEED EXAMPLES

COMMON WATERHEMP

Amaranthus rudis

SEEDS/PLANT

250K

SITE OF ACTION	2 ALS INHIBITORS	4 SYNTHETIC AUXINS	5 PHOTOSYSTEM II INHIBITORS	9 EPSP SYNTHASE INHIBITOR	14 PPO INHIBITORS	27 HPPD INHIBITORS
PRODUCT EXAMPLES (Trade Name®)	Assure II, Select Max	Class Pursu			ess	Gramoxone®, (paraquat)	Callisto, Laudis

1 ACCASE INHIBITORS	2 ALS INHIBIT	AIN TORS	22 PHOTOSYSTEM I ELECTRON DIVERTER	27 HPPD INHIBITORS

KNOWN RESISTANCE

Take ACTION Herbicide-Resistance Management

WEED EXAMPLES

PALMER AMARANTH

Amaranthus palmeri

SEEDS/PLANT

600K

SITE OF ACTION	1 ACCASE INHIBITORS	2 ALS INHIBITORS	3 MICROTUBULE INHIBITORS	4 SYNTHETIC AUXINS	5 6 7 PHOTOSYSTEM II INHIBITORS	8 LIPID SYNTHESIS INHIBITOR (not ACCase)	9 EPSP SYNTHASE INHIBITOR	10 GLUTAMINE SYNTHETASE INHIBITOR	13 DITERPENE BIOSYNTHESIS INHIBITOR	14 PPO INHIBITORS	15 LONG-CHAIN FATTY ACID INHIBITORS	22 PHOTOSYSTEM I ELECTRON DIVERTER	27 HPPD INHIBITORS
PRODUCT EXAMPLES (Trade Name®)	Assure II, Select Max	Classic, Pursuit	Prowl H_2O, Treflan	2,4-D, Clarity®, quinclorac	atrazine, metribuzin, Basagran, Linex	Far-Go	Roundup, (glyphosate)	Liberty®	Command	Flexstar, Cobra®	Dual, Harness	Gramoxone®, (paraquat)	Callisto, Laudis

WEED EXAMPLES

PALMER AMARANTH

Amaranthus palmeri

SEEDS/PLANT
600K

SITE OF ACTION	1 ACCASE INHIBITORS	2 ALS INHIBITORS	3 MICROTUBULE INHIBITORS	5 PHOTOSYSTEM II INHIBITORS	9 EPSP SYNTHASE INHIBITOR	14 PPO INHIBITORS	27 HPPD INHIBITORS	22 PHOTOSYSTEM I ELECTRON DIVERTER	27 HPPD INHIBITORS
PRODUCT EXAMPLES (Trade Name®)	Assure II, Select Max							Gramoxone®, (paraquat)	Callisto, Laudis
KNOWN RESISTANCE									

WEED EXAMPLES

HORSEWEED

Conyza canadensis

SEEDS/PLANT

200K

SITE OF ACTION	1 ACCASE INHIBITORS	2 ALS INHIBITORS	3 MICROTUBULE INHIBITORS	4 SYNTHETIC AUXINS	5 6 7 PHOTOSYSTEM II INHIBITORS	8 LIPID SYNTHESIS INHIBITOR (not ACCase)	9 EPSP SYNTHASE INHIBITOR	10 GLUTAMINE SYNTHETASE INHIBITOR	13 DITERPENE BIOSYNTHESIS INHIBITOR	14 PPO INHIBITORS	15 LONG-CHAIN FATTY ACID INHIBITORS	22 PHOTOSYSTEM I ELECTRON DIVERTER	27 HPPD INHIBITORS
PRODUCT EXAMPLES (Trade Name®)	Assure II, Select Max	Classic, Pursuit	Prowl H_2O, Treflan	2,4-D, Clarity®, quinclorac	atrazine, metribuzin, Basagran, Linex	Far-Go	Roundup, (glyphosate)	Liberty®	Command	Flexstar, Cobra®	Dual, Harness	Gramoxone®, (paraquat)	Callisto, Laudis

WEED EXAMPLES

HORSEWEED

Conyza canadensis

SEEDS/PLANT

200K

SITE OF ACTION	1 ACCASE INHIBITORS	2 ALS INHIBITORS	3 MICROT INHIBIT	2 ALS INHIBITORS	5 7 PHOTOSYSTEM II INHIBITORS	9 EPSP SYNTHASE INHIBITOR	22 PHOTOSYSTEM I ELECTRON DIVERTER	15 LONG-CHAIN FATTY ACID INHIBITORS	22 PHOTOSYSTEM I ELECTRON DIVERTER	27 HPPD INHIBITORS
PRODUCT EXAMPLES (Trade Name®)	Assure II, Select Max	Classic, Pursuit	Prowl Trefl	KNOWN RESISTANCE				Dual, Harness	Gramoxone®, (paraquat)	Callisto, Laudis

WEED EXAMPLES

KOCHIA

Kochia scoparia

SEEDS/PLANT

30K

SITE OF ACTION	1 ACCASE INHIBITORS	2 ALS INHIBITORS	3 MICROTUBULE INHIBITORS	4 SYNTHETIC AUXINS	5 6 7 PHOTOSYSTEM II INHIBITORS	8 LIPID SYNTHESIS INHIBITOR (not ACCase)	9 EPSP SYNTHASE INHIBITOR	10 GLUTAMINE SYNTHETASE INHIBITOR	13 DITERPENE BIOSYNTHESIS INHIBITOR	14 PPO INHIBITORS	15 LONG-CHAIN FATTY ACID INHIBITORS	22 PHOTOSYSTEM I ELECTRON DIVERTER	27 HPPD INHIBITORS
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WEED EXAMPLES

KOCHIA

Kochia scoparia

SEEDS/PLANT

30K

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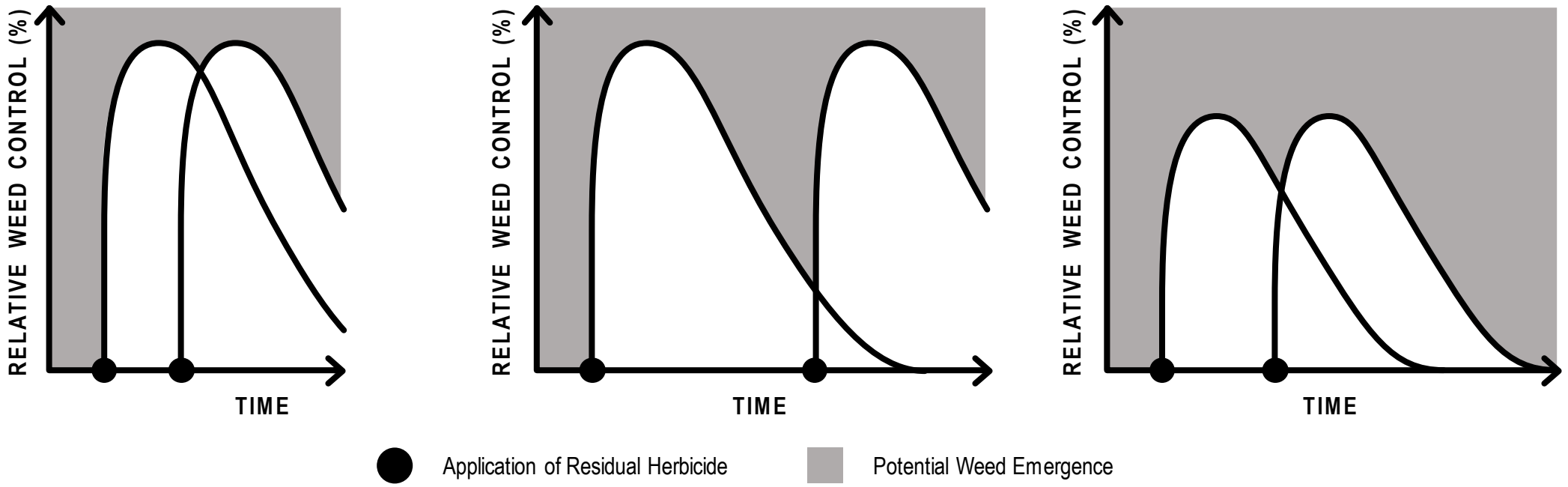
Take ACTION Herbicide-Resistance Management

ADOPTING SYSTEMS APPROACH

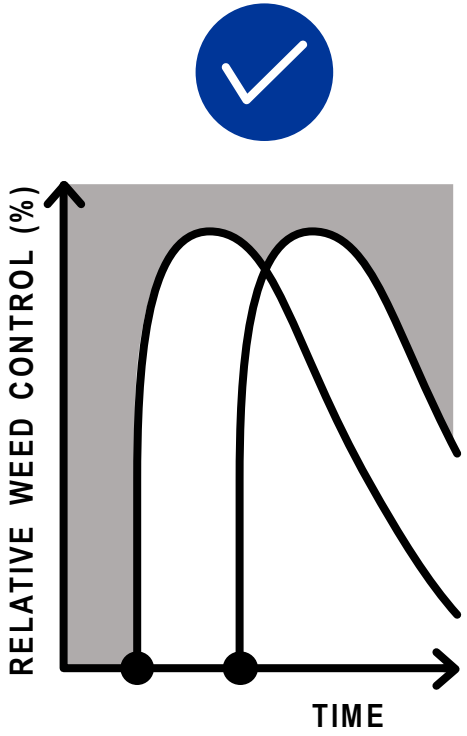
WEED RESISTANCE MANAGEMENT



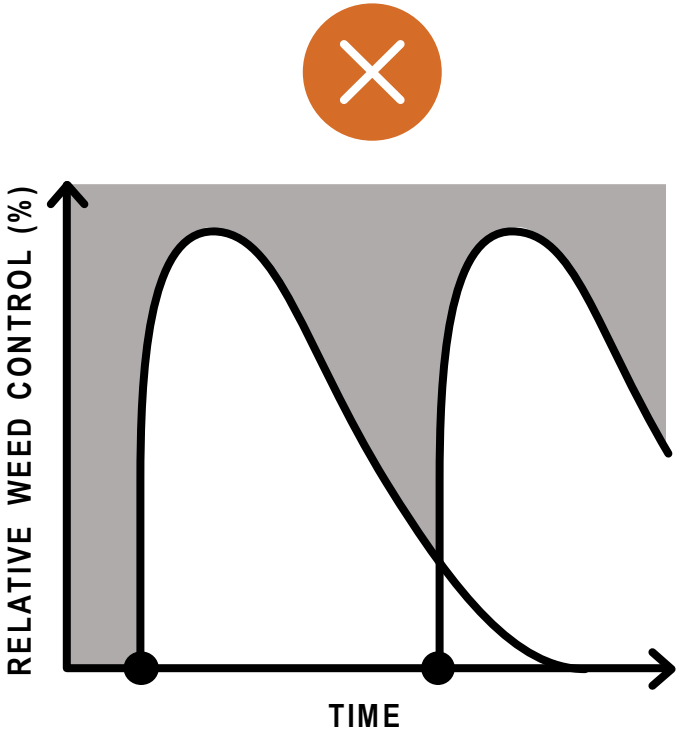
ADOPTING SYSTEMS APPROACH

WEED RESISTANCE MANAGEMENT

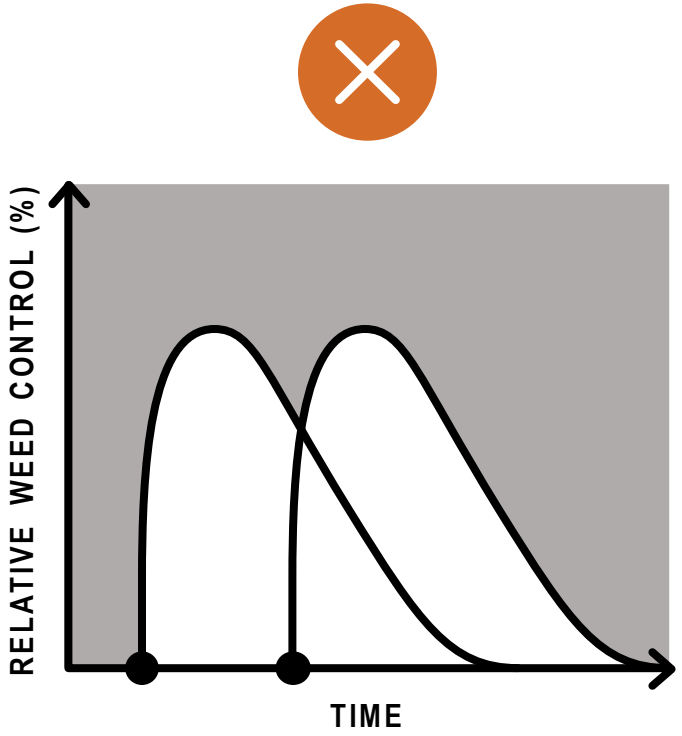
Overlapping residual herbicides



Failure to overlap leaves a window for weed emergence



Low rates or improper residual herbicide selection leaves a window for weed emergence



Application of Residual Herbicide

Potential Weed Emergence

APPLICATIONS OF LOW-VOLATILITY FORMULATIONS OF DICAMBA

WEED RESISTANCE MANAGEMENT

Use **LABELED RATE*** for in-crop applications (0.5 lb ae/A)

BRAND	RATE
XtendiMax® herbicide with VaporGrip® Technology **(Monsanto)**	**22 fl oz/A**
Engenia® Herbicide **(BASF)**	**12.8 fl oz/A**
DuPont™ FeXapan™ herbicide Plus VaporGrip® Technology	**22 fl oz/A**

* In-crop labeled rate

Consider **ENVIRONMENTAL FACTORS** for applications

4 hour rainfast period

Drought and cold stress can reduce effectiveness

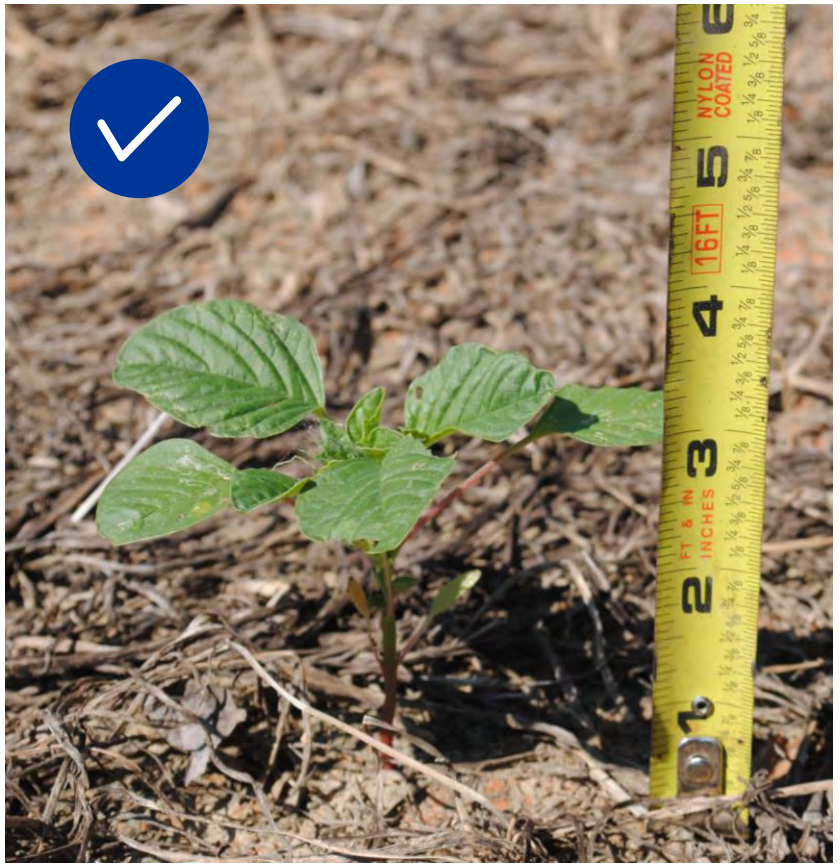
Spray while weeds are actively growing

EFFECTIVE APPLICATIONS

WEED HEIGHT

EFFECTIVE APPLICATIONS

WEED HEIGHT



FOR BEST RESULTS, SPRAY WEEDS THAT ARE 4 INCHES OR SHORTER

APPLICATIONS OF LOW-VOLATILITY FORMULATIONS OF DICAMBA

WEED RESISTANCE MANAGEMENT

When you observe lack of control of weed species that should have been controlled by herbicide application

Check your specific product label for contact information or consult your local retailers. Report any incidence of non-performance of this product against a particular weed species to your retailer or company representative.

XtendiMax	FeXapan	Engenia
1-844-RRXTEND	1-800-922-2368	engeniaquestions.com
roundupreadyxtend.com	dupont.com	

*Above subject to change with new labels

EXAMPLE OF GOOD WEED MANAGEMENT SYSTEM

ROUNDUP READY 2 XTEND® SOYBEANS*

Soybean

TIMING	PRACTICE	EXAMPLE RECOMMENDATION**
Before Planting	Burndown or Start Clean with Tillage	Roundup PowerMAX® Herbicide (32 oz) + XtendiMax® herbicide with VaporGrip® Technology (22-44 oz) + labeled Drift Reducing Adjuvant (DRA)
At Planting	Pre	Valor® SX Herbicide (2 oz), Valor® XLT Herbicide (3 oz), Fierce® Herbicide (3 oz) or Warrant® Herbicide (3-4 pt) + metribuzin (0.25 lb)
Post 1 Over-the-top	Post 1 < 4" weeds and within 20-30 days after PRE Application	Roundup PowerMAX® Herbicide (32 oz) + XtendiMax® herbicide with VaporGrip® Technology (22 oz) + labeled DRA Warrant® Herbicide (3-4 pt) or Warrant® Ultra Herbicide (50 oz)
Post 2 Over-the-top	Post 2 Prior to R6 growth stage	Cobra® Herbicide (10 oz) + COC (1% v/v) to control any weed escapes prior to R6

*Check with your local dealer or representative or U.S. EPA and your state pesticide regulatory agency for the product registration status and additional restrictions in your state.
**Contact your local retailer, company representative or extension service for specific regional weed management recommendations.

EXAMPLE OF GOOD WEED MANAGEMENT SYSTEM

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EXAMPLE OF GOOD WEED MANAGEMENT SYSTEM

Cotton

COTTON WITH XTENDFLEX® TECHNOLOGY*

TIMING	PRACTICE	EXAMPLE RECOMMENDATION**
Before Planting	Early Burndown or Start Clean with Tillage	Roundup PowerMAX® II Herbicide (32 oz) + 2,4-D (16-32oz) or dicamba (0.25-0.5 lb)
At Planting	Pre	Gramoxone® SL 2.0 Herbicide (2-4 pt) + Warrant® Herbicide (3 pt) + diuron (1.5 pt)
Post	Post 1 < 4" weeds and within 14-18 days after planting	Roundup PowerMAX® II Herbicide (32 oz) + XtendiMax® herbicide with VaporGrip® Technology (22 oz) + Warrant® Herbicide (3 pt) + labeled Drift Reducing Adjuvant (DRA)
Post	Post 2 32-39 days after planting	Roundup PowerMAX® II Herbicide (32 oz) + XtendiMax® herbicide with VaporGrip® Technology (22 oz) + labeled DRA or Liberty® Herbicide (32 oz)
Post	Lay-by hooded sprayer	Diuron (1.5 pt) + Roundup PowerMAX® II Herbicide (32 oz) or MSMA (2 lbs ai)

*Check with your local dealer or representative or U.S. EPA and your state pesticide regulatory agency for the product registration status and additional restrictions in your state.
**Contact your local retailer, company representative or extension service for specific regional weed management recommendations.

EXAMPLE OF GOOD WEED MANAGEMENT SYSTEM

COTTON WITH XTENDFLEX® TECHNOLOGY*

Cotton

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At Planting	Pre	Gramoxone® SL 2.0 Herbicide (2-4 pt) + Warrant® Herbicide (3 pt) + diuron (1.5 pt)
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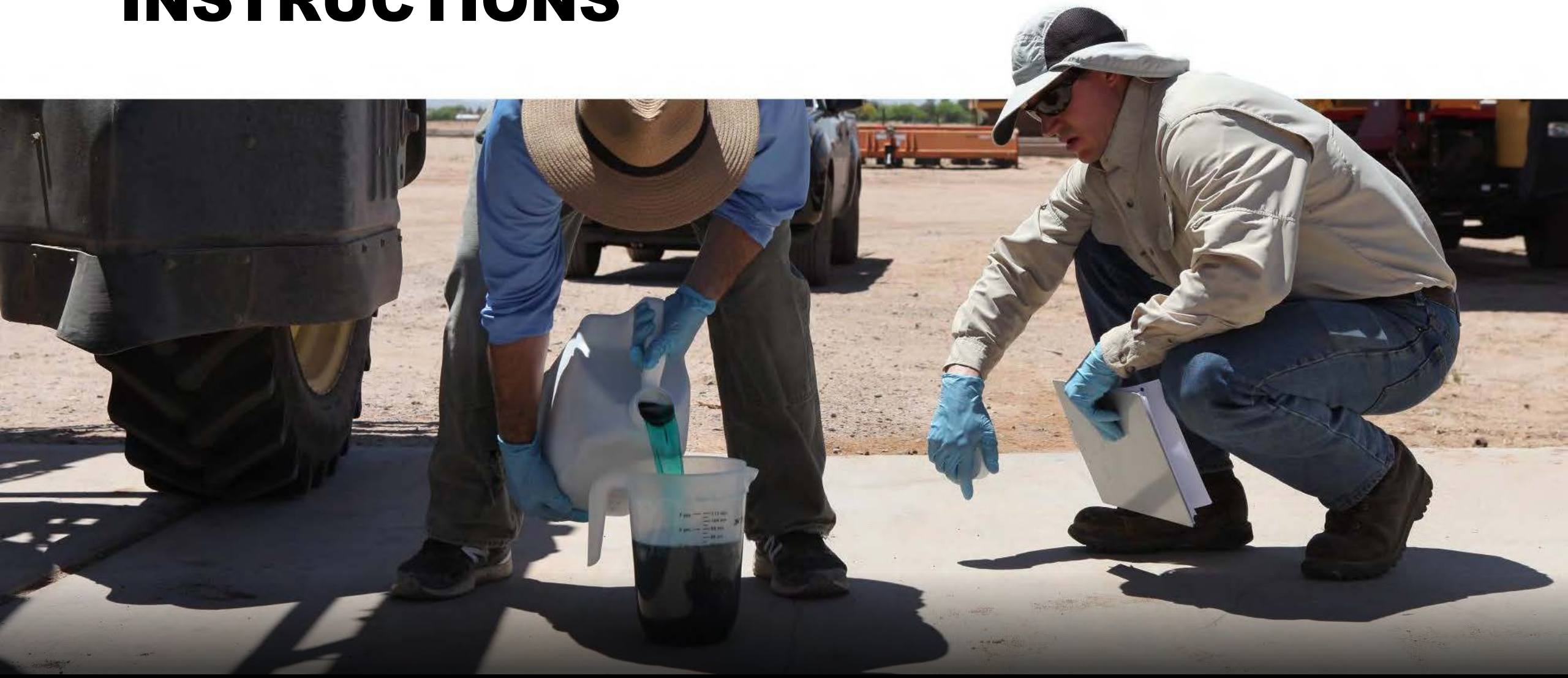
TANK MIXING INSTRUCTIONS

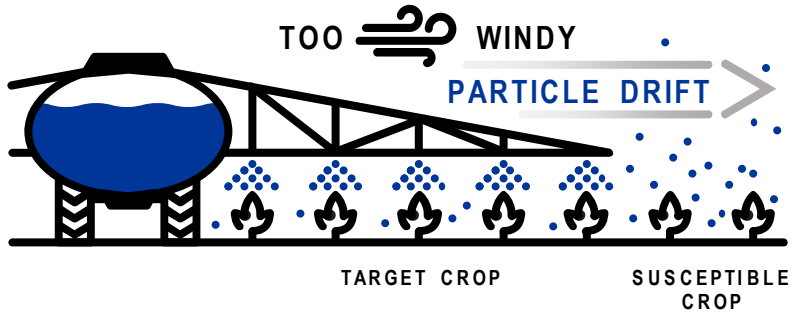
8



OFF-TARGET MOVEMENT*

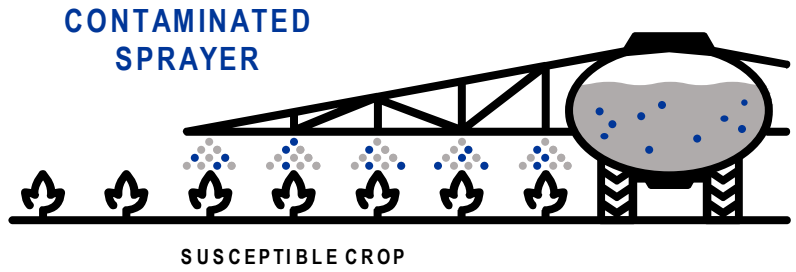
PHYSICAL DRIFT

Physical movement of spray particles **during** spray application



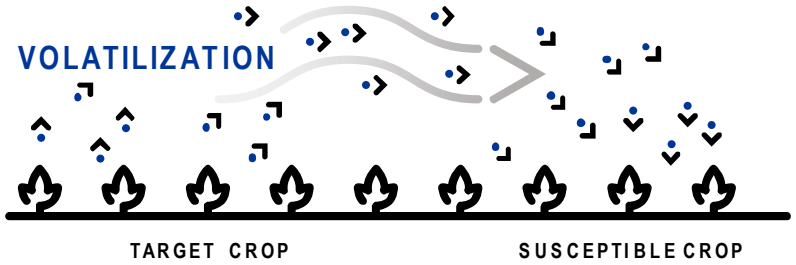
SPRAYER CONTAMINATION

Off-target movement from herbicide residue remaining in sprayer components



VOLATILITY

Movement of a herbicide as a gas or vapor **after** spray application. **Least frequent** form of off-target movement



*Movement through surface runoff or soil is another form of off target movement. Applicators should be aware of weather forecasts and avoid applications if rainfall that may exceed field capacity is expected in the next 24 hours.

TANK MIXING INSTRUCTIONS

TANK-MIX PARTNERS

Use only approved, low-volatility formulations of dicamba

Use only approved herbicides, other pesticides, and additives as tank mix partners which have been found not to adversely affect off-target movement (OTM) potential

Some tank mix partners with dicamba require an approved drift reducing adjuvant (DRA)

Low spray solution pH may increase volatility of dicamba

- Use only approved tank mixes

TANK MIXING INSTRUCTIONS

TANK-MIX PARTNERS

Follow the tank mix order recommended for the specific DRA selected

- Before mixing components, always perform a compatibility jar test

Agitation is recommended following the addition of each component within a tank mix

CONTROL THE CONTROLLABLE

ADDRESSING VOLATILITY

Herbicide volatility is the loss of a portion of the applied pesticide as vapor after application.

Differentiated from particle drift as volatility is **movement of individual molecules of an agent** versus movement of agent trapped in spray droplets.

Vapor loss of the applied pesticide can reduce the residual activity of the herbicide or be a potential source for off-target movement from the application area.

Herbicide formulation influences volatility potential.

Various environmental and agronomic factors as well as composition of the spray solution may influence volatility potential.

A NUMBER OF PESTICIDES WITH HIGH VAPOR PRESSURE ARE SUBJECT TO VOLATILITY UNDER CERTAIN CONDITIONS.

- Most soil/ grain fumigants
- Etridiazole
- Dicamba
- Clopyralid
- 2,4-D Ester
- Clomazone
- Trifluralin

TANK MIXING INSTRUCTIONS

SPRAY SYSTEM EQUIPMENT CLEANOUT

You must ensure that the entire spray system used to mix, load, apply and transfer this product is clean before using this product

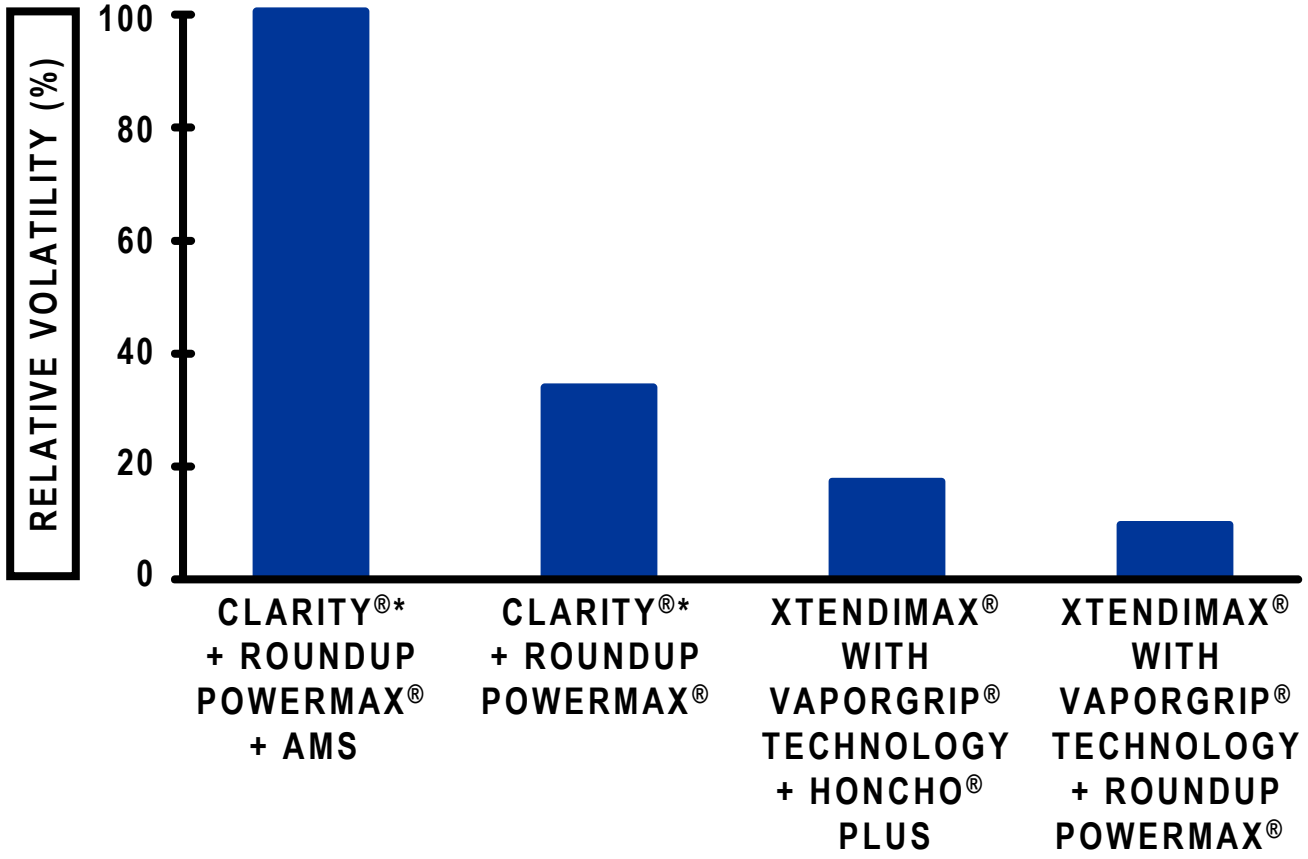
AMMONIUM SULFATE

DO NOT add ammonium sulfate or other acidifying adjuvants to the tank when applying dicamba

> AMS will increase volatility of dicamba even in small amounts

CONTROL THE CONTROLLABLE

VOLATILITY ADDRESSED WITH LOW-VOLATILITY FORMULATIONS AND RESTRICTIONS ON TANK MIXTURES AND ADJUVANTS



Only EPA approved and labeled new low-volatility products are approved for in-crop use in the Roundup Ready® Xtend Crop System.

No other dicamba, or dicamba-containing products are approved for use in the Roundup Ready® Xtend Crop System

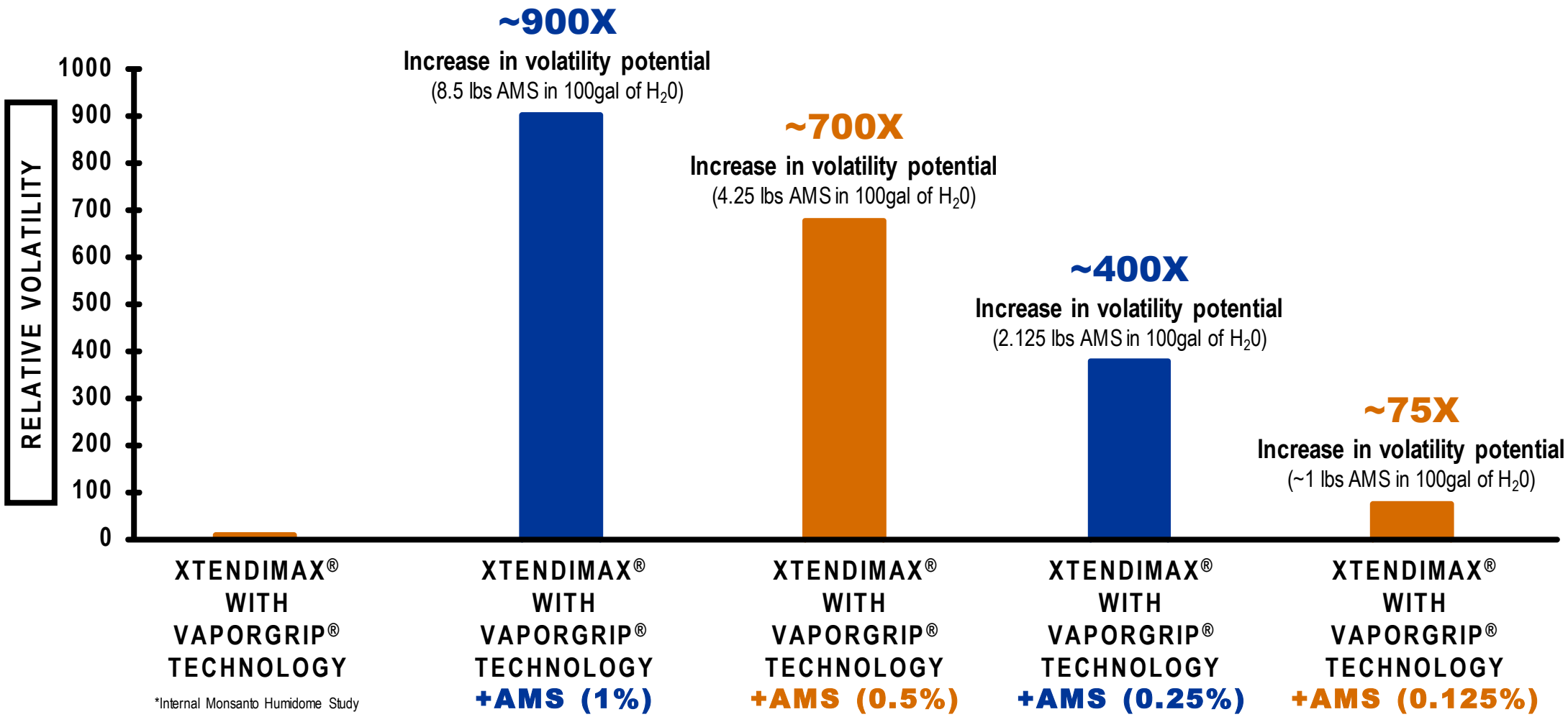
AMS

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

Based on published ASTM humidome methodology | *Clarity® is not approved in the Roundup Ready® Xtend Crop System

CHEMISTRY, MIXING AND HANDLING

AMMONIUM SULFATE CAN SIGNIFICANTLY IMPACT THE VOLATILITY OF XTENDIMAX® HERBICIDE WITH VAPORGRIP® TECHNOLOGY*



*Internal Monsanto Humidome Study

TANK MIXING INSTRUCTIONS

PRODUCT WEBSITES

TANK-MIX PARTNERS

Approved tank mix partners and required DRAs are included at each specific product labeling website

> Applicator must check the list of approved products no more than 7 days before applying

XtendiMax® herbicide with VaporGrip® Technology **(Monsanto)**

xtendimaxapplicationrequirements.com

DuPont™ FeXapan™ herbicide Plus VaporGrip® Technology

fexapanapplicationrequirements.dupont.com

Engenia® Herbicide **(BASF)**

Stewardship: engeniastewardship.com
Tank Mix: engeniatankmix.com

Websites show approved nozzles, pressure ranges, DRA's and tank mixes.

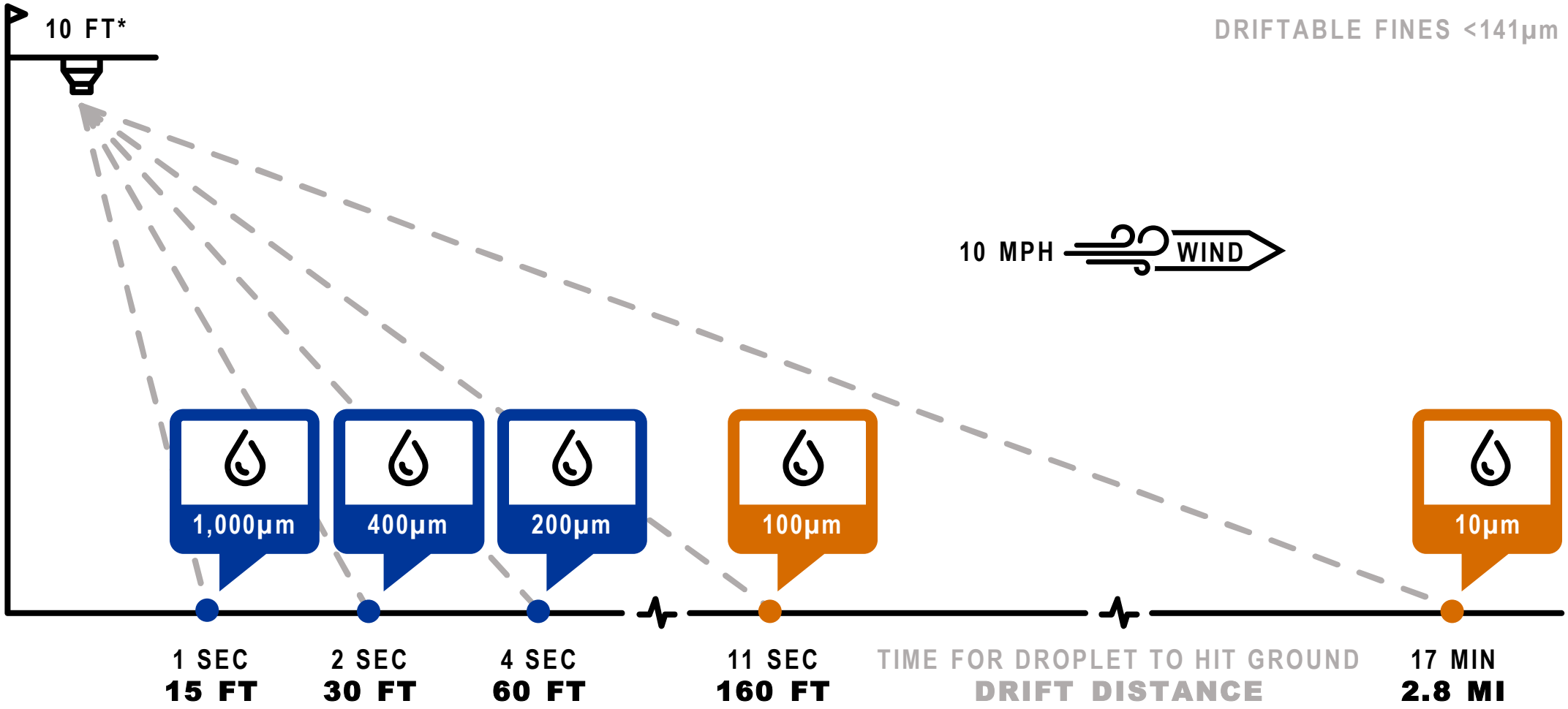
SPRAY DRIFT MANAGEMENT

9.1

Do not allow herbicide solution to mist, drip, drift, or splash onto desirable vegetation because severe injury or destruction to desirable broadleaf plants could result.

