

HatchTrakSM

4-20-17

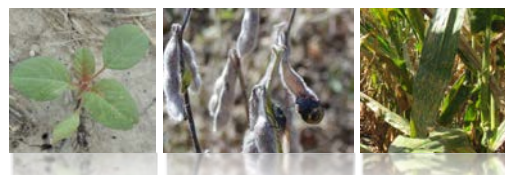
Black Cutworm Monitoring

Recent storms with southerly winds have disseminated black cutworm moths into our region. Intense black cutworm flights have been observed in several Indiana counties. It will be important to begin scouting for shot hole feeding in early May. Fields containing heavy winter annual weed pressure, or cover crops are primary targets for egg laying moths. Minor leaf feeding will likely occur when 200 GDD's have accumulated from an intense moth flight. Cutting typically occurs with the accumulation of approximately 300 GDD's from an intense flight.

Intense Moth Captures – Indiana Counties

County	Cooperator	Week 1 3/23 – 3/29	Week 2 3/30 – 4/5	Week 3 4/6 – 4/12
Adams	Roe	11	17	7
Allen	Kneubler	-	0	19
Bartholomew	Bush	1	13	3
Dubois	Eck	14	28	41
Fayette	Shelle	5	33	5
Fountain	Mroczkiewicz	7	18	31
Lake	Moyer	4	16	60
Shelby	Simpson	7	49	41
Sullivan	Bower	6	21	14
Tippacanoe	Nagel	30	47	44
Whitley	Walker, Richards	10	28	37

*Adapted from Purdue Pest and Crop Newsletter



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FMC

Cutworm Facts:

- ✓ Do not overwinter in the Midwest
 - Deposited from the South with spring storms
- ✓ Undergo 7 instars of growth
 - 1-3rd feed on leaf margins
 - 4-7th cut plants
- ✓ Capable of cutting plants up to V6
- ✓ Later planted corn is more susceptible to cutting
- ✓ Feeding mostly occurs at night
- ✓ Hide under soil surface during daylight
- ✓ **Threshold: 2-3% of plants cut, larvae under ¾"**

MUSTANG[®] HERO[®]
MAXX INSECTICIDE **HERO[®]** INSECTICIDE

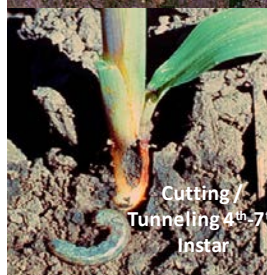
Cutworm Recommendations:

Mustang[®] Maxx insecticide or Hero[®] insecticide 2.6 oz./A – Surface applied preplant or after planting – prior to corn emergence.

- Provides knockdown + residual activity for hatch and feeding



Leaf "Shot Hole" Feeding 1st-3rd Instar



Cutting / Tunneling 4th-7th Instar

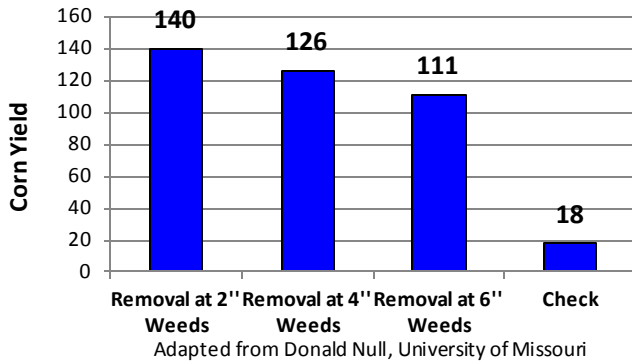
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Early Post Corn Herbicide Strategies

Minimizing early-season weed competition is paramount in preserving yield potential. With many acres of corn going in across IL and IN, it will be critical to implement an effective early-season weed management strategy. Hopefully, pre-emergence herbicides were applied to achieve the first step in a start clean stay clean strategy. However, many tactics might only include a post + residual attempt at a one pass program, even though we know that 2 pass programs are more consistent. Other factors might also influence the initial pre-emergence herbicide plan forcing "option B" employing a post + residual concept. Efforts to reduce early-season weed competition will pay dividends as research has demonstrated that weed competition costs yields and managing weeds early will assist in preserving bushels.

Influence of Early-Season Weed Competition on Corn Yield



Research has demonstrated that Palmer amaranth can reduce corn yields by 90% if allowed to compete with the crop. Research conducted by The Ohio State University has revealed that just 1 giant ragweed plant per 3 foot of row can reduce corn yields by 65%. Species listed above encompass extended germination intervals. Employing herbicide concepts encompassing multiple effective sites of action and strong residual activity will be critical for consistently managing these difficult weed species in addition to others. Taking advantage of the FMC Freedom Pass program to allow you practice resistance management and achieve clean fields this season.

