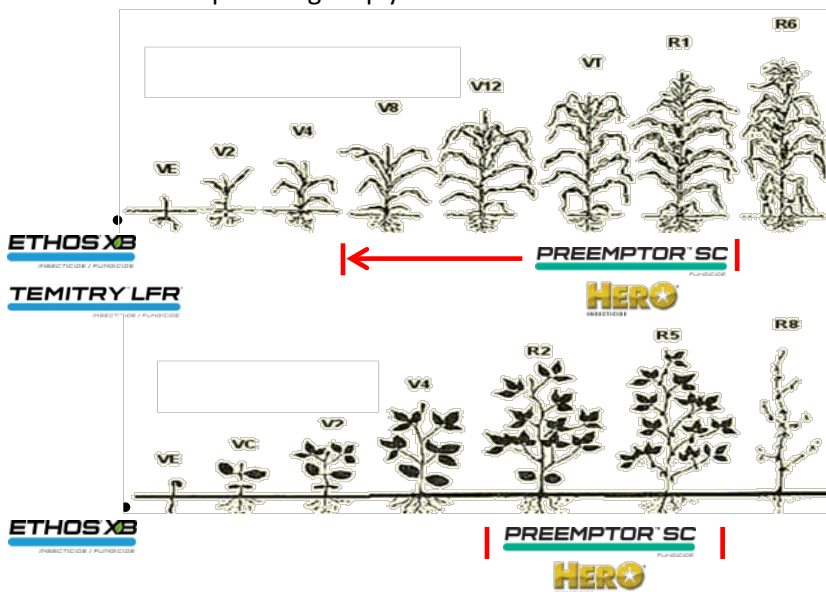


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01-05-17

Yield Optimization Through Plant Health in 2017

As prepay plans are determined, it will be important to implement strategies that increase bushels in the bin and return on investment. FMC has a diverse portfolio of plant health products from furrow to finish to assist in optimizing crop yield and return on investment.

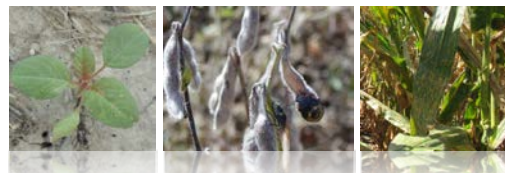


In the Furrow:

Uniform plant stands are critical for maximizing yield. Whether it is an insect chewing through crop growing points, pathogens damping seedling plants off or a combination of both, there are a whole host of detrimental organisms compromising invariable crop emergence. Seed investments are commonly protected by insecticide / fungicide seed treatments. However, they are employed at low doses to maintain seed safety and seed flow through planters. Research has demonstrated synthetic fungicide seed treatments remain at efficacious levels approximately 14 days beyond planting. Soil pathogens such as *Rhizoctonia* can persist well beyond this window of protection. Soil insects exposed to low seed treatment insecticide doses may still afflict seedling plants reducing emergence. FMC has introduced two value products for broad spectrum, long lasting protection in the furrow. **EthosTM XB Insecticide / Fungicide** and **TemitryTM LFR[®] Insecticide / Fungicide** provide insect and disease protection to growing plants, well beyond seed treatment capabilities.

High Risk Field Situations for Insect / Pathogen Presence:

- No-till, poorly drained
- Early planting – Cool / Wet Soils
- History of soil crusting, temporary flooding, soil compaction
- Dense winter annual or cover crop vegetation



Inside This Issue

- ✓ Yield Optimization Through Plant Health in 2017
- ✓ 2016 Fungicide Performance Data
- ✓ Protecting Soybeans During Reproductive Stages

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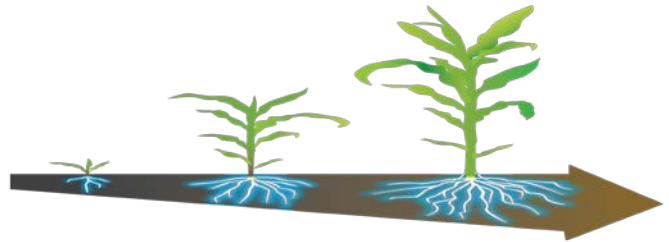
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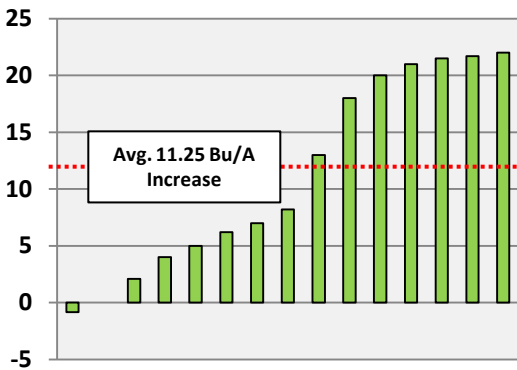


Value-added FMC in-furrow Brands for corn

Two new products were added to the expanding line-up of FMC in-furrow options to help protect corn plants from insects, as well as seedling diseases and provides early-season growth benefits.



