



Burning Down Marestalk Effectively

When it comes to marestalk management, weed height is a critical factor. In no-till situations where fall burndown did not occur, don't delay getting these treatments on. Multiple studies have demonstrated most consistent activity on marestalk prior to bolting.

Effective tank-mixtures should include:

- 2,4-D (1 pt./A) + Authority Brand herbicide (**7 Day Plant Back**);
- Gramoxone[®] herbicide (44-48 oz.) + metribuzin (4-6 oz.) + Authority Brand herbicide (**0 day plant back**);
- Liberty[®] 280 herbicide (29-32 oz.) + Authority Brand herbicide (**0 Day Plant-Back**)
- 2,4-D (16 oz.) + Sharpen[®] herbicide (1 oz.) + Authority Brand herbicide (**14 day plant-back**). Since marestalk has adapted emergence patterns throughout the month of May, including herbicides with residual activity will provide most reliable results.
- A new tool for 2017 is XtendiMax[™] herbicide and Engenia[™] herbicide for dicamba tolerant soybean systems. Utilizing these two products in combination with approved Authority brand herbicides provides a strong tool in managing marestalk along with residual from Authority Brand herbicides for summer annual weeds.

Treatment	Marestalk % Control 20 DAT
Authority [®] XL herbicide 4 oz. + Aim [®] EC herbicide 1 oz. + Gramoxone herbicide 48 oz. + COC 1% v/v (0-day Plant-back)	88
Authority XL herbicide 4 oz. + Aim EC herbicide 1 oz. + Gramoxone herbicide 48 oz. + metribuzin 4 oz. + COC 1% v/v (0-day Plant-back)	95
Authority [®] MTZ DF herbicide 14 oz. + Aim EC herbicide 1 oz. + Liberty [®] 280 herbicide 29 oz. + COC 1% v/v (0-day Plant-back)	97
Authority MTZ DF herbicide 14 oz. + Aim EC herbicide 1 oz. + 2,4-D 1 pt. + Roundup WeatherMAX [®] herbicide 22 oz. + COC 1% v/v (7-day Plant-back)	99

As the window for burndown applications gets tighter, growers may opt to go without 2,4-D in the mix. There are several options that may be effective with several different modes of action.

- #1 Recommendation: Include 2,4-D where you can or use XtendiMax herbicide or Engenia[®] herbicide and plant Roundup Ready 2 Xtend[®] soybeans. Waiting the few extra days to plant for 2,4-D can be worth it rather than having marestalk escapes.
- Combinations of Authority[®] First DF/Authority XL herbicides, or Authority MTZ DF herbicide + Aim EC herbicide 1.0 oz. + Gramoxone herbicide or Liberty[®] herbicide can be effective as shown above.
- Spray coverage (15-20 gpa) and including COC or MSO @1% v/v is also a necessary part in getting good control.

Inside This Issue

- Preplant / Postplant Burndown Options with Aim[®] EC Herbicide for Corn & Soybeans
- Authority[®] Brand herbicides for Soybeans close to planting
- Alfalfa Weevil
- Mixing Pointers for LFR[®] formulations in Starter Fertilizer
- Early Post Herbicide Treatments for Corn

Gail Stratman

Midwest Technical Support

Mobile: 402-430-3515

Gail.Stratman@fmc.com

Contact your local FMC Representative for more information.