CONTROL THE CONTROLLABLE

EFFECT OF DROPLET SIZE OVER FALL OF 10 FEET

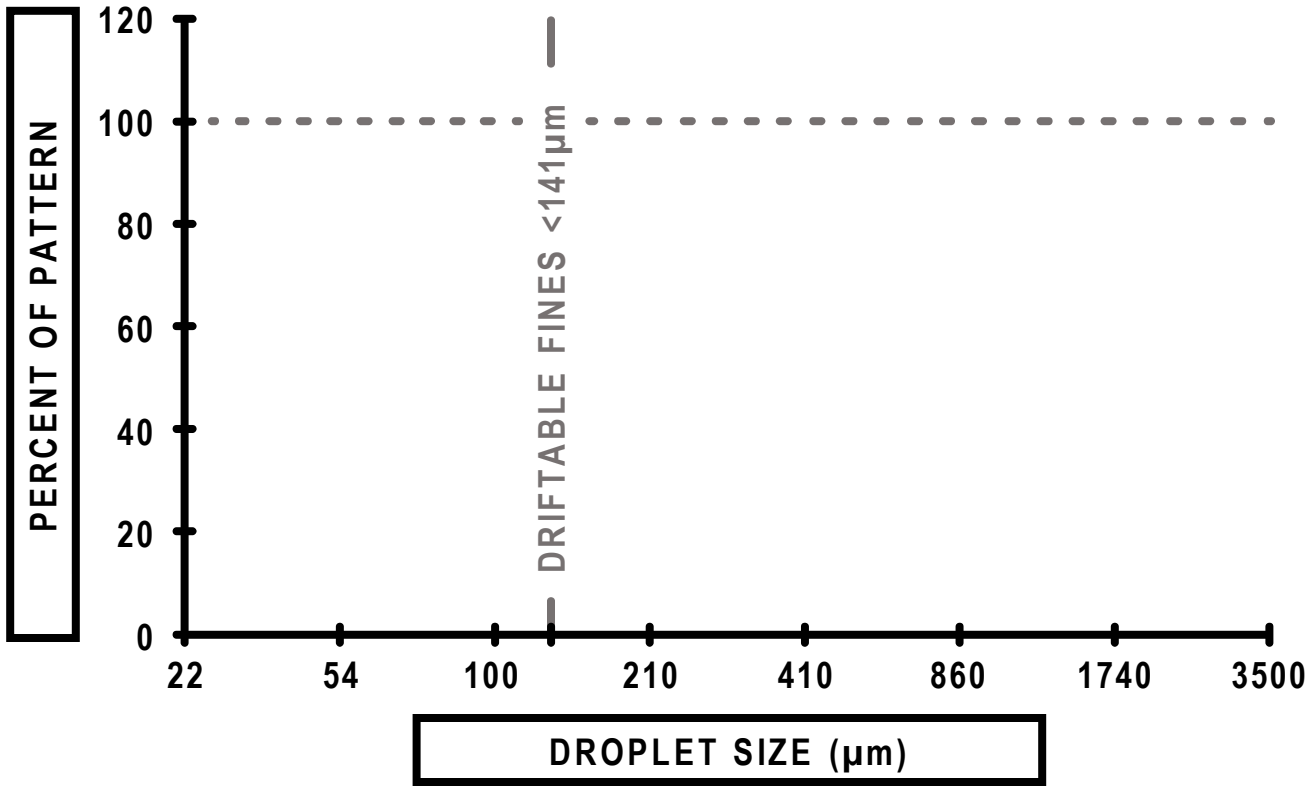


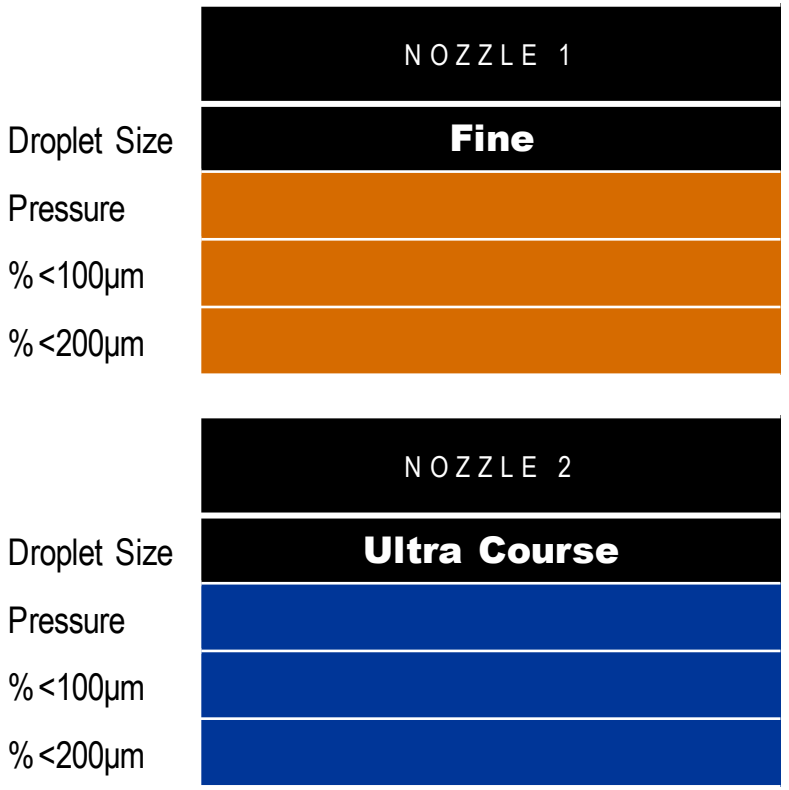
Adapted from: Ross and Lembi, 1985. *Ten foot boom height for illustrative purposes only.

CONTROL THE CONTROLLABLE

PARTICLE DRIFT – NOZZLE SELECTION

Impact of Nozzle and Pressure on Particle Size Distribution





http://pat.cfwebtools.com/

CONTROL THE CONTROLLABLE

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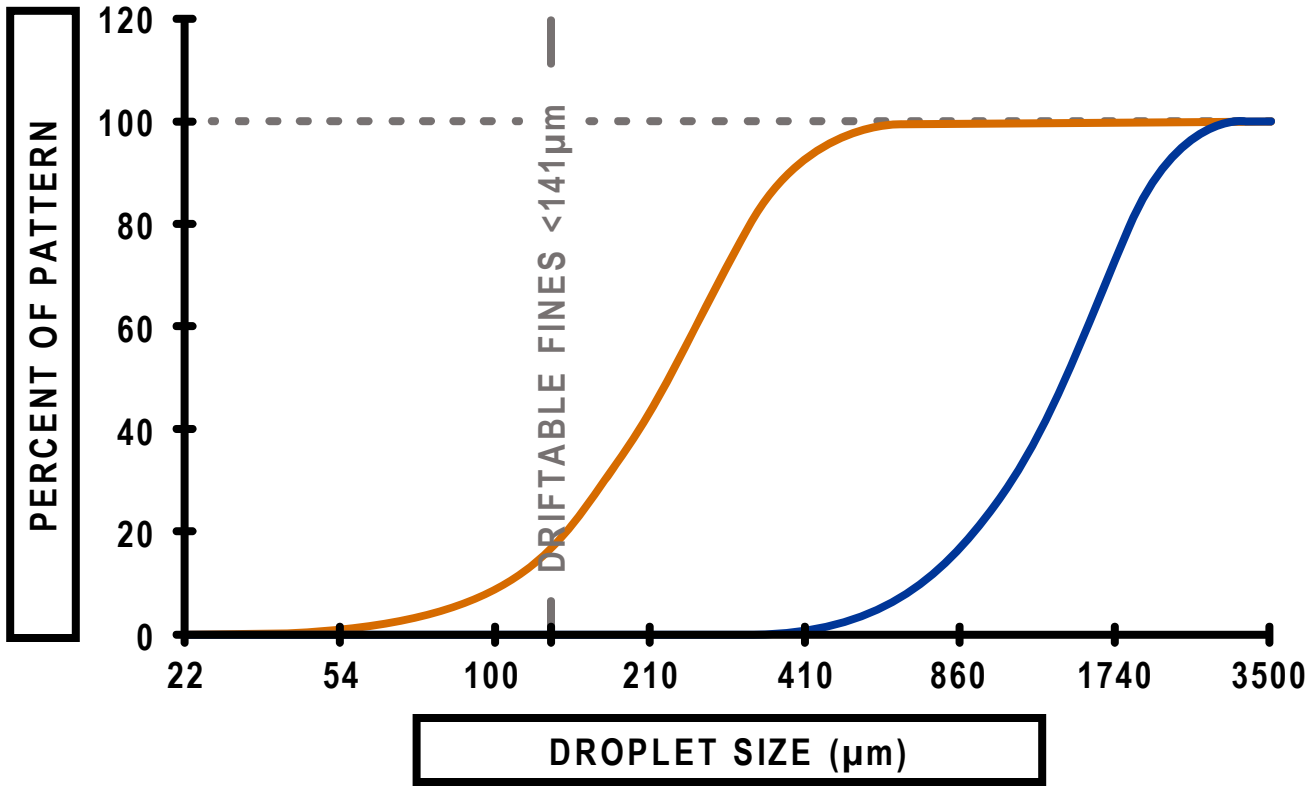

	NOZZLE 1
Droplet Size	Fine
Pressure	40
%<100µm	8.533
%<200µm	38.490

	NOZZLE 2
Droplet Size	Ultra Course
Pressure	40
%<100µm	0.040
%<200µm	1.320

University of Nebraska Lincoln PAT

http://pat.cfwebtools.com/

APPLICATION EQUIPMENT AND TECHNIQUES

NOZZLE SELECTION AND DROPLET SIZE

Consult Product Label for Appropriate Nozzle and Do Not Exceed Recommended Operating Pressure

FINE

MEDIUM

COARSE

ULTRA COARSE

https://pat.unl.edu/research-and-innovation

APPLICATION EQUIPMENT AND TECHNIQUES

NOZZLE SELECTION AND DROPLET SIZE

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FINE

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COARSE

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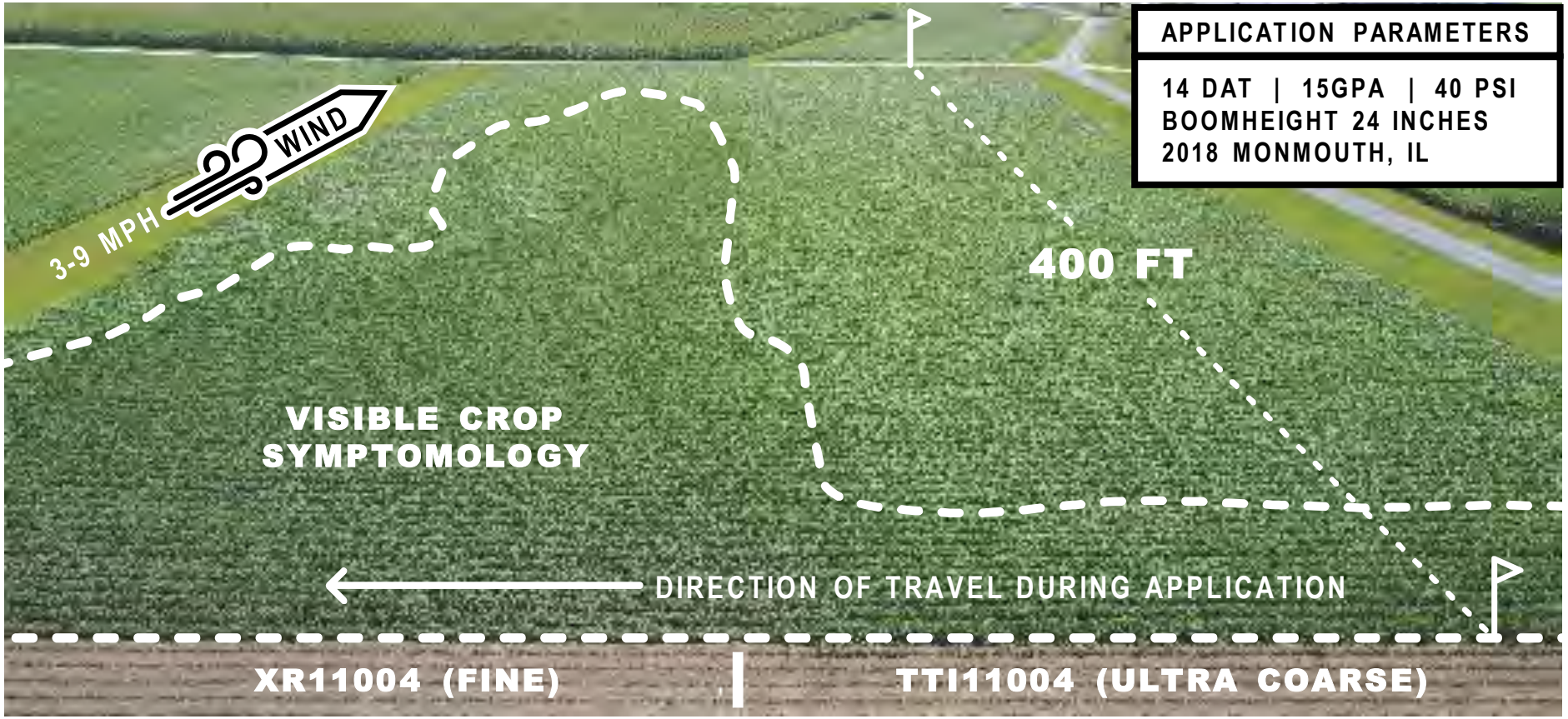
https://pat.unl.edu/research-and-innovation

DEMONSTRATION ON IMPORTANCE OF PROPER NOZZLES

Nozzle Tip Impact on Drift



APPLICATION EQUIPMENT AND TECHNIQUES

UNDERSTANDING REQUIRED NOZZLE MANAGEMENT

ONLY USE
approved nozzles within the pressure ranges listed on the specific product websites

DO NOT USE
any nozzle and pressure combination not specifically listed on the label or the specific product website

*

* Examples of approved nozzles; refer to the specific product website for a complete list of approved nozzles and operating pressures

⚠ Applicators are required to consult specific product website no more than 7 days before application for a complete list of nozzles, DRAs, and other herbicides, pesticides, and additives approved for use with dicamba

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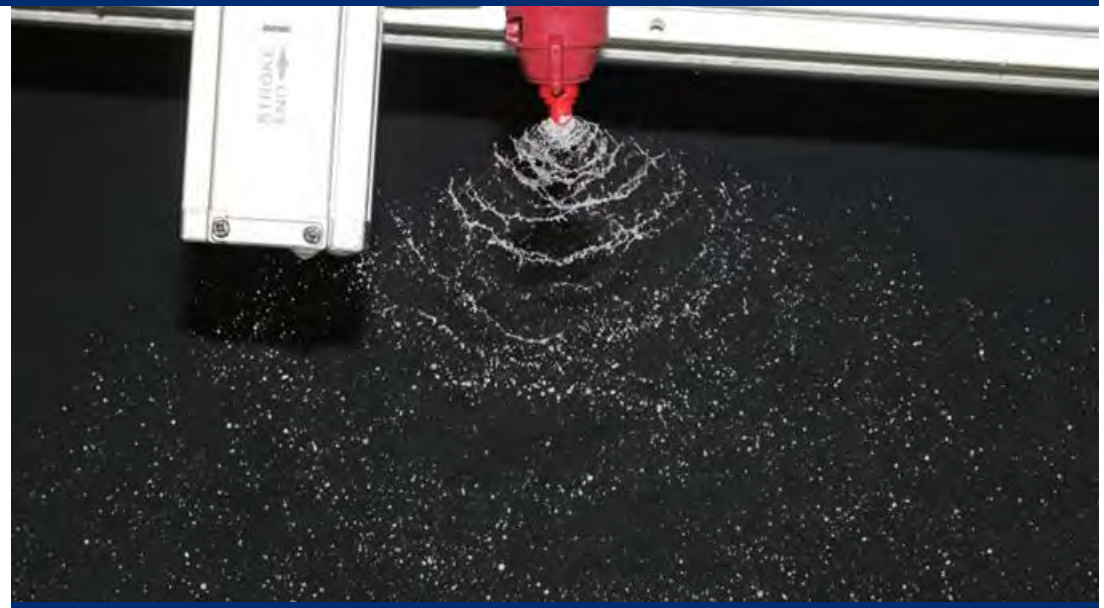
IMPACT OF DRA ON PARTICLE SIZE

1 Include labeled DRA. Failing to include Redbox DRA increases fine particle production and Drift Potential

2 Visually ensure adequate spray pattern within your sprayer set-up for effective weed coverage

TTI11004@ 60 PSI (15 GPA)

Approved Dicamba + Approved Glyphosate
***No required DRA included



Approved Dicamba + Approved Glyphosate
+ Approved DRA (0.5% v/v)

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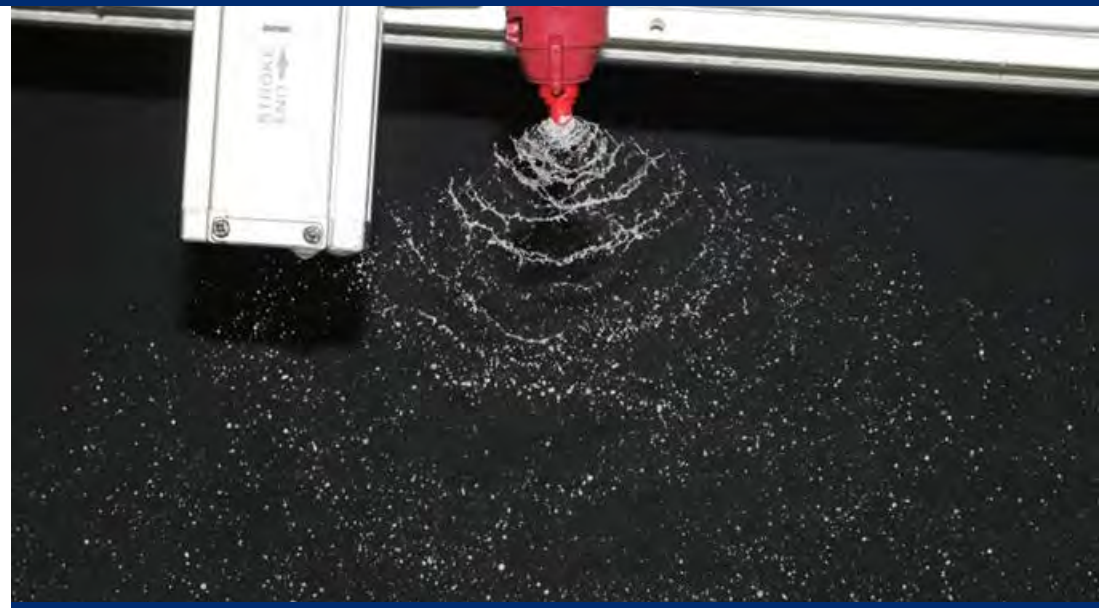

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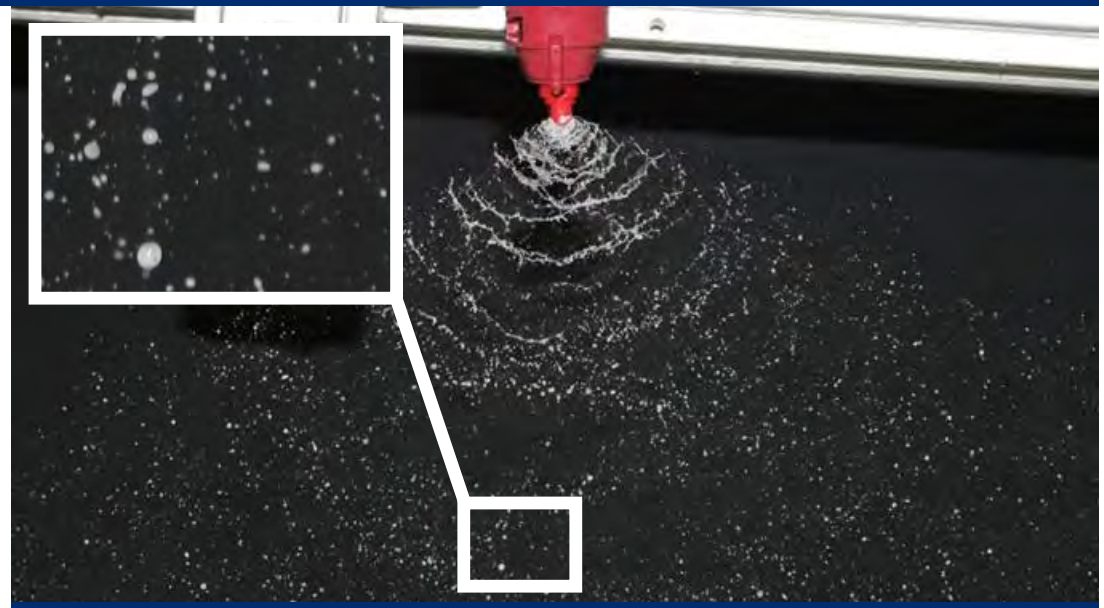

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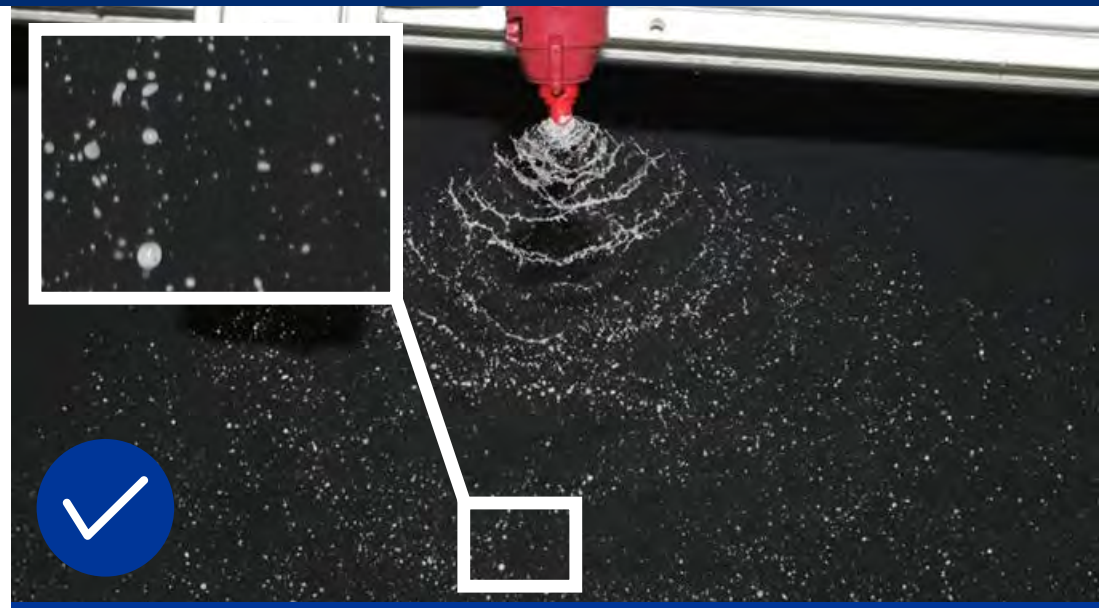

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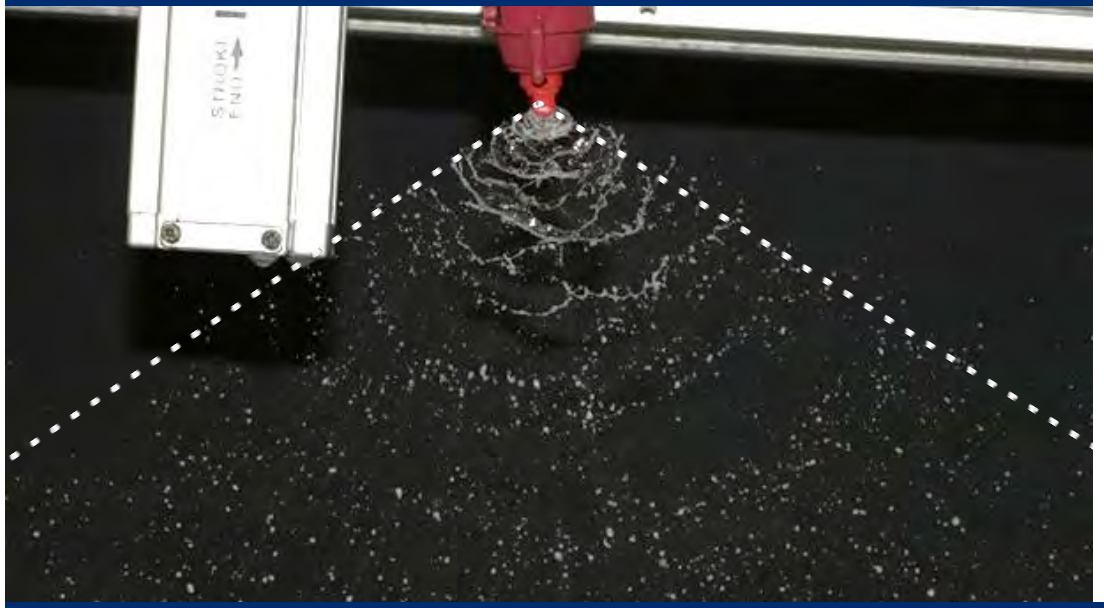
PRESSURE IMPACT ON WEED COVERAGE

SPRAY PRESSURE SHOULD BALANCE WEED COVERAGE AND PRODUCTION OF FINE SPRAY PARTICLES

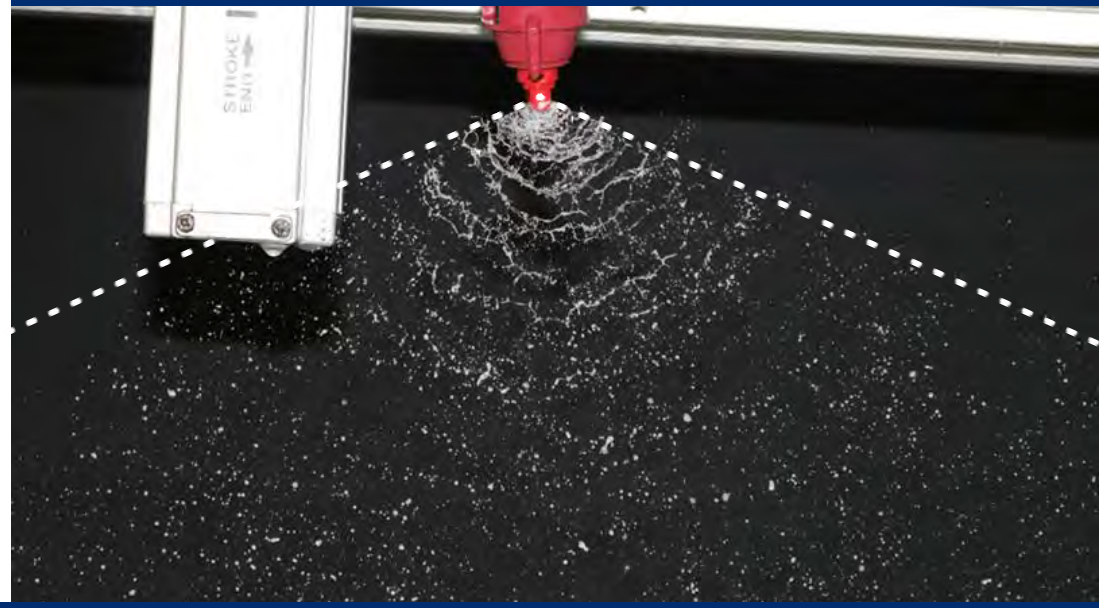
1 Both pressures shown below are within approved range; yet higher PSI improves coverage

2 Ensure appropriate sprayer ground speed and operating pressure

30 PSI - INCOMPLETE PATTERN



60 PSI - FULL PATTERN



Approved Dicamba + Approved Glyphosate + Approved DRA (0.5% v/v)
Applied at 15 GPA

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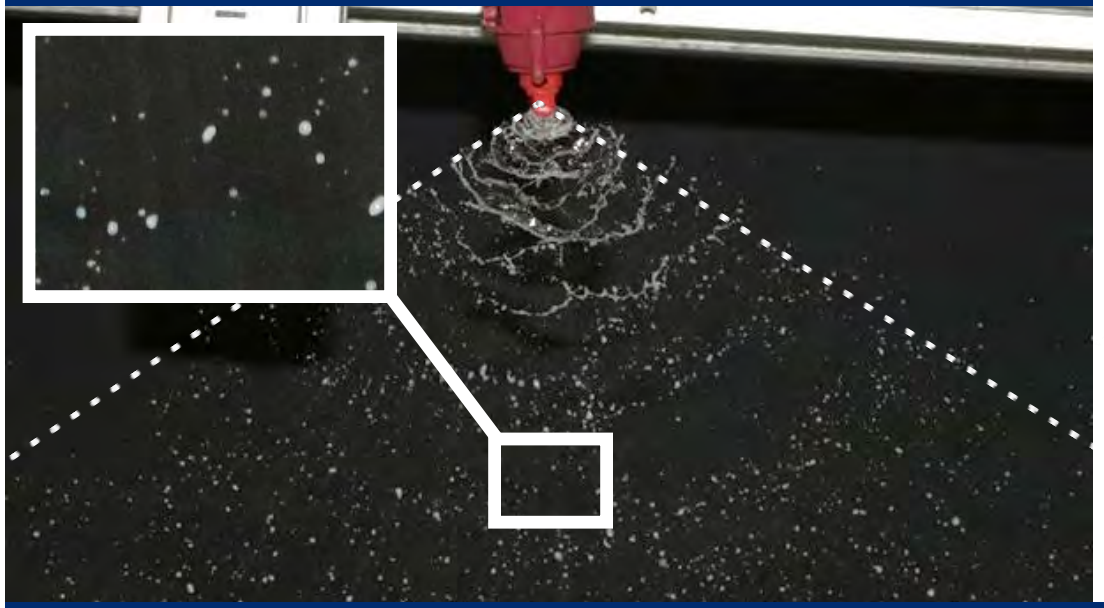

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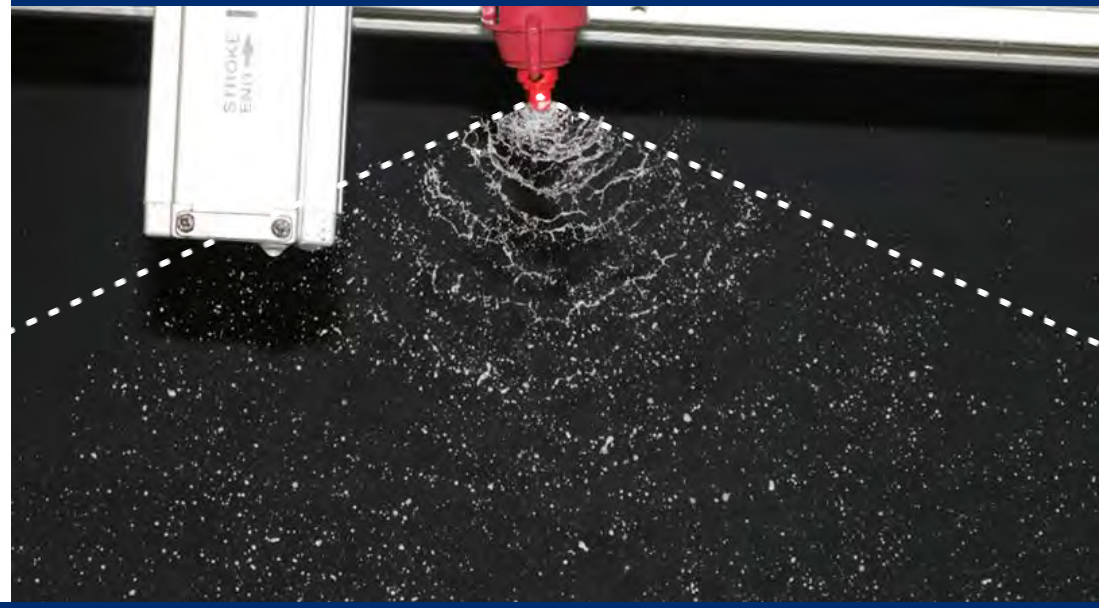

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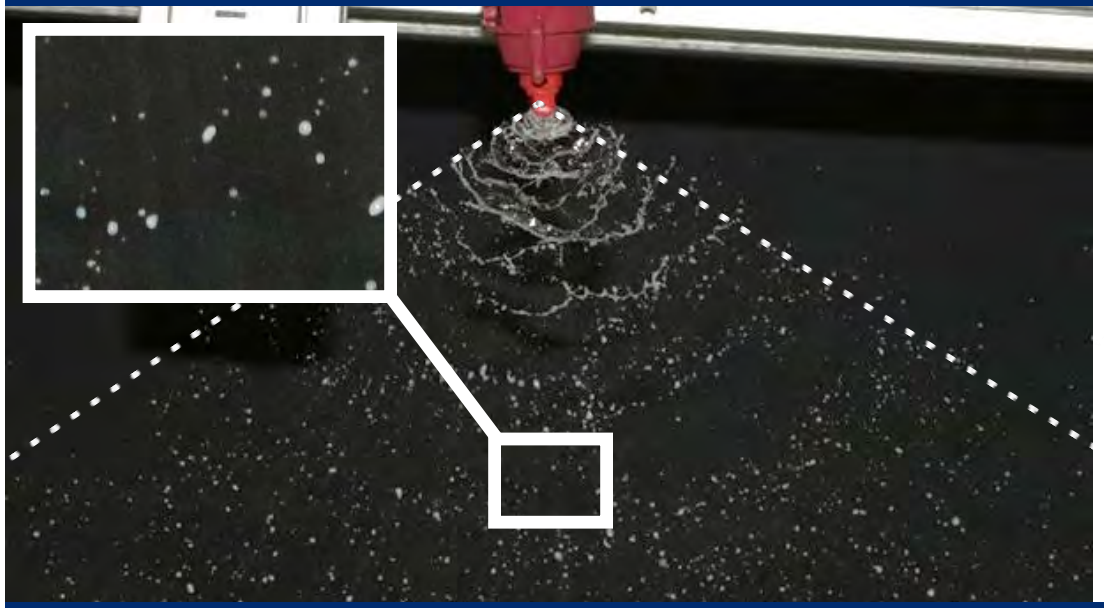

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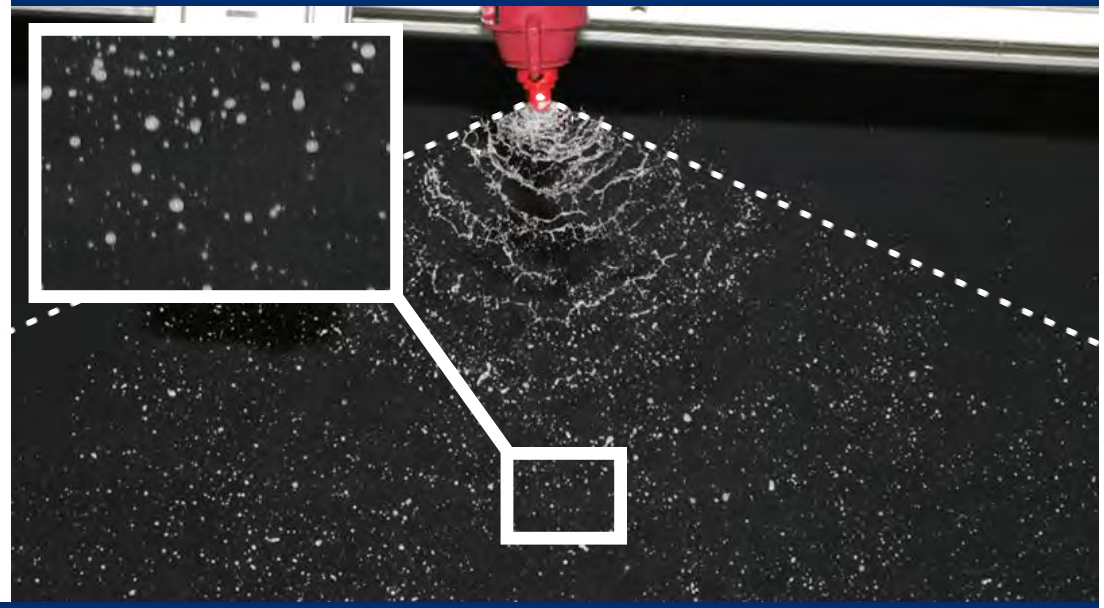

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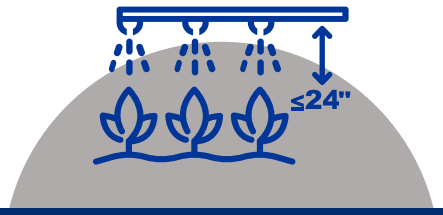
Applied at 15 GPA

APPLICATION EQUIPMENT AND TECHNIQUES

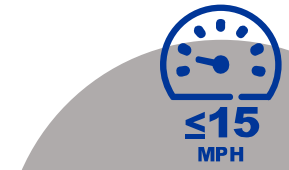


SPRAY BOOM HEIGHT

Keep boom height ≤ 24 inches from target crop or pest canopy

WIND SPEED

Apply when wind speeds are between 3 - 10 mph



GROUND SPEED

Do not exceed a ground speed of 15 mph

Provided the applicator can maintain the required nozzle pressure, it is recommended that tractor speed is reduced to 5 miles per hour at field edges

APPLICATION EQUIPMENT AND TECHNIQUES

BOOM HEIGHT

Product labels restrict boom height.

Be aware of sudden topographical changes.

Boom height sensor automatically adjusts to changes in topography and crop canopy to maintain set boom height.

