Inside This Issue

✓ Ethos® XB Insecticide/ Fungicide
  • Stand Protection
  • Label Expansion
✓ Corn Weed Control Programs
  • Early Preplant burndown
  • 1 Pass Systems
  • 2 Pass Systems

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Protect your seed investment and plant stand from early season insect and fungal root nibblers with the dual action of Ethos® XB Insecticide/Fungicide.

What is Ethos XB Insecticide/Fungicide? combines the proven insect control of Capture® LFR® Insecticide with a proven, labeled biological fungicide.

What are the benefits? Plant stand protection and uniform emergence in multiple soil conditions including adverse conditions like cool wet soils, poorly drained areas, no-till production systems or cover crop systems with high residue and increased pest pressure. The superior LFR® formulation provides easy mixing and uniform application. Same use rate as Capture LFR® insecticide with the advantage of a broad spectrum fungicide.

How does disease protection work?
  • Exclusion – colonizes the growing root system forming a protective biofilm which acts as a defensive barrier against pathogens.
  • Antifungal metabolites – forms lipopeptides during product fermentation, spore germination and root colonization.

What is the use rate and spectrum?

<table>
<thead>
<tr>
<th>Pests</th>
<th>30”</th>
<th>20”</th>
<th>15”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn Rootworm Larvae and Suppression of Seedling Disease caused by Pythium, Rhizoctonia, Fusarium or Phytophthora</td>
<td>8.5 fl oz./Acre</td>
<td>12.8 fl oz./Acre</td>
<td>17 fl oz./Acre</td>
</tr>
<tr>
<td>Seedling Pests (wireworm, grubs, cutworms, seed corn maggot, seed corn beetle, sugar cane beetle) and Suppression of Seedling Disease caused by Pythium, Rhizoctonia, Fusarium or Phytophthora</td>
<td>4 fl oz./Acre</td>
<td>6 fl oz./Acre</td>
<td>8 fl oz./Acre</td>
</tr>
</tbody>
</table>

What are the performance results?
  • Average 1250 plants/acre and 8.8 bushel/acre increase vs all comparison treatments across 73 and 28 locations, respectively.
  • Additional 1883 plants/acre and 6.9 bushel/acre increase vs Capture LFR® Insecticide across 30 and 8 locations, respectively.
2016 On Farm Yield Results
Ethos XB Insecticide/Fungicide vs Nontreated
Average increase 10.9 bu/acre across 36 sites.
81% time >3 bu/A yield increase

Side by side field trial – Western Missouri 2016
The 2017 use season will mark the first full year of label expansion for Ethos® XB insecticide/fungicide. New crops include soybean, dried beans and peas, succulent peas and beans and potatoes.

### Soybean Use Rates and Pests

<table>
<thead>
<tr>
<th>PEST</th>
<th>USE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fluid oz/acre</td>
</tr>
<tr>
<td>Rootworm larvae</td>
<td>6.6 - 6.5</td>
</tr>
<tr>
<td>Wireworm</td>
<td>3.4 - 8.5</td>
</tr>
<tr>
<td>Grape colapsis</td>
<td></td>
</tr>
<tr>
<td>Grube</td>
<td></td>
</tr>
<tr>
<td>Root maggot</td>
<td></td>
</tr>
<tr>
<td>Seedcorn maggot</td>
<td></td>
</tr>
<tr>
<td>Amyl cutworm</td>
<td></td>
</tr>
<tr>
<td>Cutworm species</td>
<td></td>
</tr>
<tr>
<td>True armyworm</td>
<td></td>
</tr>
<tr>
<td>Armyworm species</td>
<td></td>
</tr>
<tr>
<td>Seed corn beetle</td>
<td></td>
</tr>
</tbody>
</table>

*Suppression of “Damping off,” seedling blights, and root or crown diseases caused by Pythium, Rhizoctonia, Fusarium, or Phytophthora.

### Bean and Pea Use Rates and Pests

<table>
<thead>
<tr>
<th>PEST</th>
<th>USE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fluid oz/acre</td>
</tr>
<tr>
<td>Wireworm</td>
<td>3.4 - 8.5</td>
</tr>
<tr>
<td>Grape colapsis</td>
<td></td>
</tr>
<tr>
<td>Grube</td>
<td></td>
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<tr>
<td>Root maggot</td>
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</tr>
</tbody>
</table>

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### Potato Use Rates and Pests

<table>
<thead>
<tr>
<th>PEST</th>
<th>USE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireworm</td>
<td>12.75 - 25.5</td>
</tr>
<tr>
<td>Grape colapsis</td>
<td></td>
</tr>
<tr>
<td>White grub</td>
<td></td>
</tr>
<tr>
<td>Sweet potato flea beetle</td>
<td></td>
</tr>
<tr>
<td>Rootworm</td>
<td>0.15 - 0.3</td>
</tr>
</tbody>
</table>

*Suppression of “Damping off,” seedling blights, and root or crown diseases caused by Pythium, Rhizoctonia, Fusarium, or Phytophthora.

