

January 12, 2017

Four Reasons to Choose Authority[®] herbicide and Anthem[®] herbicide Brands to Protect Soybean Yield Potential

1. Authority herbicide and Anthem herbicide brands provide the longest lasting residual in their respective mode of action groups

Comparison of Soil Half Lives

Group 14 Herbicides ¹	Soil Half Life	Group 15 Herbicides	Soil Half Life
sulfentrazone (Authority Brands)	70.8	pyroxasulfone (Anthem Maxx)	34
fomesafen	45.6	dimethenamid	20
saflufenacil	21.4	s-metolachlor	22
flumioxazin	21.2		

¹Weed Science 2014 62:664-671

What are the grower benefits?

- Protect yield during the soybean critical weed free period which ranges from the VE to V6 soybean growth stages. Eliminating early season weed competition is important for maximizing yields.
- Managing weeds at emergence is the best time to effectively control weed, especially problematic weed species.
- Time Management – Springs are busy with multi-crop plantings and side dress applications to corn. Beginning the season weed free with use of an early preplant or at planting preemergence herbicide buys time to finish spring activities and still apply a timely postemergence herbicide to soybean fields.

2. Two Effective Modes of Action

Each Authority brand contains two modes of action with various brands to choose from depending on each grower's specific weed issues.

- Authority[®] First DF herbicide: 4 - 6.4 oz./A (Group 14 & 2)
 - ✓ Delivers strong performance on ragweeds and susceptible marestalk especially in tough no-till environments
 - ✓ No soil pH restrictions
- Authority[®] XL herbicide: 4 - 6 oz./A (Group 14 & 2)
 - ✓ Strong residual weed control especially for morningglory species and common ragweed
- Authority[®] MTZ DF herbicide: 10 - 14 oz./A (Group 14 & 5)
 - ✓ Rotation flexibility to plant corn after 4 months or tomato immediately. Excellent option for soybeans going to seed corn the following year. Non ALS (Group 2) herbicide premix option
 - ✓ Excellent preemergence residual for pigweeds and marestalk
- Authority[®] Elite herbicide: 24 - 30 oz (Group 14 & 15)
 - ✓ Strong grass and small-seeded broadleaf control with combination of sulfentrazone and s-metolachlor. Great combination for pigweeds and problem grass fields



Inside This Issue

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3. Overlapping residuals

- Authority herbicide and Anthem herbicide brands provide the perfect sequential application program to provide season long residual weed control for soybean production.

4. Preserving new technologies

- Incorporating Authority herbicide and Anthem herbicide brands into soybean production systems such as Liberty Link[®] soybeans, Roundup Ready Xtend[®] crop system, Enlist[®] herbicide and other trait technologies under development will reduce the risk of overreliance and heavy selection pressure resulting in rapid weed resistance especially in species such as Palmer amaranth, waterhemp, marestail and ragweed species which have a track record of resistance development.
- Researchers in the Northeast have confirmed resistance for Palmer amaranth to glyphosate (group 9) and ALS (group 2) herbicides. In other regions, Palmer amaranth is resistant to DNAs (group 3), triazines (group 5), HPPD (group 27), and PPO (group 14) herbicides¹.
- There are currently 8 weeds in the United States and 34 globally resistant to the synthetic auxins such as 2,4-D and dicamba¹.
- Do not rely too heavily on any new technology. Develop a program approach of herbicide diversity to keep the tools available for the future.

¹Source: <http://weedsociety.org/default.aspx>



No Preplant Herbicide



Authority[®] First DF herbicide 5 oz + Aim[®] EC herbicide 0.75 oz + 2,4-D LV6 12 oz./A.
Application Apr 6, 2015. Photo May 8, 2015.

PRE and POST Weed Control in Liberty Link Soybean

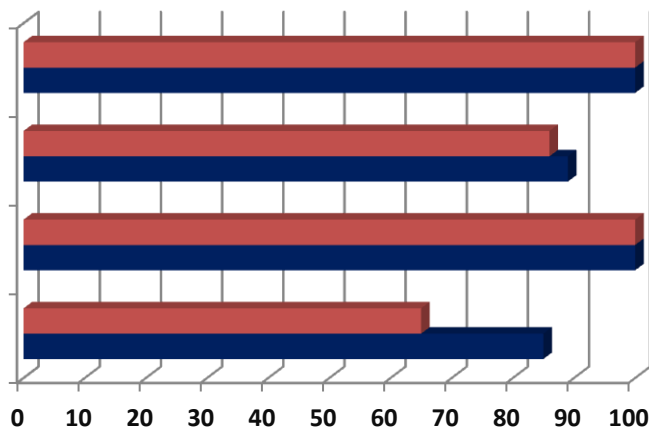
Mark VanGessel – UDEL – 2015

16 oz. Authority[®] MTZ DF herbicide
fb 29 oz. Liberty[®] Soybean (V2-4)

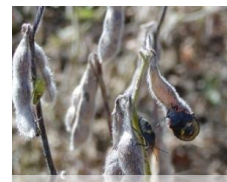
29 oz. Liberty Soybean (V2-4)