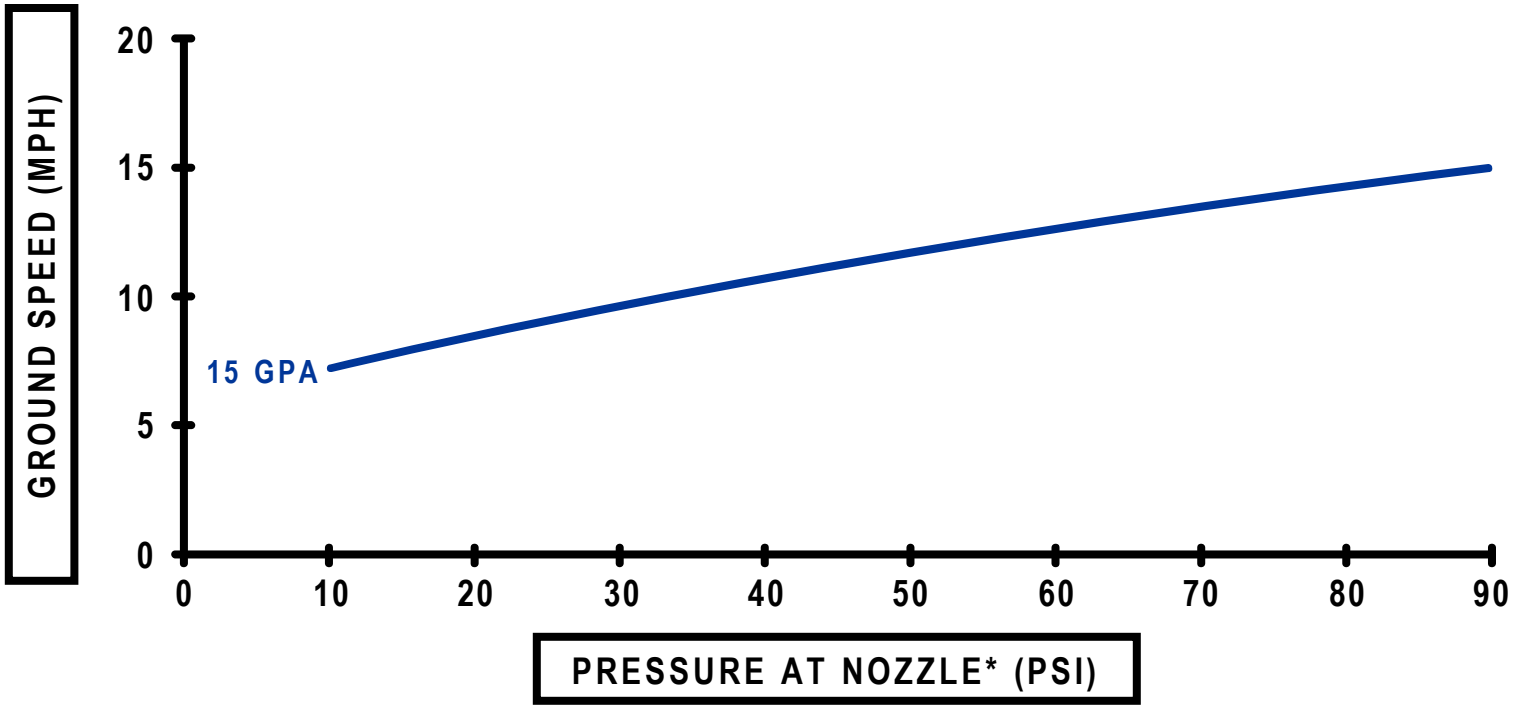
APPLICATION EQUIPMENT AND TECHNIQUES

KEEPING TRACK OF THE WIND SPEED AND DIRECTION

Measure wind speed at boom height with an anemometer.
Recommended 2-minute sustained average. (Federal Aviation Administration, 2012)

APPLICATION EQUIPMENT AND TECHNIQUES

GROUND SPEED



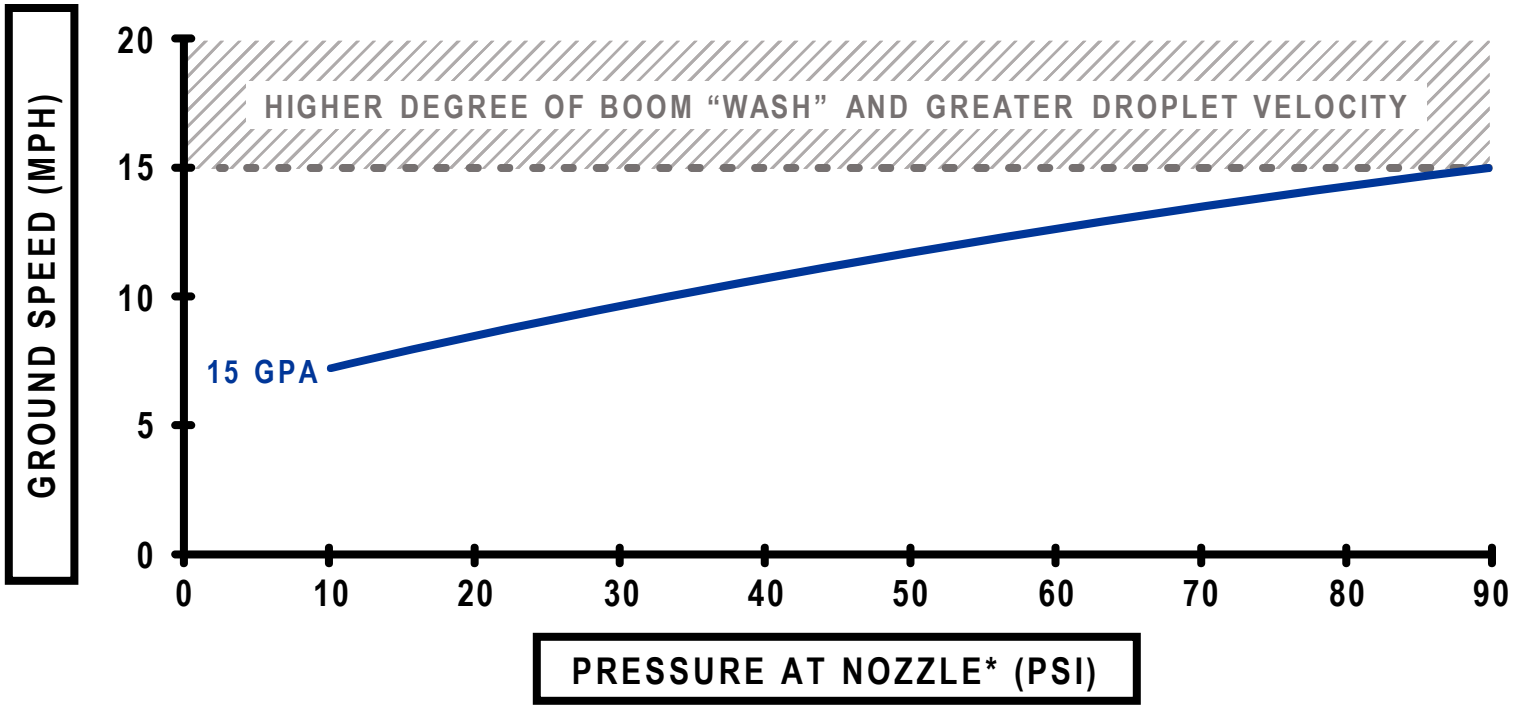
REQUIRED SPEEDS

<15MPH

*Spraying Systems TTI11004

APPLICATION EQUIPMENT AND TECHNIQUES

GROUND SPEED



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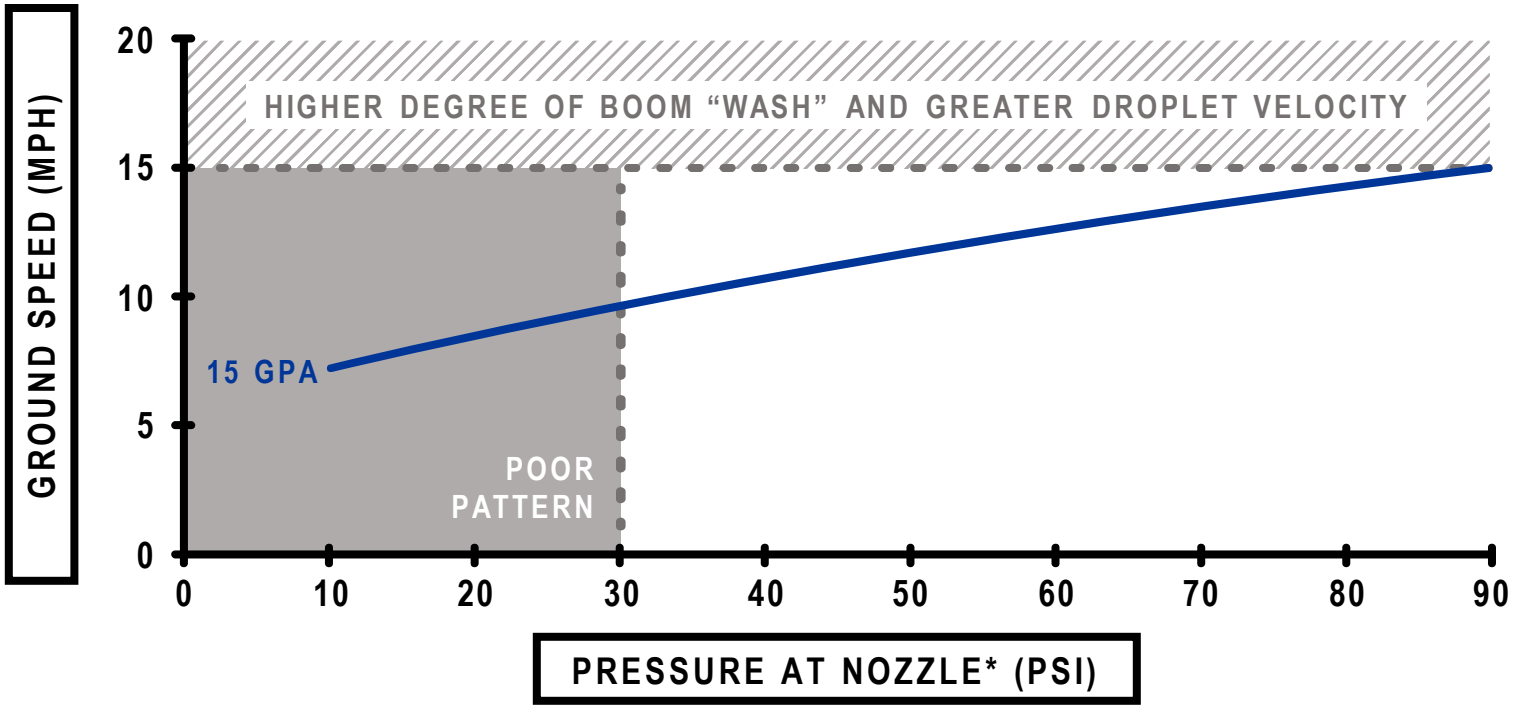
APPLICATION EQUIPMENT AND TECHNIQUES

GROUND SPEED



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APPLICATION EQUIPMENT AND TECHNIQUES

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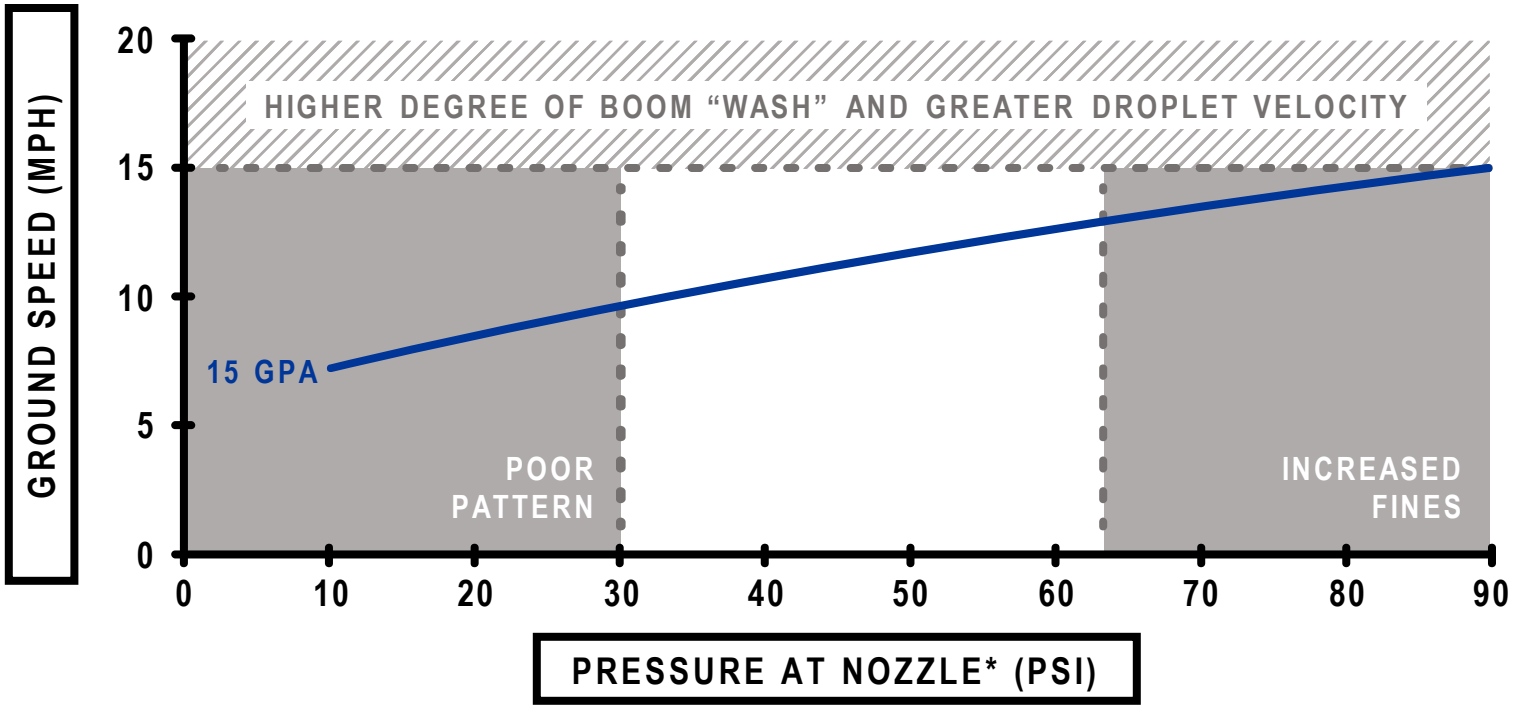

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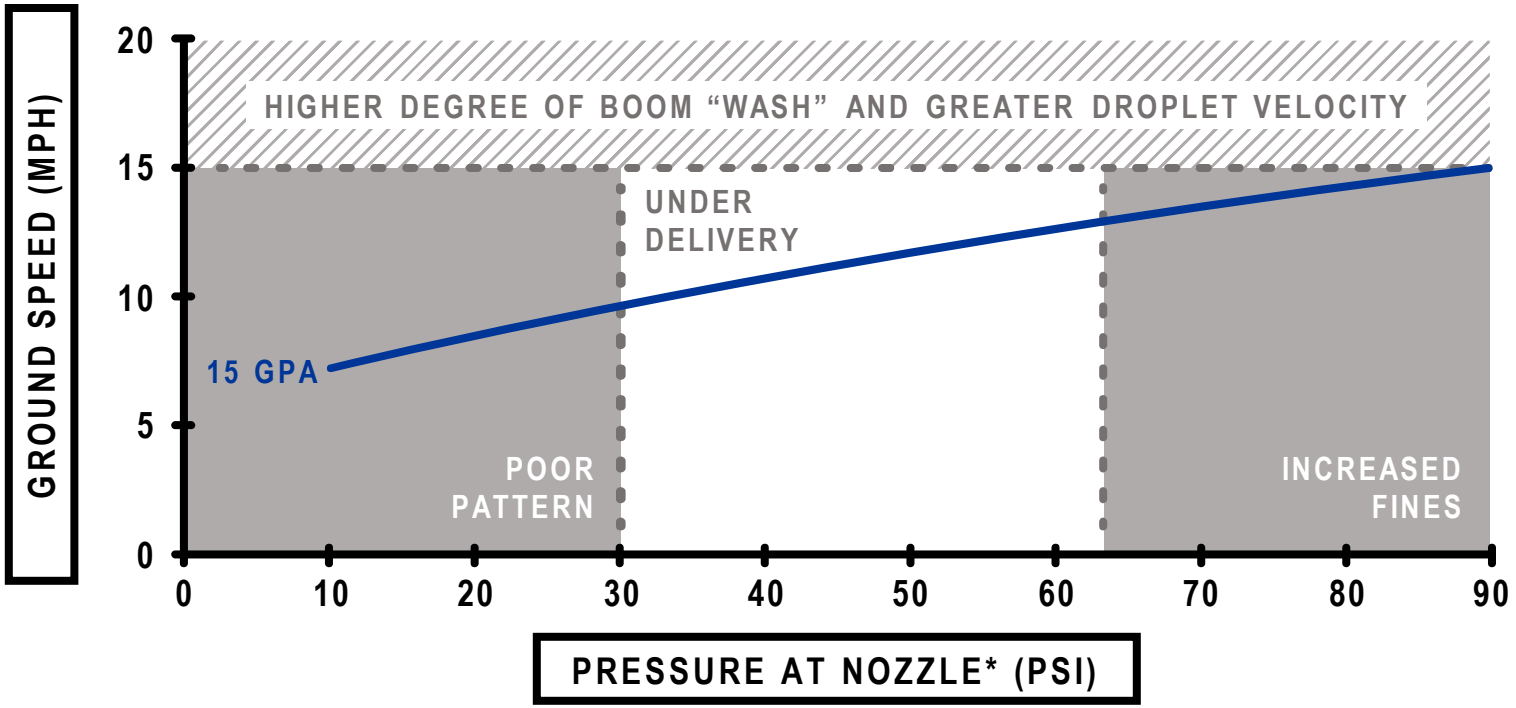
*Spraying Systems TTI11004

APPLICATION EQUIPMENT AND TECHNIQUES

GROUND SPEED



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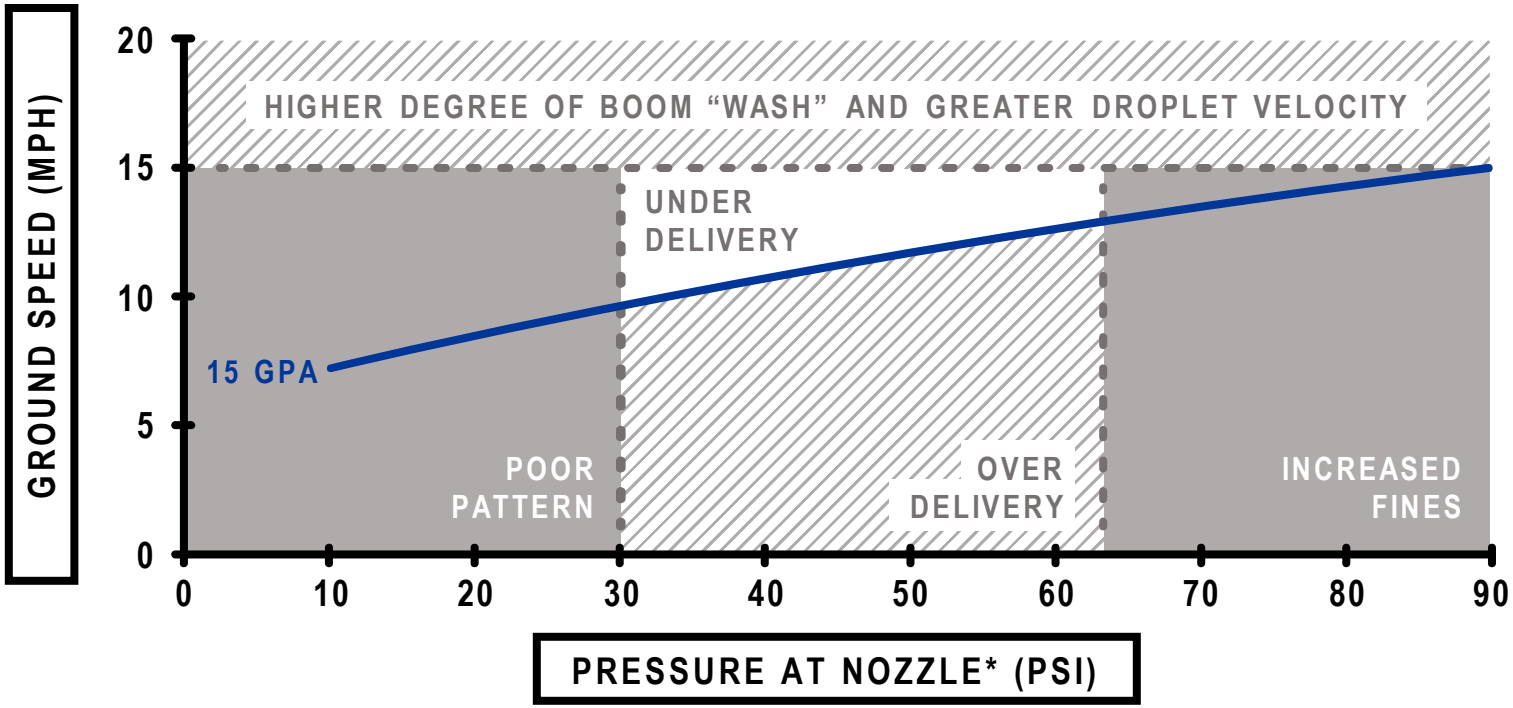
APPLICATION EQUIPMENT AND TECHNIQUES

GROUND SPEED



REQUIRED SPEEDS

<15MPH

*Spraying Systems TTI11004

APPLICATION EQUIPMENT AND TECHNIQUES

SPRAY VOLUME

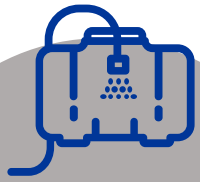
Require minimum 15 gallons of spray solution per acre

TEMPERATURE INVERSION

Do not apply this product during a temperature inversion

APPLICATION TIMING

Apply this product only during the daytime hours beginning **one hour after sunrise up to two hours prior to sunset**



HYGIENE

Failure to properly clean the **entire** system can result in inadvertent contamination of the spray system

TYPICAL CONDITIONS

VERTICAL MIXING OF AIR

11:00 a.m.
4–8 mph winds

TEMPERATURE GRADIENT
AIR COOLS MOVING UPWARD

TEMPERATURE INVERSIONS

INVERSION LAYER NEAR SURFACE

7:15 a.m.
<1 mph winds

A LAYER OF COOL AIR TRAPPED
BELOW A LAYER OF WARMER AIR

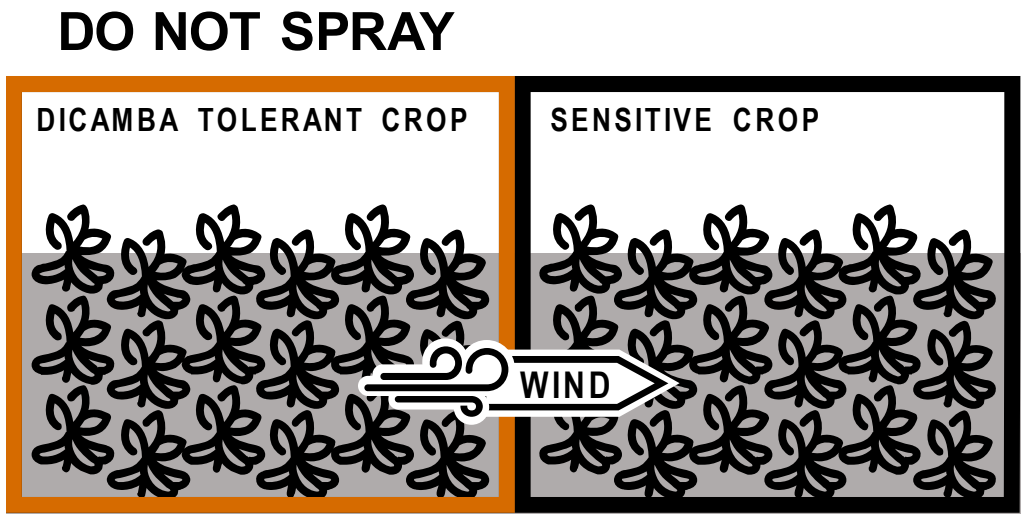
PROTECTING ADJACENT SENSITIVE CROPS

9.1.4

PROTECTION OF ADJACENT SENSITIVE CROPS

DO NOT APPLY this product when the wind is blowing toward adjacent non-dicamba tolerant sensitive crops; **this includes NON-DICAMBA TOLERANT SOYBEAN AND COTTON**.

> Sensitive crops include but are not limited to tomatoes and other fruiting vegetables (EPA crop group 8), fruit trees, cucurbits (EPA crop group 9), grapes, beans, flowers, ornamentals, peas, potatoes, sunflower, tobacco, other broadleaf plants, and including plants in a greenhouse.



Contact with foliage, green stems, or fruit of crops, or any desirable plants that do not contain a dicamba tolerance gene or are not naturally tolerant to dicamba, could result in severe plant injury or destruction.

EXAMPLES OF DICAMBA SENSITIVE CROPS

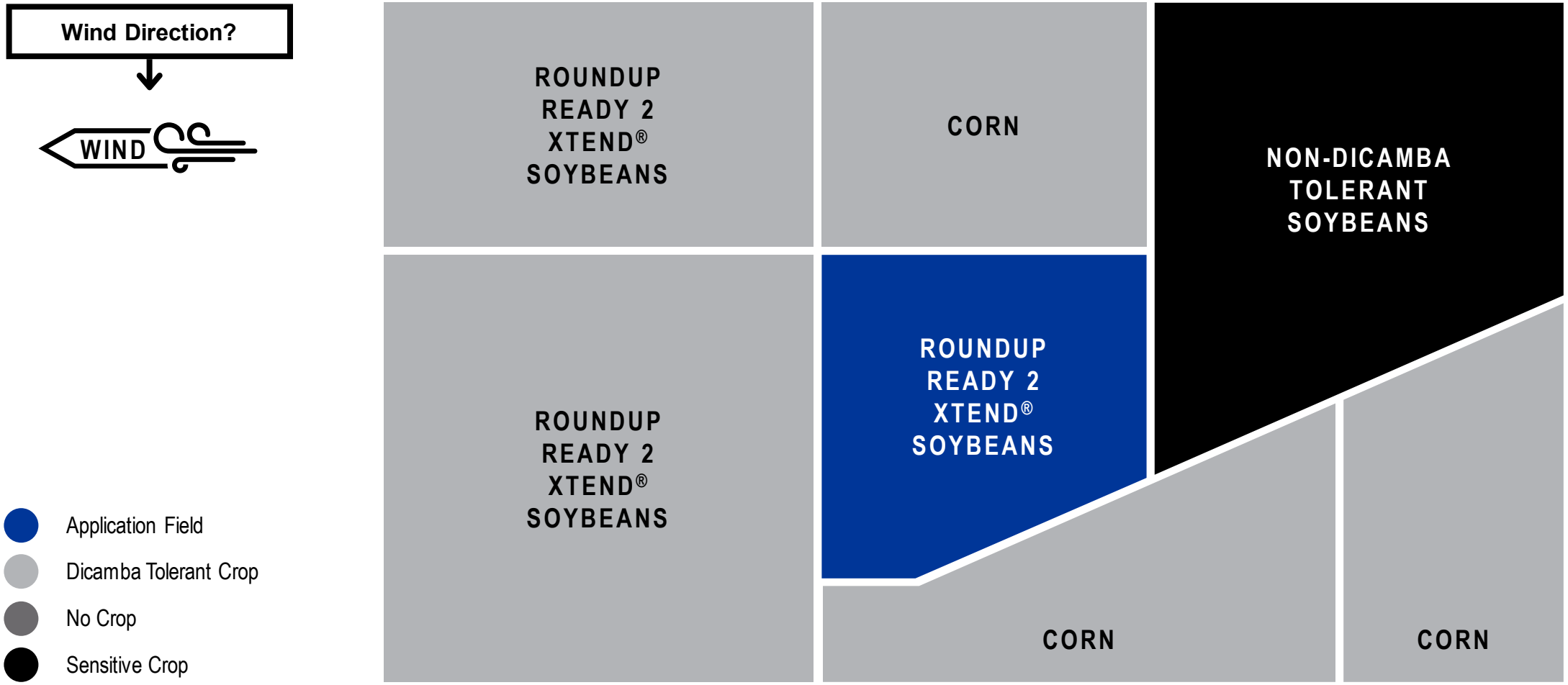
VISUAL SENSITIVITY SCALE FOR DICAMBA

LOWER	MODERATE	SEVERE	EXTREME
Broccoli Cabbage Kale Mustard Pecan Turnip	Cantaloupe Canola** Cucumber Peach Peanut Squash	Cotton Pepper Tomato Watermelon	Grapes** Lima Bean Southern Pea Snap Bean Soybean Sweet potato** Tobacco**
>1/75X	1/75-1/300X	1/300-1/800X	< 1/800X

Herbicide Rate of Visually Detectable Injury: For relative comparison, tomato, squash, and watermelon response to glyphosate for visual damage would be in the “lower” category.

Information adapted from Dr. Stanley Culpepper, University of Georgia Cooperative. *Categories indicate sensitivity of listed plants to dicamba exposure; not the degree of symptomology
**Data from literature; all other data generated in over 70 UGA field experiments | Source: GA-018*.

PROTECTION OF ADJACENT SENSITIVE CROPS



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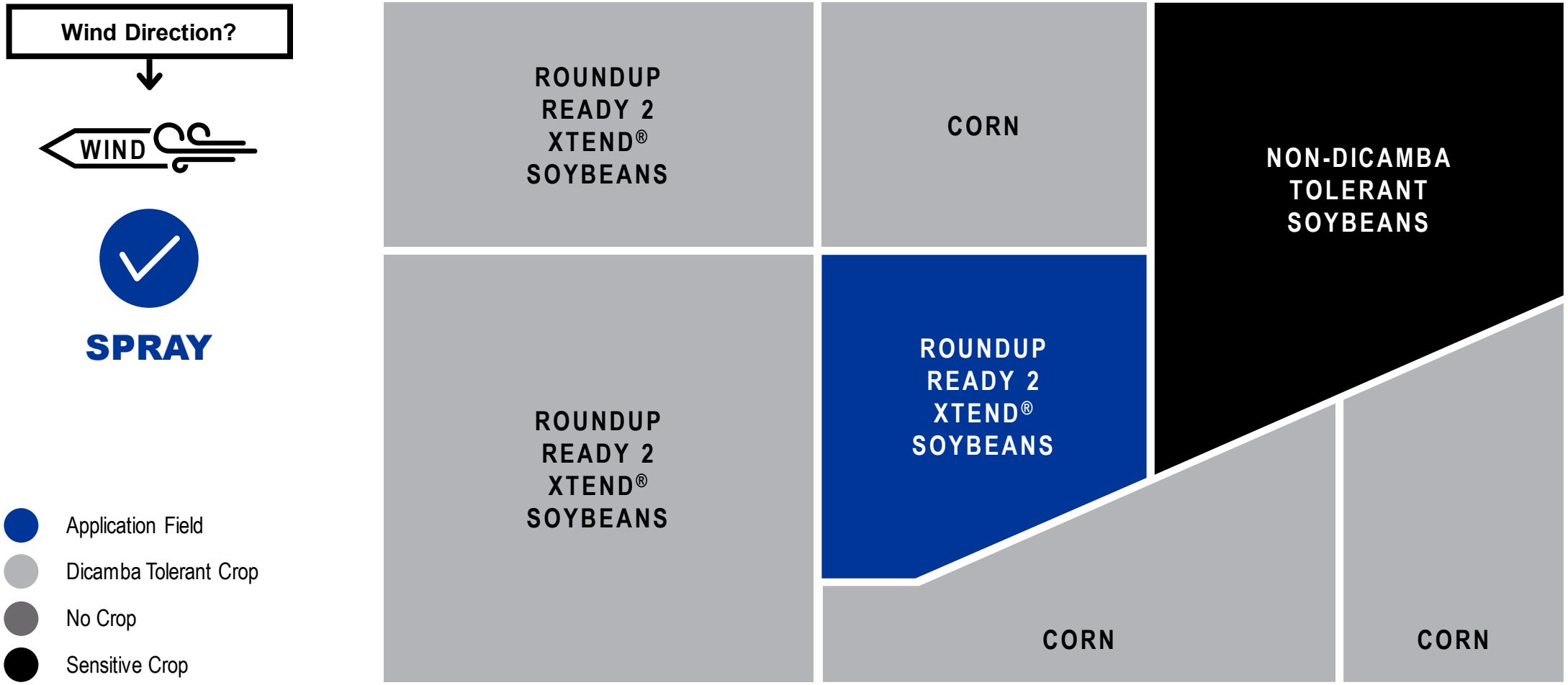

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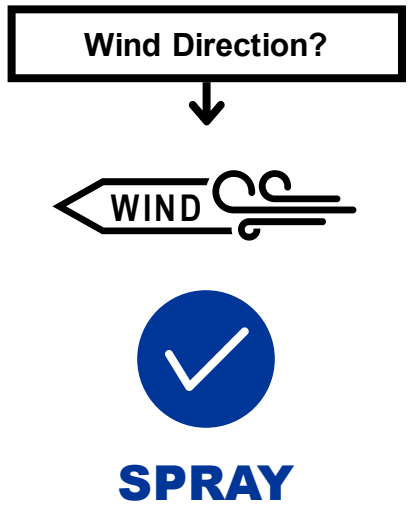

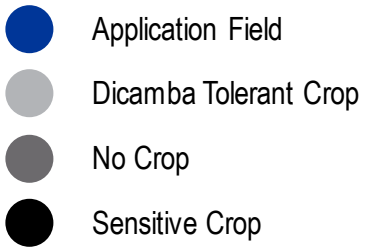

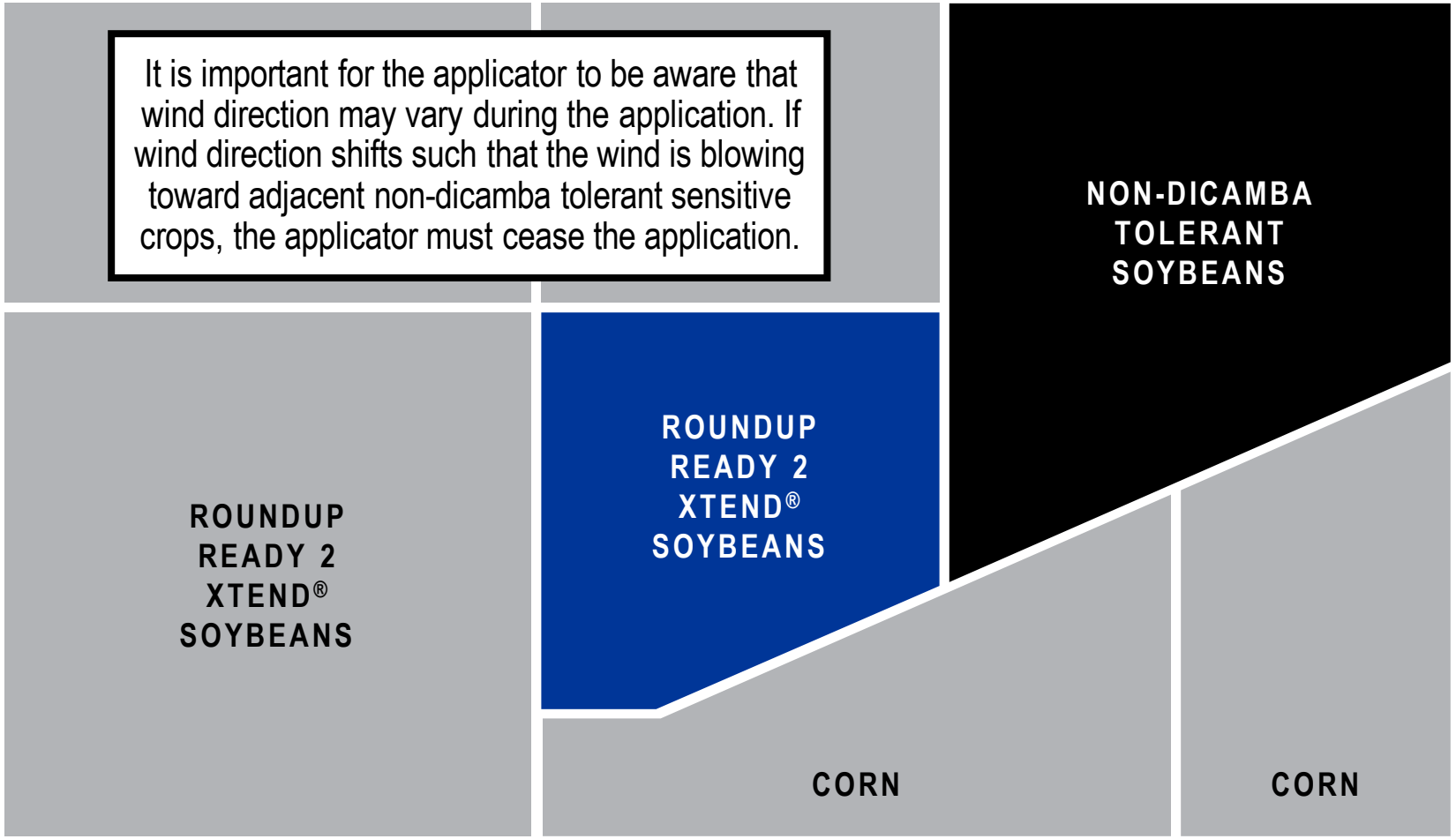

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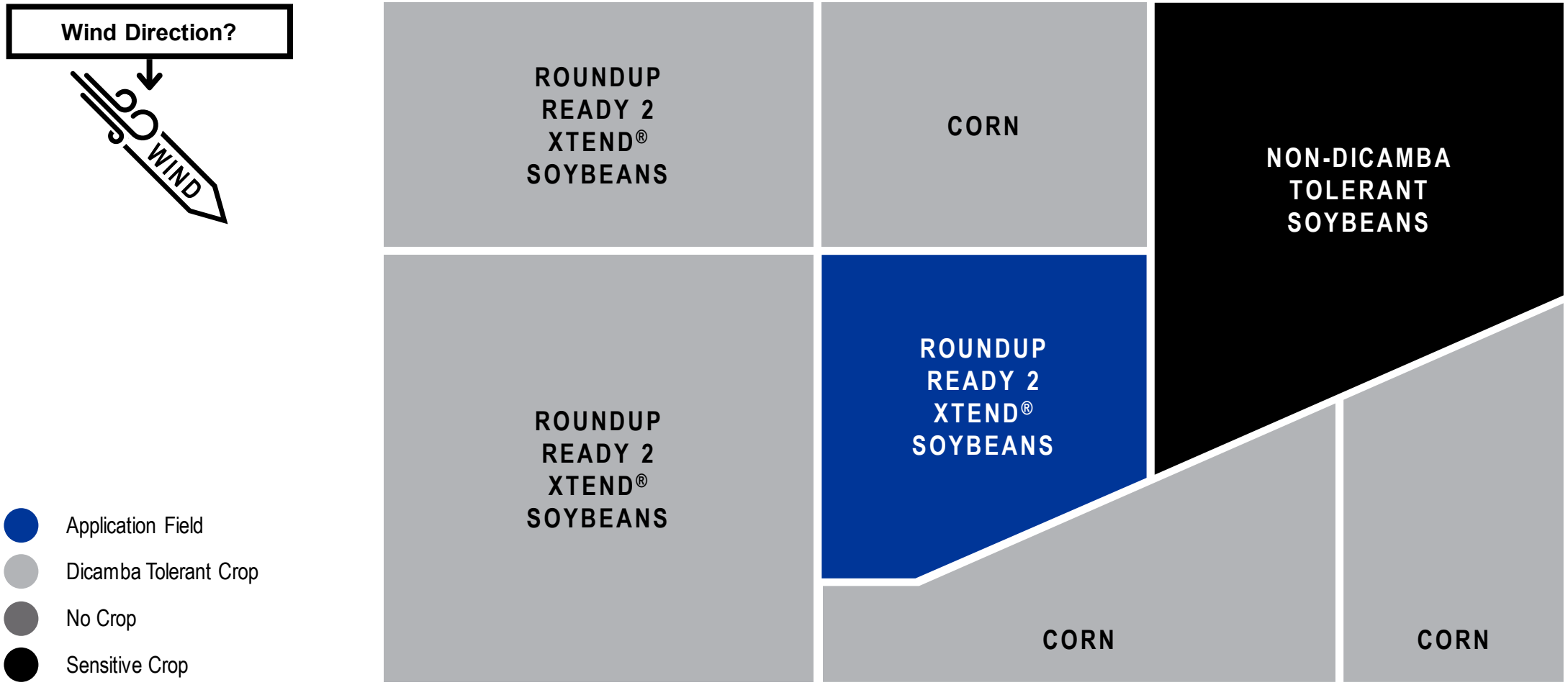

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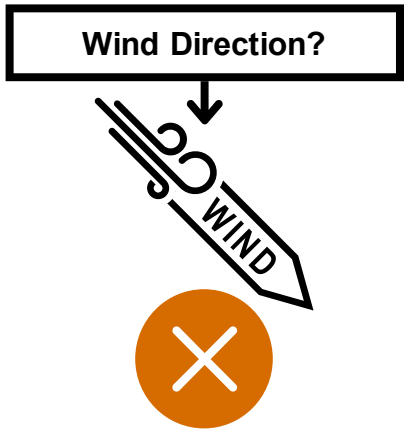
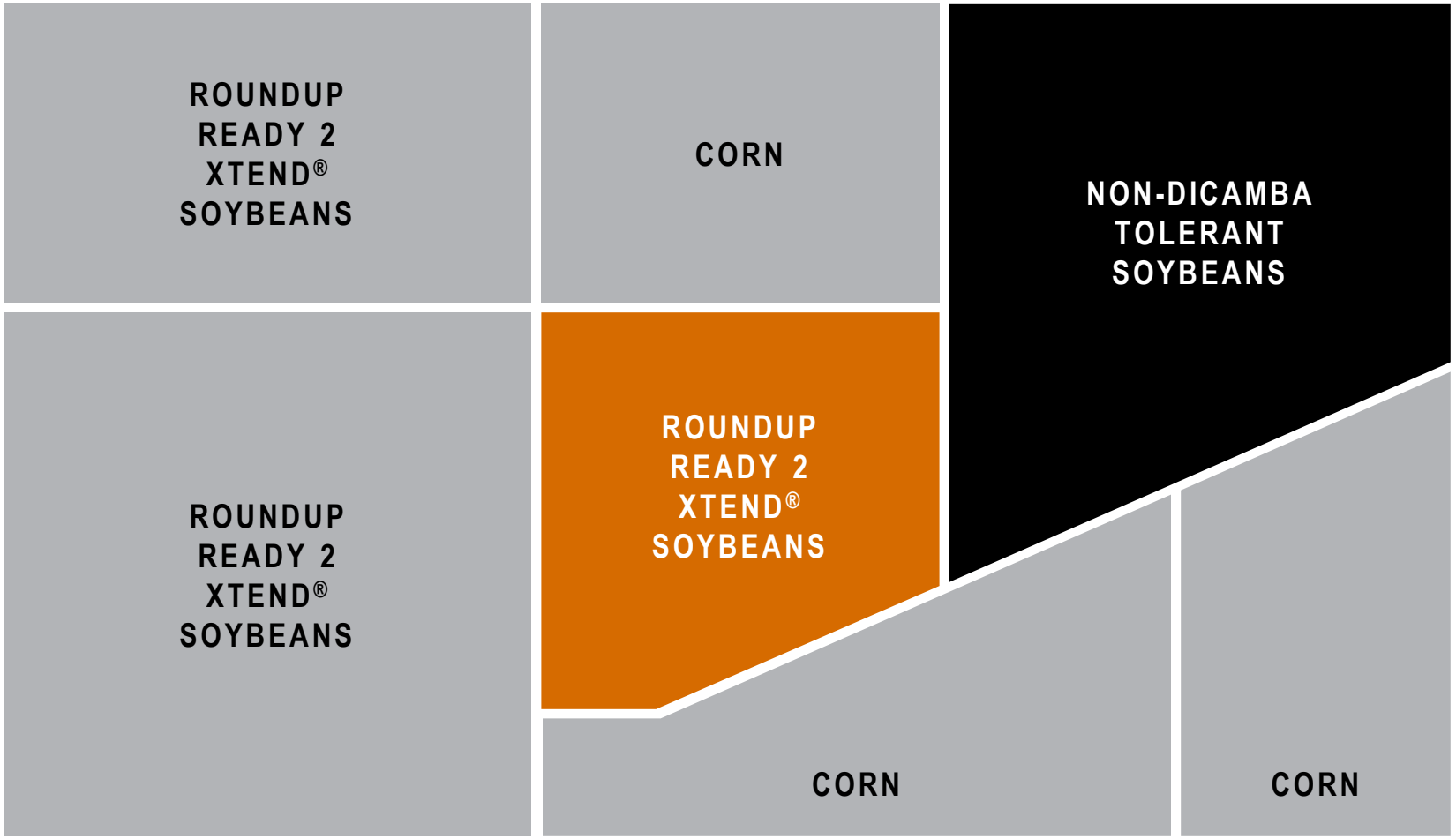