Jared Gillmore (620) 921-0429

Matt Kampschnieder (402) 992-4610

Dan Smydra (308) 750-6340

Matt Thompson (605) 400-3004

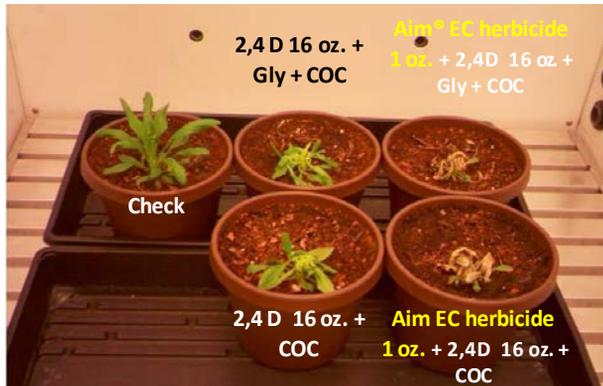
Rob Rainey (970) 342-6105

FMC

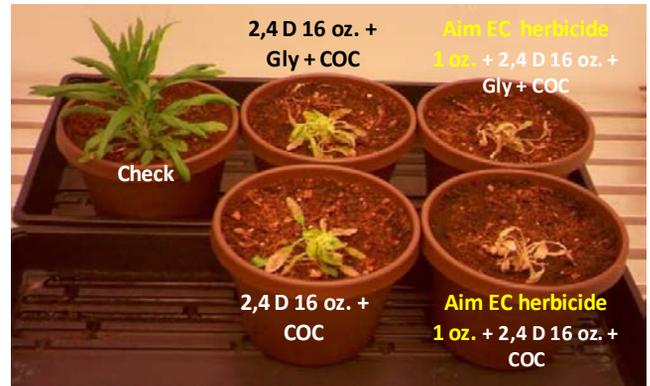


Aim[®] EC Herbicide— Preplant/Postplant Burndown

Spring burndown applications can be a challenge. Cold conditions can reduce 2,4-D and glyphosate's effectiveness making Aim EC herbicide a valuable partner. Aim EC herbicide is not as temperature dependent, so it increases the burndown performance of your mix every time. Look at the difference Aim EC herbicide makes on marestail when added to 2,4-D or glyphosate in these time-lapse photos taken in a greenhouse at S. Illinois Univ. Aim EC herbicide can be used prior to planting or after planting with your PRE herbicide before corn/soybean emergence for those tillage escapes, or when rain doesn't come in time to get a PRE activated and a new flush of weeds is coming.



2 Days after Treatment



7 Days after Treatment



Burndown Recommendations: Corn / Soybean Treatments

Aim EC herbicide 1.0 oz./A

Fast Activity in Cool Conditions

Excellent activity on kochia, Russian thistle, lambsquarters, mustards, henbit, dandelion, marestail and other winter annuals.

- Aim EC herbicide works excellent on button-sized Kochia, Russian thistle, and adds another mode of action to mixes.
- Strong performance on velvetleaf, waterhemp, field bindweed, mustards in combination with 2,4-D, Roundup[®] herbicides, atrazine mixes, or Authority[®] Brand herbicides.

Corn

Aim EC herbicide 1.0 oz. + 2,4-D LV4 16 oz. + COC 1 gal./100: Fast performance, low cost treatment. No residual control. 7-day plantback on all 2,4-D LV4 mixes up to 16 oz./A.

Aim EC herbicide 1.0 oz. + atrazine 0.75-1.5 lb + COC 1%: Excellent combo to heat up premerge before or after planting. Good on mustards, lambsquarter, henbit. Add 2,4-D 8-16 oz. for marestail, dandelion, kochia.

Aim EC herbicide 0.5-0.75 oz. + Anthem[®] MAXX herbicide 4-4.5 oz. + atrazine 1.0-1.5 lb + 2,4-D LV4 16 oz. + COC 1%

- Aim EC herbicide 0.5 oz. with Cadet[®] herbicide in Anthem MAXX herbicide, so lower rate of Aim Ec herbicide needed

Aim EC herbicide 1.0 oz. + 2,4-D LV4 12-16 oz. + Acuron[®] herbicide/Corvus[®] herbicide/Balance[®] Flexx herbicide/ Resicore[®] herbicide + COC 1 gal/100: Fast burndown with strong control on kochia, Russian thistle, lambsquarters, mustards, marestail, etc in the premerge program.

Soybeans

Aim EC herbicide 1.0 oz. + 2,4-D LV4 12-16 oz. + Authority Brand herbicides + COC 1 gal./100: Strong burndown for preplant in soybeans along with residual control during the season. 7-day 2,4-D plantback.

- Close to planting, where 2,4-D is not an option, metribuzin 75 DF @3-4 oz. can enhance burndown with Authority brand herbicides. (except Authority MTZ DF herbicide). See metribuzin label for geographic and soil restrictions on use.