Purdue Univ. – 2016

Solstice® herbicide 2.5 oz. + Anthem® MAXX herbicide 2 oz. + Glyphosate 1.125 lb ae/A + Atrazine 1.5 lb COC 0.5% v/v EPOST



Check

Univ. of Illinois – 2016

Solstice herbicide 2.5 oz. + Anthem MAXX herbicide 2 oz. + Glyphosate 1.125 lb ae/A + Atrazine 1 lb EPOST



Halex® GT herbicide 3.6 pt + Atrazine 1 lb + NIS 0.25% v/v EPOST

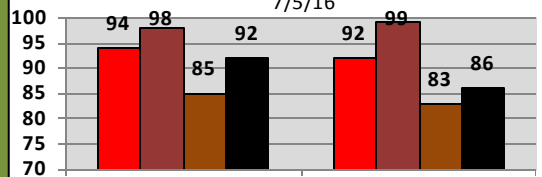


Application Guidelines

Emergence-V4 (or 12'' corn)

- Anthem MAXX herbicide 2 oz. + Solstice herbicide 2.5 oz. + Atrazine 1-1.5 lb + Glyphosate 1.125 lb ae/A + COC 0.5% v/v + AMS 8.5-17 lb/100 GAL
- If LibertyLink® system replace glyphosate with Liberty® herbicide 29 oz.
- Do not apply crop oil with Liberty herbicide tank-mix
- Do not apply if canopy is wet

Anthem MAXX Herbicide Competitive Programs – Corn
Univ. of IL Urbana, IL 2016
7/5/16

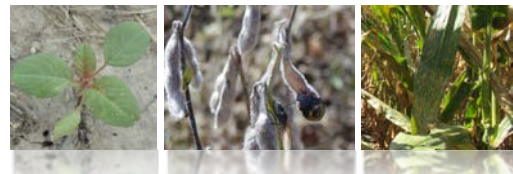


Anthem MAXX herbicide 2 oz. + Solstice herbicide 2.5 oz. + Atrazine 1 lb + Roundup PowerMax® herbicide 32 oz. EPOST

Halex GT herbicide 3.6 pt. + Atrazine 1 lb + NIS 0.25% EPOST

Legend: Giant Foxtail (Red), Waterhemp (Brown), Tall Morningglory (Orange), Cocklebur (Black)

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Soybean Weed Management

Soil seed bank numbers must be reduced to achieve sustainable weed management. 2017 will be a banner year to remain on the right track for reducing soil seed bank numbers, especially in fields with a history of heavy pigweed density. Weed management practitioners should remain vigilant in executing plans to preserve crop yields and keep current tools effective by: **implementing effective soil residual herbicides**, thus reducing the number of plants exposed to the post-emergence treatment (the more individuals exposed, the greater the opportunity to select for a resistant plant), **spraying post-emergence treatments in a timely manner** (preferably <4" weed height), **overlapping residual treatments (prior to new weed emergence)**, **executing multiple effective sites of action in each application**, and **facilitating integrated management through cultural practices** (narrower row spacing, proper seeding rates, hand weed removal, crop rotation, cover crops etc.).

Authority[®] Brand herbicides have proven consistent on multiple tough weed species, representing the first step in a start clean, stay clean strategy. Weeds with extended emergence intervals require a calculated approach targeting the full emergence period. Multi-year analysis has demonstrated consistent results on these species when Authority Brand herbicides followed by Anthem[®] herbicide or Anthem[®] MAXX herbicide are utilized in an overlapping residual strategy.



Application Guidelines

Pre-plant/Pre-emergence followed by V2-V3

- Authority[®] XL herbicide, Authority[®] Maxx herbicide, Authority[®] First DF herbicide 4-6 oz. OR Authority[®] Elite herbicide 26-30 oz. OR Authority[®] Assist herbicide 7-9 oz. Pre
- Anthem MAXX herbicide 3 oz. + Glyphosate 1.125 lb ae/A or Liberty[®] herbicide 29 oz. Post depending upon trait system
- Apply layered residual, prior to new weed emergence

Excerpt from Univ. of IL The Bulletin Publication "Considerations for Weed Management in 2016". Dr. Aaron Hager. October 30, 2015

Step 2:

Select and apply within 14 days of planting a soil-residual herbicide that targets your most problematic weed species.