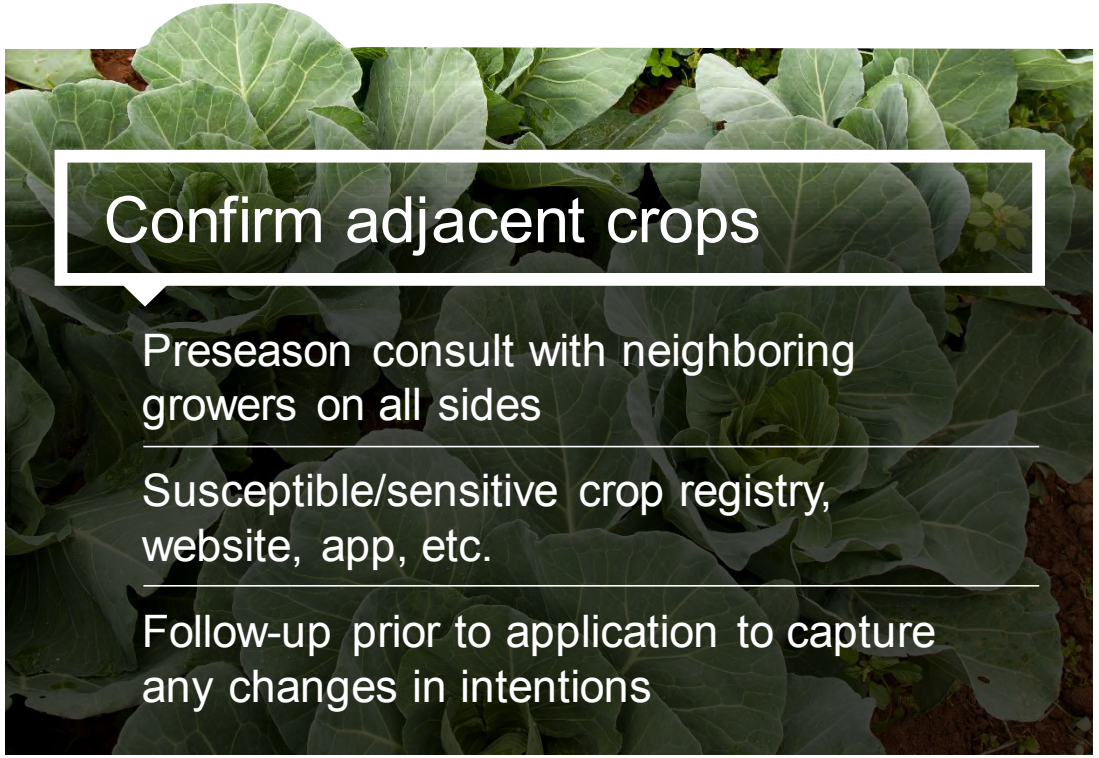
DO NOT SPRAY

- Application Field
- Dicamba Tolerant Crop
- No Crop
- Sensitive Crop



CONFIRM AND DOCUMENT ADJACENT CROPS

TAKE TIME TO KNOW YOUR NEIGHBORS AND YOUR SURROUNDINGS



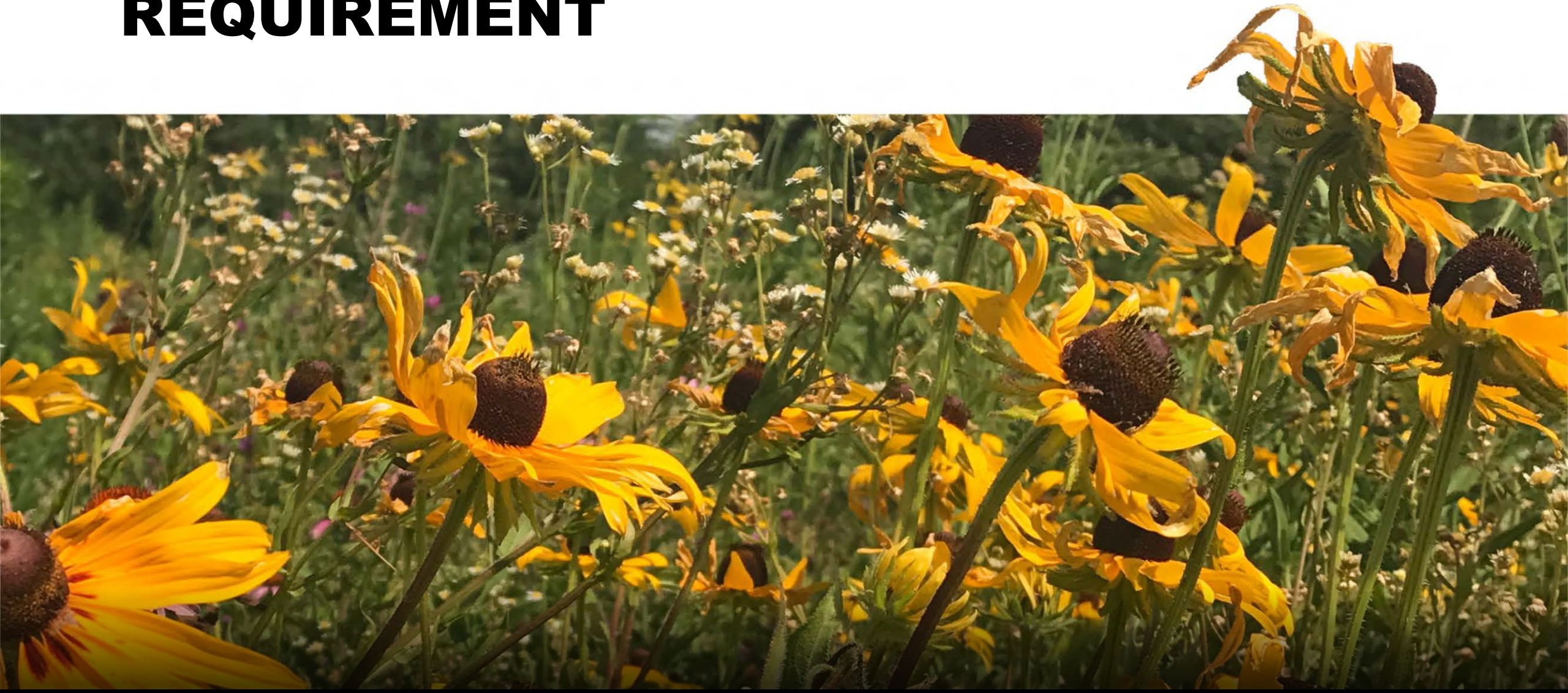
Record that a sensitive crop registry was consulted AND survey adjacent fields documenting the crops/areas surrounding the field prior to application

* FieldWatch Communication. Cooperation. Collaboration. driftwatch Specialty Crop Site Registry by FieldWatch beecheck Apiary Registry by FieldWatch

*Registry examples; consult your state authority for other crop registries.

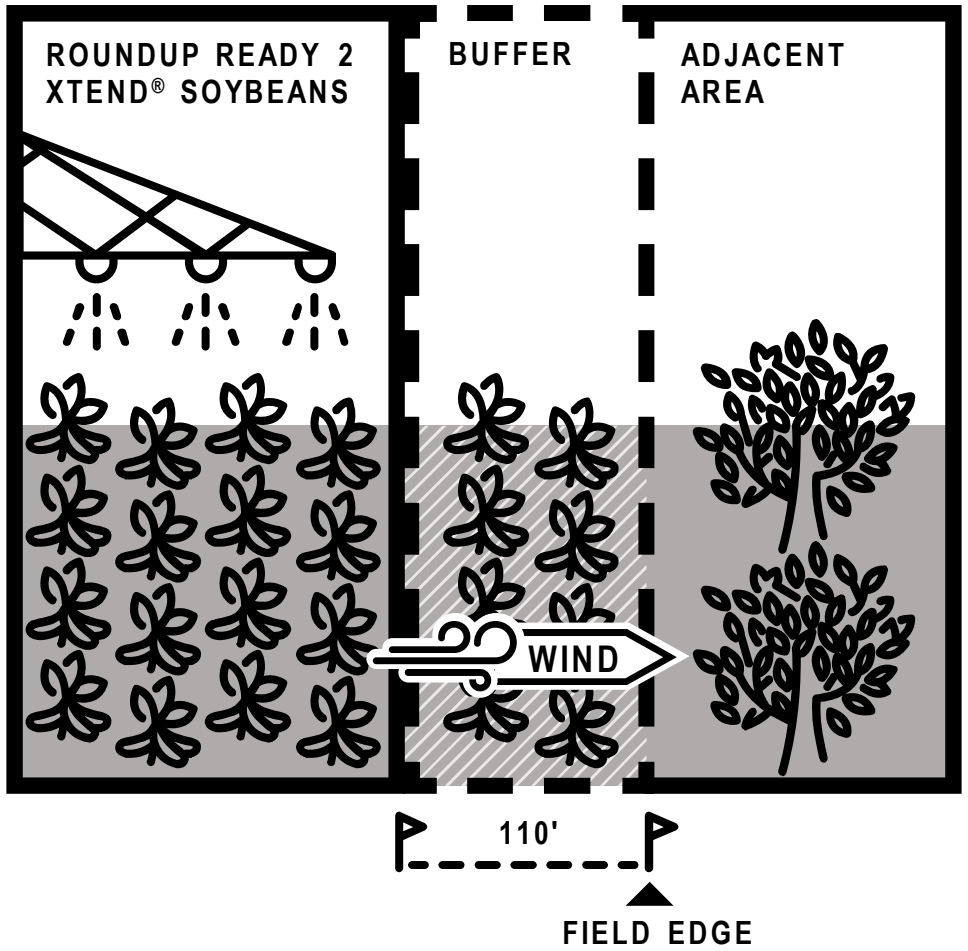
BUFFER REQUIREMENT

9.1.4
3.2



EXAMPLE BUFFER REQUIREMENT

DOWNWIND ADJACENT AREAS



The applicator **must always maintain** a downwind buffer between the last treated row and the nearest downwind field edge (in the direction the wind is blowing) for all uses of these products.

> **110 feet** (when applying 0.5 lb ae per acre)
>
> **220 feet** (when applying > 0.5 lb up to 1.0 lb ae per acre)
>
> Downwind buffer is not intended for protection of downwind sensitive crop

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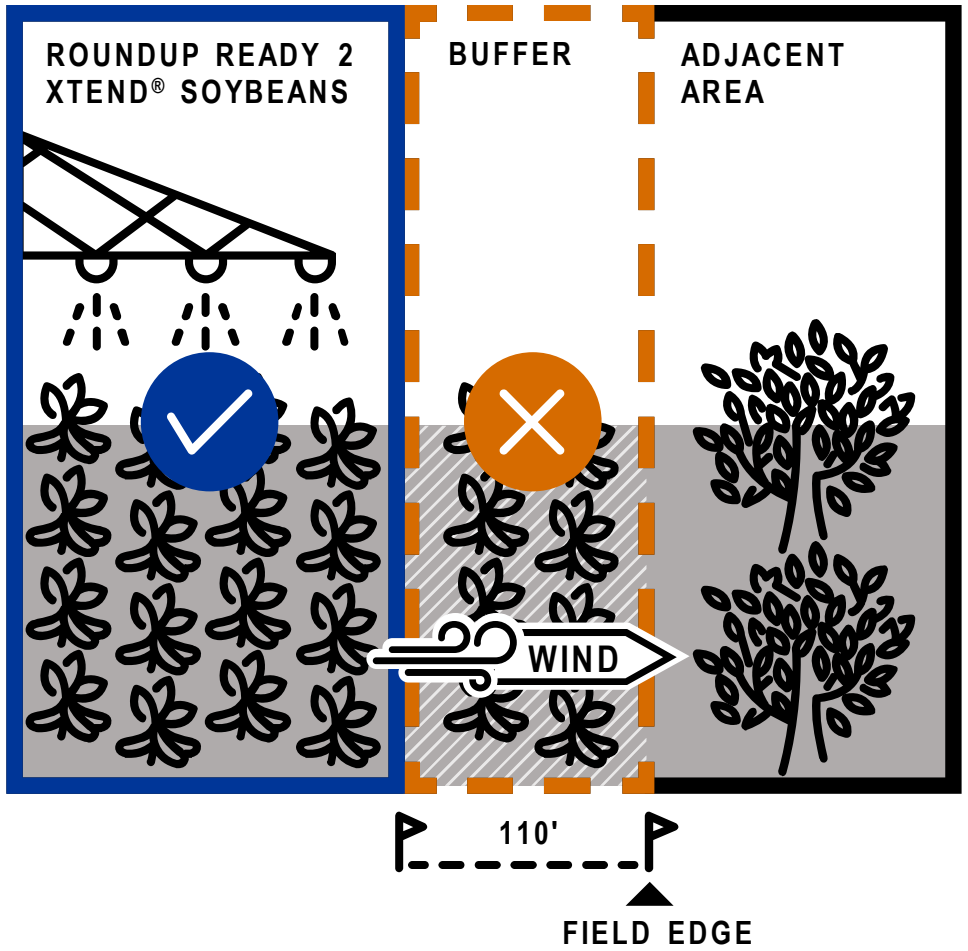
DOWNWIND ADJACENT AREAS



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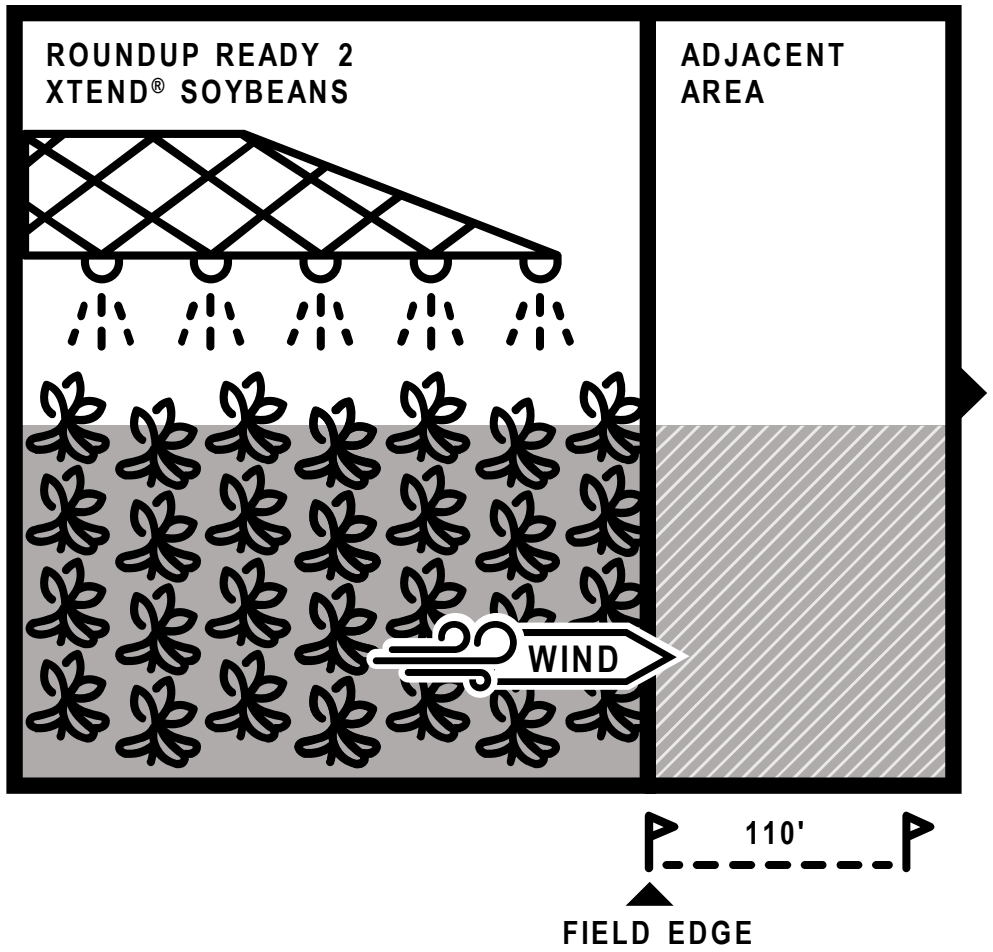

Roads, paved or gravel surfaces, **mowed and/or managed areas adjacent to field such as rights of way.**

Planted agricultural fields containing: corn, dicamba tolerant cotton, dicamba tolerant soybean, sorghum, proso millet, small grains and sugarcane.

> If the applicator intends to include such crops as dicamba tolerant cotton and/or dicamba tolerant soybeans in the buffer distance calculation, the applicator must confirm the crops are in fact dicamba tolerant.

Agricultural fields that have been prepared for planting.

Areas covered by the footprint of a building, silo, or other man made structure with walls and or roof.

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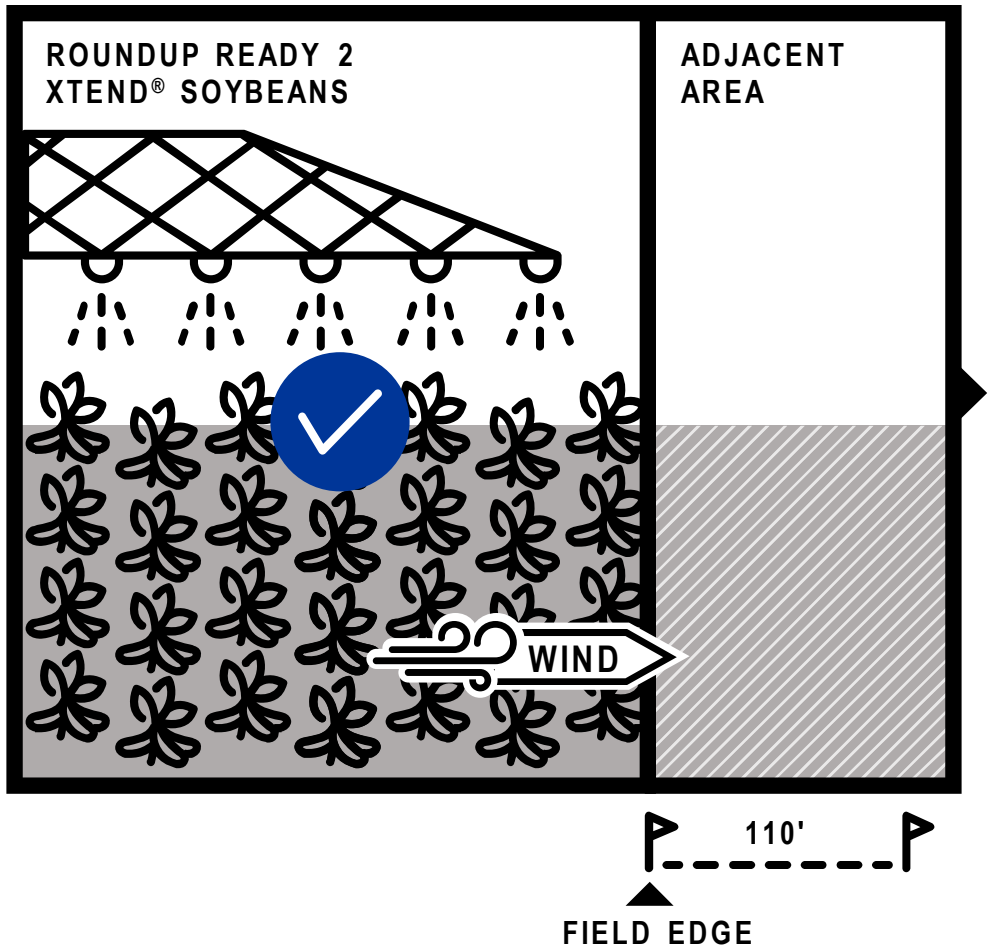

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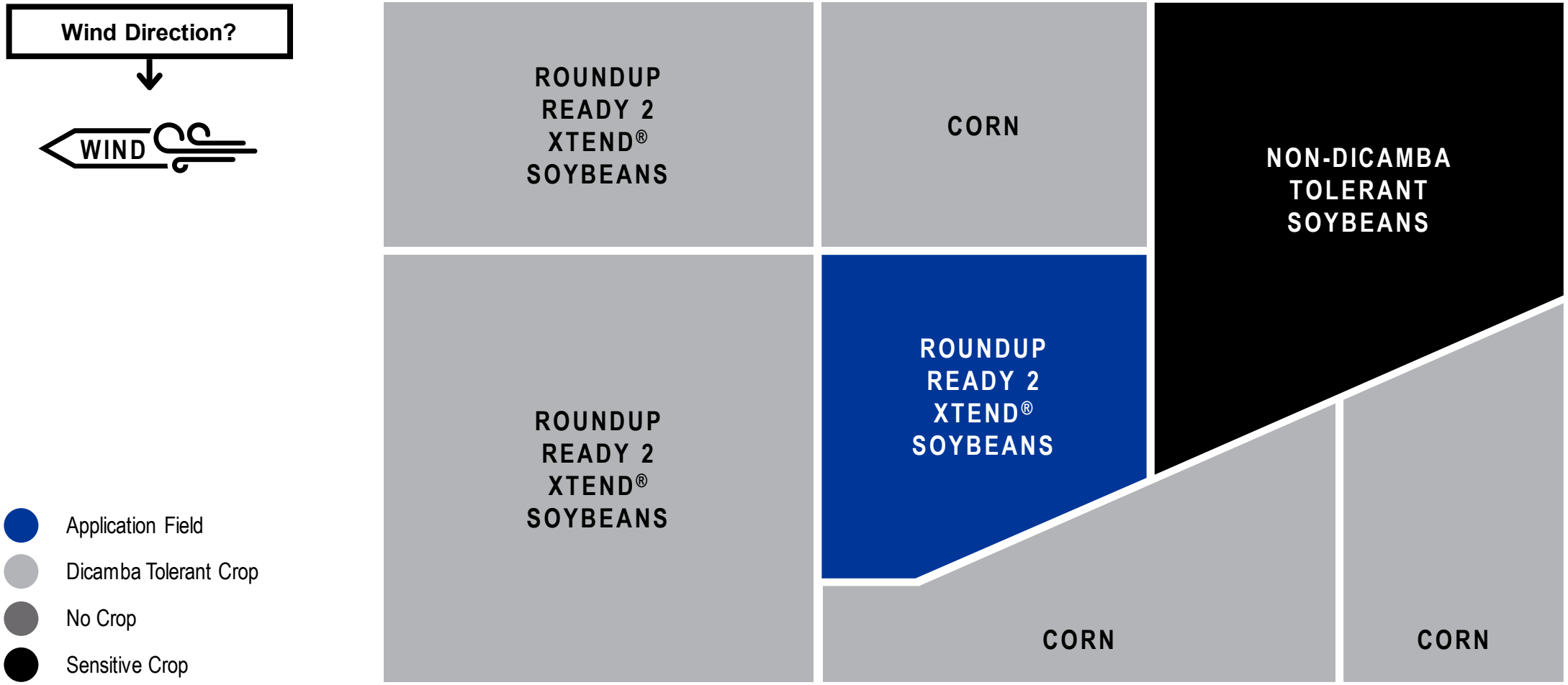

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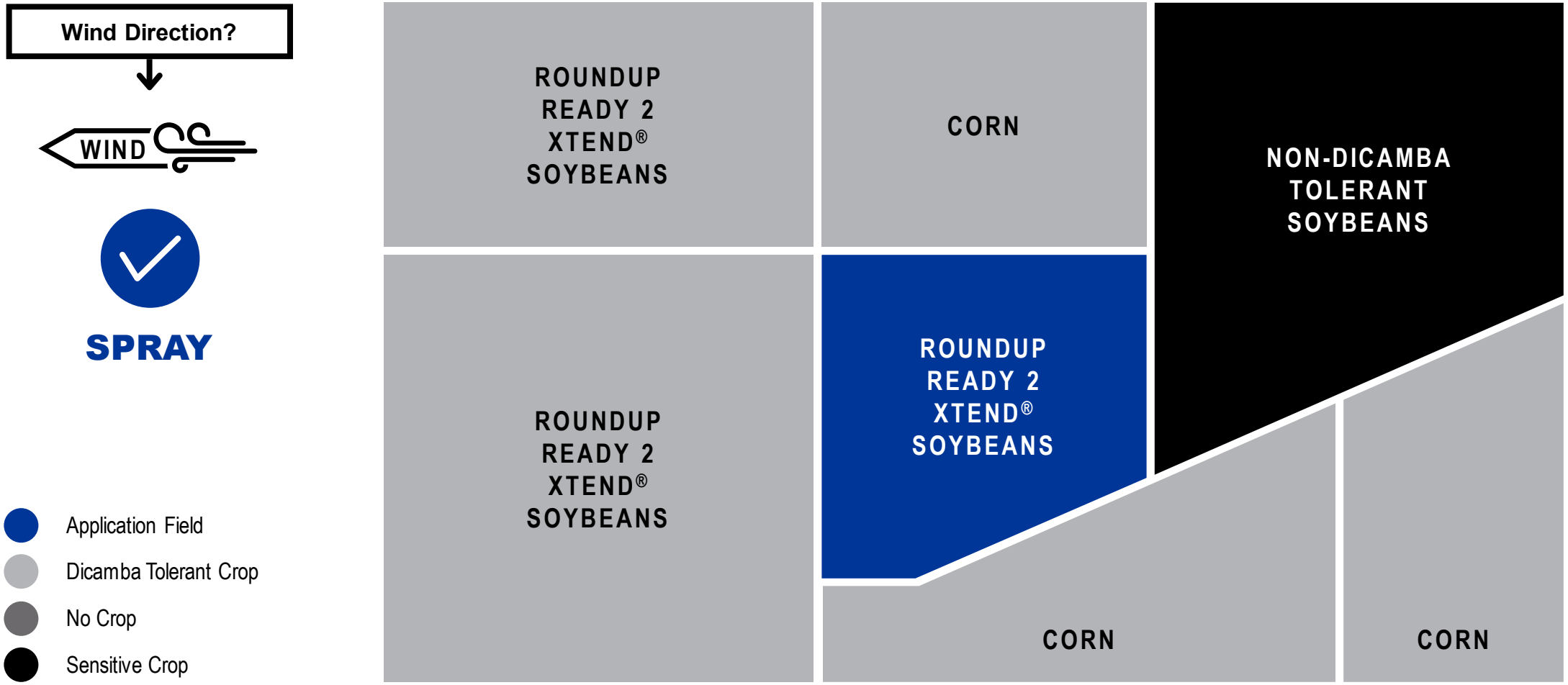

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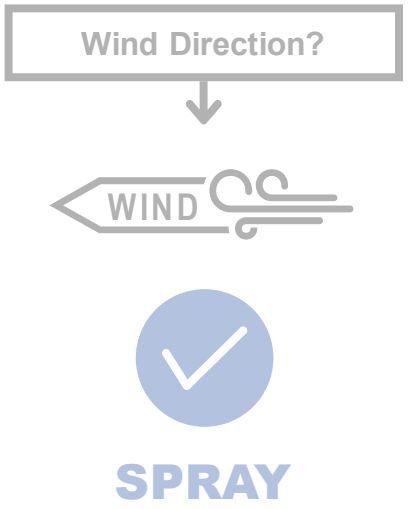
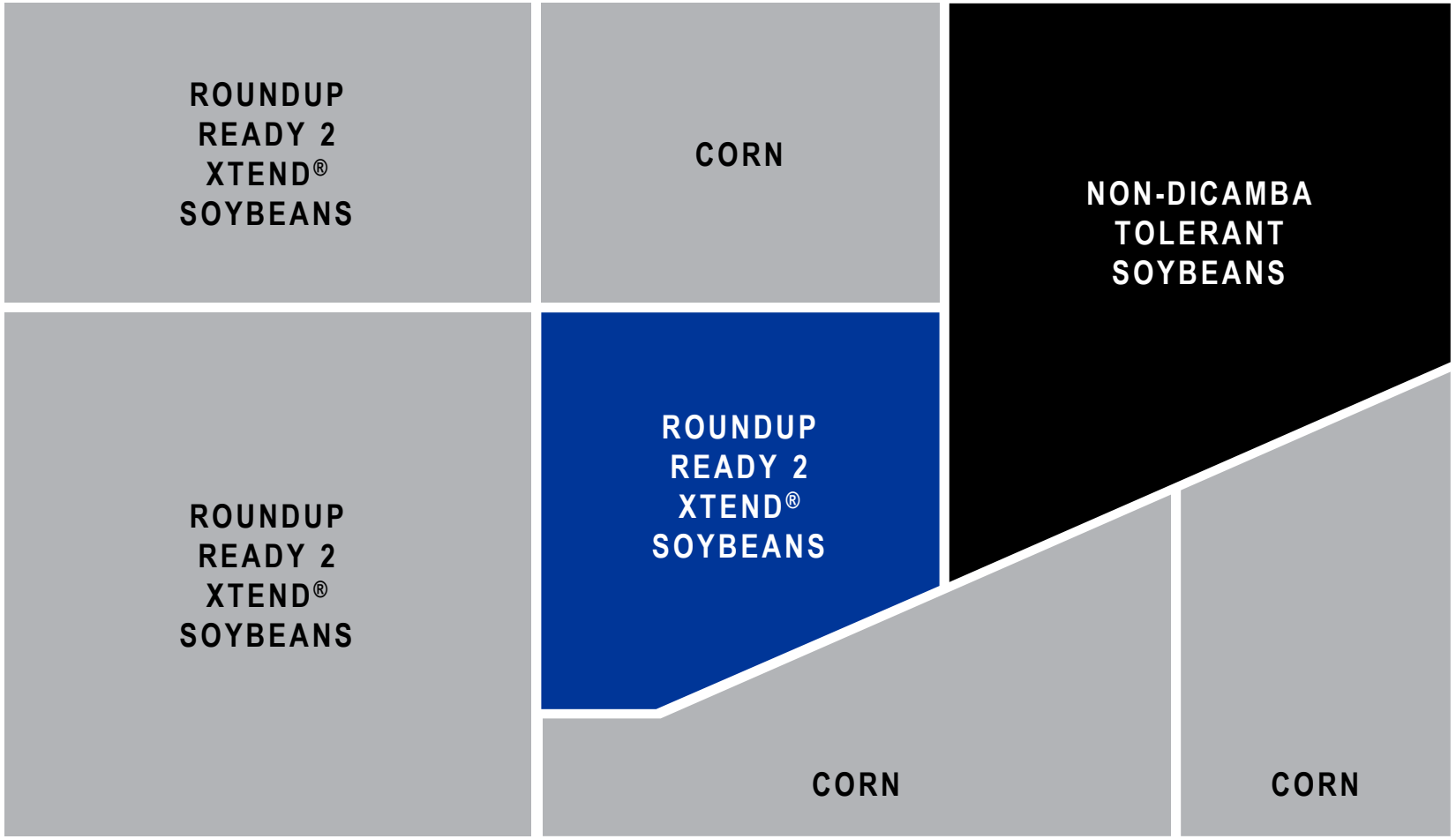


Buffers

- Application Field
- Dicamba Tolerant Crop
- No Crop
- Sensitive Crop



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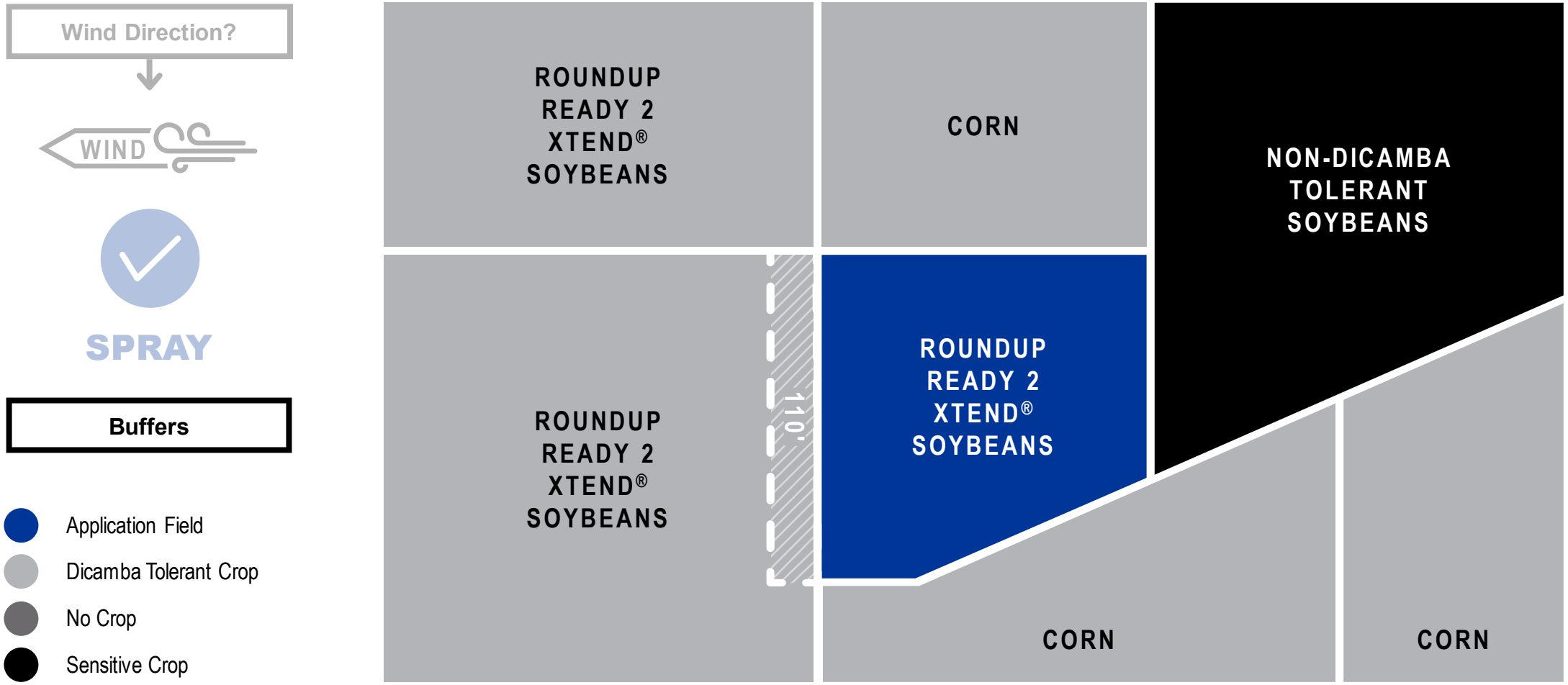

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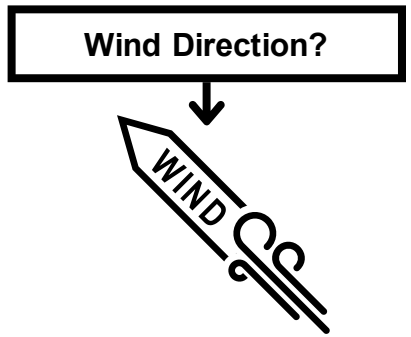

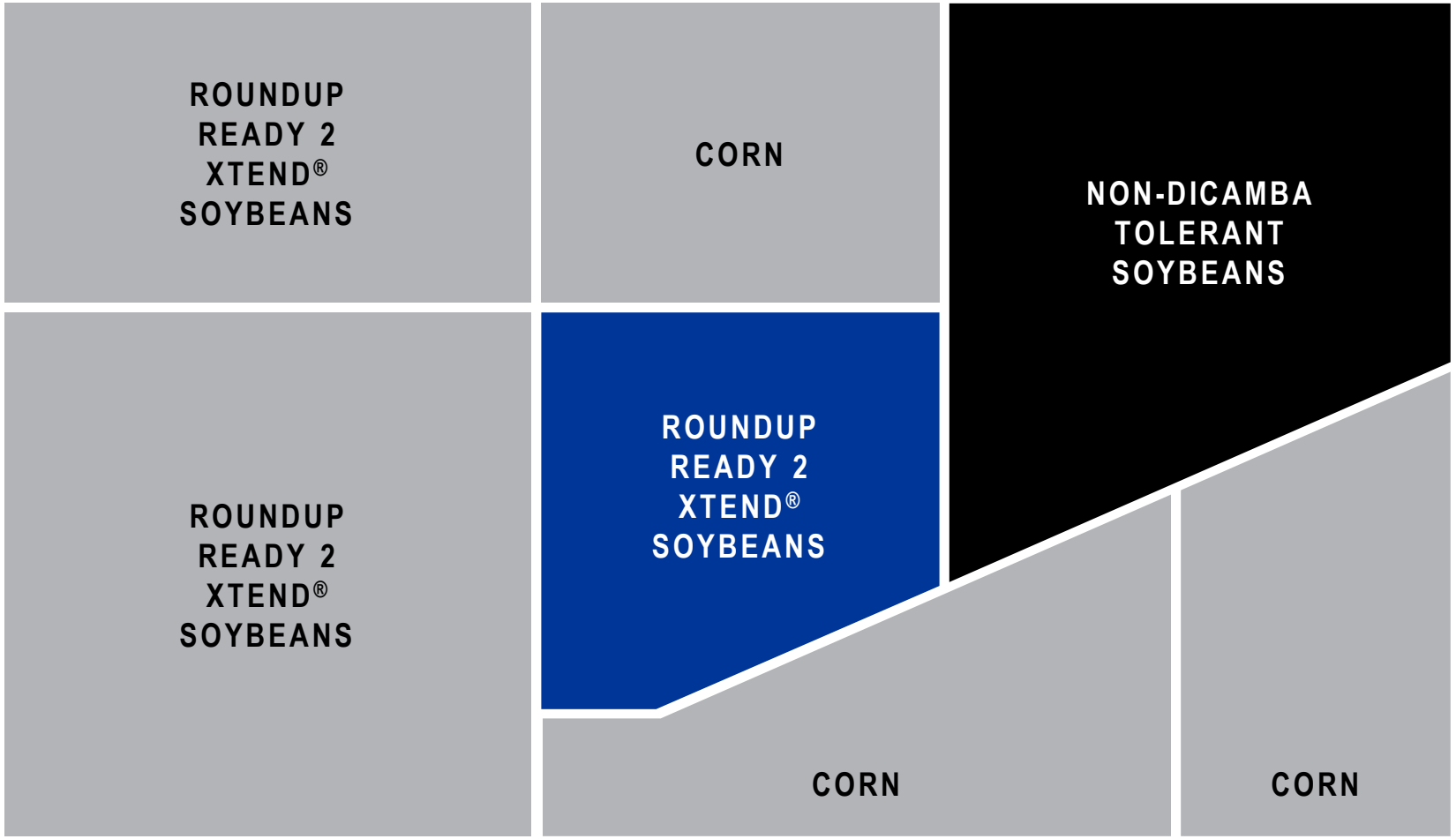

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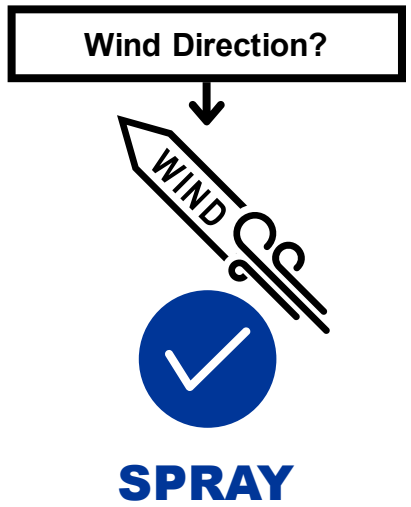

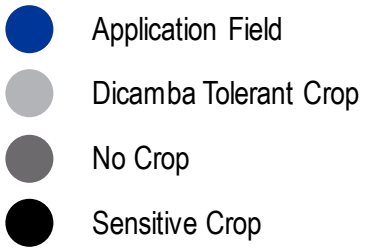

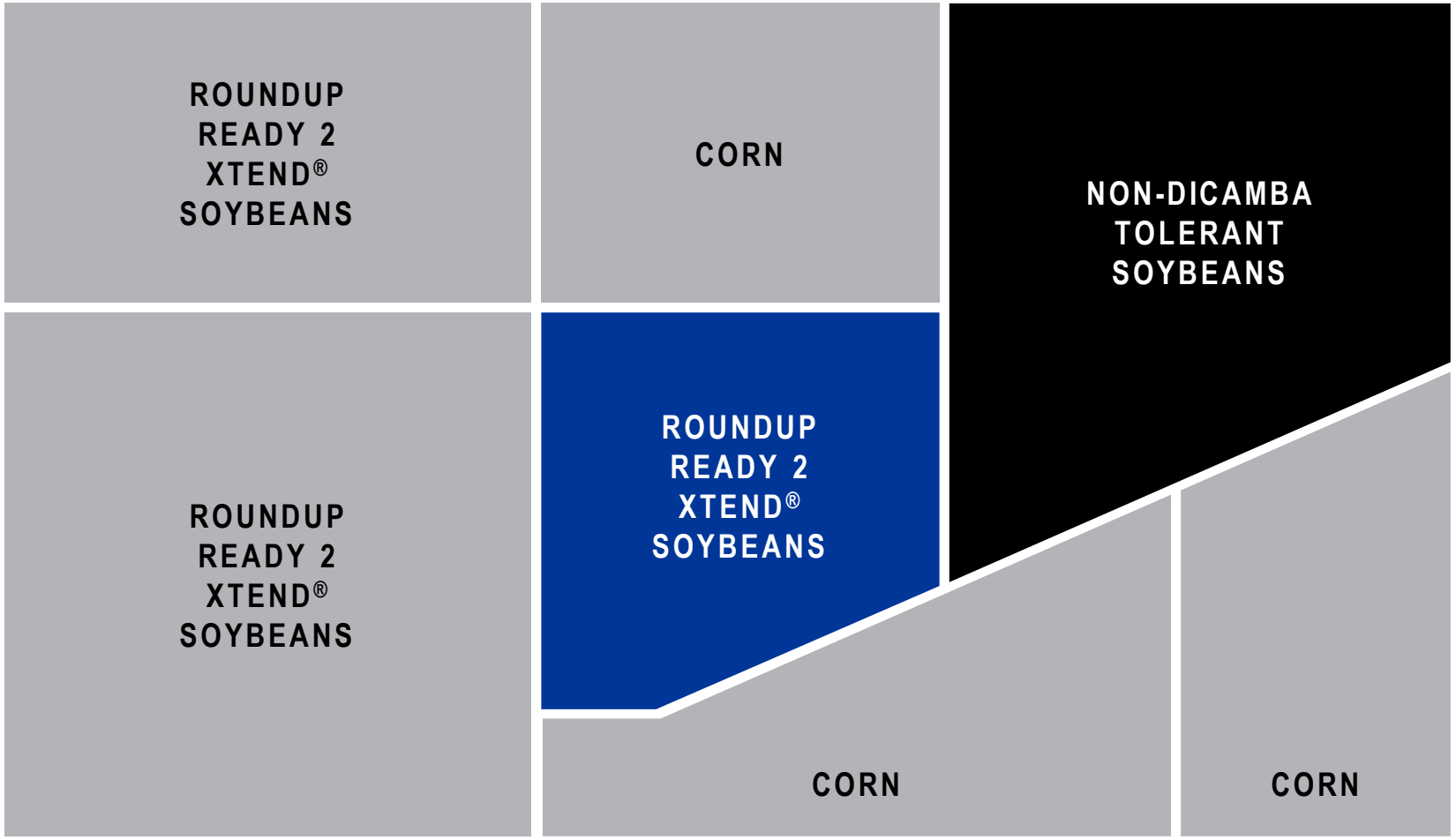

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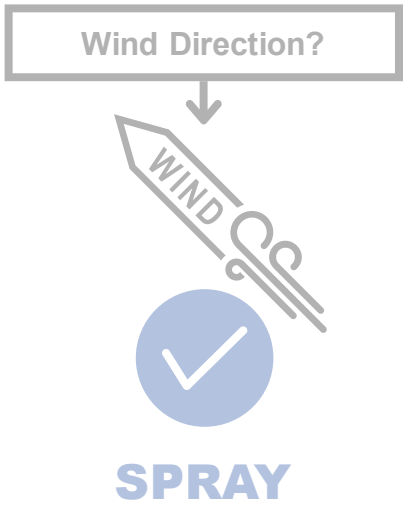