- Add glyphosate at 1 lb a.i. to any mixes listed above for control of grasses
- Can apply with UAN carrier. Add ½ rate of COC as desired, but not required
- Spray coverage is critical for best burndown performance. Use 10-15 gpa minimum and flat fan nozzles. If using flood nozzles, use high pressure for good pattern and droplet breakup



Residual Herbicide Applications Close to Soybean Planting

Authority® Brand herbicides:

With the wide open weather we have seen, grower are rolling right into soybean planting and the planned PRE on bean acres can be a challenge to stay ahead of planters. **Authority Brand herbicides** can be applied ahead or behind the planter. They need to be applied before the beans begin to emerge.

- ❖ Apply up to 3-days after Planting. Don't apply if the beans are cracking
- ❖ Using a strong burndown program to kill emerged weeds is critical. Many growers don't want to wait 7-days for the 2,4-D planting restriction, but if you miss the weeds like marestail, it can be a bigger mess than it would be waiting to get a better kill
- ❖ Use a full recommended rate of Authority® Brand herbicide to get the best control. You don't want to use a low rate then have it run out to early in the season. For resistant weeds like **waterhemp, Palmer amaranth, giant ragweed**, keep the rates up no matter when the application is made to get the best control

Anthem® MAXX herbicide: Preplant / PRE & Early Post Applications (thru V3)

- ❖ Residual control of grasses plus small-seeded broadleaf weeds (waterhemp, Palmer pigweed, lambsquarters, nightshade plus suppression of velvetleaf, morningglories)
- ❖ Can be tank-mixed with burndown herbicides : Roundup® herbicide, Liberty® herbicide, metribuzin, etc

1. **Apply at 3-4 oz. POST for 2nd layer of residual over you existing PRE for Palmer / waterhemp.**
 2. **Anthem MAXX herbicide 4 oz.+ Reflex® herbicide 8-16 oz. + Roundup® herbicide + COC 0.5-1%**
 - Burndown & Residual on broadleaves & grasses. Reflex provide additional help on emerged waterhemp, ragweeds, plus adds burndown activity on winter annuals in addition to Anthem MAXX activity
 3. **Anthem MAXX herbicide 4 oz + Liberty® herbicide 29 oz + AMS (LibertyLink® soybeans)**
- ✓ Spray coverage is critical to get the best results. Use 15-20 gpa and go slow to maximize spray uniformity



Alfalfa Weevil/Aphids:

Alfalfa is benefiting from the recent moisture and warmer conditions and has gotten off to a good start this year. Reports of alfalfa weevil feeding in central and western NE means growers need to watch for alfalfa weevil damage and take action if necessary.

Treatment Thresholds – At \$100/ton hay, most entomologists indicate a threshold of **15 weevil /sweep or 1/stem on hay 5-8” tall**, it will pay to treat. With \$150-\$250+/ton premium alfalfa, that threshold is lower and closer to **10/sweep or 0.5-0.75 weevil / stem.**

Treatment Recommendations

Mustang® Maxx Insecticide - 4.0 fl. oz./A - Good treatment where alfalfa is 6” or larger to take advantage of foliage holding the product. 3-day Pre-Harvest Interval for hay or grazing

Stallion® Brand Insecticide 11.75 fl. oz./A - Dual-mode of action when pressure is heavy plus residual of Mustang Maxx Insecticide. 7-day Pre-Harvest interval.

Note: Where aphids are also present, **Stallion® Brand Insecticide @ 9.25-11.75 fl. oz./A would be the best choice or tank-mixing Lorsban® 4E insecticide with Mustang® Maxx insecticide. (Pea aphid, Spotted alfalfa aphid, Blue aphids).



Early Post Herbicide Options for Corn

As planters continue to roll across the countryside, it is not too early to start thinking about post programs for corn. Eliminating weed competition from emergence forward is critical in achieving maximum yield potential. Anthem[®] MAXX herbicide, Anthem[®] ATZ herbicide, and Solstice[®] herbicide provide unique and strong post options with residual performance.