For waterhemp or Palmer amaranth, select a product containing the active ingredients from one of the following categories of control:

Excellent	Good	Acceptable
sulfentrazone	pyroxasulfone	S-metolachlor/metolachlor
flumioxazin	metribuzin	acetochlor
	fomesafen+metolachlor	dimethenamid
		pendimethalin

*Excellent: greatest efficacy on *Amaranthus* species and longest residual control

Good: good efficacy on *Amaranthus* species, residual control generally not as long

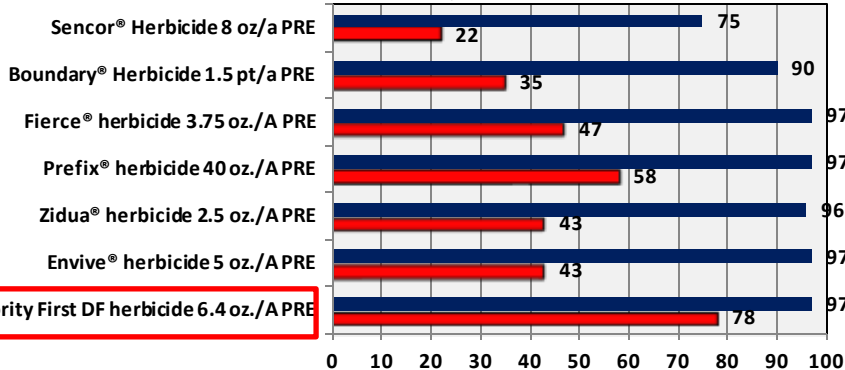
Acceptable: stronger on grass species but with some activity on *Amaranthus* species

General Evaluation of Soil Residual Herbicide Efficacy on Glyphosate-Resistant

Waterhemp in Soybean

■ 28 DAT ■ 56 DAT

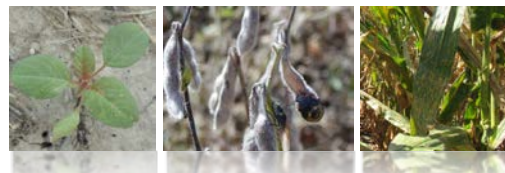
SIU – DeSoto, IL 2013



Univ. of IL - 2015



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Early-Season Corn Diseases

Soil Pathogens:

As corn plants begin to emerge and stand count evaluations occur, be on the lookout for early-season diseases. Damping off diseases such as pythium, rhizoctonia and fusarium could be robbing plants from your stand. Seed treatments are labeled for seedling pathogens listed above, however doses applied to the seed are typically not high enough to provide more than 2 weeks of activity. Field observations revealing heavier pressure might require an altered management strategy for next season. Management strategies including Liquid fertilizer ready products such as EthosTM XB Insecticide/Fungicide and TemitryTM LFR[®] Insecticide/Fungicide offer additional protection augmenting seed treatments for longer activity on stand robbing diseases.

Anthracnose Leaf Blight:

Anthracnose inoculum survives on soil surface residue, after corn emergence rainfall will splash inoculum on young leaves and if conditions are favorable for development symptoms of the pathogen may follow. No-till or minimum-till fields particularly corn on corn are most at risk for pathogen development. The disease encompasses 3 phases: 1. Leaf blight, 2. top die back, and 3. Stalk rot. Leaf blight lesions typically appear in early to mid June, however the infection takes place earlier in the season. For corn hybrids susceptible to Anthracnose in environments conducive for disease consider adding a fungicide to the post herbicide pass to mitigate early-season loss of leaf area. Finish with a VT treatment targeting later infecting diseases to optimize crop yields and bushels in the bin.

Anthracnose Leaf Blight



Source: Iowa State University

Management Strategies:

Apply PreemptorTM SC fungicide 4-6 oz. or in combination with early post herbicide on susceptible hybrids planted in fields with heavy surface residue.

- For optimal results use high end of the use rate when disease pressure is high and conditions are favorable for development.
- Min 10 GPA by ground

PREEMPTORTM SC
FUNGICIDE



Alfalfa Weevils

Now is the time to scout alfalfa for leaf tip feeding and skeletonization from alfalfa weevils. When scouting be mindful of variability in size and number of alfalfa weevils which indicates that egg laying occurred over an extended period of time. This may also translate into larval development taking place over a longer period of time, thus extended feeding. Employ the highest labeled insecticide rate to provide maximum residual on this tough pest.

Threshold: 3 or more larvae per stem

MUSTANG[®]
MAXX
INSECTICIDE

Mustang[®] Maxx insecticide offers outstanding Alfalfa weevil control and excellent crop safety with a short 3 day PHI on alfalfa hay at the 4 fl. oz. per acre use rate.

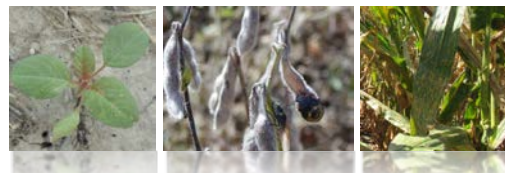
STALLION BRAND
INSECTICIDE

Stallion[®] Brand Insecticide provides enhanced insecticide technology offering broad spectrum and residual control, plus added knockdown. Stallion Brand Insecticide's PHI of 7 days and use rate of 11.75 fl. oz. per acre on alfalfa makes it a great fit in alfalfa weevil control programs.

- Two modes of action for faster knockdown and longer residual control
- Convenient formulation



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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, Temitry 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 MITZ 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, Temitry 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, Temitry, 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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