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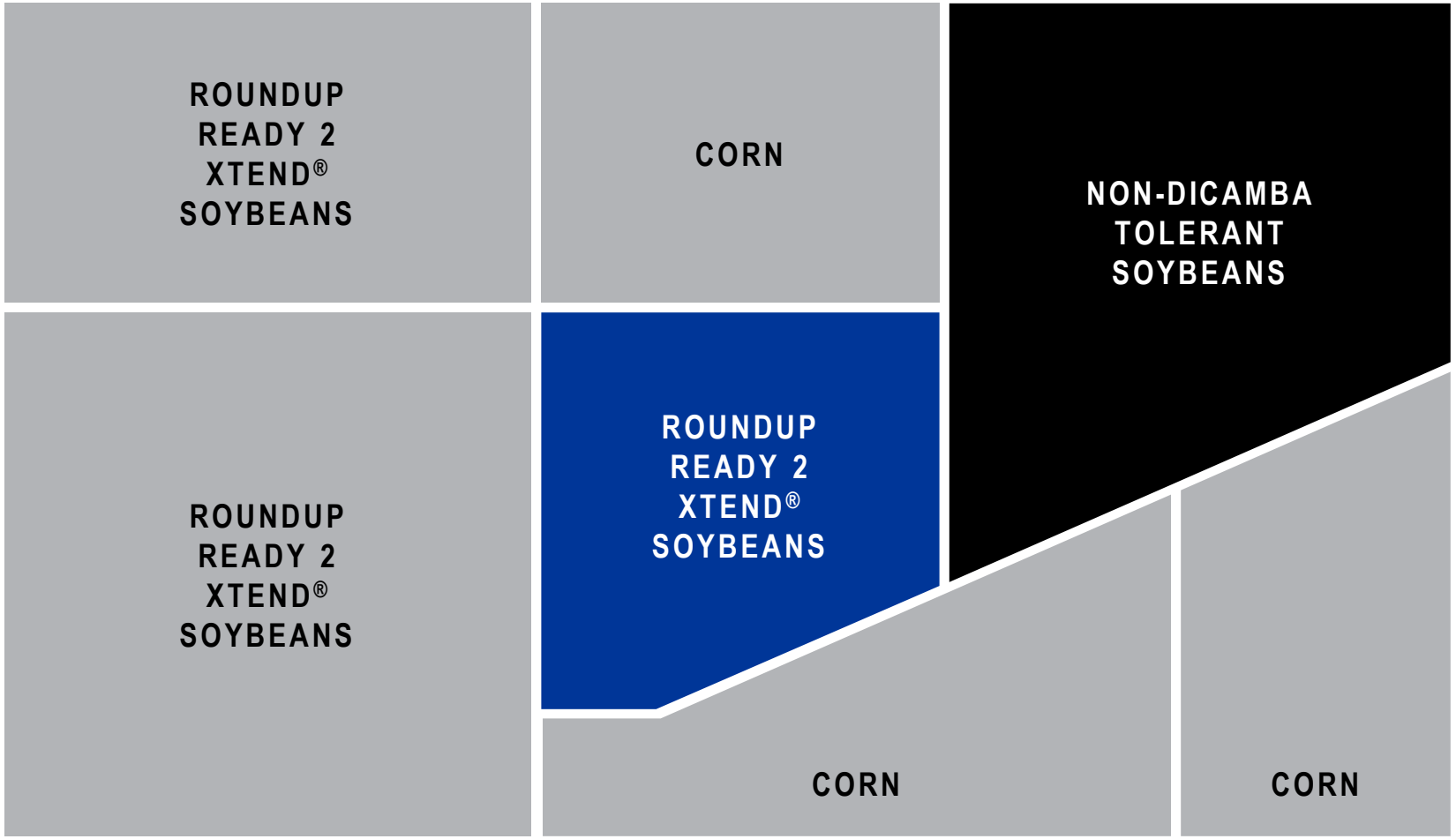

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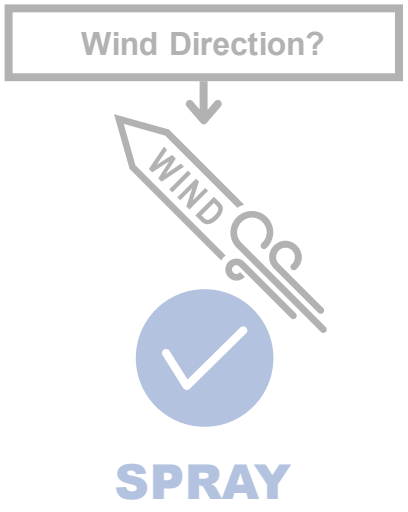

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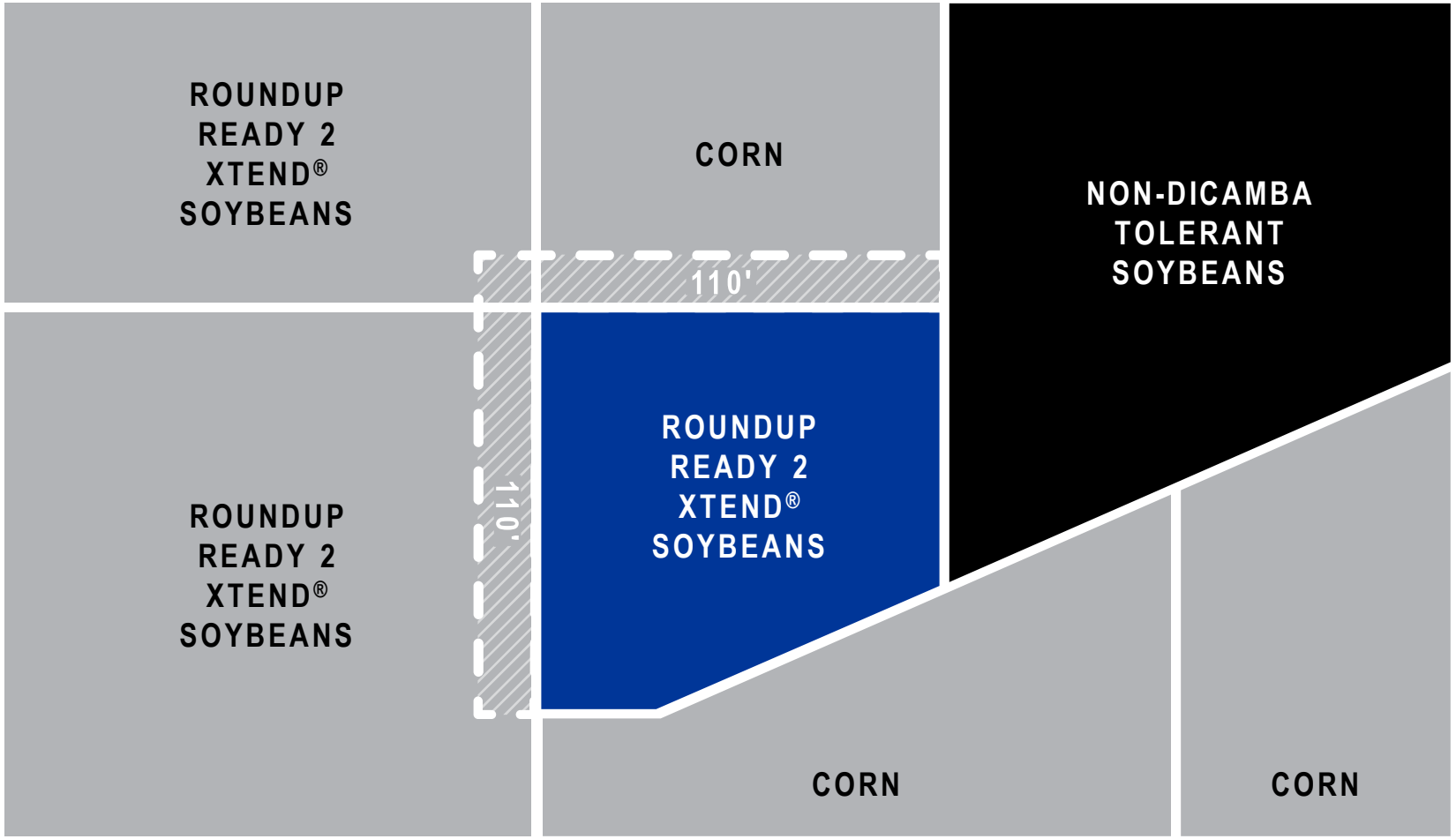

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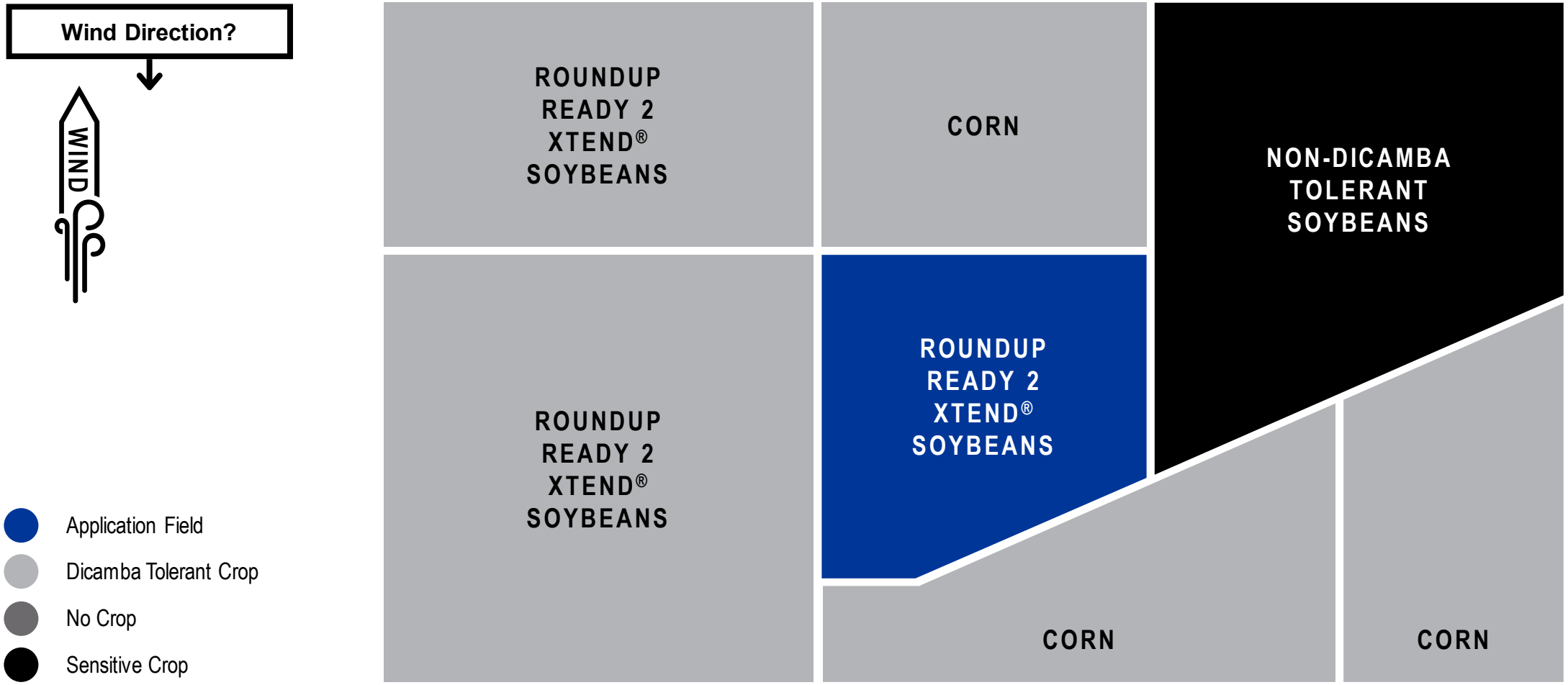

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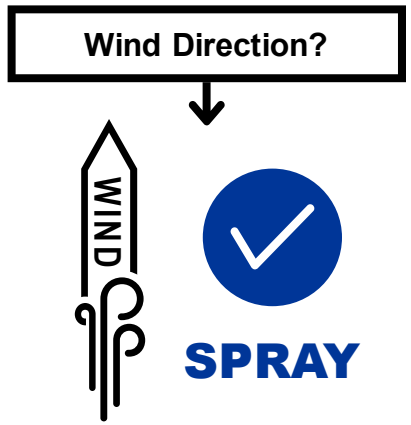

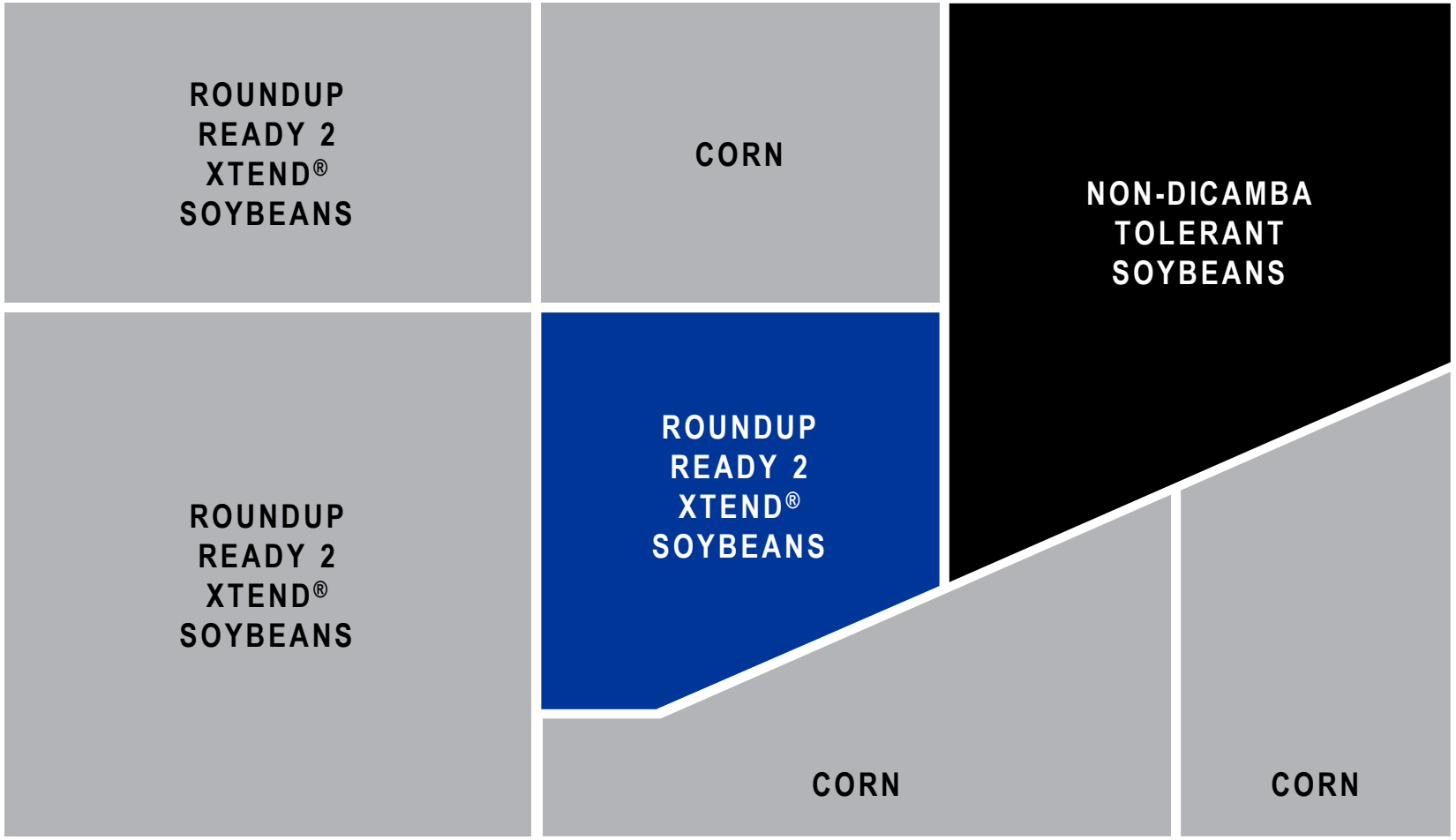

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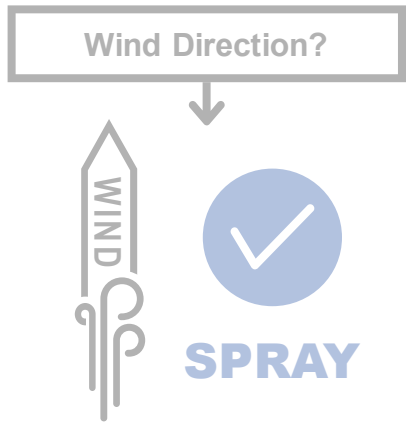

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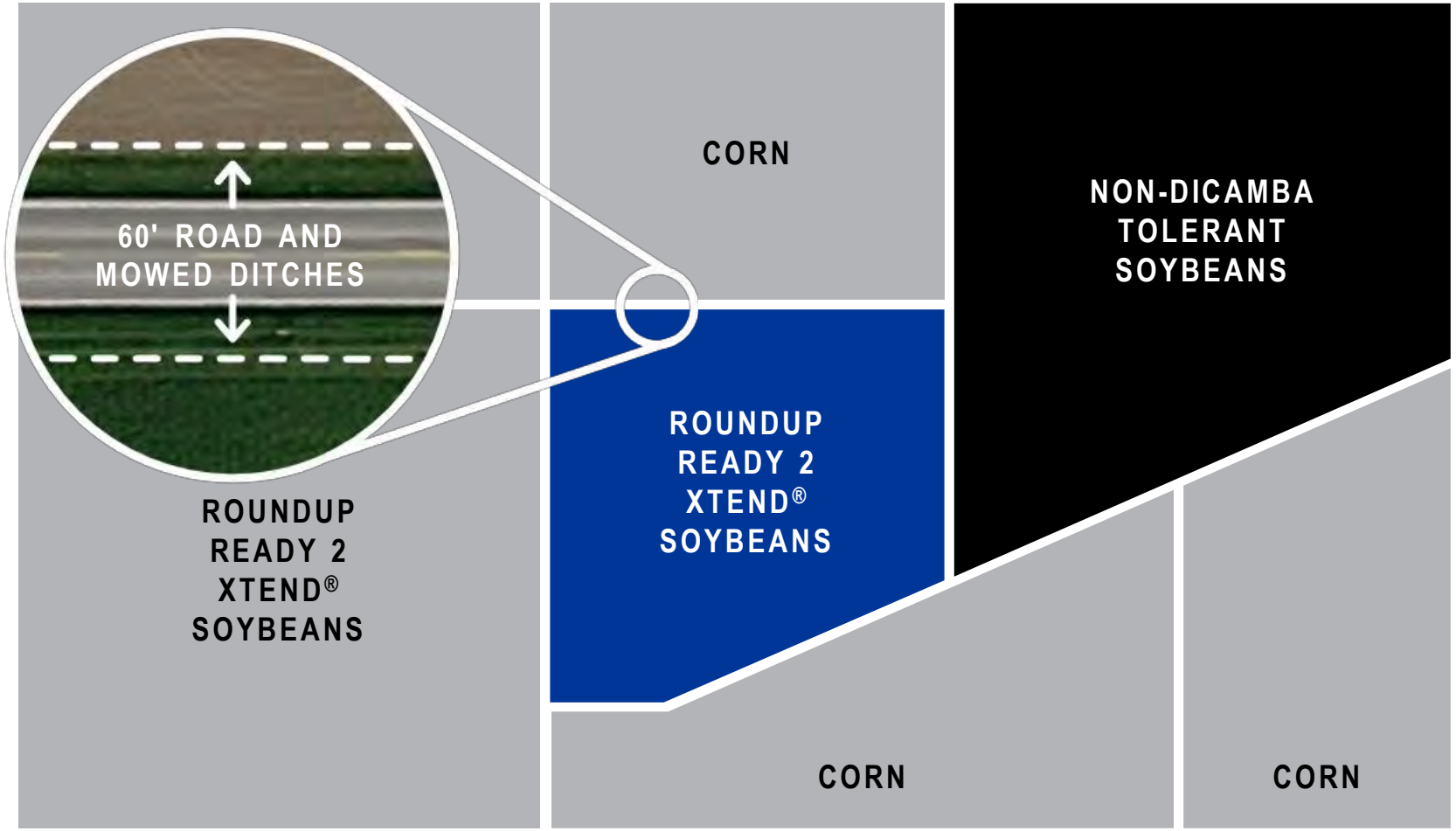

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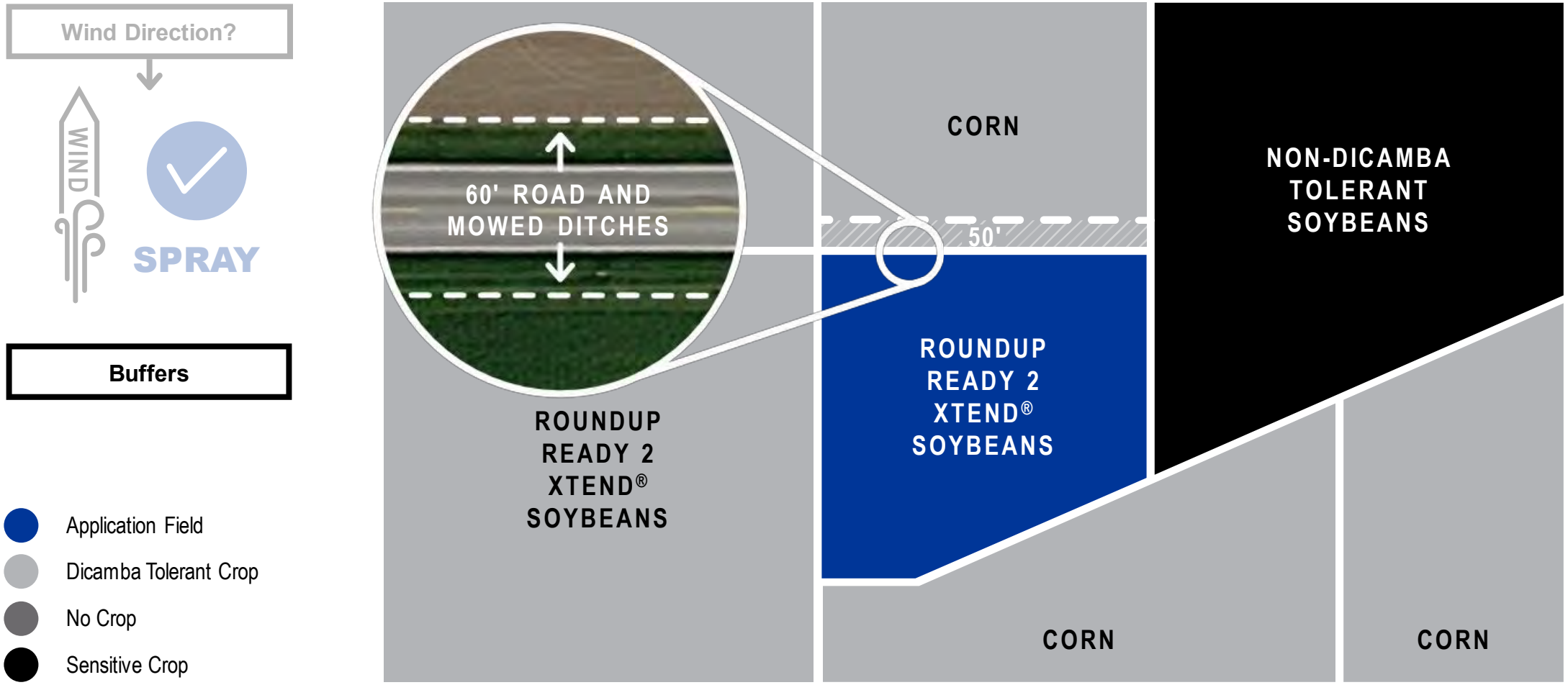

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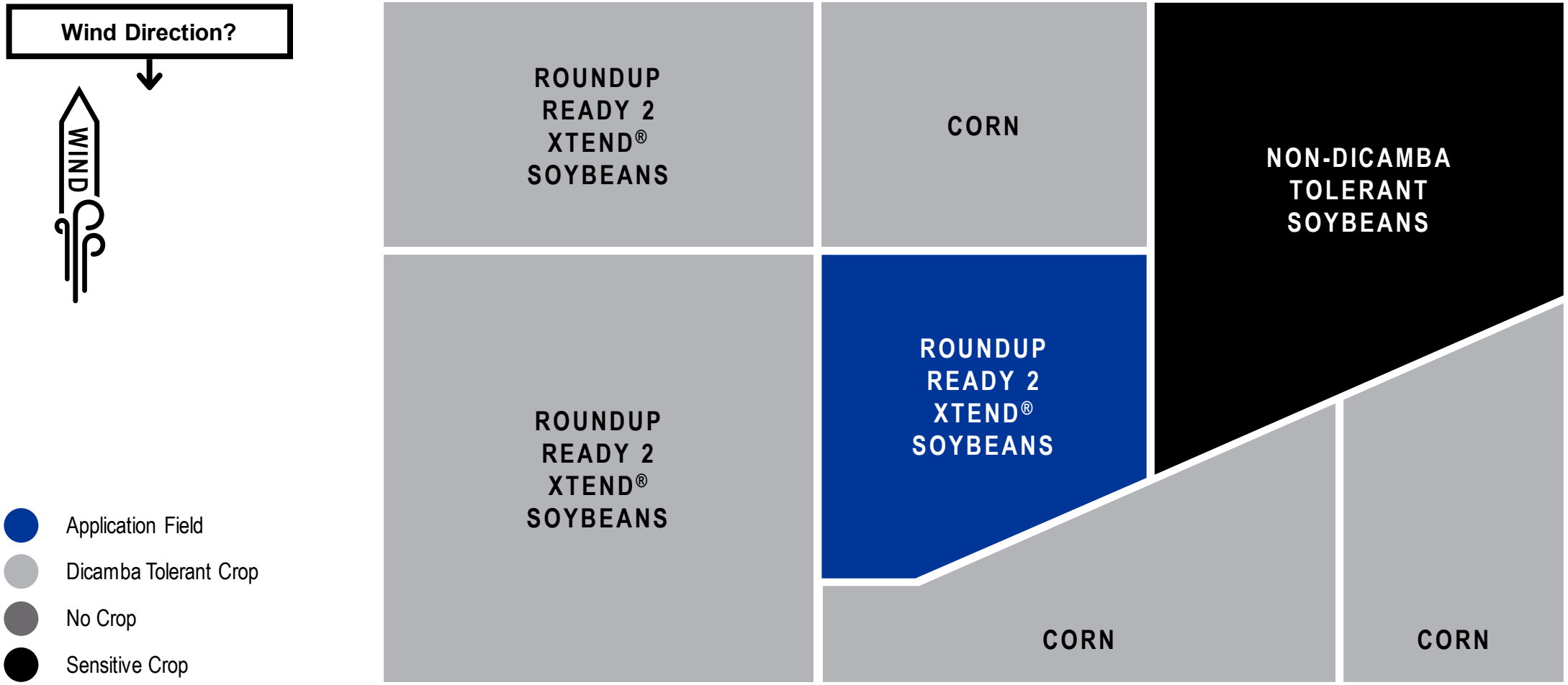

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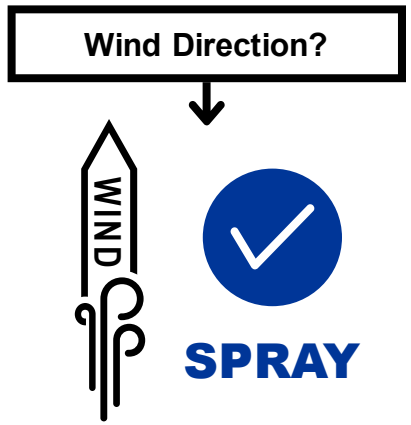

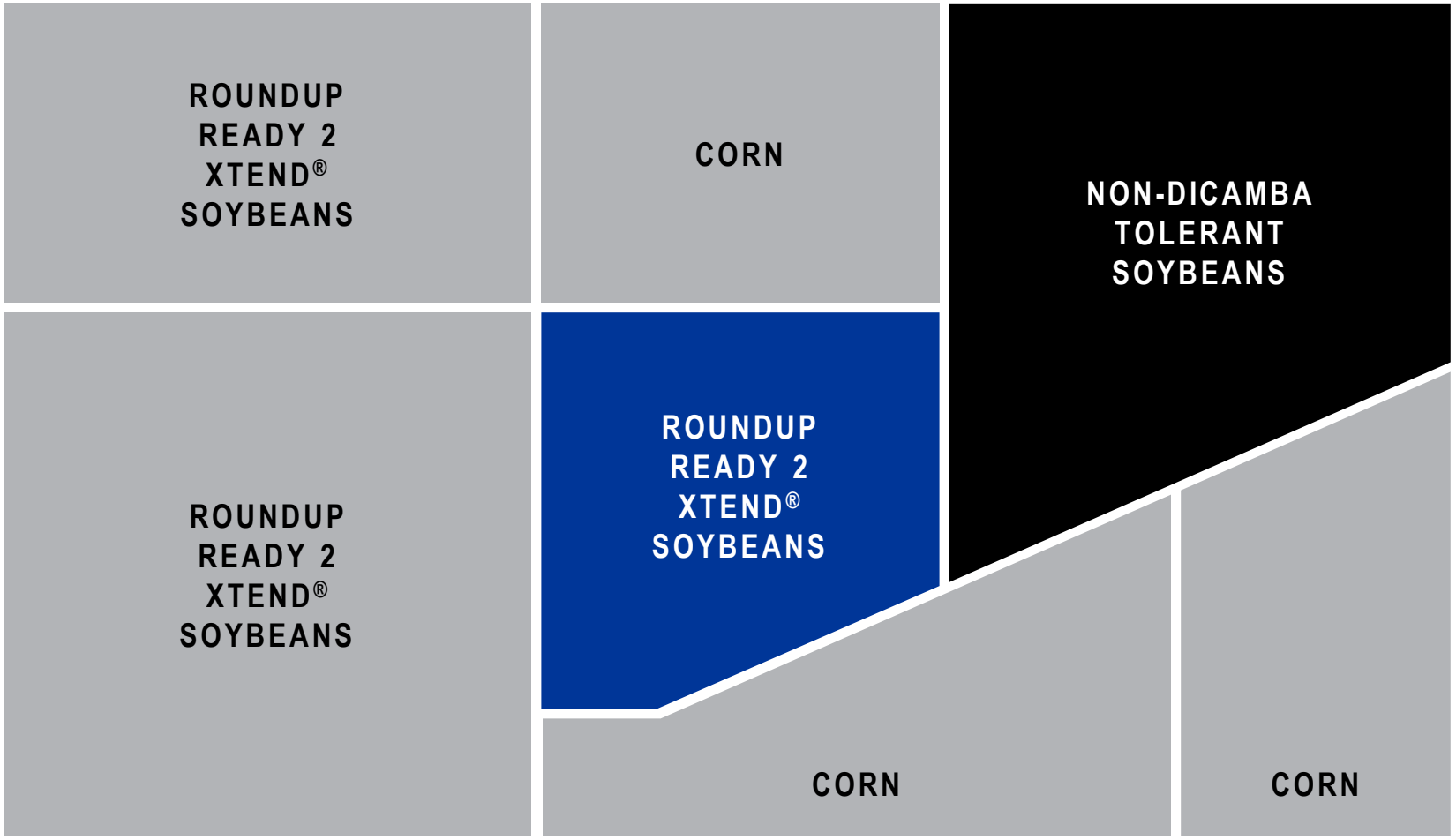

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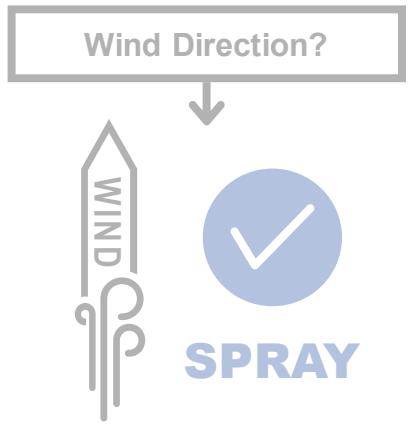

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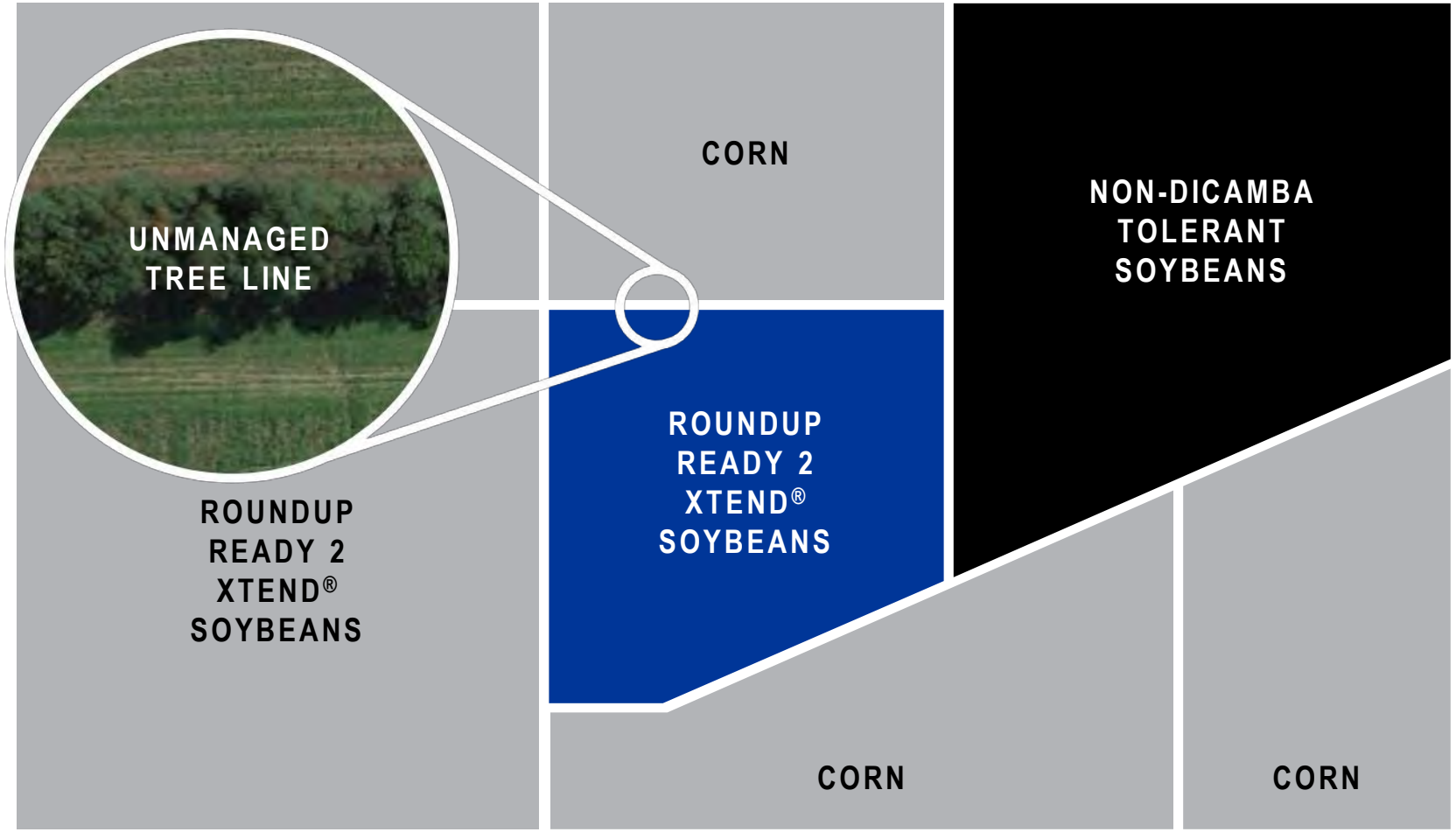

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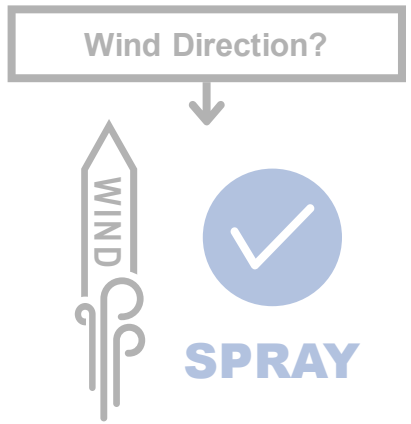

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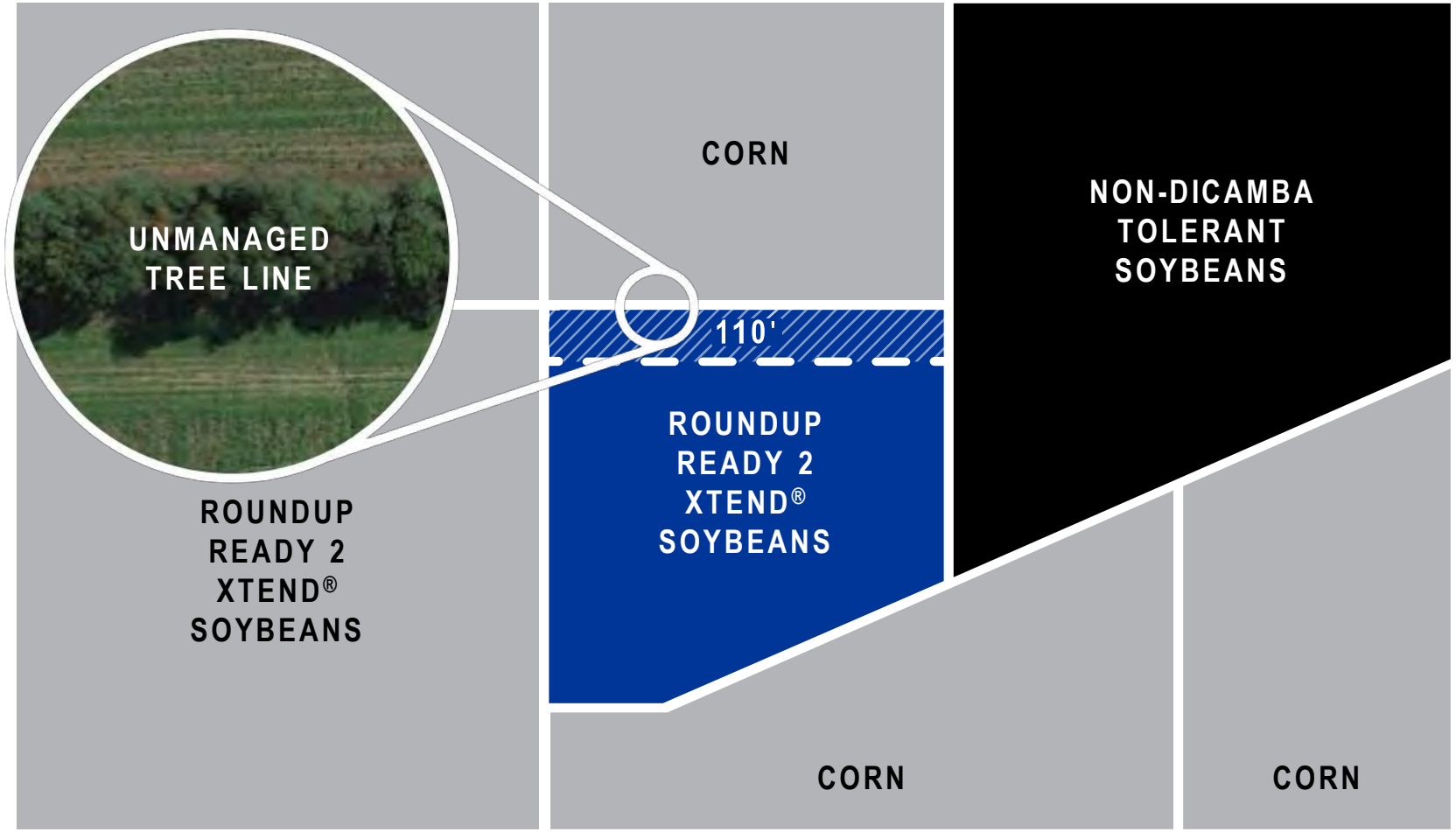

ENDANGERED SPECIES CONCERNS

FOLLOWING MEASURES CONTAINED IN ENDANGERED SPECIES PROTECTION BULLETIN

To obtain bulletins no more than six months before using these products

Go to https://www.epa.gov/endangered-species

OR call 1-844-447-3813

You must use the Bulletin valid for the month in which you will apply these products

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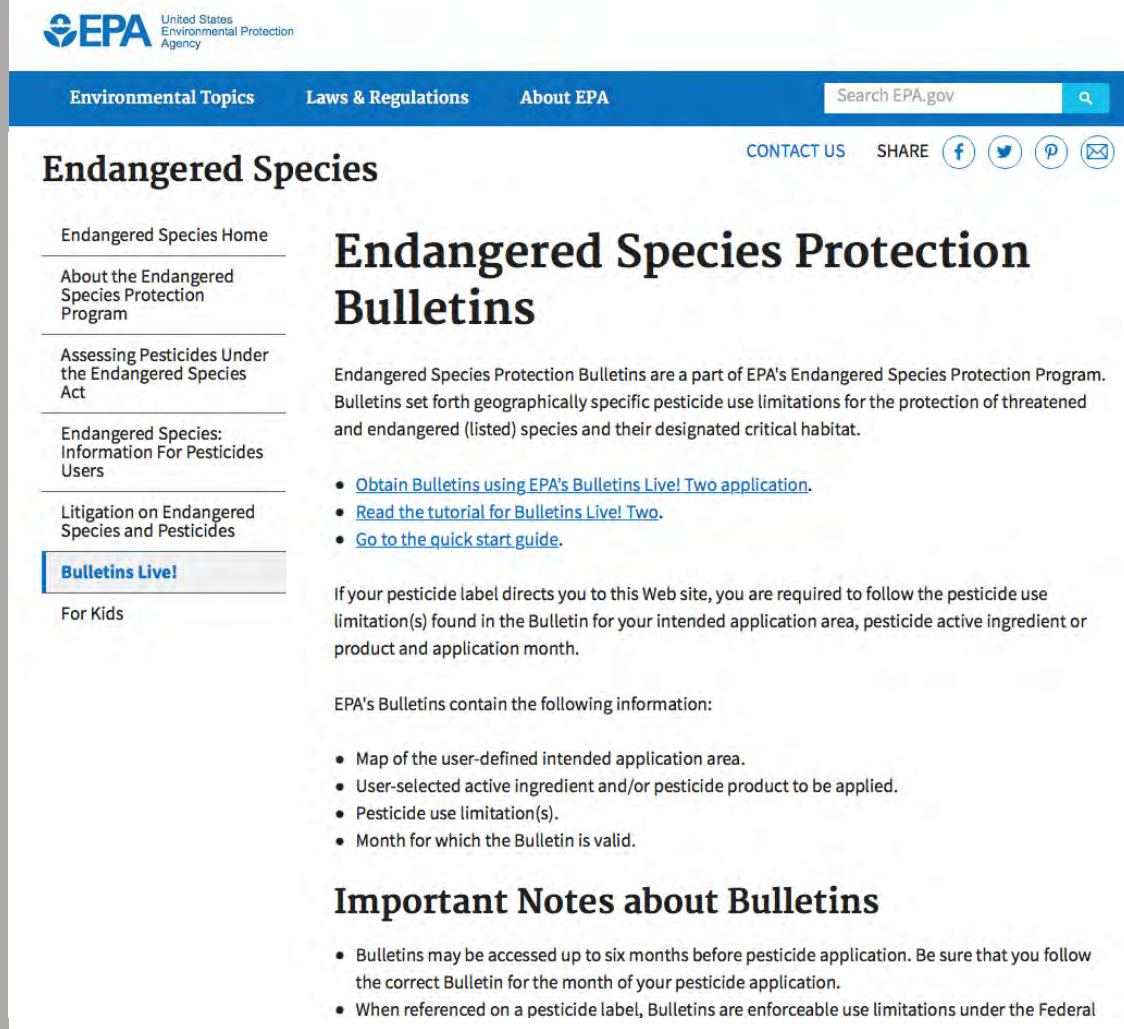

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Endangered Species

- Endangered Species Home
- About the Endangered Species Protection Program
- Assessing Pesticides Under the Endangered Species Act
- Endangered Species: Information For Pesticides Users
- Litigation on Endangered Species and Pesticides
- **Bulletins Live!**
- For Kids

Endangered Species Protection Bulletins

Endangered Species Protection Bulletins are a part of EPA's Endangered Species Protection Program. Bulletins set forth geographically specific pesticide use limitations for the protection of threatened and endangered (listed) species and their designated critical habitat.