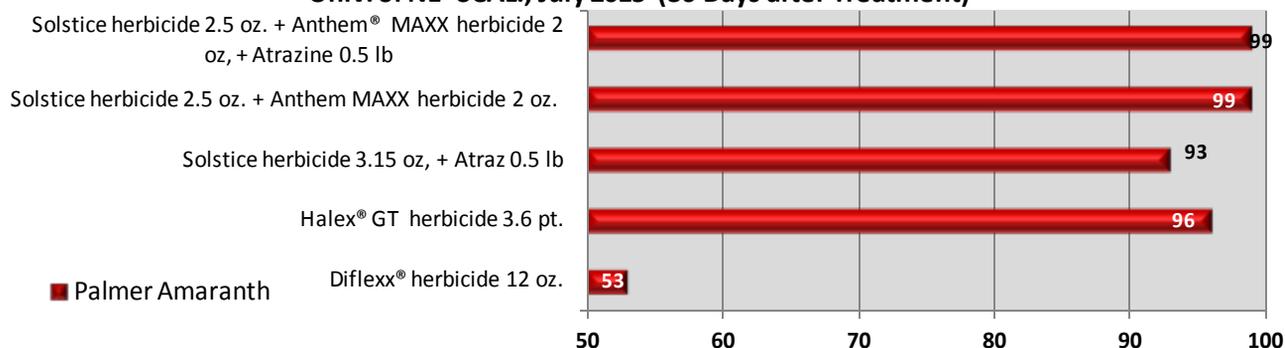
Anthem MAXX Herbicide & Anthem ATZ Herbicide – Post Recommendations

- **Anthem MAXX herbicide 3 - 4 oz./A + atrazine 1-1.5 lb + glyphosate 1 - 1.5 lb ai/a + AMS OR**
- **Anthem ATZ herbicide 1.5 - 2.5 pt./A + glyphosate 1 - 1.5 lb ai/a + AMS**
 - **Excellent residual** on waterhemp, Palmer amaranthus, lambsquarters, velvetleaf, as well as grasses to control weeds well past canopy to maximize yield potential
 - Both products can be applied both PRE thru V4 stage corn for maximum flexibility
 - Cadet[®] herbicide can be included to provide added post activity on broadleaf weeds
 - Tank-mix with DiFlexx[®] and Status[®] herbicides, Callisto[®] herbicide, Laudis[®] herbicide, or other suitable herbicide for a strong Post + Residual 1-pass combination.
 - NIS – 0.25% or COC 0.5-1.0% is recommended for improved post activity from Cadet[®] herbicide and partner products.

Solstice Herbicide – Post Recommendations

- **Solstice herbicide 3.15 oz. + atrazine 0.5 - 1.0 lb ai + glyphosate 1 - 1.5 lb ai + AMS**
 - 4 modes of action treatment combination
 - **Outstanding post broadleaf weed control** : Waterhemp, Palmer amaranth, lambsquarters, velvetleaf, kochia, R. thistle, sunflower, cocklebur, ragweeds, morningglories, wild buckwheat
 - Strong, economical treatment + short residual that fits over PRE programs in a sound 2-pass program
 - Add COC @ 0.5% v/v. Apply from spike to 12" (with atrazine) or to V8 stage (w/o atrazine)
- **Solstice herbicide 2.5 oz. + Anthem MAXX herbicide 2 oz. + atrazine 0.5 - 1.0 lb ai + glyphosate 1 - 1.5 lb**
 - Combines outstanding post broadleaf + grass control AND excellent residual with Anthem MAXX herbicide
 - Strong, 1-pass early post program to provide yield protection past crop canopy
 - Combines PPO + HPPD + Triazine + ESPS modes of action post
 - Apply from spike to V4 stage corn. Add COC 0.5% v/v

Univ. of NE- SCAL., July 2015 (36 Days after Treatment)





888-59-FMC-AG FMCCROP.COM

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 XCherbicide, 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. ©2017 FMC Corporation. All rights reserved. 11/16

Gramoxone, Acuron, Corvus, Balance Flex, Lorsband 4E, Temity , Capture LFR, Mustang Maxx, Anthem ATZ and atrazine are **Restricted Use Pesticides**.

Gramoxone, Acuron, Callisto and Halex are trademarks of Syngenta Group Company. Xtendimax, Roundup Ready 2 Xtend , Roundup WeatherMAX are trademarks of Monsanto Company. Engenia, Sharpen and Status are trademarks of BASF. Liberty and DiFlexx are trademarks of Bayer Crop Science. Lorsban 4E and Resicore are trademarks of Dow AgroScience.