### Ethos XB Insecticide/Fungicide Soybean Yield Results

3 locations - 2016

- Ethos XB insecticide/fungicide: 68.3
- Untreated Check: 65

### Ethos XB - Reardon, WA - Potatoes

- Total Yield - CWT: 532
- 24 oz./A Ethos XB insecticide/fungicide: 477
- 3.2 oz./A Regent* insecticide 4SC + 1 gal/a Serenade® Soil fungicide: 532

*Data consists of four replicated 20ft digs in each treatment
Anthem® MAXX Herbicide 3 - 4 oz./A
Anthem® ATZ herbicide 1.5 - 2.5 pt./A

Benefits of Anthem® Brand Herbicides
- Flexible application timing – 45 days prior to planting up to 4 leaf corn
- Easy to handle and mix liquid formulation
- Anthem MAXX is twice the concentration of Anthem herbicide resulting in lower product application rate which equates to less container handling and disposal
- Extended residual – soil half life 12 – 14 days longer than dimethenamid and s-metolachlor
- Burndown control of small broadleaves with superior grass and small seeded broadleaf residual control

Anthem® Herbicide Early Preplant Burndown Programs
An early burndown herbicide application can reduce grower stress and early season weed competition stress in the early stages of the production season when time is limited with lots of acres to cover. Additional benefits may be realized by removing alternate insect pest host plants that serve as bridges for cutworms, thrips, plant bugs, etc to develop on prior to crop emergence.

- Anthem ATZ herbicide 2 pt./A + Balance® Flexx herbicide 2 - 3 oz./A – common ragweed fields
- For Anthem MAXX herbicide applications 14+ days prior to planting, use the or 4 oz./A Anthem MAXX herbicide or 2 - 2.5 pt./A Anthem ATZ herbicide. For light, sandy soils use 3 – 3.5 oz./A Anthem MAXX herbicide or 1.5 – 1.75 pt./A Anthem ATZ herbicide.
- Add 1pt./A 2,4-D or 4 – 8 oz./A dicamba and/or glyphosate herbicide for total burndown of emerged weeds in no-till systems
- Excellent mixing with 28% or 32% UAN solutions
- No known interactions with at-plant insecticides

Two Pass Programs
1st Pass PRE Herbicide Program
- Anthem MAXX herbicide @ 3 - 4 oz./Acre
- Atrazine @ 0.5 – 1.0 lb/acre
- or
- Anthem ATZ herbicide @ 28 – 32 oz./Acre

Additional No-Till / Burndown tank-mix partners
- 2,4-D + Glyphosate + Aim® EC herbicide 1.0 - 1.5 oz./Acre
- Glufosinate Herbicide

2nd Pass POST Herbicide Program (< 4” Weeds)
- Solstice® herbicide 2.75 - 3.15 oz./Acre (up to V8 corn)
  - If Anthem® MAXX herbicide 4 oz./Acre is applied PRE, max. use rate for Solstice herbicide is 2.9 oz./Acre POST
  - or
- Solstice herbicide 2.75 oz./Acre + Atrazine 0.5 – 1.0 lb/acre – up to 12” corn
  - or
- Cadet® herbicide 0.6 oz./Acre - 48”corn (NO Residual Control Provided)
  - plus
- Glyphosate or Glufosinate at local rates with respective seed technology traits
**One Pass PRE Programs**

- Anthem® MAXX herbicide @ 4 oz./Acre
- Atrazine @ 1.0 – 2.0 lb/acre
- Balance® Flexx Herbicide @ 2 - 4 oz./Acre or Hornet® herbicide @ 3 oz./Acre

**No-Till / Burndown tank-mix partners at local burndown rates:**

- 2,4-D + Glyphosate + Aim® EC herbicide 1.0 - 1.5 oz./Acre
- Glufosinate

**One Pass Early POST Programs (< 4” Weeds but Prior to 12” Corn)**

- Anthem MAXX herbicide* 3 - 4 oz
- Atrazine 1.0 – 2.0 lb/acre
- Glyphosate or Glufosinate (at recommended rates)
  - or
- Anthem MAXX herbicide@ 2.2 oz./Acre
- Solstice® herbicide@ 2.75 oz./Acre
- Atrazine @ 0.5 - 1.5 lb/acre
- Glyphosate or Glufosinate (at recommended rates)

**Reduced Input Early POST for low-moderate weed pressure (< 4” Weeds but Prior to 12” Corn)**

- Solstice herbicide @ 3.15 oz./Acre
- Atrazine @ 1.0 – 2.0 lb/acre
- Glyphosate or Glufosinate (at recommended rates)
  - Weaker on grass residual (esp. large seeded grasses - fall panicum, et al.)

### 2016 Corn Trial Results

**Single Pass vs Two Pass Programs**

Dr. Bill Curran – PSU – 2015

- 5.6 oz Corvus®* + 1 qt Atrazine PRE
- 2.5 qt Acuron®* + 1 qt Atrazine PRE
- 32 oz Anthem ATZ fb 1 qt Glyphosate + 3 oz Solstice PRE fb EPOST

**Single Pass - Early vs Late POST Program Comparison**

Charlie Cahoon, Painter, VA – 2016

- 3.6 pt Halex GT EPOST
- 1.5 lb atrazine + 1 qt glyphosate EPOST
- 4 oz AnthemMaxx + 1 lb atrazine + 1 qt glyphosate EPOST
- 3.15 oz Solstice + 1 lb atrazine + 1 qt glyphosate EPOST
- 2.5 qt Acuron PRE fb 1 qt glyphosate LPOST
- 4 oz AnthemMaxx + 1.5 lb atrazine PRE fb 1 qt glyphosate LPOST

**Rating Interval:**
- 92 DA EPOST
- 65 DA LPOST

- DA = days after
- fb = followed by

- E. blacknightshade
- c.lambsquarters
- velvetleaf
- giant foxtail

**PRE - 4/18/16; EPOST - 5/10/16 - V2 corn; LPOST - 6/6/16 - V5 corn**

- Across early post (EPOST) programs, the combination of Anthem MAXX herbicide, atrazine and glyphosate provided the best weed control and was also the most consistent for EPOST vs late (LPOST) weed control programs.
- Anthem MAXX herbicide + atrazine fb glyphosate was comparable to the Acuron fb glyphosate PRE fb LPOST program.
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, Temtrly 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, Temtrly 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, Temtrly, 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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