- Obtain Bulletins using EPA's Bulletins Live! Two application.
- Read the tutorial for Bulletins Live! Two.
- Go to the quick start guide.

If your pesticide label directs you to this Web site, you are required to follow the pesticide use limitation(s) found in the Bulletin for your intended application area, pesticide active ingredient or product and application month.

EPA's Bulletins contain the following information:

- Map of the user-defined intended application area.
- User-selected active ingredient and/or pesticide product to be applied.
- Pesticide use limitation(s).
- Month for which the Bulletin is valid.

Important Notes about Bulletins

- Bulletins may be accessed up to six months before pesticide application. Be sure that you follow the correct Bulletin for the month of your pesticide application.
- When referenced on a pesticide label, Bulletins are enforceable use limitations under the Federal

ENDANGERED SPECIES CONCERNS

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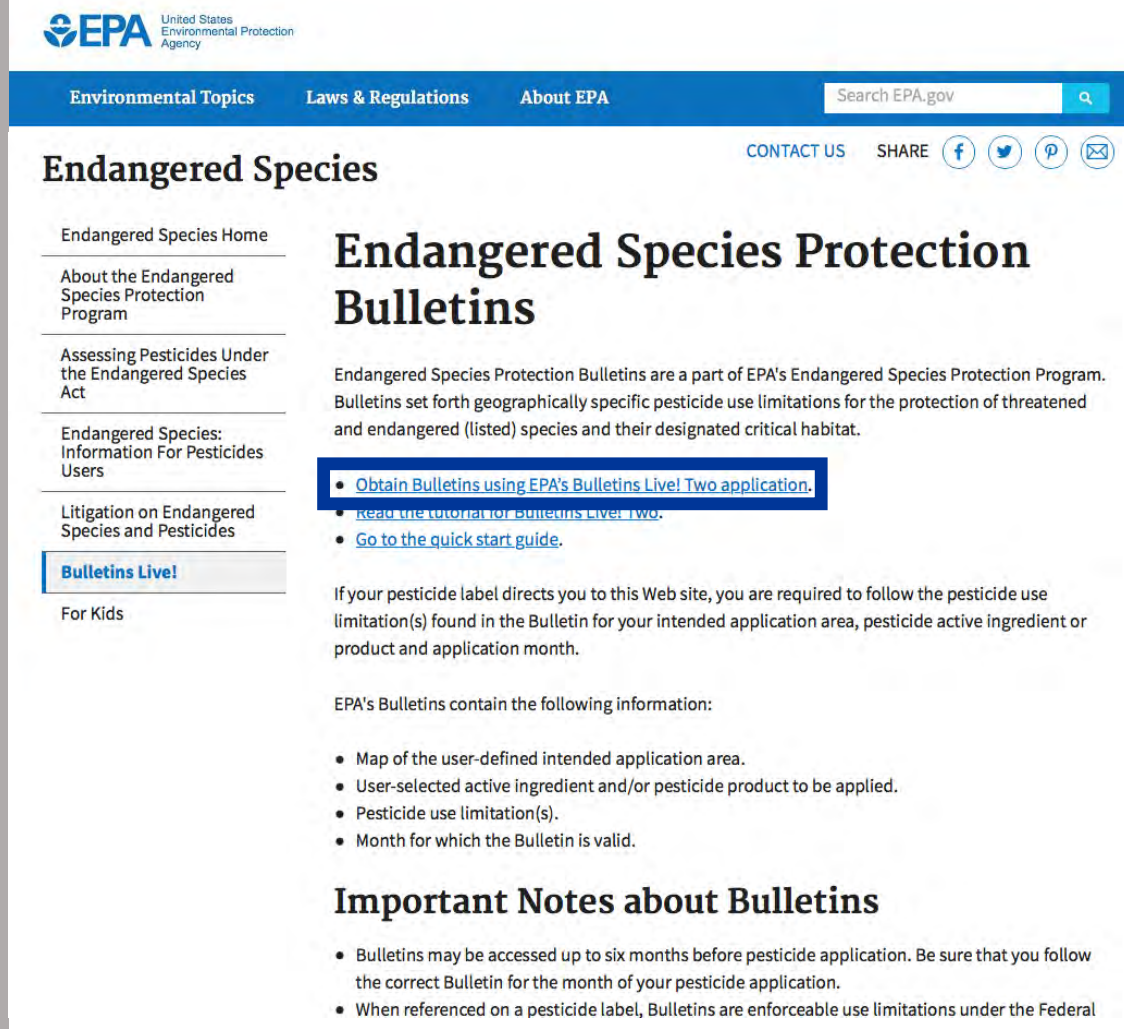
OR call 1-844-447-3813

You must use the Bulletin valid for the month in which you will apply these products



INSTRUCTIONS

OBTAINING A BULLETIN

Enter Application Month

- "April 2019"

Enter Product Name (example)

- "M1768 Herbicide" or

Enter Product Registration Number

- "524-617"

Press Search

INSTRUCTIONS

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Enter Product Name (example)

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Enter Product Registration Number

- "524-617"

Press Search

INSTRUCTIONS

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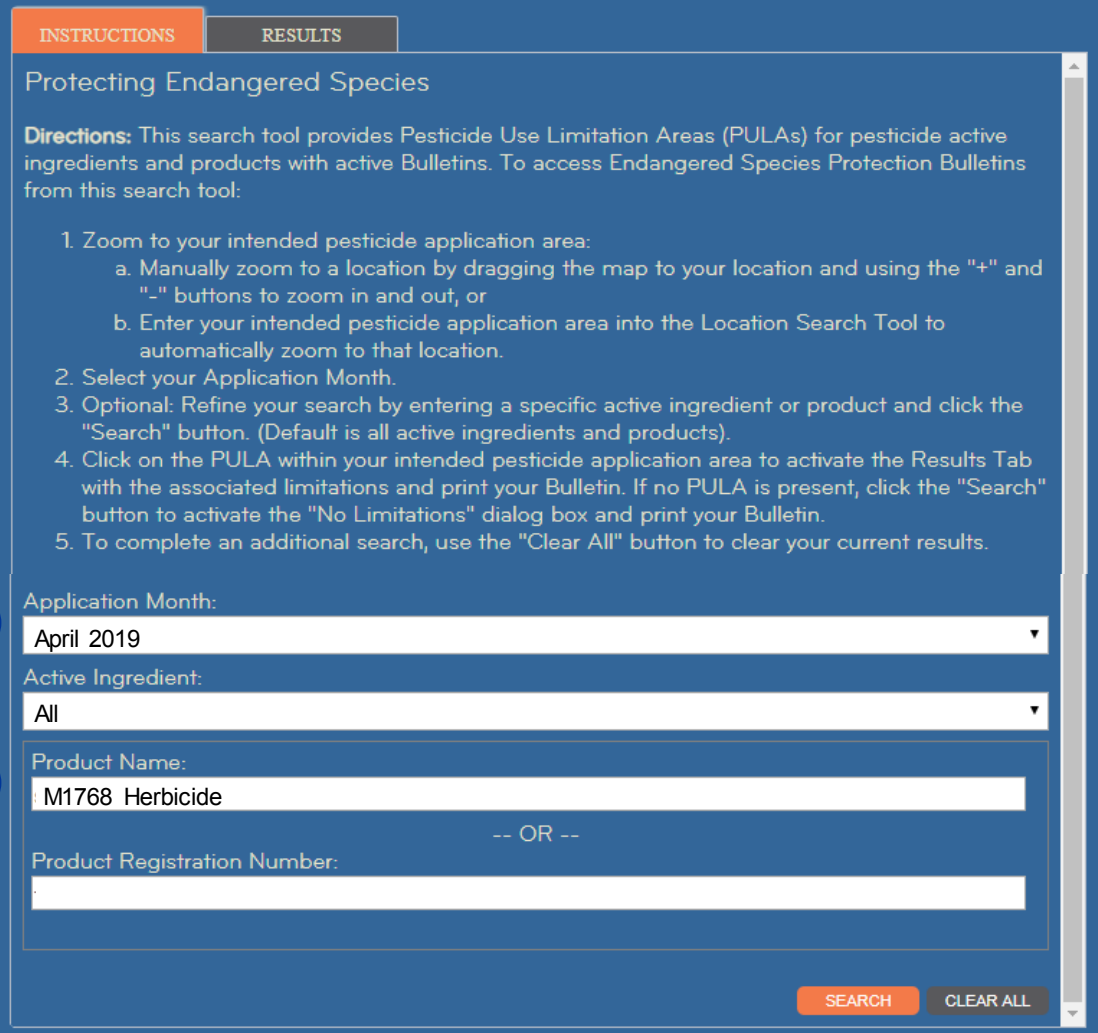

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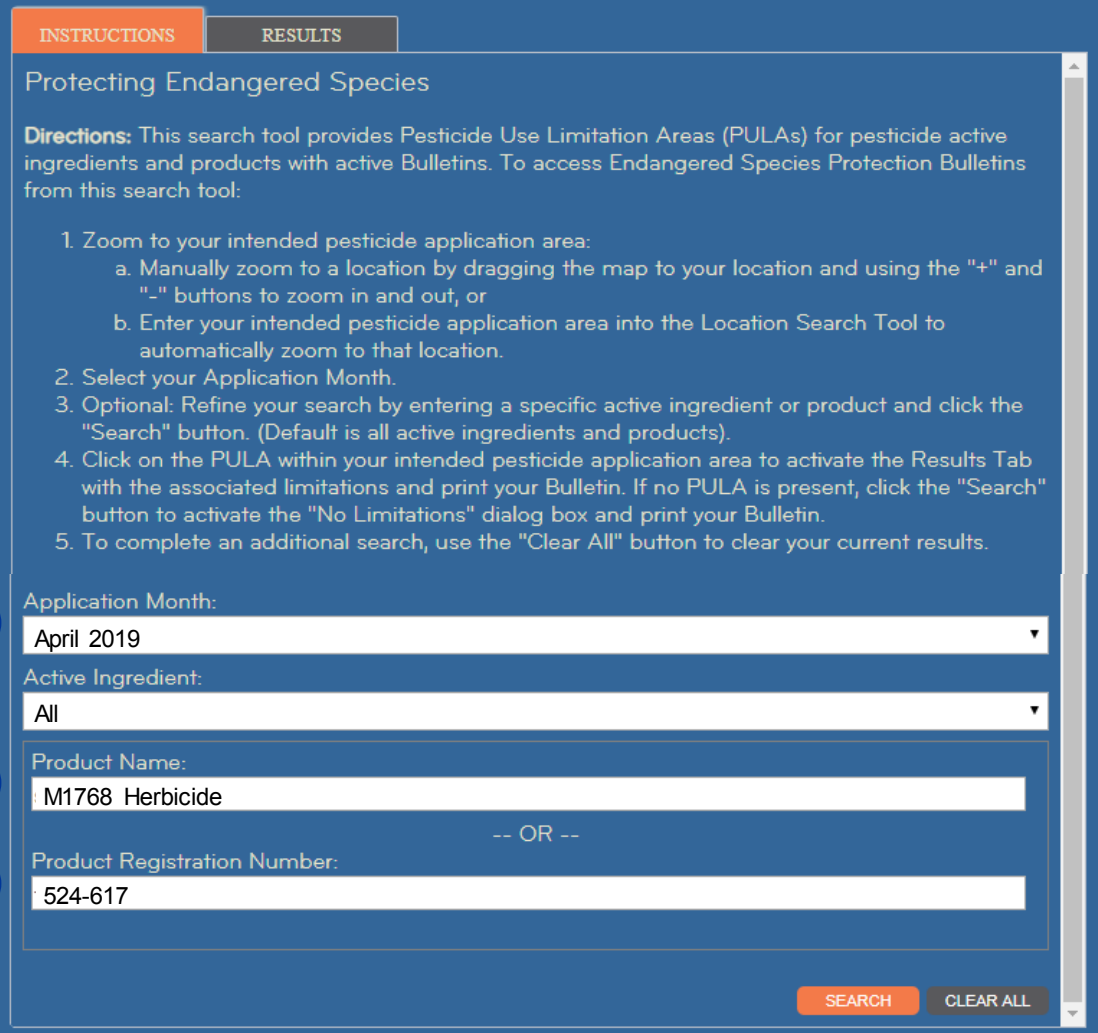

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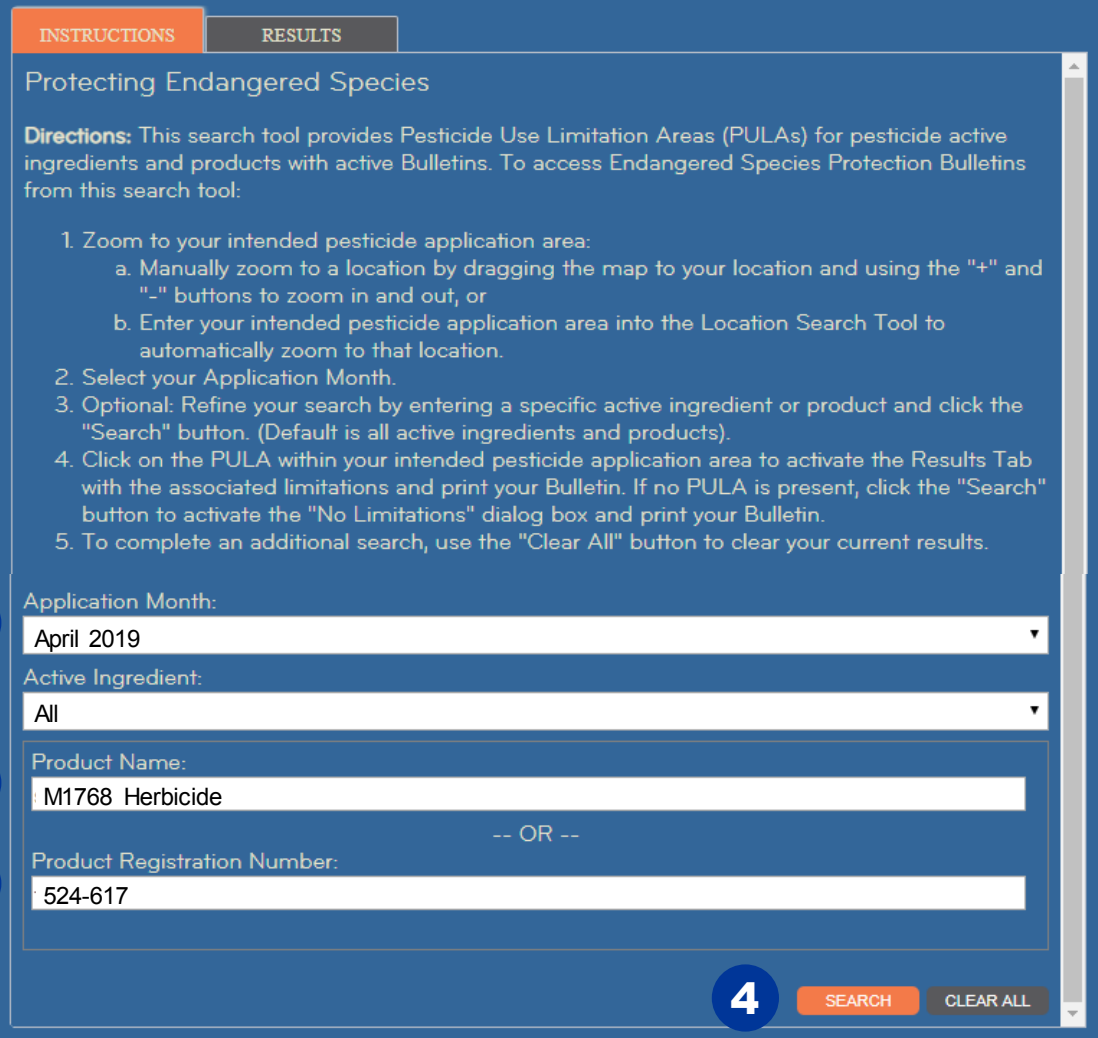

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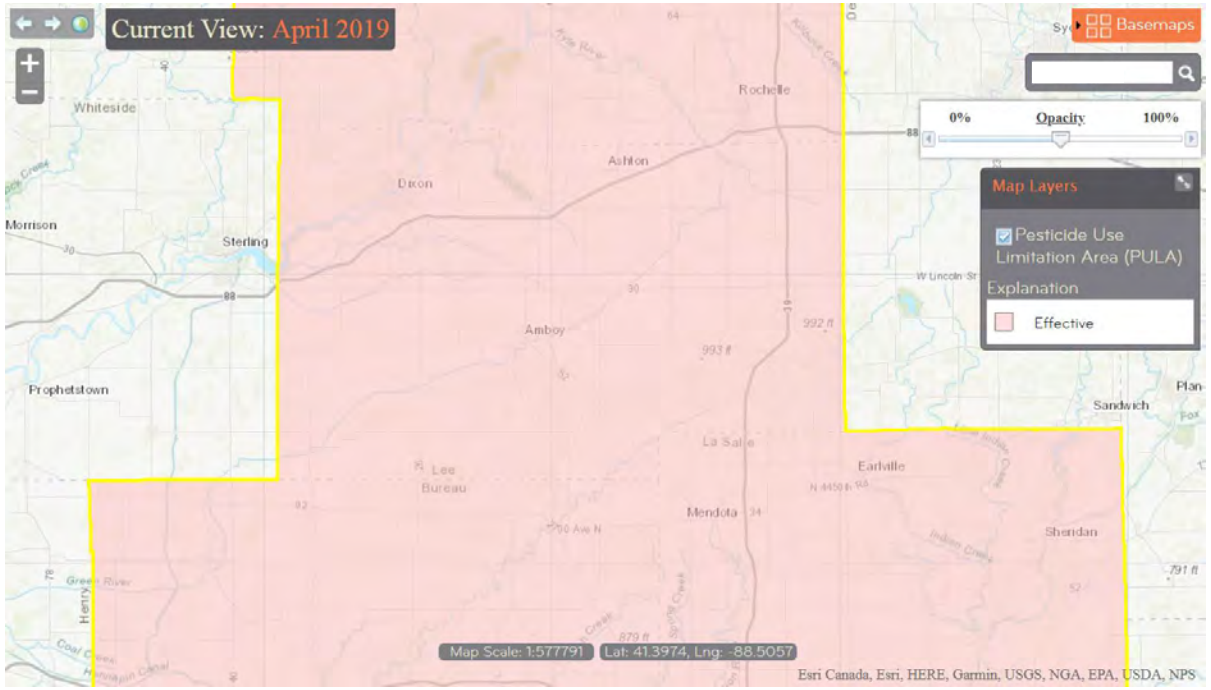

Go to Map and find application county OR

Type in application field information in Search box; zip code, address, etc.

Pink area will be outlined in yellow

INSTRUCTIONS

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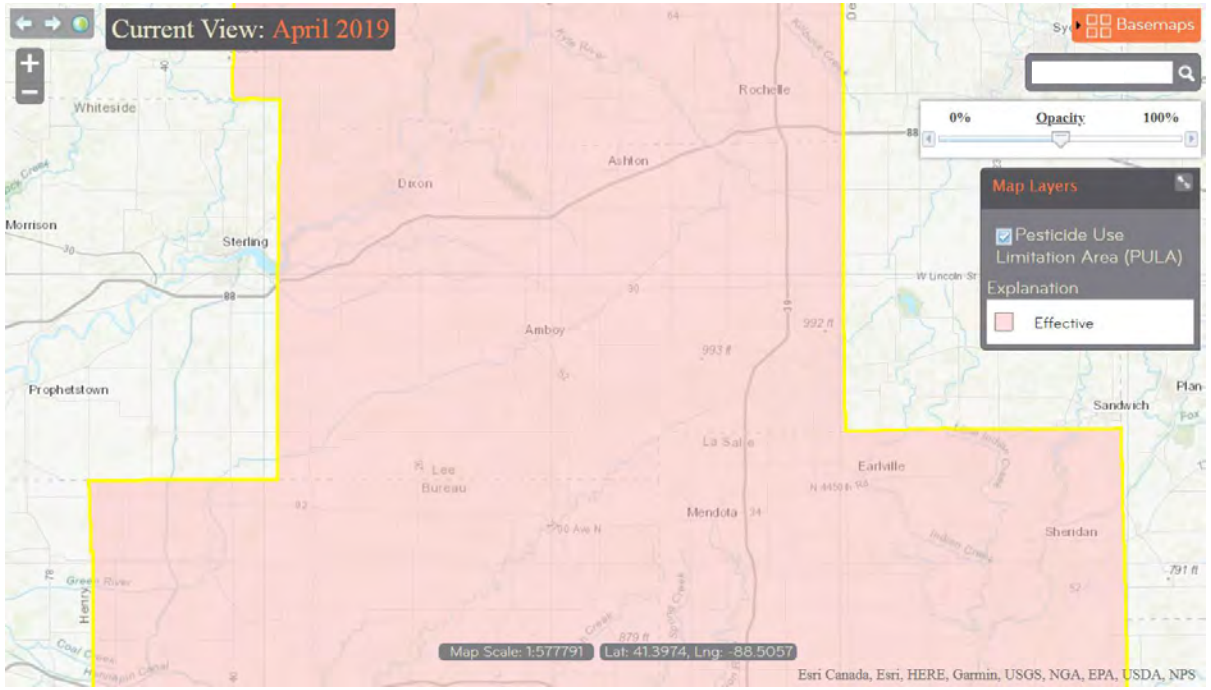
1



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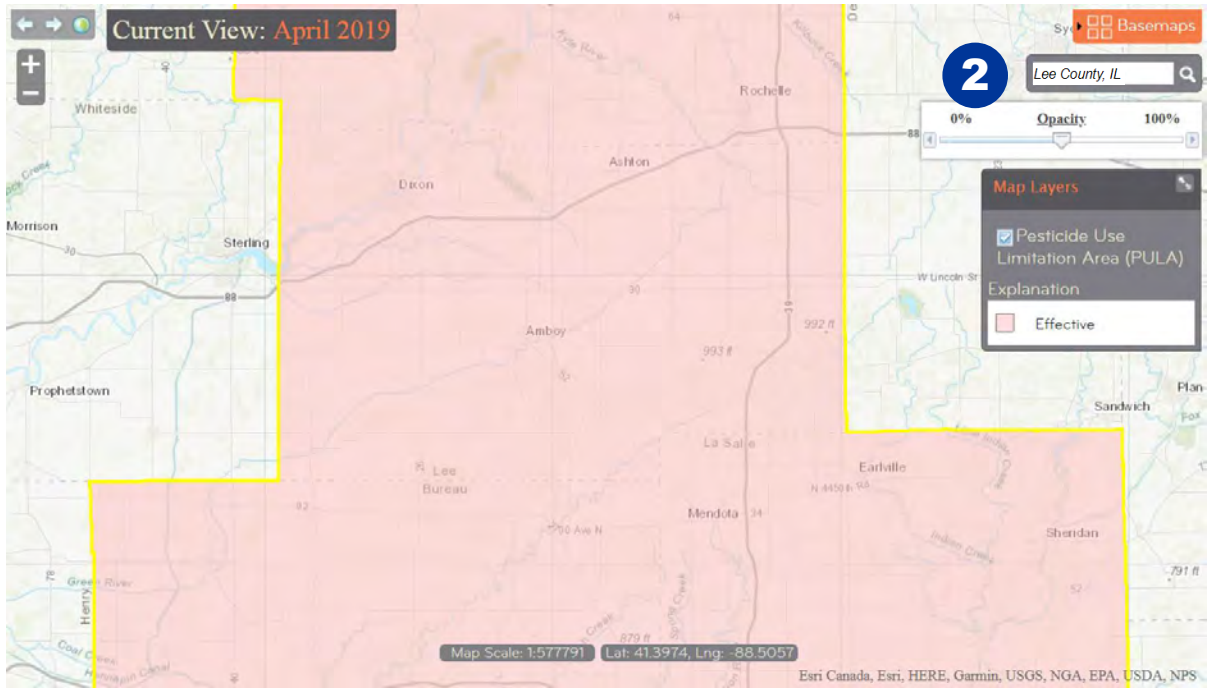

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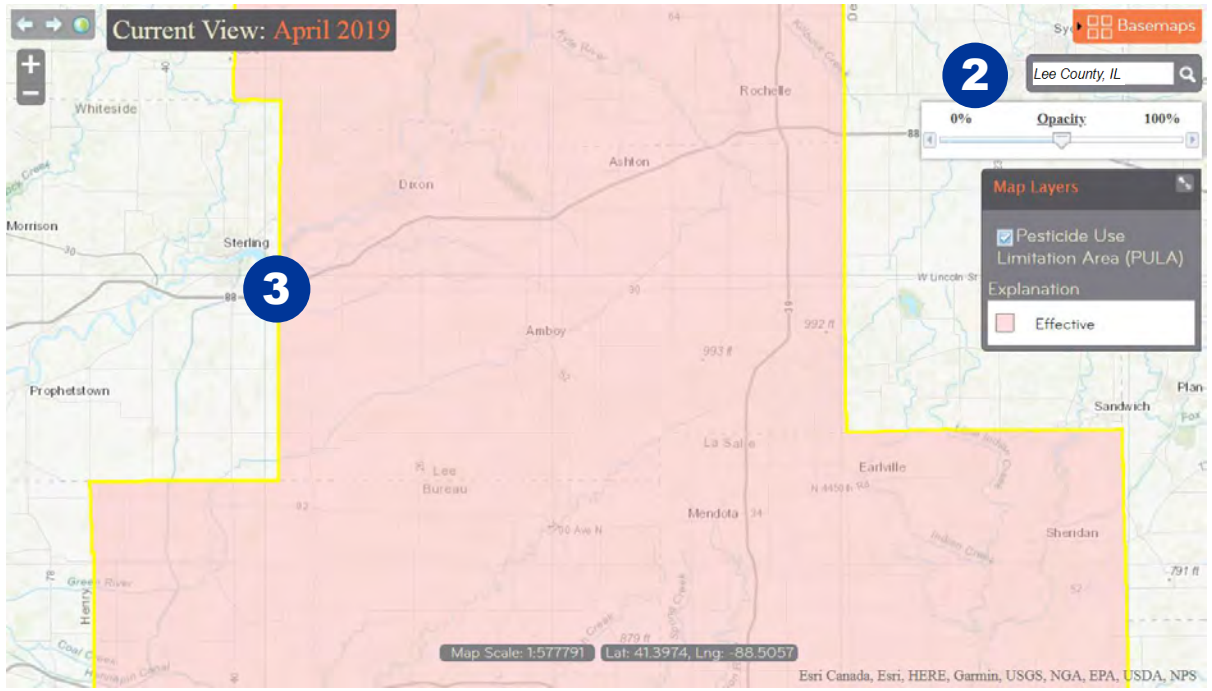

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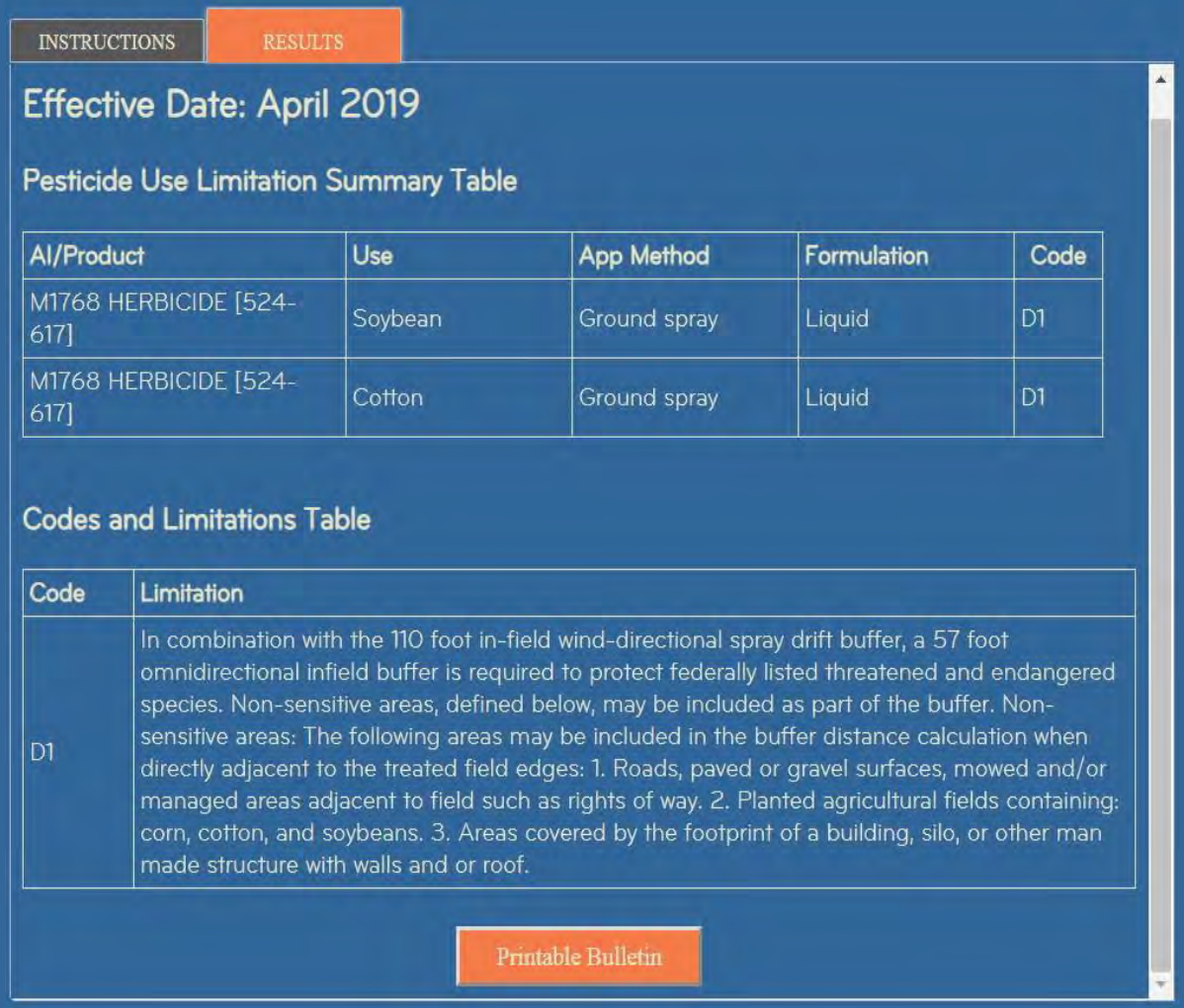

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Go back to blue box on right and click on RESULTS tab

Product information and uses will be shown along with Codes and Limitations Table.

