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GLYPHOSATE RESISTANCE IS A GROWING THREAT

- Some of these weeds are also resistant to triazine and ALS inhibitors
- Resistant issues are expected to continue
- Research has also confirmed Kochia biotypes that are resistant to glyphosate and other problem weeds such as lambsquarters are not being effectively controlled with glyphosate
- Regardless of the level of resistance most weed scientists agree that problems with controlling these weeds will become more numerous
- The continuous use of glyphosate alone will favor the expansion of resistance

Charts courtesy of Mike Owen, Iowa State University
ATTACK WEEDS EARLY TO PRESERVE YIELD

University research confirms that if postemergence control is delayed until six-inch weeds, significant yield loss will occur due to early season weed competition. Soybean yield can be reduced from 0.625 bushel/acre/day, according to university research. Therefore, if postemergence applications are delayed five days, the impact in profits could be reduced by over $40/A when soybeans are $13/bu. Are you willing to accept this type of loss?

- Left untreated, weeds compete with crop for:
  - nutrients
  - space
  - light
  - water
  (weeds can use from 200-700 lbs of water to produce 1 lb of dry matter. 1-Lambsquarters – 660 lbs, 1- Pigweed – 300 lbs. Example; 4 lambsquarter plants per yard competing with a crop for 3 weeks would take 1.0 inch of water to produce 350 lbs of dry matter. Weeds compete for space and light and cause soybean plants to try to grow away from weeds in an attempt to capture more light.)

- Weeds also host insects and disease pathogens

- Treated early you can reduce those negative factors

- By the first trifoliate stage (V1, 7-10 days after emergence), weeds competing with soybeans in 30" rows can reduce yields by 5%

- By the third trifoliate stage (V3), yield loss can reach 15% in 30" rows and 8% in 15" rows. Soybeans are 7-9" tall

- Removal of weeds at V3 stage will not help recover lost yield
(TYPICAL YIELD IMPACT) \times (SOYBEAN PRICE) = LOSS IN PROFIT

3.1 BU \times 13/\text{A} = 40/\text{A}

Source: Knezevic & Evans, 2000 University of Nebraska
ATTACK WEEDS EARLY, WHEN THEY ARE SMALL TO PRESERVE YIELDS AND IMPROVE PROFITS

Waiting to make postemergence herbicide applications costs money.

CADET® IN EVERY TANK OF GLYPHOSATE ENHANCES POSTEMERGENCE BROADLEAF WEED CONTROL

• Helps control broadleaf weeds glyphosate and ALS herbicides leave behind

• Excellent fit in a Roundup Ready® program to enhance glyphosate, and gain better weed control with the first application

• Provides second mode of action in the tank to reduce selection of weeds to a single herbicide class

• Delivers broader weed spectrum control to reduce herbicide resistance buildup

• Exhibits excellent crop safety
**CADET® IN EVERY TANK OF GLYPHOSATE TAKES OUT TOUGH WEEDS**

- Untreated
- Glyphosate Only
- Cadet + Glyphosate

**CADET PLUS GLYPHOSATE**

- Smartweed
- Pigweed
- Morningglory

**STRIKE FAST ON BROADLEAF WEEDS**

- 10 Days After Treatment
- 28 Days After Treatment

Field treated with glyphosate and Cadet®. Note the excellent lambsquarters control and clean field.
Authority® Assist herbicide applied pre-emergent, followed by Cadet plus glyphosate, yielded 62 bu/A, which was superior than other fields not treated with this program.
CADET® - SOYBEAN WEED CONTROL 24 DAT

- Cadet 0.7 oz/A + Roundup PowerMAX® 22 oz/A + NIS 0.25% v/v
- Resource® 2.0 oz/A + Roundup PowerMAX 22 oz/A + NIS 0.25% v/v
PalmEr amarantH control
LONOKE COUNTY, AR

SOYBEAN WEED CONTROL TRIALS
IOWA STATE
WEED CONTROL TRIALS
KANSAS STATE UNIVERSITY

SOYBEAN WEED CONTROL TRIALS (6 DAT)
IOWA STATE
**LABELED FOR BOTH CORN AND SOYBEANS**

- Eliminates the need to change the rate or rinse equipment when switching crops
- Allows for greater efficiency of time and resources

These photos were of the same adjacent corn and soybean fields that were treated with Cadet. Photos were taken approximately 16 weeks apart.
CADET® TANK MIXED WITH GLYPHOSATE CONTROLS TOUGH BROADLEAF WEEDS

Cadet Provides Convenient Application Flexibility at Labeled Rates

- 0.4-0.6 oz/A – tank mixed with labeled rates of glyphosate herbicides in Roundup Ready® soybeans

- 0.6-0.9 oz/A – for control of labeled weeds alone or in a tank mix with other post herbicides

- Apply early to small weeds (2-5 inches tall) for best performance

- Use a minimum of 15 gpa spray volume and medium droplet size to insure good coverage and best control of weeds

- Labeled for application from the first trifoliate through full flowering stage

- Can be applied by ground or air

Adjuvants

- Apply with NIS at 1 qt/100 gal or COC at 1-2 pt/A. UAN at 1-2 qt/A or AMS at 8-17 lb/100 gal may be added. If applying with a glyphosate herbicide that contains an adjuvant, no additional NIS is required.

Convenient Pre-Harvest Interval

- Do not apply within 60 days of soybean harvest
Excellent Tank Mixing Compatibility with Herbicides and Insecticides

• Offers outstanding flexibility to tank mix with most postemergence herbicides and insecticides except insecticides containing chlorpyrifos

Weeds Controlled/Suppressed

• Velvetleaf
• Common lambsquarters
• Ivyleaf morningglory
• Tall morningglory
• Eastern black nightshade
• Burcucumber
• Common waterhemp
• Tall waterhemp
• Kochia
• Spurred anoda
• Jimsonweed
• Russian thistle

Additional Use Recommendations For Enhanced Performance

• Add Cadet® to normal tank mix program with glyphosate at 0.5- 0.9 oz/A

• If using a grass herbicide for control of volunteer corn, remove extra COC, unless required by companion product

• Cadet can provide enhanced control or suppression of ragweeds and marestail, but will not provide complete control of these weeds if they are tolerant or resistant to glyphosate. Additional tank-mix partners will be required to control glyphosate tolerant biotypes
**CADET® HERBICIDE – ADDING VALUE TO GLYPHOSATE AS AN EFFECTIVE TANK MIX PARTNER**

- Good control of troublesome weeds including:
  - Waterhemp, Common Lambsquarters, Velvetleaf, Morningglory, Kochia, Nightshades, Pigweeds, Jimsonweed, and others

- Enhances the broadleaf control of glyphosate

- Labeled for corn and soybeans - Eliminates tank cleanout and contamination issues when spraying both crops

- No drift concerns, no cupped soybean issues, and not persistent in soil

- No antagonism with glyphosate or other postemergence herbicides

- Great companion to manage herbicide resistance in weeds
Learn More About Cadet Herbicide

To find out how Cadet can strengthen your postemergence weed management program, contact your FMC Star Retailer today or visit www.fmccrop.com.