









FMC Fungicide Guide and Uses in Field Crops

FMC 2017 FUNGICIDE REFERENCE GUIDE

						
Active Ingredient	BLAD	mancozeb	flutriafol + fluoxastrobin	iprodione	flutriafol	kresoxysim - methyl
FRAC Code	BM 01	M3	3 & 11	2	3	11
Fungicide Class	Multi-Site	Multi-Site	Demethylation Inhibitor (DMI, Azole) & Quinone Outside Inhibitor (QoI)	Dicarboximide	Demethylation Inhibitor (DMI, Azole)	Quinone Outside Inhibitor (QoI)
Mode of Action	Cell wall & membrane fissure inducer	Attacks multiple pathways	Sterol biosynthesis inhibitor in membranes & Cytochrome bc1 at Qo site	Histidine-Kinase in osmotic signal transduction disruption	Sterol biosynthesis inhibitor in membranes	Cytochrome bc1 at Qo site
Fungicidal Activity	Protectant (preventative) with limited curative activity	Protectant, long residual	Protectant, curative, translaminar with local systemic activity	Protectant, limited curative, localized penetrant	Protectant highly systemic, curative	Protectant, translaminar with local systemic & vapor activity
Bacterial Activity	Yes – 2ee Grape Sour Rot	Yes	No	No	No	No
Resistance Potential	Very Low	Very Low	Moderate	Moderate to High	Moderate	High
Formulation, Package Size, Rate Range and Application and Adjuvants	2.1 lbs. ai/gal 4 X 1 gal./case 20.5 -36.6 fl. oz. See Label NIS or COC	75% DF 30 lbs. bag or 8X6 lbs./case 0.75 – 6.4 lbs. Water volume for optimum coverage	3.32 lbs. ai/gal. SC 2 X 2.5 gal./case 2 – 6 fl. oz. Ground 10 gal./A Aerial 2 gal./A NIS or COC	4 lbs. ai/gal. F 2 X 2.5 gal./case 1- 4 pt. See Label NIS or COC	2.08 lbs ai/gal. SC 4 X 50 oz. / case 4 – 6 oz. See Label NIS or COC	50 WG 10 X 1.5 lb./case 3.2 – 6.4 oz. Ground See Label Aerial 5 gal./A NIS or COC
Crops Labeled and Pre-Harvest Intervals – PHI (days to harvest)	Strawberries, Tomatoes, Almonds, Grapes (1)	Several crops, very good on diseases in potatoes, tomatoes, apples, and sugar beets (PHI variable – see label)	Corn, Soybeans, Wheat (30)	Stone Fruits, Ginseng (36), Berries (0), Grapes (7), Strawberries, Beans, Broccoli (0), Carrots (0), Dry Bulb Onions (7), Garlic, Lettuce (14), Potatoes (14)	Brassicas Leafy Vegetables (7), Celery (7), Fruiting Vegetables (0), Grapes (14), Leafy Vegetables (7), Pome(14), Stone (14), Cucurbits (0), Strawberries (0)	Numerous; Apples, Pears, Grapes, Pecans, Cucurbits (PHI variable see label)
Diseases Controlled and Suppressed where noted	Botrytis, Powdery Mildew, See Section 2ee suppression Sour Rot Grapes	Anthracnose, Black Rot, Bunch Rot, Downy Mildew , Fruit Rots Phytophthora, Ruts Scabs,	Anthracnose, Northern Corn Leaf Blight, Greay Leaf Spot, Ruts, Brown Rot, Frogeye Leaf Spot, Alternaria Leaf Spot, Stripe Rust, Powdery Mildew, Tan Spot	Botrytis Fruit Rot, Grey Mold, White Mold, Alternaria Leaf Spot, Early Blight, Bottom Rot, Lettuce Drop, Brown Rot, Blossom Blight, Bunch Rot, Purple Blotch, Phomopsis, Stmphyllium blight	Anthracnose, Alternaria Leaf and Fruit Spot, Cercospora Leaf Spot, Powdery Mildew, Black Rot, Powdery Mildew, Broen Rot Blossom Blight, Septoria Leaf Spot, Charcoal Rot, Early Night	Scab, Powdery Mildew, Cedar Apple Rust, White Rot, Black Rot, Brooks Fruit Spot, Sooty Blotch, Fly Speck, Black Rot, Phomopsis, Downy Mildew

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☐ 2017 FMC Fungicide Reference Guide

☐ 2016 University Wheat, Corn and Soybean Fungicide Disease Control Studies

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HatchTrakSM

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PREEMPTORTM SC
FUNGICIDE

PreemptorTM SC fungicide is versatile, flexible and provides outstanding disease control in wheat, corn and soybeans to help maximize yields and profits.