Click on “Printable Bulletin” button to obtain a hard copy of the Bulletin

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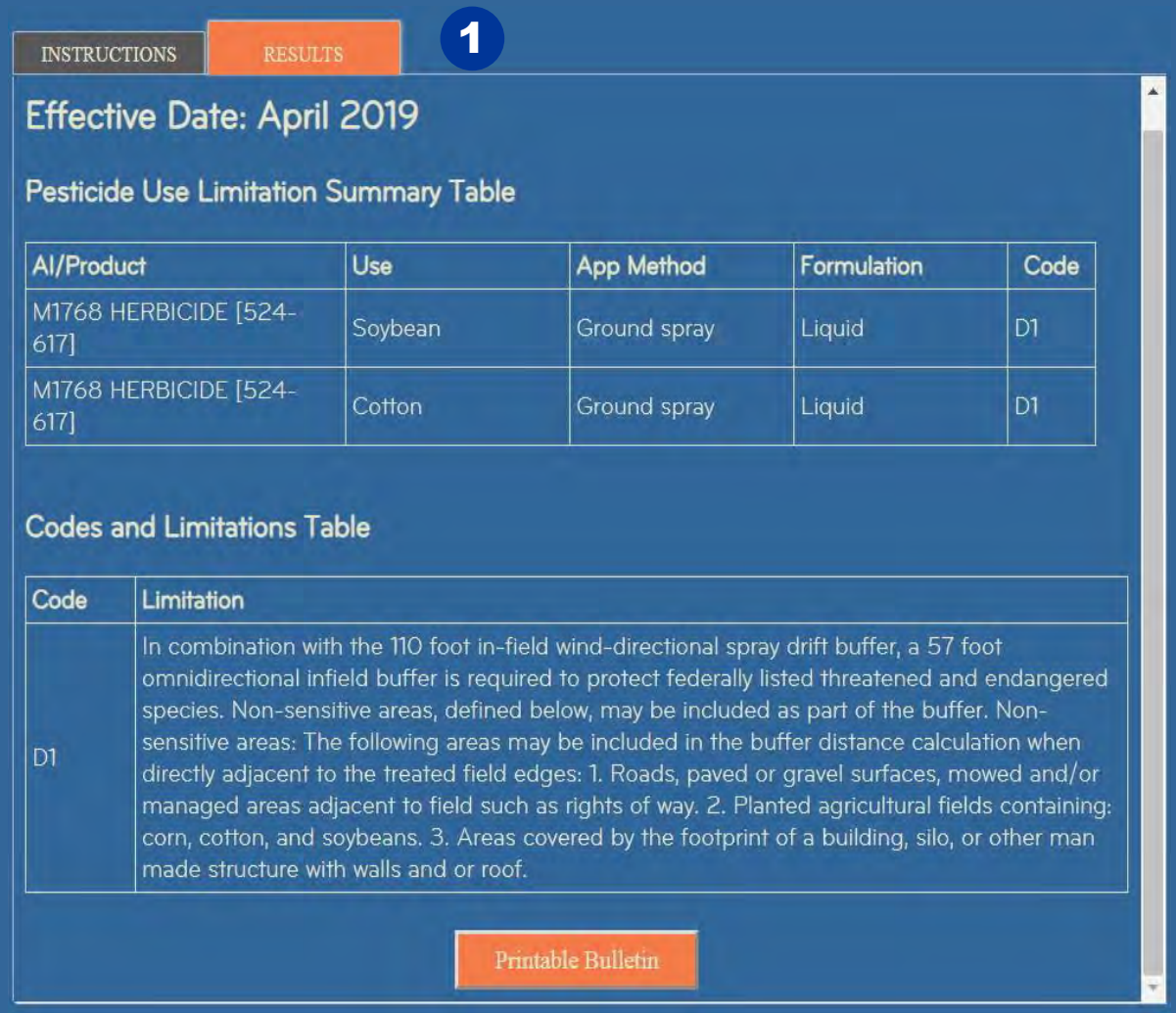

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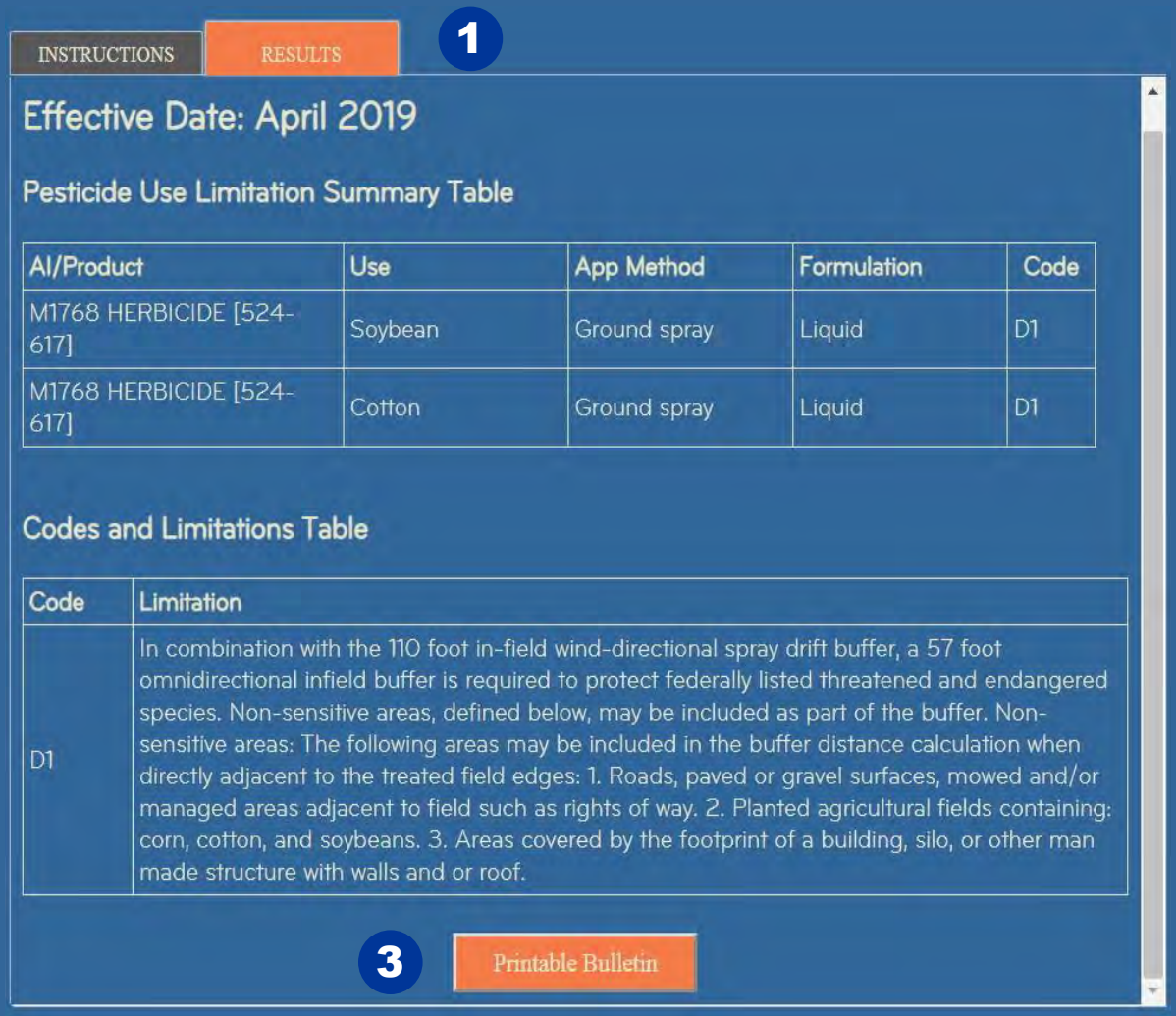

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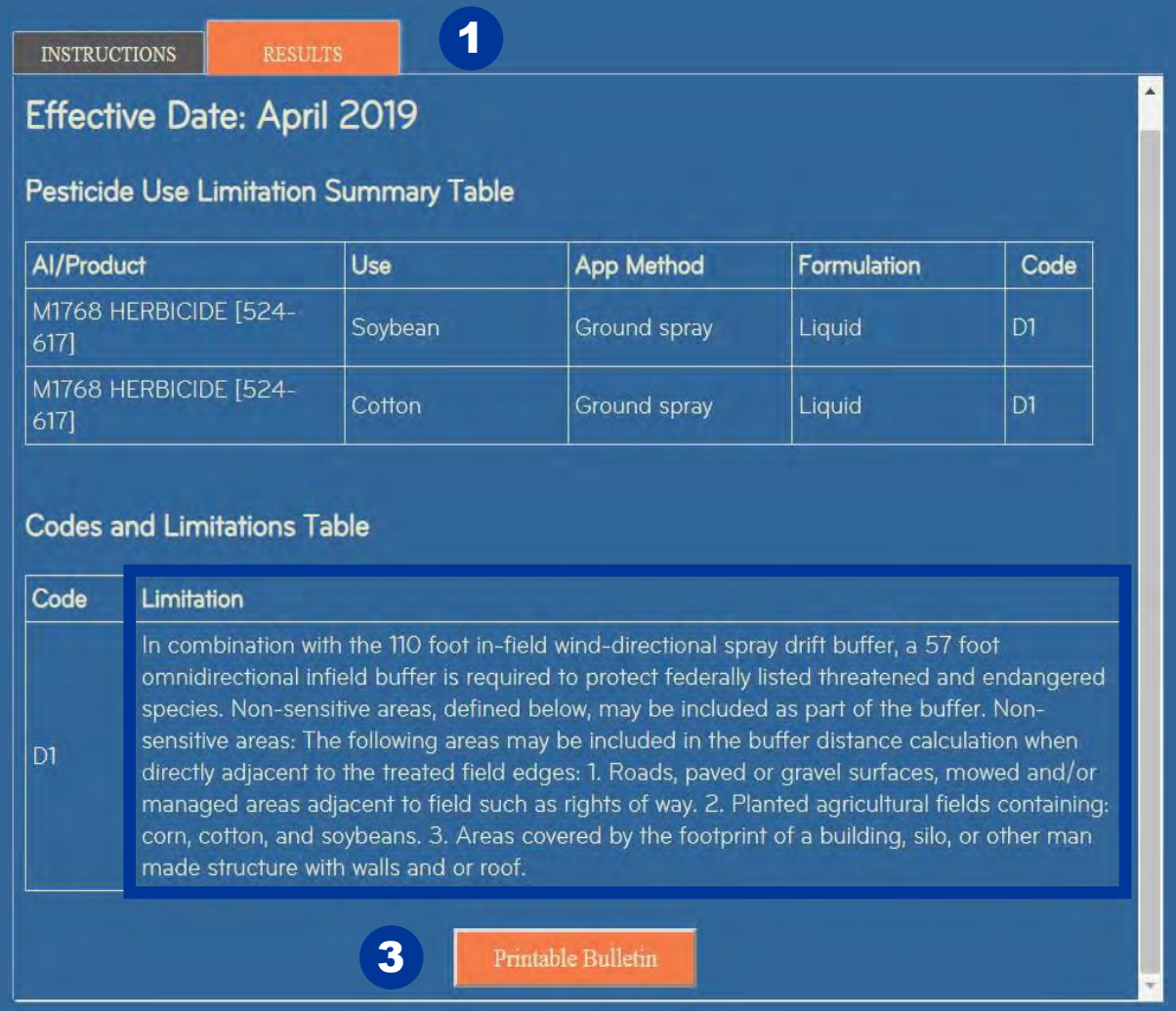

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Limitation

In combination with the 110 foot in-field wind-directional spray drift buffer, a 57 foot omnidirectional infield buffer is required to protect federally listed threatened and endangered species. Non-sensitive areas, defined below, may be included as part of the buffer. Non-sensitive areas: The following areas may be included in the buffer distance calculation when directly adjacent to the treated field edges: 1. Roads, paved or gravel surfaces, mowed and/or managed areas adjacent to field such as rights of way. 2. Planted agricultural fields containing: corn, cotton, and soybeans. 3. Areas covered by the footprint of a building, silo, or other man made structure with walls and or roof.

INSTRUCTIONS

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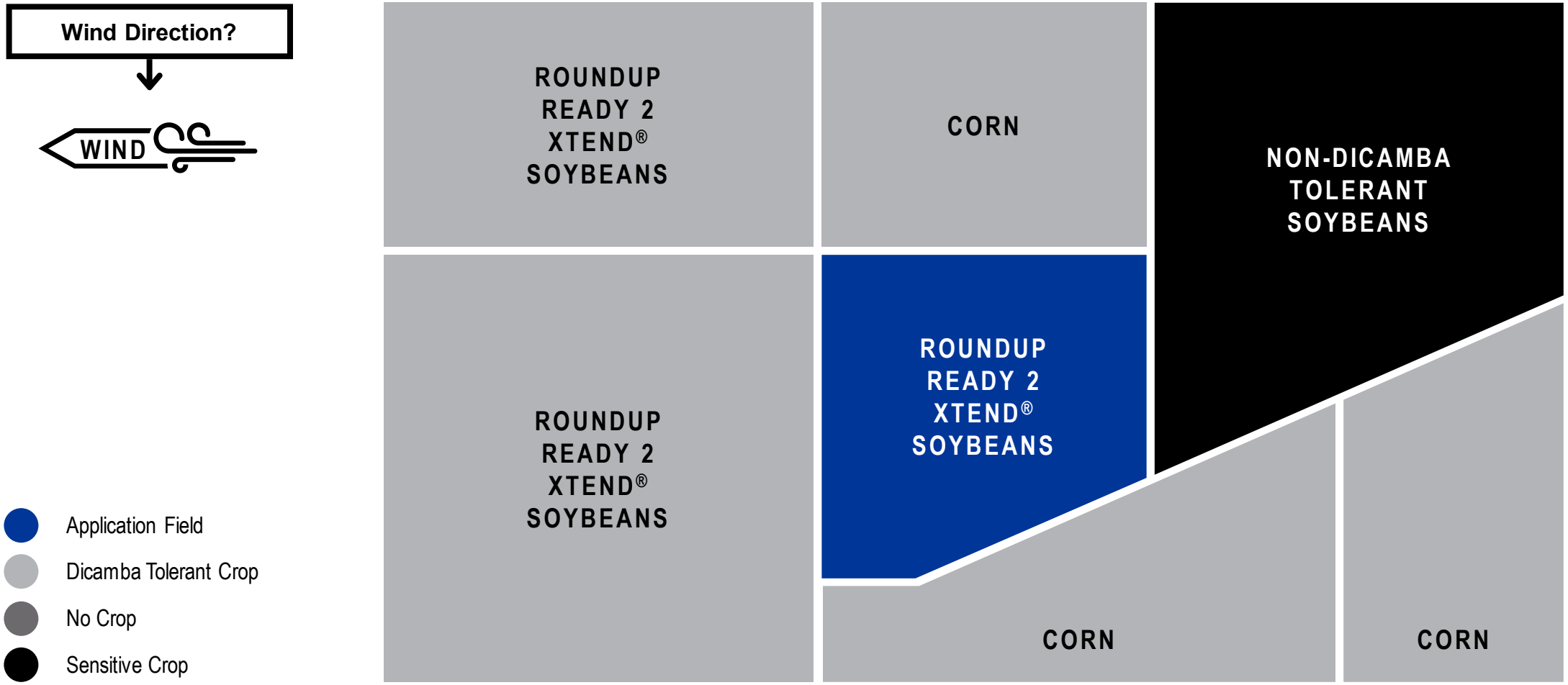
BUFFER PROTECTION

COUNTY REQUIRING OMNIDIRECTIONAL BUFFER



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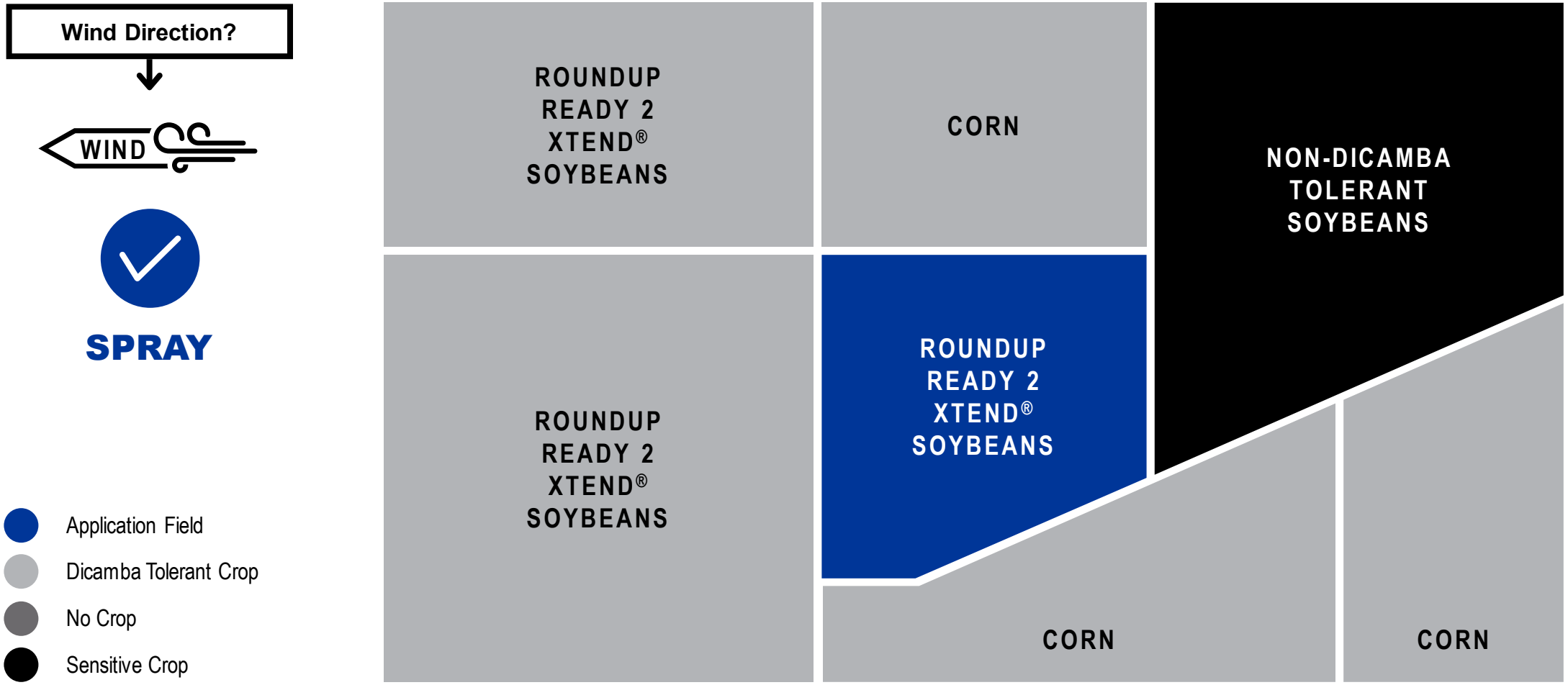

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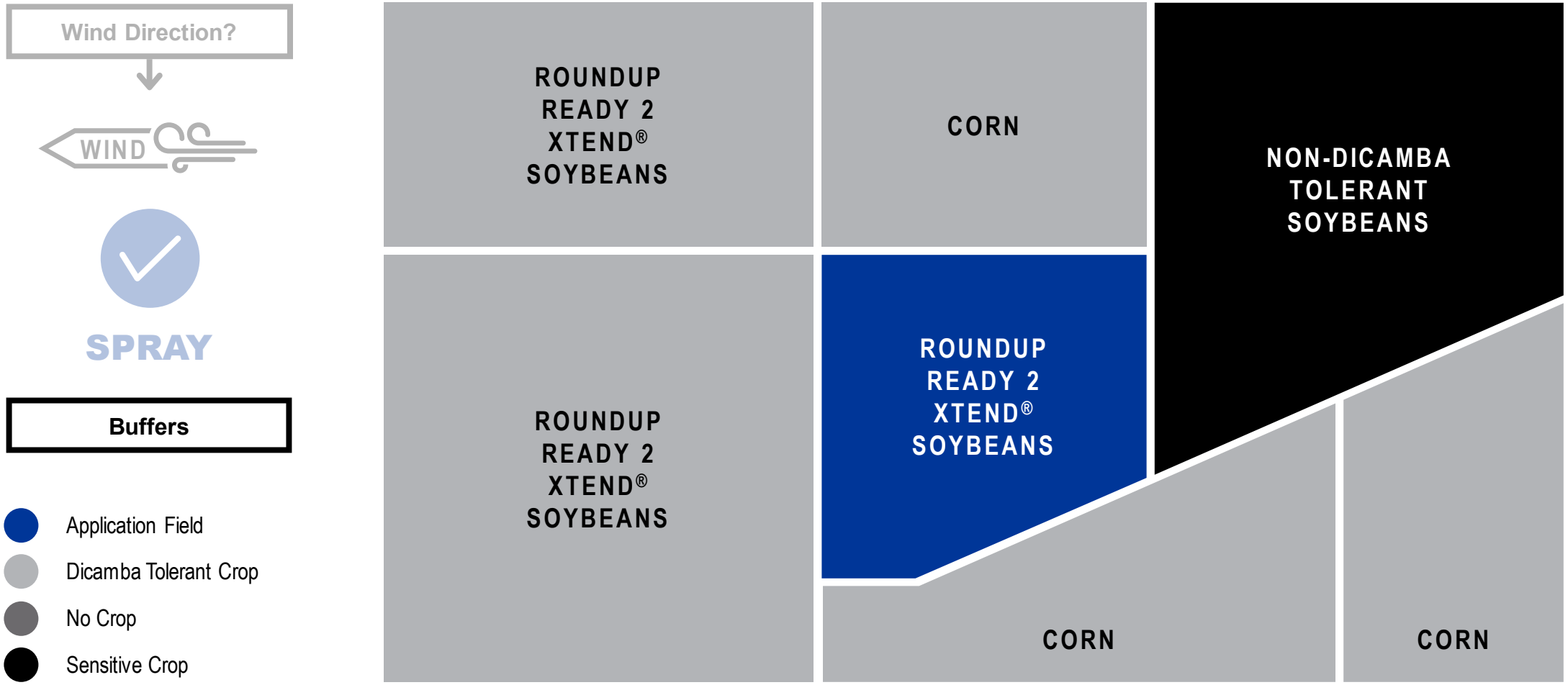

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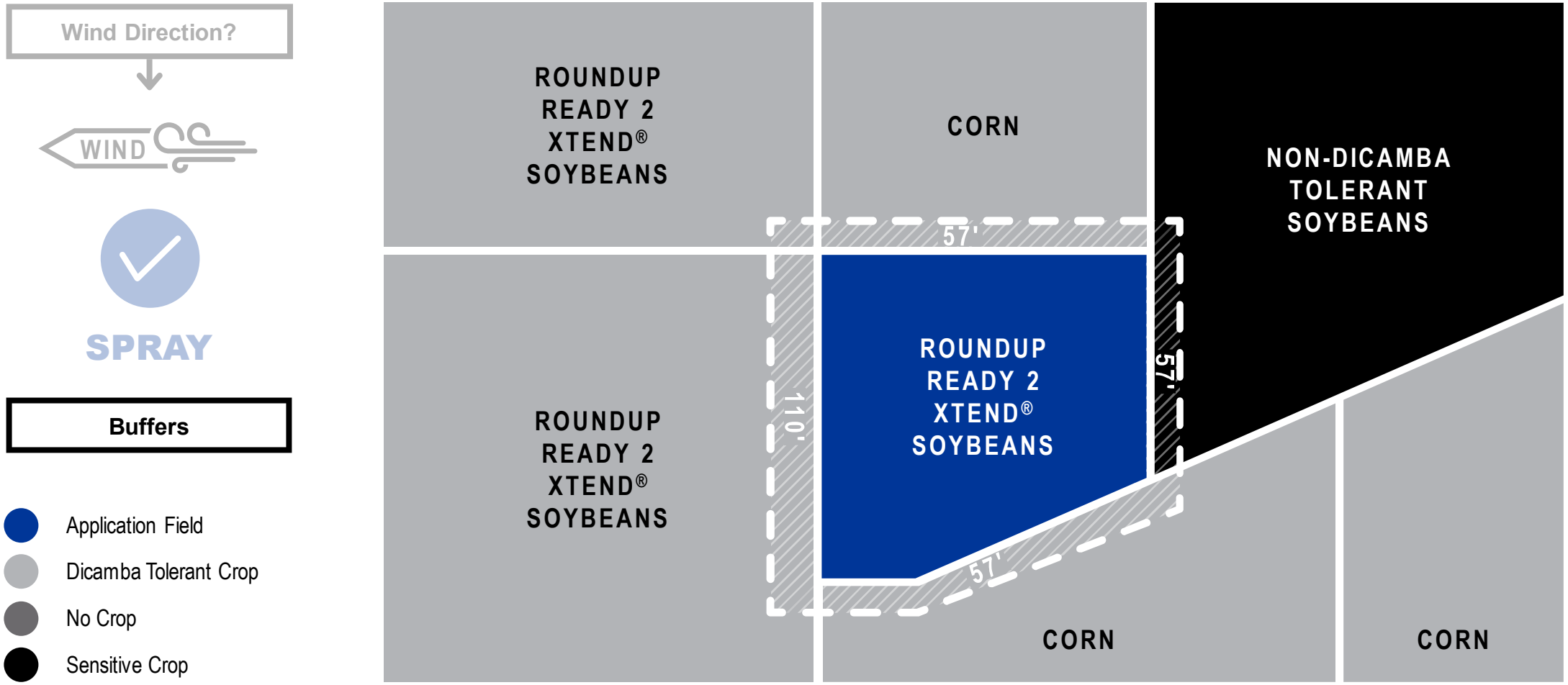

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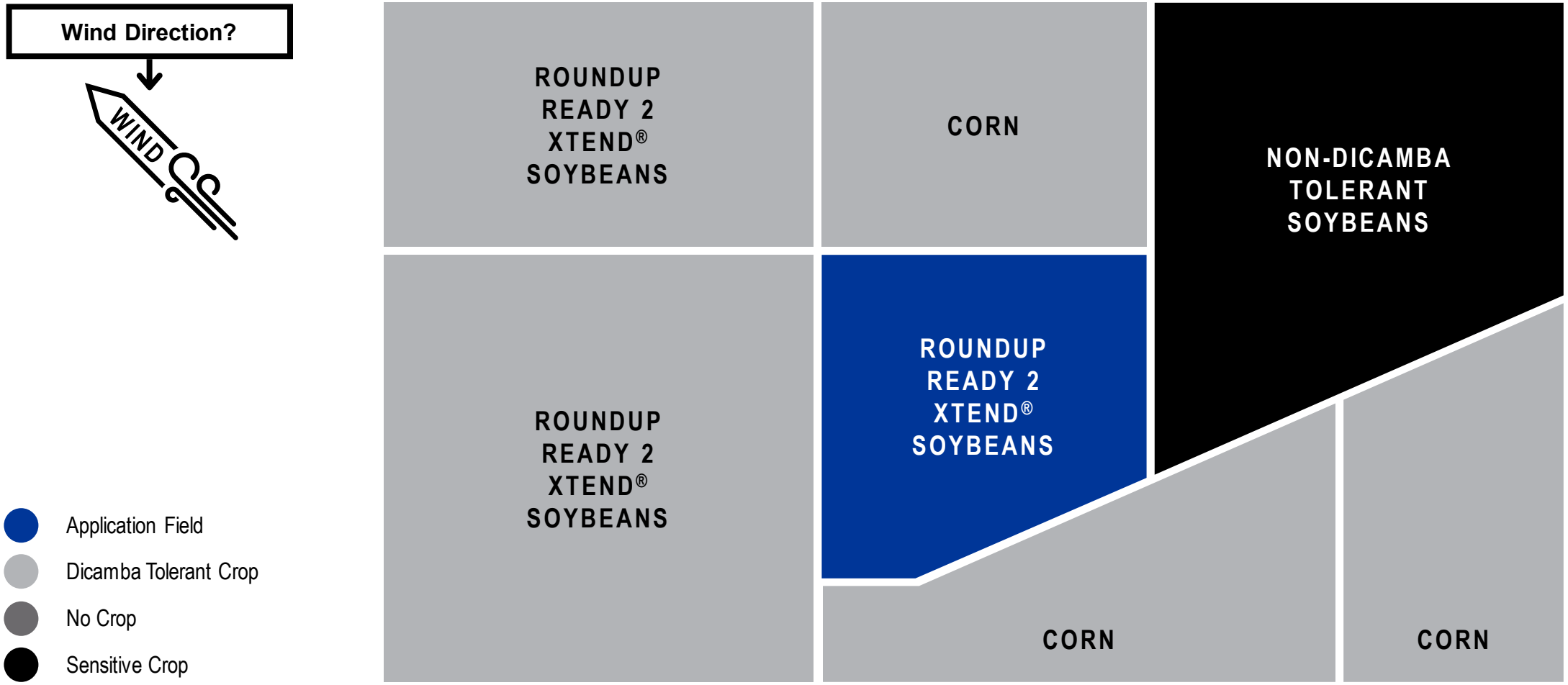

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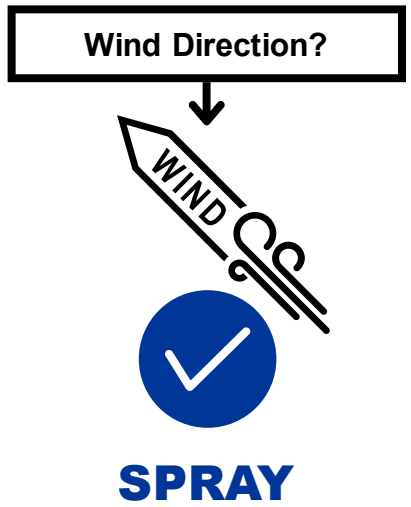

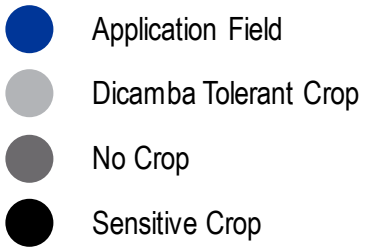

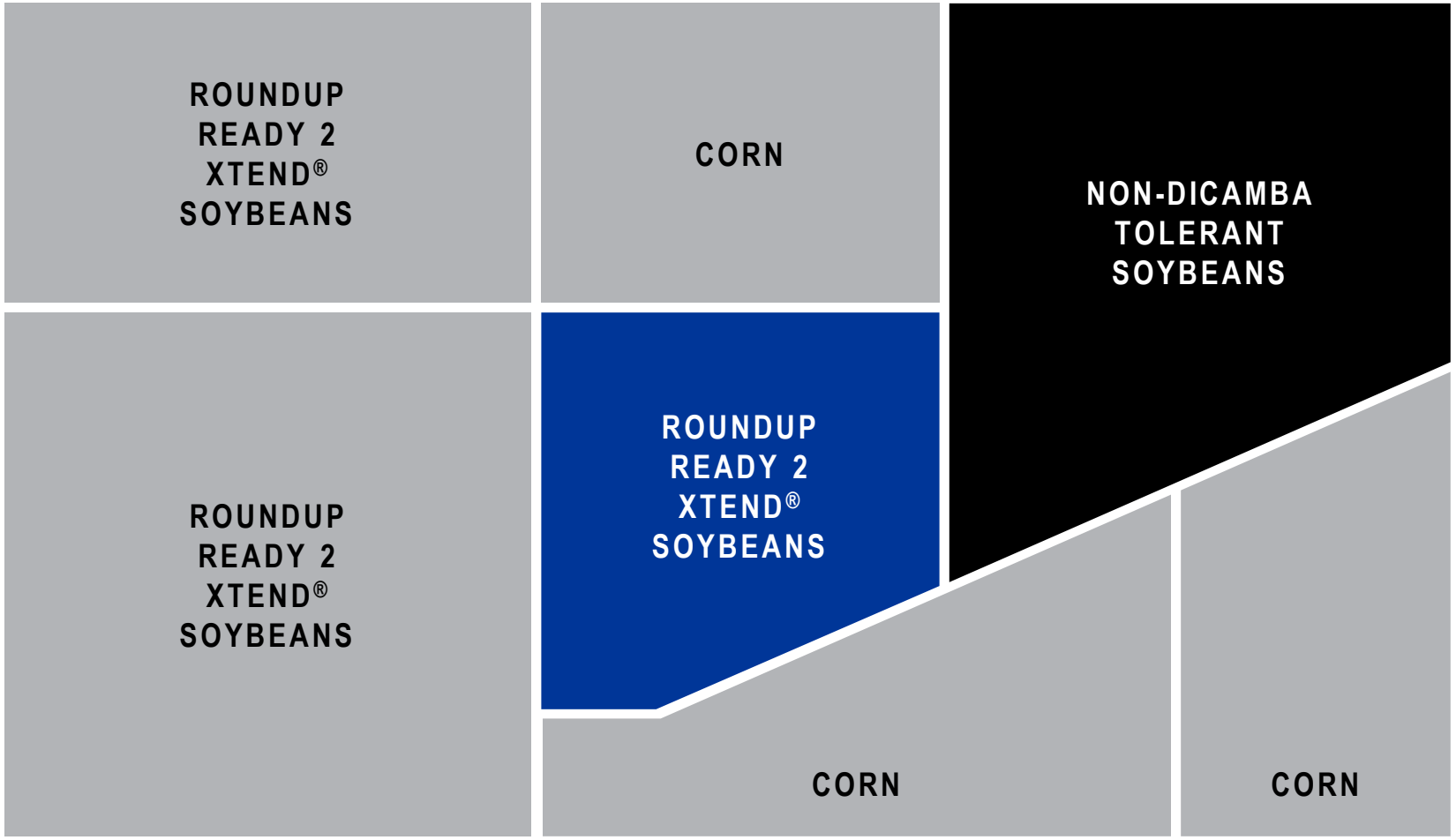

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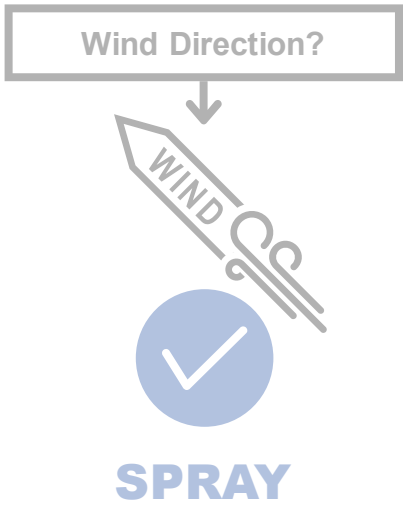
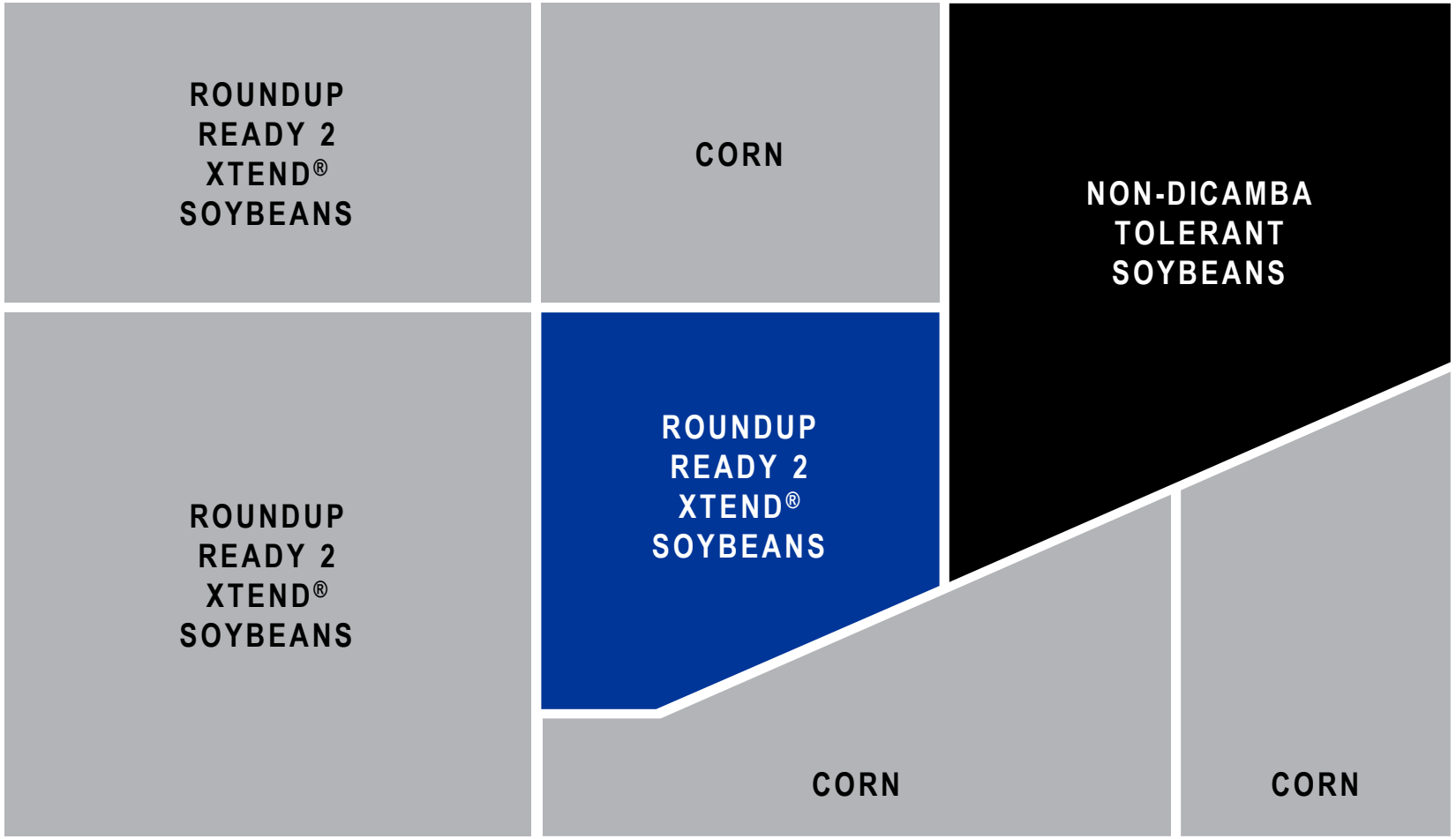


Buffers

- Application Field
- Dicamba Tolerant Crop
- No Crop
- Sensitive Crop



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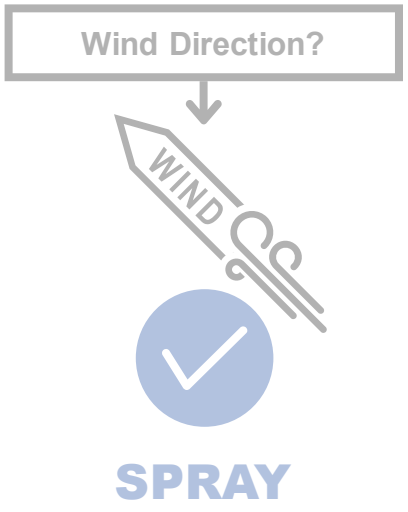

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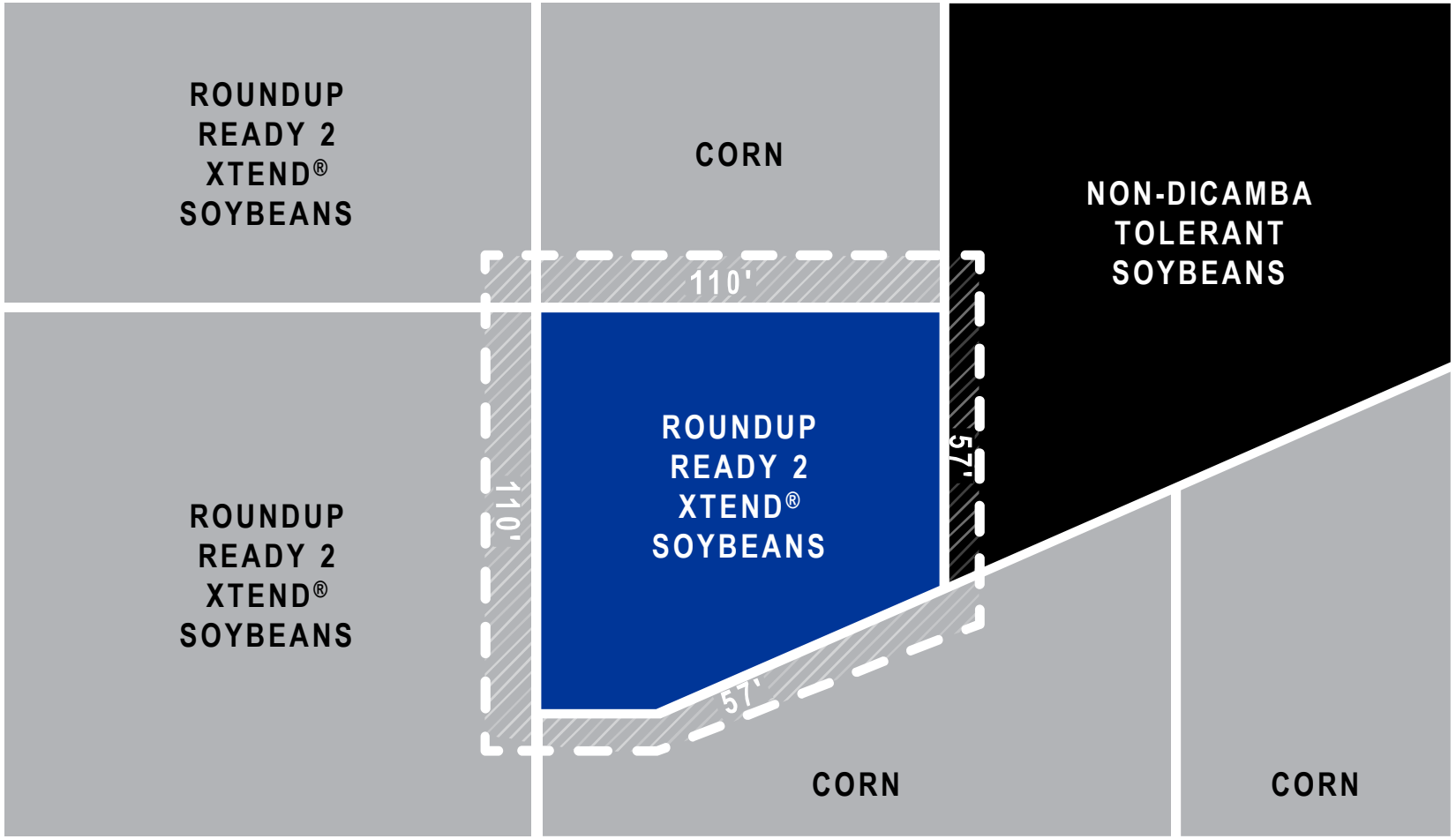

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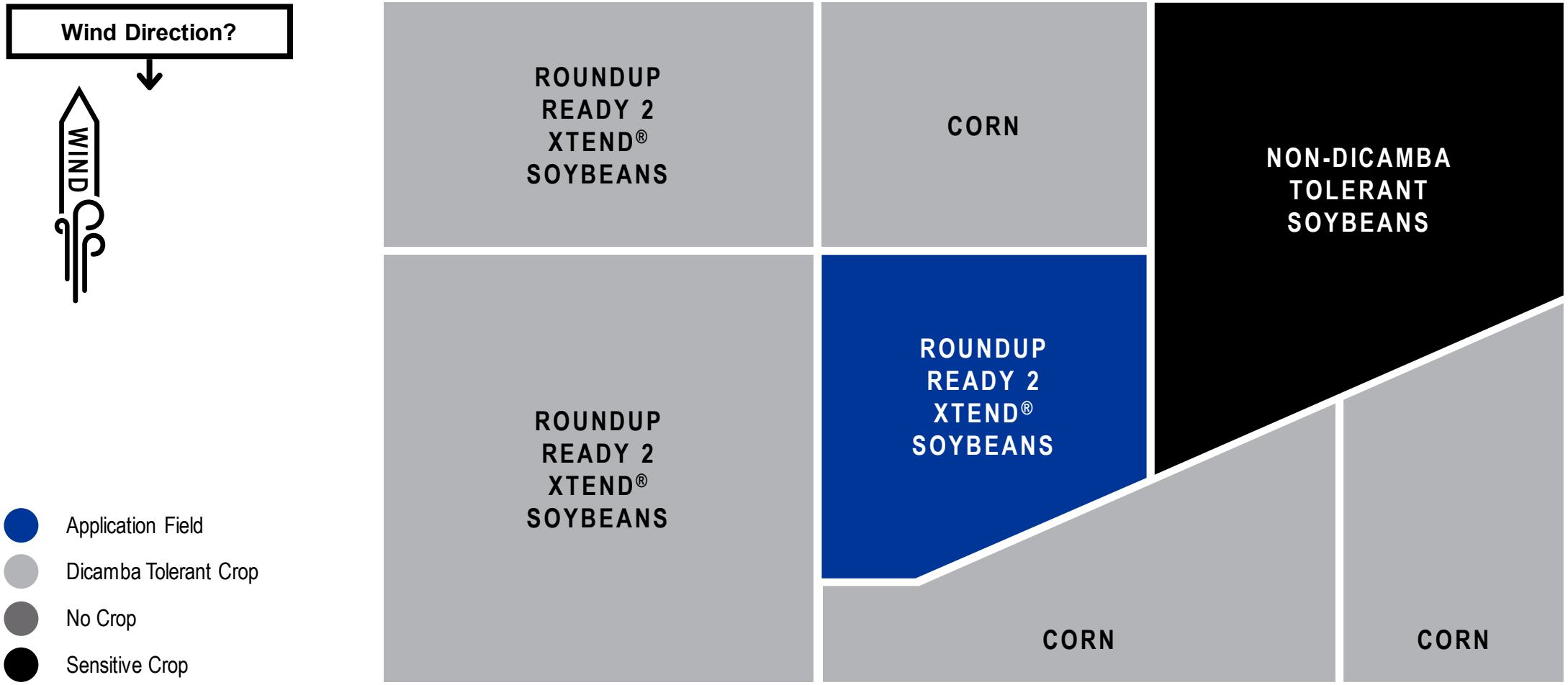