Yield Increase Over a Combination of Untreated, Starter Fertilizer, Starter Fertilizer + Capture[®] LFR[®] Insecticide
15 Commercial Trials – IL 2016



Application Rate 30" Spacing (See label for narrow spacing / twin rows):

- 4 oz. – Secondary insect pests, suppression of Pythium, Rhizoctonia, Fusarium and Phytophthora.
- 8.5 oz. – CRW + pests mentioned above.

LFR[®] "Liquid Fertilizer Ready" Formulation of bifenthrin insecticide + *Bacillus amyloliquefaciens* strain D747 biological fungicide.

- The bacteria colonize the roots forming a **protective biofilm which acts as a defensive barrier against pathogens** and which grows and expands with the root system
- **Anti-fungal lipopeptides are formed as spores germinate and colonize in the soil**
- Anti-fungal metabolites are secreted that **compromise the cell membranes and cell walls of specific pathogens**
- Labeled for suppression of **Pythium, Rhizoctonia, Fusarium, and Phytophthora**

Side by side field trial – Western Missouri 2016



Untreated



Untreated



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TemitryTM LFR[®] Insecticide/Fungicide

Maximize protection to unlock yield potential

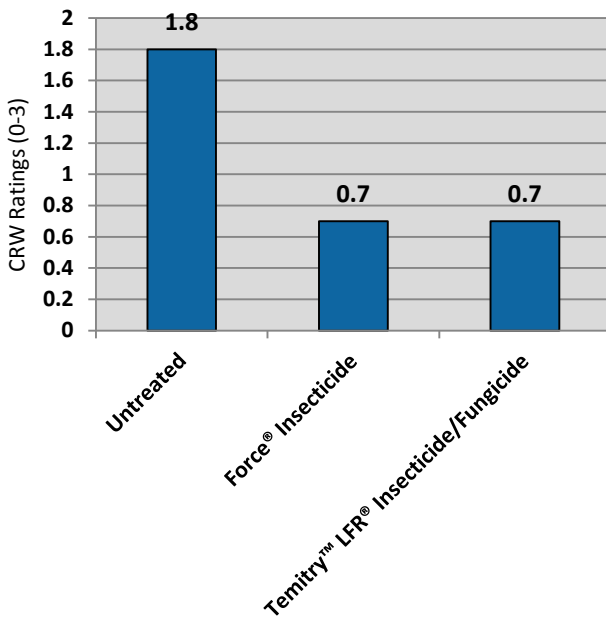
- **Powered by the active ingredients in Capture[®] LFR[®] insecticide and Headline[®] fungicide**
- **Full spectrum insect control plus *Rhizoctonia solani* protection give every seed the chance to emerge, increasing plant stands**
- **Stronger, more consistent early plant stands provide the best opportunity for maximizing yield potential**
- **Patented LFR[®] formulation mixes readily, ensuring consistent application rates from the first acre planted to the last**
 - Maximum insect protection, even in heavy CRW infestations or known resistant acres
 - *Rhizoctonia solani* protection through V3 growth stage
 - Increase stands & provide every seedling an opportunity to become productive
- **Use Rate: 9.5 oz/a 30" Spacing (See label for narrow / twin rows)**

TEMITRYTM LFR[®]
INSECTICIDE / FUNGICIDE

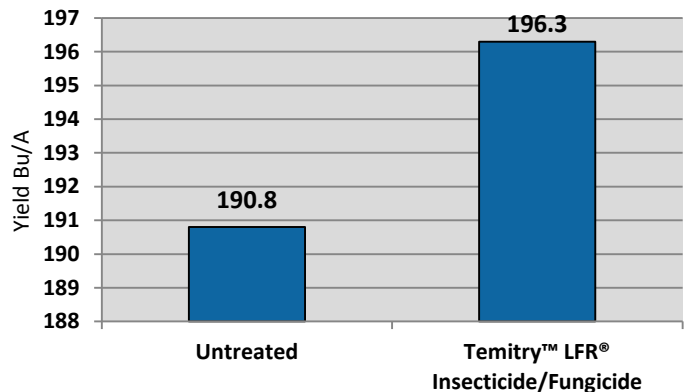
Protects Yield Potential

- Corn Rootworm protection impacts root ratings and increases yields

CRW Protection with TemitryTM LFR[®] Insecticide / Fungicide
Data Pooled Over 2015 Trials



