

## Enversa™ herbicide



### Novel formulation

- **Proprietary** acetochlor (Group 15) formulation for residual control of tough to control weeds
- **Microcapsules** move quickly from the leaf surface and drive to the soil creating strong residual control
- **When sprayed** on leaf surface, it will delay release to reduce crop injury



### Versatility

- **Crop application flexibility** for use on corn<sup>1</sup>, cotton, sorghum, and soybeans<sup>2</sup>
- **Wide application window** to help navigate challenging weather conditions
- **Great handling** and tank-mix compatibility

<sup>1</sup> Field, production seed, silage and popcorn

<sup>2</sup> Pending label submission for additional use on peanuts and sugarbeets



### Effective Weed Control

- **½ inch of moisture** needed for activation
- **Program approach** with other Corteva Agriscience™ soybean herbicides such as Kyber, Sonic, Trivence, and Enlist One herbicides
- **Residual control** of hard-to-control weeds like: waterhemp, Palmer amaranth, and grasses



### Excellent crop safety

- **Encapsulated acetochlor** for increased crop safety
- **Higher yield potential** due to less crop response

# Enversa™

HERBICIDE

## Comparison Guide Soybean

| Herbicide           | Manufacturer        | Chemical family | WSSA Group # | Use Rate (per acre)          | Weed Species      | Applications (per year)                 |
|---------------------|---------------------|-----------------|--------------|------------------------------|-------------------|---|
| Enversa™ herbicide* | Corteva Agriscience | acetochlor      | 15           | 2.5 – 4 pt                   | Broadleaf / Grass | 4 qt/A<br>(3 lbs acetochlor)            |
| Warrant             | Bayer               | acetochlor      | 15           | 2.5 – 4 pt                   | Broadleaf / Grass | 4 qt/A<br>(3 lbs acetochlor)            |
| Dual Magnum         | Syngenta            | a-metolachlor   | 15           | 1 – 2.6 pt<br>POST: 1 – 2 pt | Broadleaf / Grass | 3.9 pt/A<br>(3.71 lbs ai a-metolachlor) |
| Medal               | Generic             | a-metolachlor   | 15           | 1 – 2.6 pt<br>POST: 1 – 2 pt | Broadleaf / Grass | 3.9 pt/A<br>(3.71 lbs ai a-metolachlor) |

\*Enversa information provided is from the proposed label that will be submitted for federal approval.

## Features

- Proprietary acetochlor (Group 15) formulation for residual control of tough to control weeds
- Versatility in application timing
- Drives to the soil from the leaf surface with proprietary encapsulation, creating strong residual control
- Encapsulated acetochlor for excellent crop safety
- Great handling and tank-mix compatibility

## Benefits

- Residual control of 20 broadleaf weeds and grasses, including Palmer amaranth and waterhemp
- Reliable product and performance leads to confidence in resistance management
- Fits perfectly into a herbicide program approach with other Corteva Agriscience™ soybean herbicides such as Kyber®, Sonic®, Trivence® and Enlist® One herbicides
- Excellent crop safety leads to higher yield potential
- Wide window of application to help navigate challenging weather conditions

Enversa™ herbicide is an encapsulated Group 15 residual herbicide with a proprietary formulation, pending regulatory approval, that provides powerful control of 20 of the toughest broadleaf and grass weeds. Enversa is designed to drive to the soil and provide lasting residual control.

Enversa is a new solution in the Corteva Agriscience portfolio for residual control on broadleaf and grass weeds. In addition to strong broad-spectrum weed control, Enversa will offer farmers versatility to use in multiple crops and is a great tank mix option as part of a program approach to resistance management. Enversa is the preferred residual tank-mix partner with Enlist® One herbicide. Farmers will have a wide application window to apply Enversa, giving them application timing flexibility. The excellent crop safety in Enversa will help optimize yield potential, while delivering outstanding tank-mix compatibility.