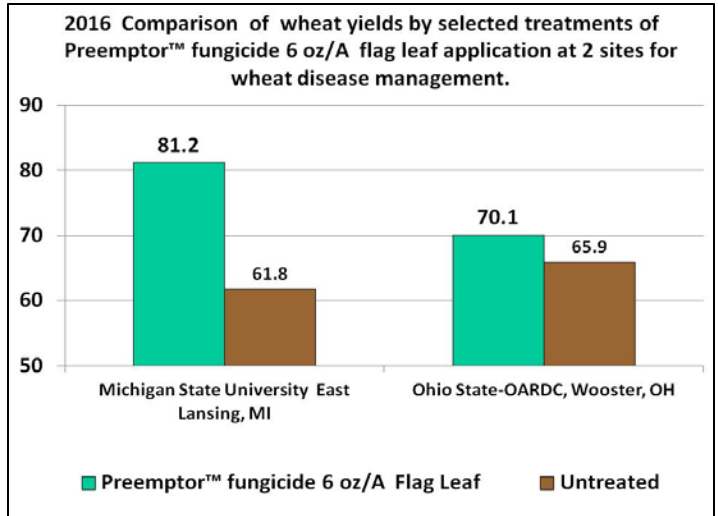
In 2016, wheat stem and leaf rust were prevalent in Ohio and Michigan, and stripe rust was observed in Michigan and northern Ohio. Preemptor SC fungicide applied at flag leaf provided excellent rust control resulting in wheat yield increases of approximately 5.1 to 19.4 bushels per acre over the untreated check.

Preemptor SC fungicide applied at V-8 in a tank mix with Roundup PowerMAX[®] herbicide shows the practicality of tank mixing a herbicide and fungicide to make more efficient use of sprayers. Preemptor SC fungicide provided excellent control of Northern Corn Leaf Blight as reflected in the yield increase of approximately 28.3 bushels per acre and very profitable too.

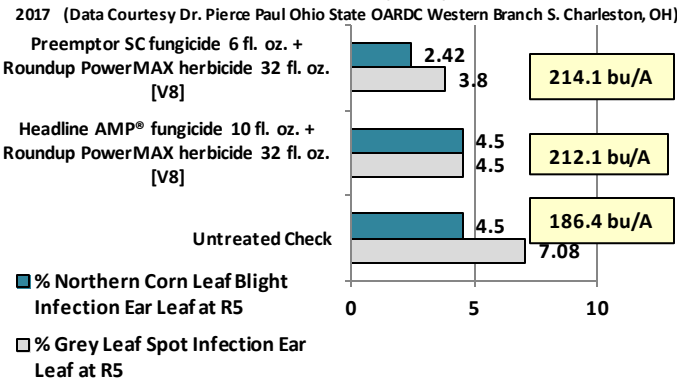
At the Ohio State OARDC in Wooster, Ohio, an application of Preemptor SC fungicide at R1 soybean growth stage increased soybean yields by 4.6 bushels per acre. The return on investment ratio of an application of Preemptor SC fungicide was greater than 3:1 and under heavier frogeye leaf spot pressure might even be higher.



2016 UNIVERSITY WHEAT, CORN AND SOYBEAN FUNGICIDE PERFORMANCE DATA

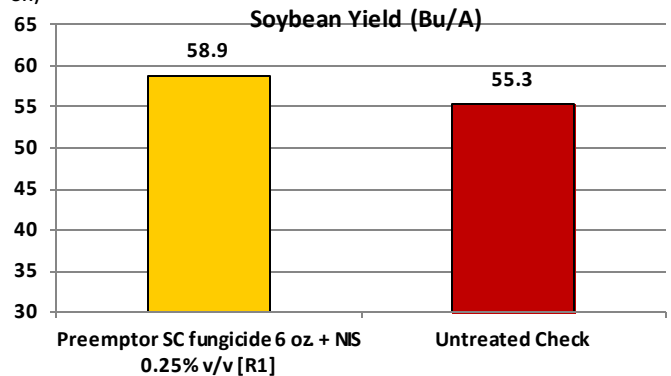


2016 selected treatments showing the yield protection benefit of corn foliar fungicides applied at V-8 systemically protecting the corn ear leaf from grey leaf spot and northern corn leaf blight infection (Bu/A)



2016 selected treatments from frogeye leaf spot trial observing Preemptor SC fungicide 6 oz. applied at R1 soybean stage impacting soybean yields (Bu/A) at Ohio State - OARDC Wooster, OH.

(Data Courtesy Dr. Anne Dorrance - Ohio State - OARDC, Wooster, OH and S. Charleston, OH)



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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