TemitryTM LFR[®] Insecticide / Fungicide Replicated Trials
Data Pooled Over 2015 – 2016 Trials



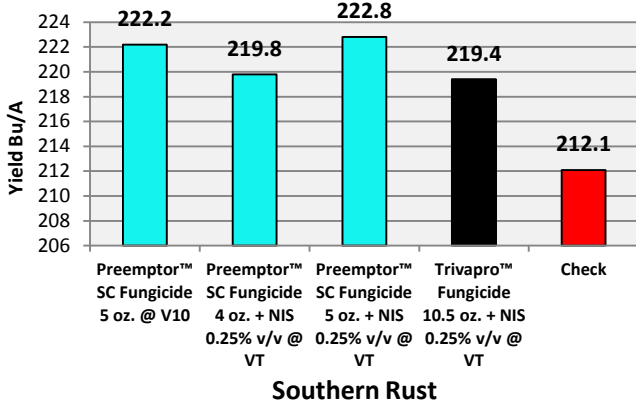
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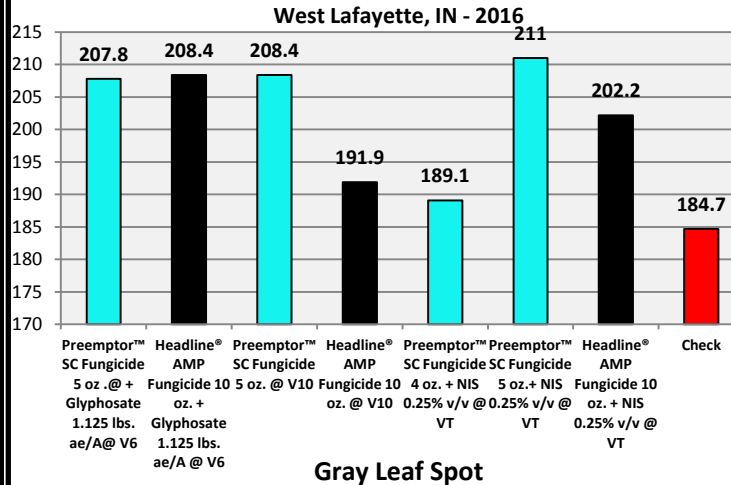
Corn Foliar Fungicide Performance in 2016:

Minimal disease presence prior to VT did not facilitate many reactive fungicide applications in 2016. However, rainfall in August and September introduced an environment conducive for disease presence resulting in later epidemics of Gray leaf spot and southern rust specifically. Southern rust fortunately does not overwinter in the Midwest and requires movement by winds carrying spores from southern states each year. It will be important to monitor S. rust progression in states such as TX, AR, TN and KY when making decisions this season. Applications occurring early in the disease cycle will optimize fungicide efficacy and scouting will be critical for success if an epidemic occurs.

Evaluation of Foliar Fungicides for Disease Control and Yield
Southern Illinois University
Carmi, IL - 2016



Evaluation of Foliar Fungicides for Disease Control and Yield
Purdue Univ.
West Lafayette, IN - 2016

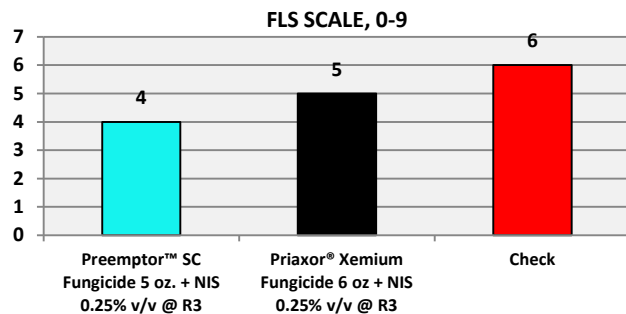


PreemptorTM SC Fungicide Corn Use Recommendations -- V5 to V8 – 5 oz, V9 – Prior to VT - 5 oz, No Adjuvants, VT to R2 – 4 – 5 oz