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## Application recommendations (pending regulatory approval)

**Application rate:** 3 pts/A

**Spray application volume:**

Postemergence: 10–30 gal/A

**Proposed application timing:**

Corn: postemergence up to 30 inches<sup>1</sup>

Cotton: preplant up to first bloom

Sorghum: preplant up to 11"

Soybean: preplant up to R2

<sup>1</sup>Can be used preplant in labeled states

- For use on corn (field, production seed, silage and popcorn), cotton, peanuts, sorghum, soybeans and sugar beets
- DO NOT exceed a total of 3 applications of Enversa per season
- DO NOT exceed a total of 4 qts/A of Enversa herbicide per season when making multiple applications

### Crop rotation interval

| Crop  | Use Rate:<br>≤ 3 pt/A |
|---|-----------------------|
| Corn<br><i>(field, production seed, silage and popcorn)</i> | Anytime               |
| Cotton  | Anytime               |
| Peanuts   | Anytime               |
| Sorghum <sup>2</sup>  | Anytime               |
| Soybeans  | Anytime               |
| Sugar beets   | Next Spring           |

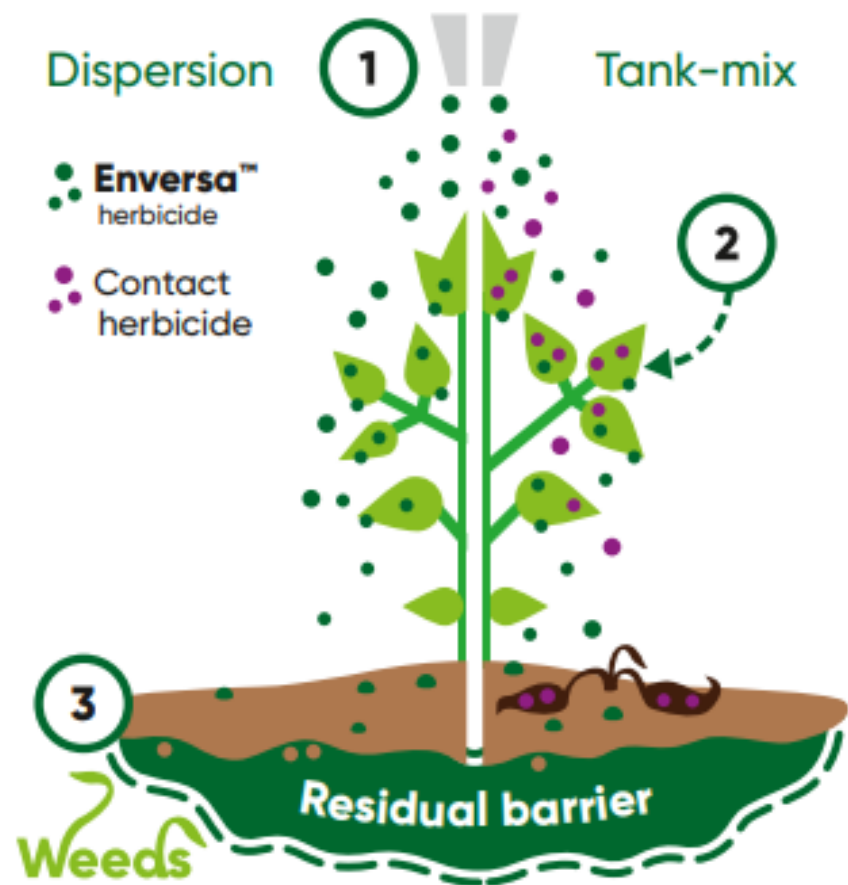
<sup>2</sup> When replanting milo (sorghum) use only seed properly treated with seed protectant or safener.



### Weed control (pre or postemergence applications)

C - Controlled PC - Reduced competition

| Grasses  |                                       |                                      |                                |
|--|---------------------------------------|--------------------------------------|--------------------------------|
| C Barnyardgrass  | C Goosegrass                          | PC Panicum<br><i>(Texas)</i>         | C Sprangletop<br><i>(red)</i>  |
| C Crabgrass  | PC Johnsongrass<br><i>(seedling)</i>  | C Rice<br><i>(red)</i>               | PC Wheat<br><i>(volunteer)</i> |
| C Crowfootgrass  | PC Millet<br><i>(foxtail)</i>         | PC Sandbur<br><i>(Grassbur)</i>      | C Witchgrass                   |
| C Cupgrass<br><i>(prairie)</i>   | PC Oat<br><i>(wild)</i>               | PC Shattercane<br><i>(Wild cane)</i> |                                |
| C Foxtail<br><i>(giant, green robust purple, robust white, yellow)</i> | C Panicum<br><i>(browntop, fall)</i>  | C Signalgrass<br><i>(broadleaf)</i>  |                                |
| Broadleaves  |                                       |                                      |                                |
| PC Beggarweed<br><i>(Florida)</i>                                      | C Henbit                              | C Purslane                           | PC Starbur<br><i>(bristly)</i> |
| C Carpetweed   | C Lambsquarters                       | C Pusley<br><i>(Florida)</i>         | C Waterhemp                    |
| C Galinsoga  | C Nightshade<br><i>(black, hairy)</i> | PC Sida<br><i>(prickly; Teaweed)</i> |                                |
| PC Groundcherry<br><i>(cutleaf)</i>                                    | C Pigweed<br><i>(Amaranthus spp.)</i> | PC Smartweed                         |                                |