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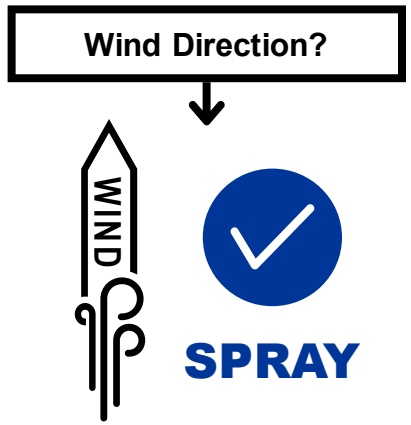

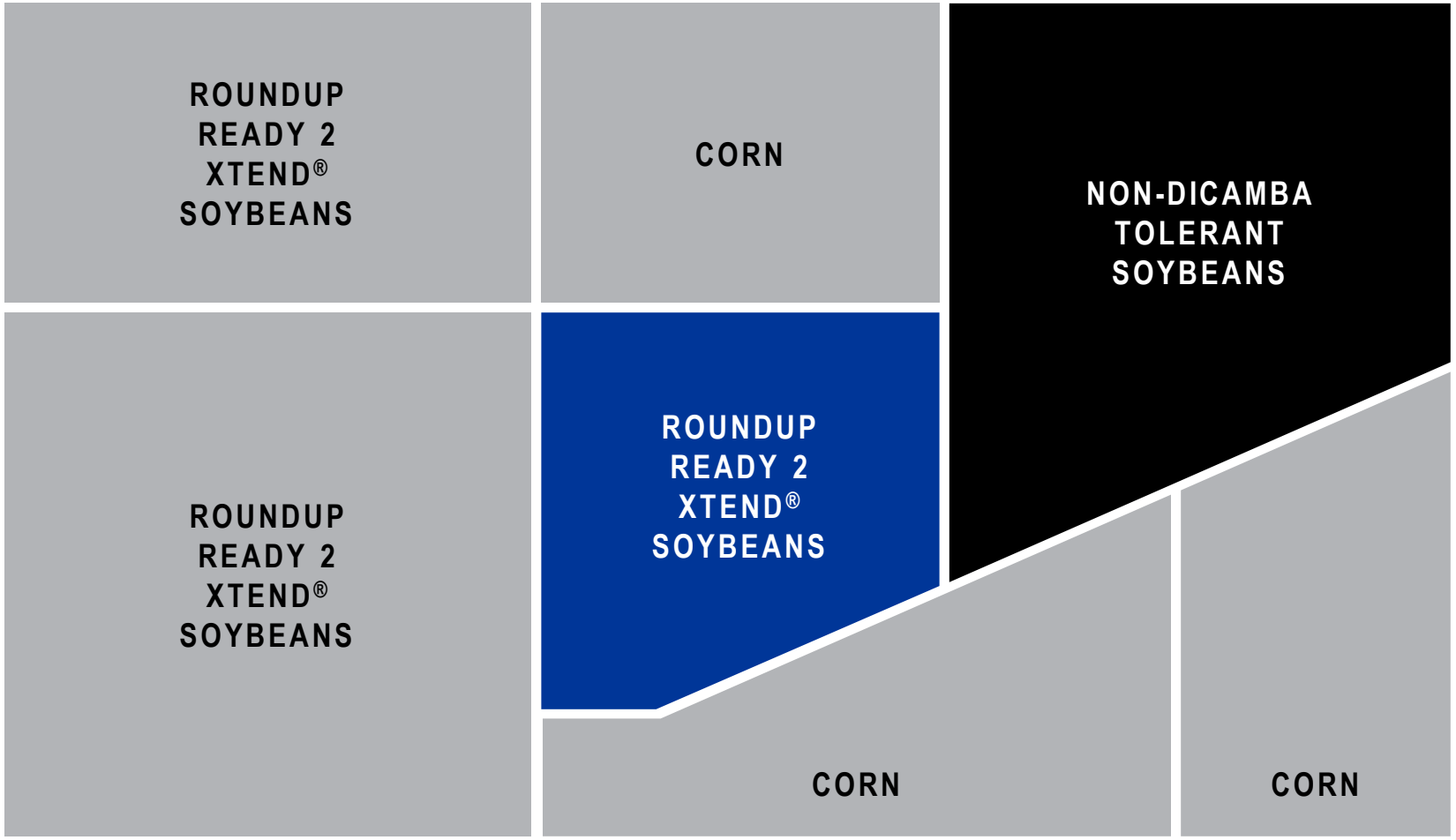

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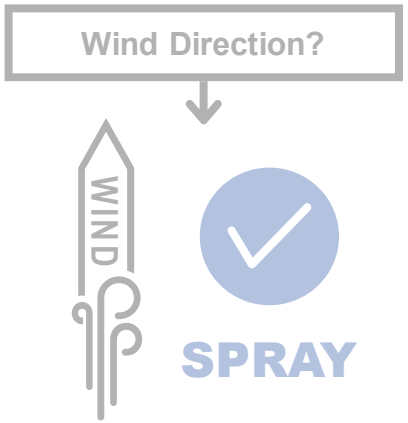

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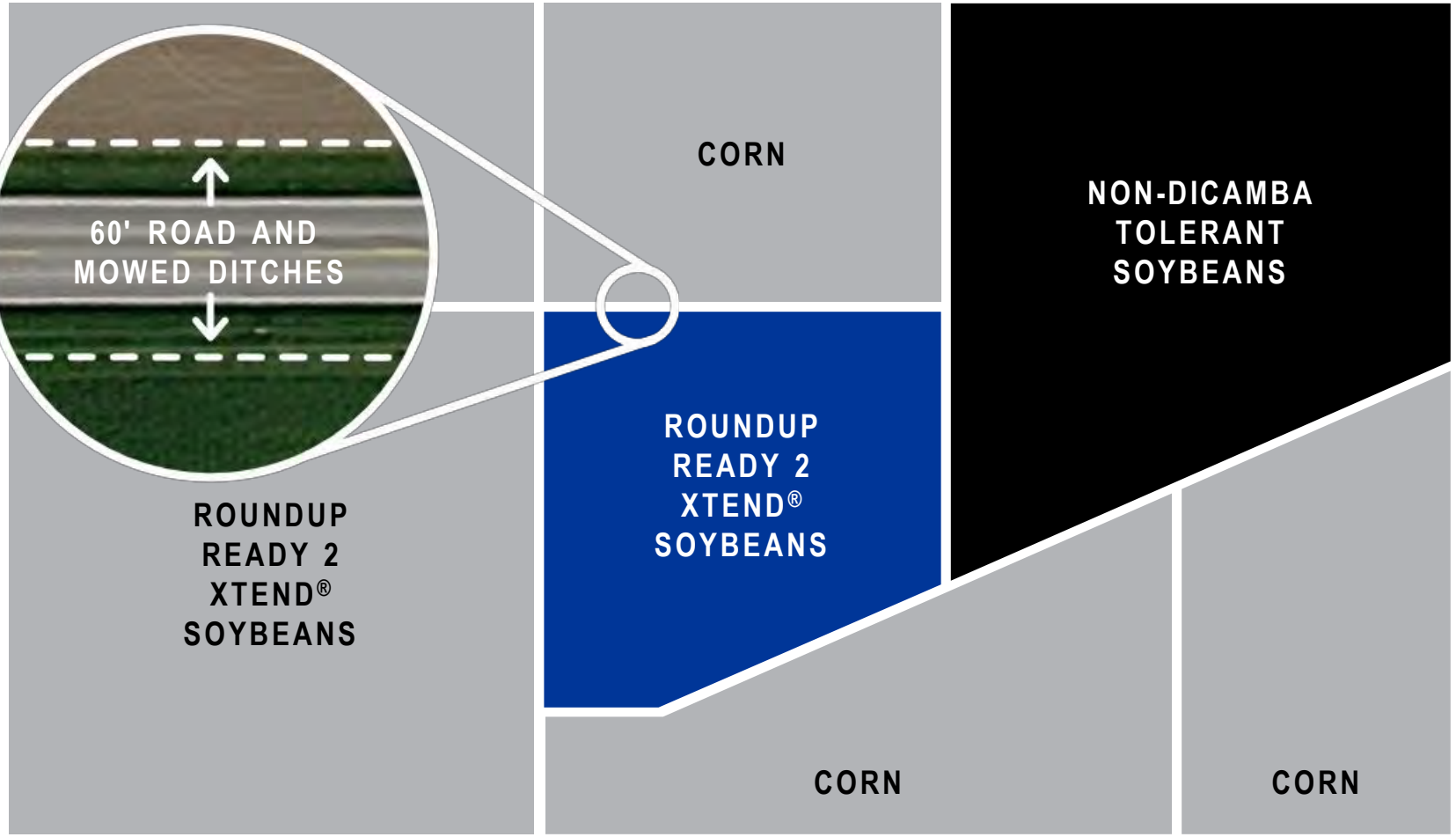

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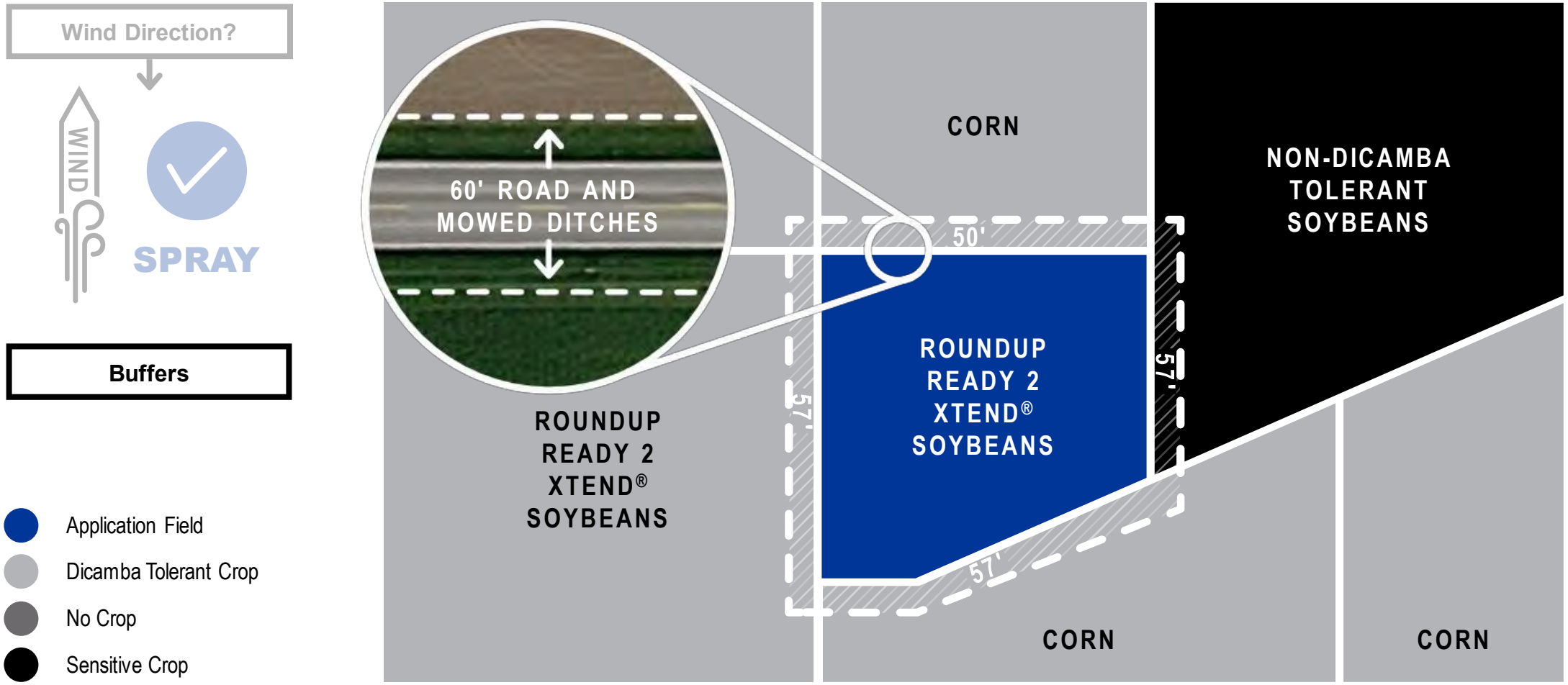

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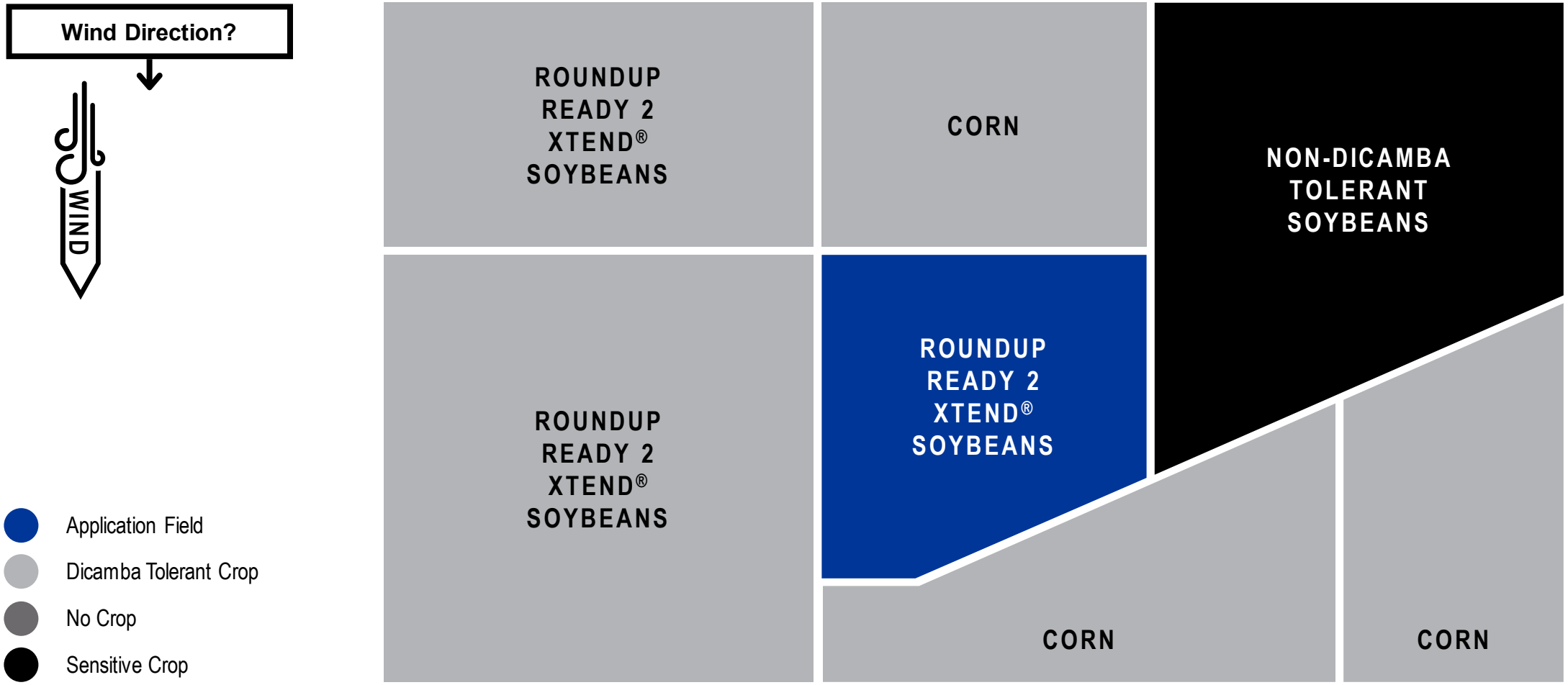

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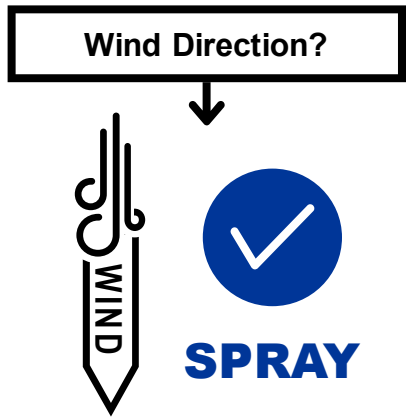

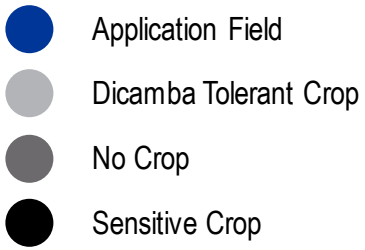

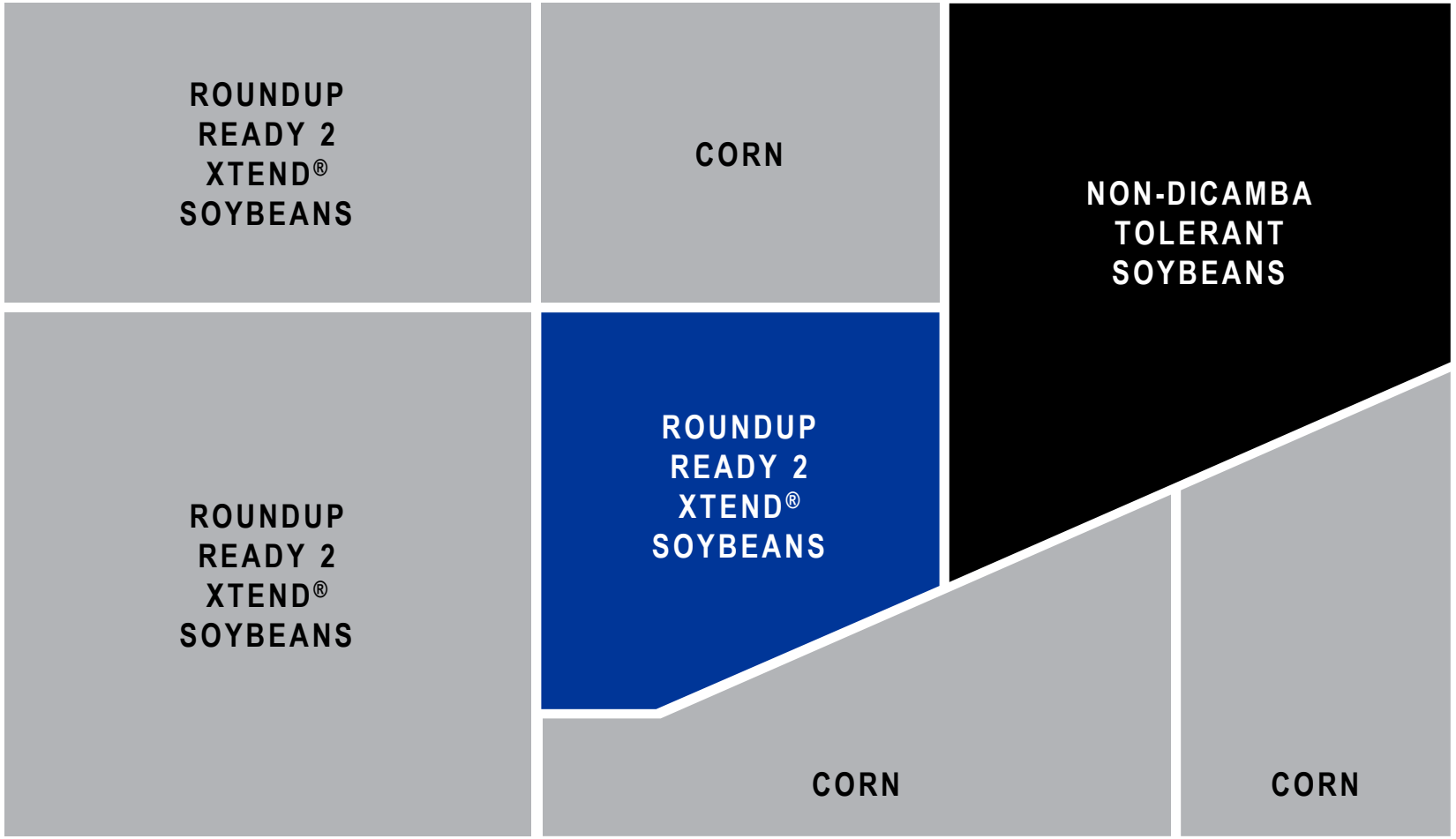

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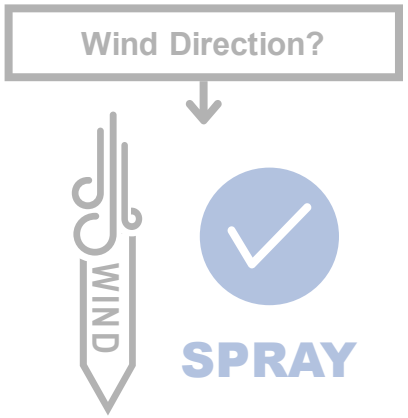

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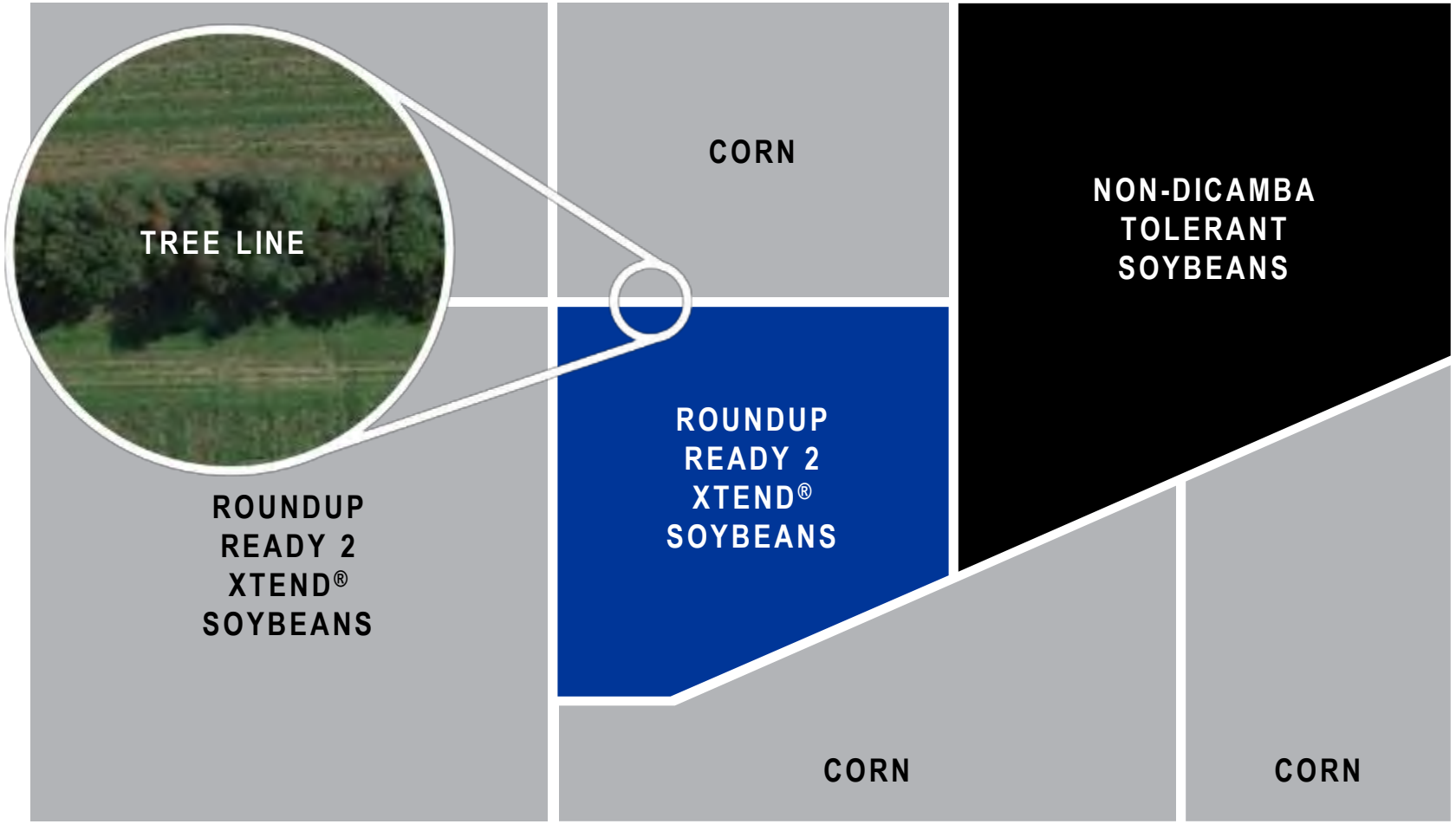

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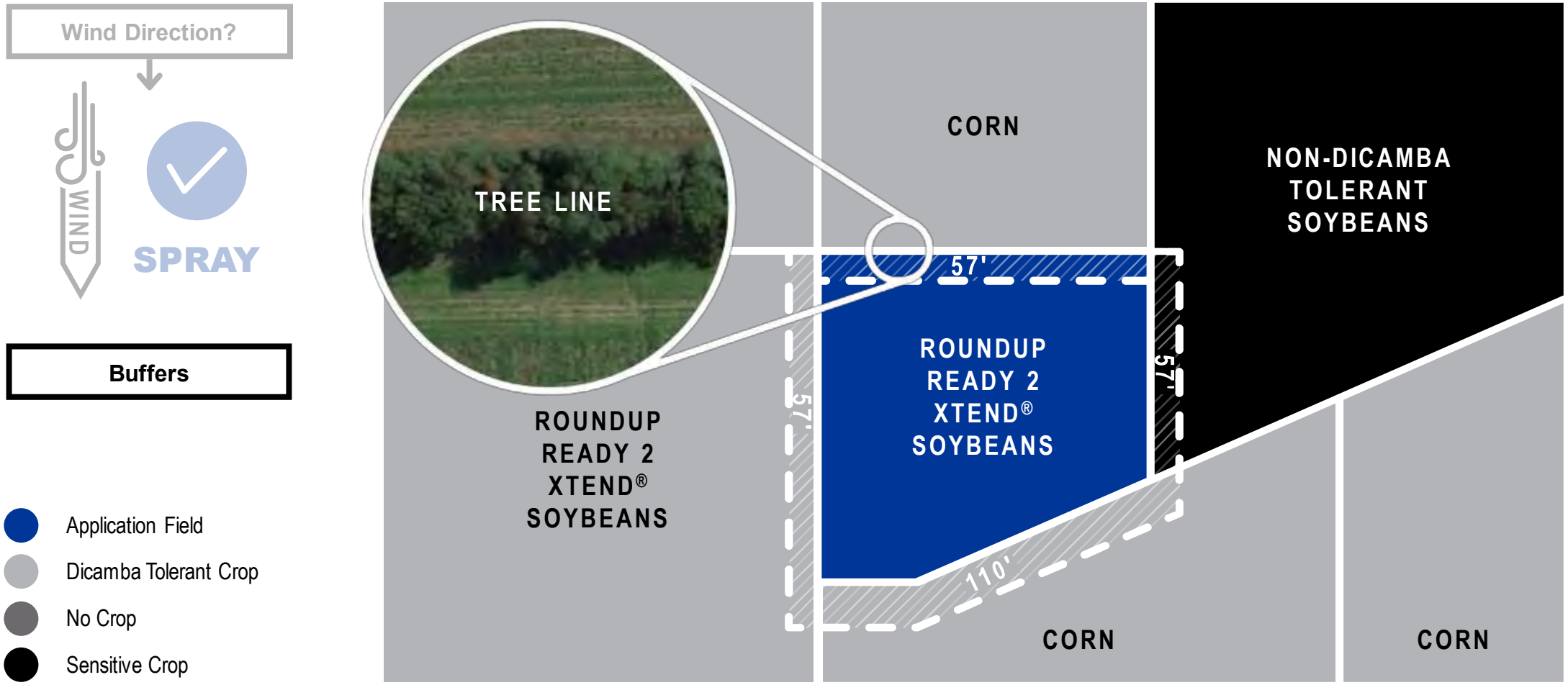


SPRAY SYSTEM CLEANOUT

KEEP IT CLEAN

SPRAYER HYGIENE – WHY THE ISSUE?

Low rates for activity and crop sensitivity

Higher use of POST (over the top applications)

Dry formulations and suspensions are prone to accumulate

Increasing trends of tank mixing products and adjuvants

Complex plumbing in sprayers and handling systems

Reference: Removing herbicide residues from agricultural equipment. Purdue University Extension. PPP

KEEP IT CLEAN

THE POWER OF THREE

SINGLE RINSE	DOUBLE RINSE	TRIPLE RINSE
		
1	2	3

Refer to specific product label for complete cleanout instructions.

* Di-Vest™ SPRAY SYSTEM CLEANER D-Act™

*Examples of specific commercial cleaners.

SMALL AMOUNTS OF PESTICIDE RESIDUE MAY CAUSE CROP RESPONSE

28 DAYS AFTER APPLICATION ON NON-DICAMBA TOLERANT SOYBEANS

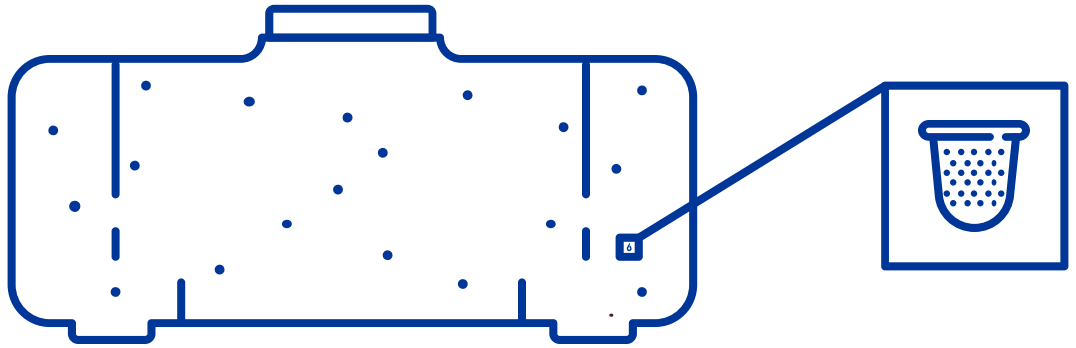
CONTROL	1/8,192 OF FULL RATE	1/16,384 OF FULL RATE
		

SMALL AMOUNTS OF PESTICIDE RESIDUE MAY CAUSE CROP RESPONSE

HOW MUCH IS 1/16,384 OF FULL RATE?

(0.000031 LB AE/A)

THE EQIVALENT OF A THIMBLE FULL OF FORMULATED DICAMBA PRODUCT IN A 1,000 GALLON SPRAY TANK



KEEP IT CLEAN

SPRAYER HYGIENE – PLACES PESTICIDES CAN HIDE

TANK

- Weld seams (steel tanks)
- Material adsorption (poly tanks)
- Baffles
- Agitation paddles and jets, sparger tubes
- Corners (flat bottom tanks)
- Sump
- Lid and tank rim

VALVES

- All valves should be cycled during flushing and cleaning
- Front and side loading ports
- Flowmeters & associated lines/hoses

LINES/HOSES

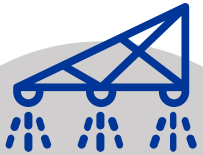
- "U" bends can serve as traps that hold spray solution and allow pesticides to separate
- Cracks and rough edges can trap residues
- Imperfections on interior surfaces inherent to material type

KEEP IT CLEAN

SPRAYER HYGIENE – PLACES PESTICIDES CAN HIDE

SCREENS

- Inline strainers before and after pump
- Suction filters at front- and side-fill ports
- Nozzle screens



BOOM

- Dead ends and end caps
- Large booms can hold as much as 35 gal. of solution

NOZZLE TIPS

- Unused nozzle bodies and pressure check valves
- Nozzle turrets

KEEP IT CLEAN

CLEANING TRANSPORT SYSTEMS

Tender trucks/tanks have fewer components but can be more difficult to remove all material

Dedicate transports when risk of crop response is high

When delivering “hot loads”, make last run with clean water and mix in the sprayer

When cleaning transports, add tank cleaner to the transport and mobilize with stop and go to ensure thorough rinsing

Triple-rinse and drain sump

KEEP IT CLEAN

DON'T FORGET MIXING/LOADING/ HANDLING EQUIPMENT

Start with clean water source

Shutoffs preferred over backflow valves

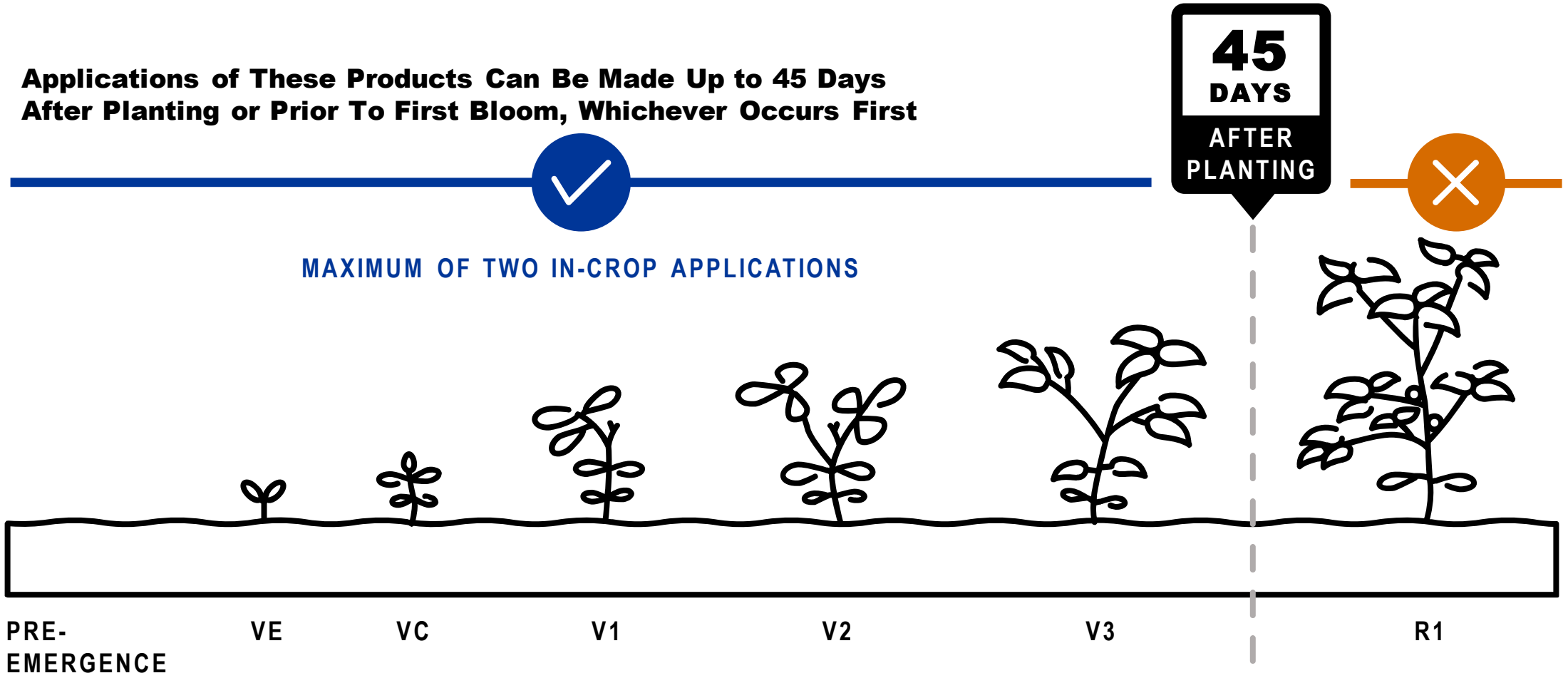
Separate lines for products with high risk for sensitive crops

Use dedicated fill lines/hoses for use with different herbicide products of similar risk

CROP SPECIFIC DIRECTIONS

ROUNDUP READY 2 XTEND® SOYBEANS

Applications of These Products Can Be Made Up to 45 Days After Planting or Prior To First Bloom, Whichever Occurs First

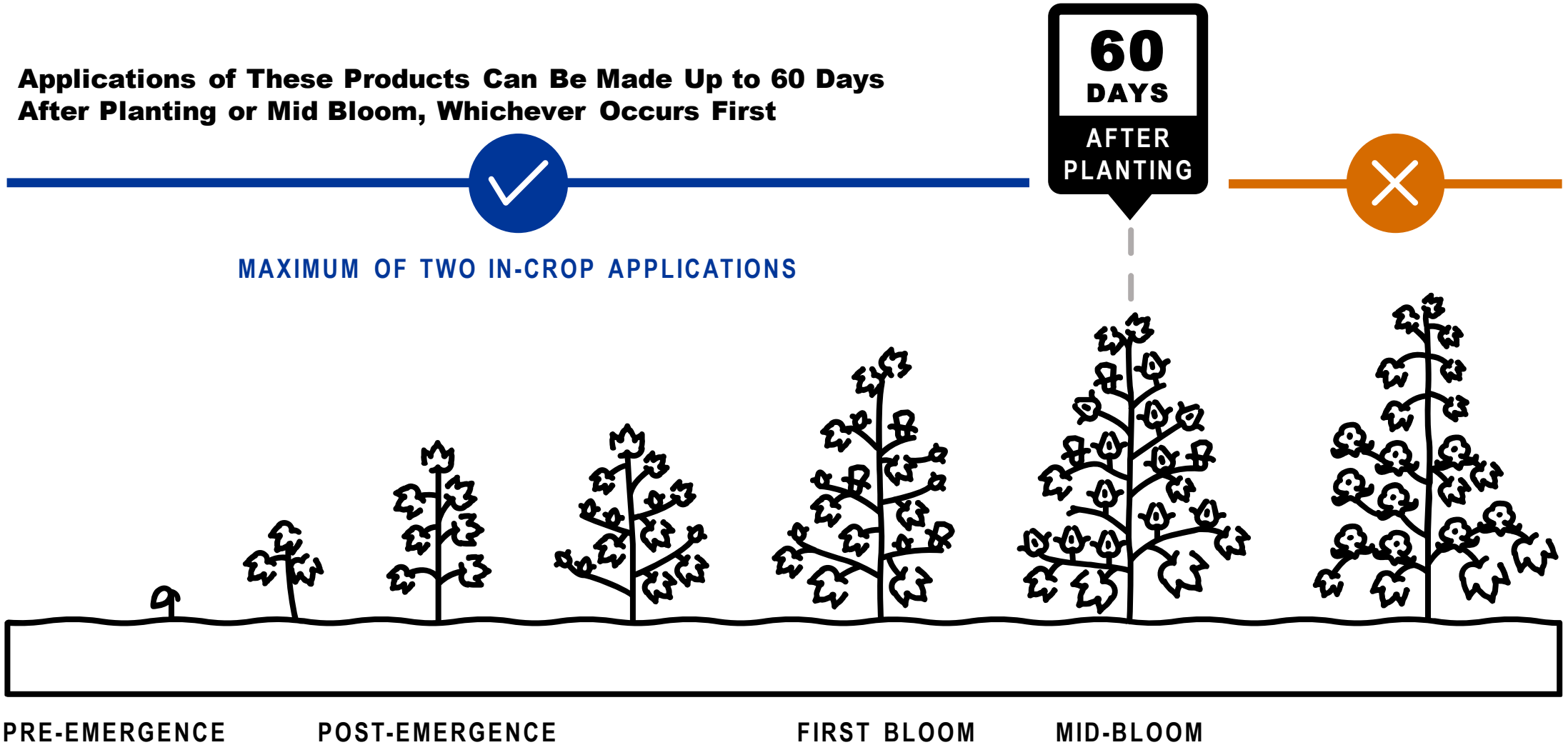


R1 GROWTH STAGE IN SOYBEANS = BEGINNING BLOOM (OPEN FLOWER AT ANY NODE ON THE MAIN STEM)

CROP SPECIFIC DIRECTIONS

COTTON WITH XTENDFLEX® TECHNOLOGY

Applications of These Products Can Be Made Up to 60 Days After Planting or Mid Bloom, Whichever Occurs First



CROP SPECIFIC RESTRICTIONS

IN THE ROUNDUP READY® XTEND CROP SYSTEM

PRE-EMERGENT BURNDOWN:	SINGLE IN-CROP APPLICATION:
Apply 0.5 lb to 1 lb ae/acre labeled dicamba formulation	Apply 0.5 lb ae/acre labeled dicamba formulation

Maximum seasonal use rates of 2 lbs for both crops.

Refer to specific product labels for rates and timings.

DISCLAIMER

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 and/or cotton with XtendFlex® Technology. 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/or cotton with XtendFlex® Technology.

Roundup Ready 2 Xtend® soybeans contains genes that confer tolerance to glyphosate and dicamba, and cotton with XtendFlex® Technology contains genes that confer tolerance to glyphosate, glufosinate and dicamba. 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 the Monsanto 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. Roundup Ready 2 Xtend® soybeans and cotton with XtendFlex® Technology 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.

Roundup Technology® includes glyphosate-based herbicide technologies.

Some of the product(s) discussed herein are restricted use pesticide(s) and may not be registered in all states. 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.

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