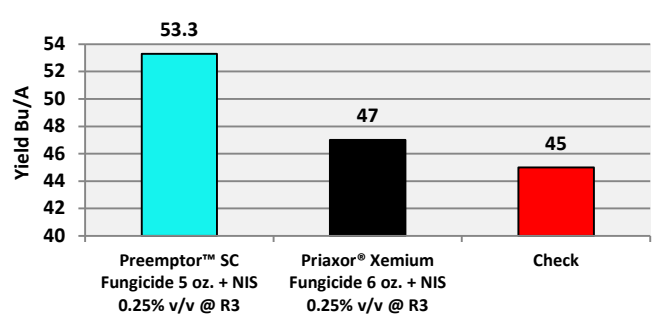
Soybean Foliar Fungicide Performance in 2016:

Septoria brown spot (*Septoria glycines*) is present in most soybean fields each year. As air temperature rises and rainfall becomes more sporadic the disease typically dissipates. August and September rainfall increased movement up the canopy and in some cases induced yield loss. Late season rainfall also stimulated the development of frogeye leaf spot (*Cercospora sojina*) in certain areas of southern IL and IN, particularly on susceptible varieties. Resistance management is imperative when targeting diverse reproducers such as *Cercospora*. Strobilurin-resistant isolates of FLS have been identified in the mid-south and utilizing a triazole containing product is pivotal for effective management.

Evaluation of Foliar Fungicides for Disease Control and Yield
S. Illinois Univ. - 2016
Shawneetown, IL



Evaluation of Foliar Fungicides for Disease Control and Yield
S. Illinois Univ. - 2016
Shawneetown, IL



Frogeye Leaf Spot

PreemptorTM SC Fungicide Soybean Use Recommendations – Beginning R1 – 5 oz (Suppression of SDS, White Mold), R3 - 5 oz (FLS, Septoria Brown Spot, Powdery mildew, Pod and Stem Blight etc.)

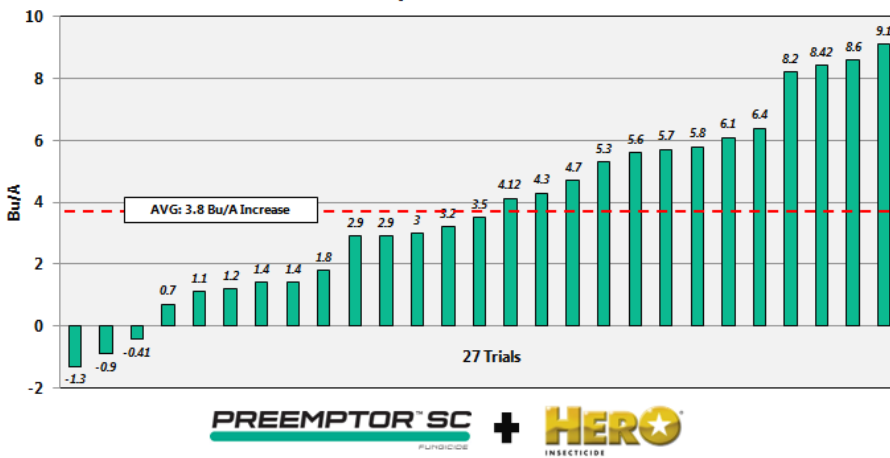
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Insect and Disease Management During Reproductive Stages in Soybeans:

Maximizing leaf health throughout the reproductive stages optimizes photosynthetic potential. Leaf area intercepts light and creates carbohydrates necessary for grain fill. Diseases and insects reduce leaf area which may influence productivity. Conditions were conducive for disease and insect presence in soybeans in 2016. Several reports of lepidopteran feeding and disease infections materialized in the early - mid reproductive stages last season. Growers taking advantage of FMC's Preemptor™ SC Fungicide + Hero® Insecticide yield assurance program realized the benefit of preserving soybean leaf health in many cases. The data below indicates average yield increase experienced over 27 commercial field trials conducted in 2016.

**Preemptor™ SC Fungicide + Hero® Insecticide Soybean Yield Results
2016 Data Submitted From Commercial Fields - IL/IN
Yield Comparison vs. Nontreated**



**Contact your local FMC Retail Market Manager for
Details Regarding the 2017 Yield Assurance Program**

Tank-Mix
Preemptor™ SC Fungicide Hero® Insecticide
Growth Stage
R1-R5 (R3 is Optimal)
Application Method
Ground
Application Rate
5 oz + 5 oz

*Include NIS or COC to improve coverage

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, Temityr 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, Temityr 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, Temityr, 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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