- 1 **Leaf is sprayed** with Enversa™ herbicide alone (left) or combination with a tank-mix product (right)
- 2 **Droplets on the leaf** hold tank-mixed product and Enversa
- 3 **Enversa microcapsules move from the leaf surface & drives to the soil**, resulting in a residual barrier around the plant

## Enversa™ herbicide



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### Versatility

- **Crop application flexibility** for use on corn<sup>1</sup>, cotton, sorghum, and soybeans<sup>2</sup>
- **Wide application window** to help navigate challenging weather conditions
- **Great handling** and tank-mix compatibility

<sup>1</sup> Field, production seed, silage and popcorn

<sup>2</sup> Pending label submission for additional use on peanuts and sugarbeets



### Effective Weed Control

- **½ inch of moisture** needed for activation
- **Program approach** with other Corteva Agriscience™ soybean herbicides such as Kyber, Sonic, Trivence, and Enlist One herbicides
- **Residual control** of hard-to-control weeds like: waterhemp, Palmer amaranth, and grasses



### Excellent crop safety

- **Encapsulated acetochlor** for increased crop safety
- **Higher yield potential** due to less crop response



# Kyro™ Herbicide Technical Presentation

**Kyro™**  

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**HERBICIDE**



# Introducing Kyro™ herbicide

**For use only on field corn, field seed corn, field silage corn, and popcorn**

An encapsulated herbicide for postemergence applications in corn that provides control on more than 65 broadleaf weeds and grasses. Kyro™ herbicide provides farmers with a novel formulation, strong post weed control, greater versatility and excellent crop safety on post-emergence corn up to 24" tall.

|            |          |           |
|------------|----------|-----------|
| Acetochlor | Group 15 | Herbicide |
| Topramezon | Group 27 | Herbicide |
| Clopyralid | Group 4  | Herbicide |





# Kyro™ herbicide Features and Benefits

**Kyro™**  
HERBICIDE



## Novel Formulation

Unique combination of 3 proven MOAs



## Strong Post Weed Control

Provides both postemergence & residual control of broadleaf and grass weeds

Fits perfectly into a two-pass program approach



## Greater Versatility

Outstanding tank-mix compatibility

Exclusive suspension package consistently delivers optimum handling & performance



## Excellent Crop Safety

Encapsulated acetochlor with less crop response

Healthier crop leads to increased yield potential



# Strong Post Weed Control



- 3 modes of action – acetochlor (group 15), topramezone (group 27), and clopyralid (group 4)
  - Control of more than 65 of the toughest broadleaf weeds and grasses, including Palmer amaranth, waterhemp, barnyardgrass, foxtail and giant ragweed.
- Kyro™ herbicide provides industry-leading grass control
  - Offers farmers another tool, outside of glyphosate and ALS herbicides, to fight against tough grasses like barnyardgrass, giant foxtail, green foxtail and woolly cupgrass
- Kyro fits into a two-pass program approach with other Corteva Agriscience™ preplant/preemergence herbicides, including LeadOff, Afforia & EverpreX
  - Kyro provides in-season post-emergence activity, while also offering effective residual control to complement farmers' existing pre-emergence weed control program

# Rate Structure



Kyro™ herbicide = 2.78 lbs/gal acetochlor + 0.046 lbs/gal topramezone + 0.247 lbs/gal clopyralid

| Kyro™ herbicide<br>Use Rates      | Up to 4" weeds (35-45 fl oz)                    |   | Up to 6" weeds (45-60 fl oz)                   |
|-----------------------------------|---|---|--|
|                                   | "Low" rate<br>smaller weeds<br>lighter pressure | "Standard"<br>recommendation<br>w/ glyphosate + atrazine<br>for<br>4-6" waterhemp | Max rate<br>for conventional acre seed<br>corn |
| <b>Equivalent component rates</b> | <b>35 fl oz</b>                                 | <b>45 fl oz</b>   | <b>60 fl oz</b>                                |
| Acetochlor                        | 0.87 pt   | 1.12 pt   | 1.48 pt  |
| Topramezone                       | 0.59 fl oz                                      | 0.76 fl oz  | 1.01 fl oz                                     |
| Clopyralid                        | 2.91 fl oz                                      | 3.74 fl oz  | 4.98 fl oz                                     |