16 oz. Authority MTZ DF herbicide
fb 29 oz. Liberty Soybean (V5-6)

29 oz. Liberty Soybean (V5-6)

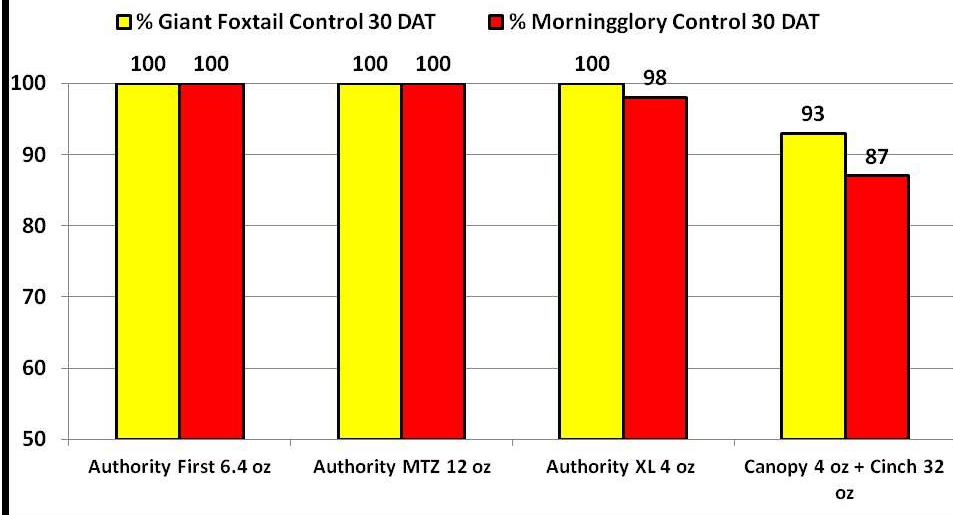


■ Morningglory spp. ■ Palmer amaranth



2014 Selected Treatments From Soybean PRE-Emergence and Postemergence Soybean Herbicide Trial Showing Control of Giant Foxtail and Morningglory at 30 Days After Treatment (DAT) by Various PRE-Emergence Applications.

(Data Courtesy Dr. Ronald Ritter – University of Maryland – Wye Mills, MD)



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Always read and follow label directions. NOTE REGARDING RESTRICTED USE PESTICIDES: Anthem ATZ herbicide; Athena insecticide, Brigade 2EC Insecticide/Miticide, Brigade WSB Insecticide/Miticide, Brigadier Insecticide Capture 3RIVE 3D insecticide, Capture LFR Insecticide, Declare insecticide, Hero Insecticide, Mustang Insecticide, Mustang Maxx Insecticide, Pounce 25WP Insecticide, Stallion Brand Insecticide, Temity LFR Insecticide/Fungicide, Triple Crown Insecticide, Ethos XB Insecticide/Fungicide and Gladiator Insecticide/Miticide are **Restricted Use Pesticides**. NOTE FOR CALIFORNIA: Accurate Extra herbicide, Aim herbicide, Aim EC herbicide, Aim EW herbicide, Anthem herbicide, Anthem ATZ herbicide, Anthem Flex herbicide, Anthem MAXX herbicide, Authority Assist herbicide, Authority Elite herbicide, Authority First DF herbicide, Authority MAXX herbicide, Authority MTZ DF herbicide, Authority XL herbicide, Cadet herbicide, Chisum Herbicide, Command 3ME microencapsulated herbicide, Crusher Herbicide, Edition Broadspec herbicide, Edition Tankmix Herbicide, Marvel herbicide, Nimble Herbicide, Nuance Herbicide, Preemptor SC fungicide, Report Extra Herbicide, Solstice herbicide, Spartan 4F herbicide, Spartan Charge herbicide, Spartan Elite herbicide, Temity LFR Insecticide/Fungicide, Topguard EQ fungicide, Zeus Prime XC herbicide, Zeus XC herbicide, Capture 3RIVE 3D insecticide, Ethos XB Insecticide/Fungicide, Hero Insecticide, Mustang Maxx Insecticide, Display cotton harvest aid, Zoro Miticide and VGR Soil Amendment **are not registered for sale or use in California**. VGR Soil Amendment is not a pesticide. Beleaf and Carbine are trademarks of Ishihara Sangyo Kaisha, Ltd. Cercobin is a trademark of Nippon Soda Co., LTD. Sovran is a registered trademark of BASF. FMC, 3RIVE 3D, Accurate, Aim, Anthem, Athena, Authority, Brigade, Brigadier, Cadet, Capture, Chisum, Command, Crusher, Declare, Display, Edition, Ethos, Preemptor, Fracture, Fyfanon, Gladiator, Hero, Koverall, LFR, Marvel, Mustang, Nimble, Obey, Pounce, Report, Rhyme, Rovral, Shark, Solida, Solstice, Spartan, Stallion, Temity, Topguard, Topguard Terra, VGR and Zeus are trademarks and HatchTrak and Investing in farming's future are service marks of FMC Corporation or an affiliate. ©2016 FMC Corporation. All rights reserved. 11/16

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