**Use Rate = 35-60 fl oz/acre**

- For use on field corn, field seed corn, field silage corn, & popcorn

**Season max rates:**

- Acetochlor: 3 lb ai/acre (3.4 pt)
- Topramezone: 0.044 lb/acre (2 fl oz)
- Clopyralid: 0.25 lb ae/acre (10.67 fl oz or 2/3 pt)

# Grasses controlled or partially controlled by post-emergence applications of Kyro™ herbicide



**C** - Controlled   **PC** - Partially Controlled   X = no control

| Grasses                          | Post-emergence Control    |                           | Residual Control |
|----------------------------------|---------------------------|---------------------------|------------------|
|                                  | 45 fl oz/A<br>≤ 3" height | 60 fl oz/A<br>≤ 4" height |                  |
| Barnyardgrass                    | <b>C</b> <sup>1</sup>     | <b>C</b>                  | <b>C</b>         |
| Crabgrass, <i>large</i>          | <b>C</b> <sup>1</sup>     | <b>C</b> <sup>1</sup>     | <b>C</b>         |
| Crabgrass, <i>smooth</i>         | <b>C</b> <sup>1</sup>     | <b>C</b>                  | <b>C</b>         |
| Cupgrass, <i>prairie</i>         | X                         | X                         | <b>C</b>         |
| Cupgrass, <i>southwestern</i>    | X                         | X                         | <b>C</b>         |
| Cupgrass, <i>woolly</i>          | <b>PC</b>                 | <b>C</b>                  | <b>PC</b>        |
| Crowfootgrass                    | X                         | X                         | <b>C</b>         |
| Foxtail, <i>giant</i>            | <b>C</b>                  | <b>C</b>                  | <b>C</b>         |
| Foxtail, <i>green</i>            | <b>C</b> <sup>1</sup>     | <b>C</b>                  | <b>C</b>         |
| Foxtail, <i>yellow</i>           | <b>PC</b>                 | <b>C</b> <sup>1,2</sup>   | <b>C</b>         |
| Goosegrass                       | <b>C</b>                  | <b>C</b>                  | <b>C</b>         |
| Johnsongrass ( <i>seedling</i> ) | <b>PC</b>                 | <b>C</b>                  | <b>PC</b>        |

| Grasses                       | Post-emergence Control    |                           | Residual Control |
|-------------------------------|---------------------------|---------------------------|------------------|
|                               | 45 fl oz/A<br>≤ 3" height | 60 fl oz/A<br>≤ 4" height |                  |
| Millet, <i>foxtail</i>        | X                         | X                         | <b>PC</b>        |
| Millet, <i>wild proso</i>     | <b>C</b>                  | <b>C</b>                  | <b>PC</b>        |
| Oats, <i>wild</i>             | X                         | X                         | <b>PC</b>        |
| Panicum, <i>browntop</i>      | X                         | X                         | <b>C</b>         |
| Panicum, <i>fall</i>          | <b>PC</b>                 | <b>C</b> <sup>1,2</sup>   | <b>C</b>         |
| Panicum, <i>Texas</i>         | <b>PC</b>                 | <b>PC</b>                 | <b>PC</b>        |
| Rice, <i>red</i>              | X                         | X                         | <b>PC</b>        |
| Sandbur, <i>field</i>         | X                         | <b>PC</b>                 | <b>PC</b>        |
| Shattercane                   | <b>PC</b>                 | <b>PC</b>                 | <b>PC</b>        |
| Signalgrass, <i>broadleaf</i> | <b>PC</b>                 | <b>C</b> <sup>1,2</sup>   | <b>PC</b>        |
| Witchgrass                    | X                         | X                         | <b>C</b>         |

\*A minimum use rate of 45 fl oz/A of Kyro is required for grass weeds listed as C=Control. When rates below 45 fl oz/A are applied, a tank mixture of Kyro + glyphosate is recommended in

<sup>1</sup> The addition of atrazine at a minimum of 0.5 lb active ingredient/A is required for control.

<sup>2</sup> Apply before grass exceeds 3 inches in height.

# Broadleaf weeds controlled or partially controlled by post-emergence applications of

## Kyro™ herbicide

C - Controlled PC - Partially Controlled X = no control

**Kyro™**  
HERBICIDE

| Broadleaves                          | Post-emergence Control    |                           |                           | Residual Control |
|--------------------------------------|---------------------------|---------------------------|---------------------------|------------------|
|                                      | 35 fl oz/A<br>≤ 4" height | 45 fl oz/A<br>≤ 4" height | 60 fl oz/A<br>≤ 6" height |                  |
| Amaranth, <i>Palmer</i>              | C                         | C                         | C                         | C                |
| Amaranth, <i>Powell</i>              | C                         | C                         | C                         | C                |
| Alfalfa, <i>volunteer (seedling)</i> | PC                        | C                         | C                         | X                |
| Beans, <i>volunteer</i>              | C                         | C                         | C                         | X                |
| Beggarweed, <i>Florida</i>           | X                         | X                         | X                         | C                |
| Bindweed, <i>field</i>               | X                         | PC                        | PC                        | X                |
| Buckwheat, <i>wild</i>               | X                         | X                         | C <sup>4</sup>            | X                |
| Buffalobur                           | X                         | PC <sup>4</sup>           | PC <sup>4</sup>           | X                |
| Burcucumber                          | C                         | C <sup>4,5</sup>          | C <sup>4</sup>            | X                |
| Carpetweed                           | C                         | C                         | C                         | C                |
| Canola, <i>volunteer</i>             | C                         | C                         | C                         | X                |
| Chickweed, <i>common</i>             | C                         | C                         | C                         | X                |
| Clover species                       | C                         | C                         | C                         | C                |
| Cocklebur, <i>common</i>             | C                         | C                         | C                         | X                |
| Dandelion, <i>common</i>             | X                         | PC                        | PC                        | X                |
| Devil's-claw                         | C <sup>4,5</sup>          | C <sup>4,5</sup>          | C <sup>4</sup>            | X                |
| Dock, <i>curly</i>                   | X                         | X                         | PC                        | X                |

| Broadleaves                      | Post-emergence Control    |                           |                           | Residual Control |
|----------------------------------|---------------------------|---------------------------|---------------------------|------------------|
|                                  | 35 fl oz/A<br>≤ 4" height | 45 fl oz/A<br>≤ 4" height | 60 fl oz/A<br>≤ 6" height |                  |
| Dock, <i>curly</i>               | X                         | X                         | PC                        | X                |
| Galinsoga, <i>hairy</i>          | C                         | C                         | C                         | X                |
| Henbit                           | C                         | C                         | C                         | C                |
| Horseweed ( <i>marestail</i> )   | C <sup>4</sup>            | C <sup>4</sup>            | C <sup>4</sup>            | X                |
| Jimsonweed                       | C                         | C                         | C                         | PC               |
| Kochia                           | C <sup>4</sup>            | C <sup>4</sup>            | C <sup>4</sup>            | PC               |
| Lambsquarters, <i>common</i>     | C                         | C                         | C                         | PC               |
| Lentils, <i>volunteer</i>        | C                         | C                         | C                         | C                |
| Lettuce, <i>prickly</i>          | C <sup>5</sup>            | C                         | C                         | X                |
| Mallow, <i>common</i>            | C <sup>4,5</sup>          | C <sup>4,5</sup>          | C <sup>4,5</sup>          | X                |
| Mallow, <i>Venice</i>            | C <sup>4,5</sup>          | C <sup>4,6</sup>          | C <sup>4,6</sup>          | X                |
| Morningglory <i>spp.</i>         | C <sup>4,5</sup>          | C <sup>4,5</sup>          | C <sup>4,5</sup>          | X                |
| Mustard, <i>wild</i>             | C                         | C                         | C                         | X                |
| Nightshade, <i>black</i>         | C                         | C                         | C                         | C                |
| Nightshade, <i>eastern black</i> | C                         | C                         | C                         | C                |
| Nightshade, <i>hairy</i>         | C                         | C                         | C                         | C                |

<sup>4</sup> The addition of atrazine at a minimum of 0.5 lb active ingredient/A is required for control.

<sup>5</sup> Apply before weed exceeds 2 inches in height.

<sup>6</sup> Apply before weed exceeds 3 inches in height.



# Cont. Broadleaf weeds controlled or partially controlled by post-emergence applications of

## Kyro™ herbicide

C - Controlled PC - Partially Controlled X = no control

**Kyro™**  
HERBICIDE

| Broadleaves                    | Post-emergence Control    |                           |                           | Residual Control |
|--------------------------------|---------------------------|---------------------------|---------------------------|------------------|
|                                | 35 fl oz/A<br>≤ 4" height | 45 fl oz/A<br>≤ 4" height | 60 fl oz/A<br>≤ 6" height |                  |
| Peas, <i>volunteer</i>         | C                         | C                         | C                         | C                |
| Pigweed, <i>prostrate</i>      | C                         | C                         | C                         | C                |
| Pigweed, <i>redroot</i>        | C                         | C                         | C                         | C                |
| Pigweed, <i>smooth</i>         | C                         | C                         | C                         | C                |
| Pigweed, <i>tumble</i>         | C <sup>5</sup>            | C                         | C                         | C                |
| Purslane, <i>common</i>        | PC <sup>5</sup>           | PC <sup>5</sup>           | C <sup>4</sup>            | C                |
| Pusley, <i>Florida</i>         | C <sup>5</sup>            | C <sup>5</sup>            | C                         | C                |
| Ragweed, <i>common</i>         | C                         | C                         | C                         | PC               |
| Ragweed, <i>giant</i>          | C                         | C                         | C                         | X                |
| Shepherd's-purse               | C <sup>5</sup>            | C                         | C                         | X                |
| Sicklepod                      | PC <sup>4</sup>           | PC <sup>4</sup>           | PC <sup>4</sup>           | PC <sup>4</sup>  |
| Sida, <i>prickly</i>           | C <sup>4,5</sup>          | C <sup>4,5</sup>          | C <sup>4</sup>            | PC               |
| Smartweed, <i>ladythumb</i>    | C <sup>4,5</sup>          | C <sup>4,6</sup>          | C <sup>4,6</sup>          | PC               |
| Smartweed, <i>Pennsylvania</i> | C <sup>4,5</sup>          | C <sup>4,6</sup>          | C <sup>4,6</sup>          | PC               |
| Soybean, <i>volunteer</i>      | C                         | C                         | C                         | C                |

| Broadleaves                 | Post-emergence Control    |                           |                           | Residual Control |
|-----------------------------|---------------------------|---------------------------|---------------------------|------------------|
|                             | 35 fl oz/A<br>≤ 4" height | 45 fl oz/A<br>≤ 4" height | 60 fl oz/A<br>≤ 6" height |                  |
| Sunflower, <i>common</i>    | C                         | C                         | C                         | X                |
| Sunflower, <i>volunteer</i> | C                         | C                         | C                         | X                |
| Thistle, <i>Canada</i>      | C                         | C                         | C                         | X                |
| Thistle, <i>Russian</i>     | C <sup>5</sup>            | C                         | C                         | X                |
| Velvetleaf                  | C                         | C                         | C                         | PC               |
| Waterhemp, <i>common</i>    | C                         | C                         | C                         | C                |
| Waterhemp, <i>tall</i>      | C                         | C                         | C                         | C                |

<sup>4</sup> The addition of atrazine at a minimum of 0.5 lb active ingredient/A is required for control.

<sup>5</sup> Apply before weed exceeds 2 inches in height.

<sup>6</sup> Apply before weed exceeds 3 inches in height.



# Post-emergence Efficacy

Kyro™ herbicide 60 fl oz/A + Durango® DMA® herbicide 1 qt + atrazine 1 qt  
+ NIS 0.25% + AMS 2.5%  
8-10" weeds | Bethany, MO

**Kyro™**  
HERBICIDE



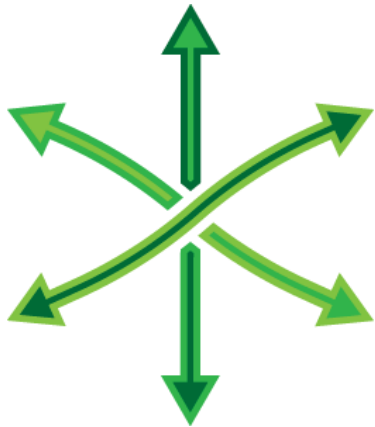


# Post-emergence Efficacy

POST Applied: 6/04/22, Photos: 28 DAA | Frankfort, IN







# Greater Versatility

- **Kyro™ herbicide provides greater application flexibility on different types of corn such as: Glyphosate-tolerant, non-GMO, seed and popcorn.**
  - Kyro has the flexibility to be a stand-alone or tank-mixed with glyphosate to control tough weeds.
- **Kyro is tank-mix-compatible with glyphosate, atrazine and other corn herbicides.**
  - Kyro is not pre-loaded with atrazine or glyphosate, which allows farmers the option to customize their herbicide program to fit the unique needs of their fields.
- **Kyro can be applied up to 24-inch tall corn, giving farmers flexibility on application timing to navigate through challenging weather conditions.**









Questions?