

# FIELD TRIALS: XYWAY™ BRAND FUNGICIDES







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- CE2/	2150-7/01	

# GET SYSTEMIC DISEASE PROTECTION FROM THE INSIDE OUT, FROM PLANTING TO HARVEST.

New Xyway<sup>™</sup> brand fungicides are the first and only at-plant corn fungicides to provide season-long, inside-out foliar disease protection from planting to harvest. A single application provides comparable performance and corn yield protection to that of VT/R1 foliar fungicides against diseases like gray leaf spot, Northern corn leaf blight, common rust and many more.

Active ingredient flutriafol is rapidly taken up and translocated within the plant, providing systemic and long-lasting residual protection. The ability of flutriafol to move from the soil upward through the plant for the duration of the growing season has not been demonstrated by any other fungicide active ingredient.







# PLANT AND PROTECT YOUR CORN YOUR WAY.

Formulated for convenience.



Delivered via our revolutionary 3RIVE 3D® application system, Xyway™ 3D fungicide allows you to maximize your efficiency. The 3RIVE 3D application system is designed with convenience in mind, allowing you to plant up to 325-450 acres between refills. Combining the right amount of product and water eliminates the need for mixing, measuring and tank agitation. The system efficiently covers more ground in less time with fewer refills, saving water, fuel, labor and time.



Designed with our Liquid Fertilizer Ready (LFR®) formula, Xyway LFR fungicide can be easily added to any liquid in-furrow application system. Our LFR formula is designed for superior mixability and stability in liquid and pop-up fertilizers and provides a uniform suspension in fertilizer for consistent delivery of products across the acre. For added flexibility, Xyway LFR fungicide is also labeled for 2X2 application.\*\*

#### XYWAY™ BRAND FUNGICIDES

**Active Ingredient:** Flutriafol

FRAC Group: 3

**Mode of Action:** Demethylation inhibitors; blocks the synthesis of ergosterol in sensitive species of fungi.

**Application Rate:** Xyway 3D fungicide: 11.8 oz./A at-plant, in-furrow; Xyway LFR fungicide: 15.2 fl. oz./A at-plant, in-furrow based on 30" row spacing.\*

**Labeled Diseases:** Gray leaf spot, Northern corn leaf blight, Southern corn leaf blight, common rust, head smut, common smut; suppression of: anthracnose stalk rot, *Fusarium* stalk and crown rot and *Physoderma* brown spot.\*\*\*

- \*See label for row spacing conversion rates.
- \*\*This Xyway LFR fungicide recommendation is made as permitted under FIFRA Section 2(ee) for 2x2 placement at-plant in corn (field, corn grown for seed, popcorn and sweet corn) in all registered states except Texas. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2025.
- \*\*\*This Xyway LFR fungicide recommendation is made as permitted under FIFRA Section 2(ee) for suppression of anthracnose stalk rot, *Fusarium* stalk and crown rot and *Physoderma* brown spot in corn. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2025.



# Seeing is believing. Go on a virtual plot tour today.

Step into the fields and see results for Xyway™ brand fungicides across the country. Visit XYWAY.AG.FMC.COM or scan the QR code to experience a virtual 360 plot tour near you.

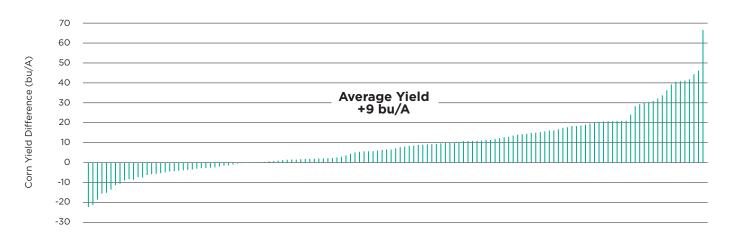


# SEASON-LONG PERFORMANCE PAYS OFF AT HARVEST.

XYWAY BRAND FUNGICIDES 0.228 LB. AI/A AT-PLANT, IN-FURROW CORN YIELD AVERAGE OVER UNTREATED | 2018-2020



XYWAY BRAND FUNGICIDES VS. UNTREATED | BALANCED DATA SET, 19 PROTOCOLS; 125 TRIALS; 2018-2020



7





# Diamond Ag Research Inc. Larned, KS Doug Nord

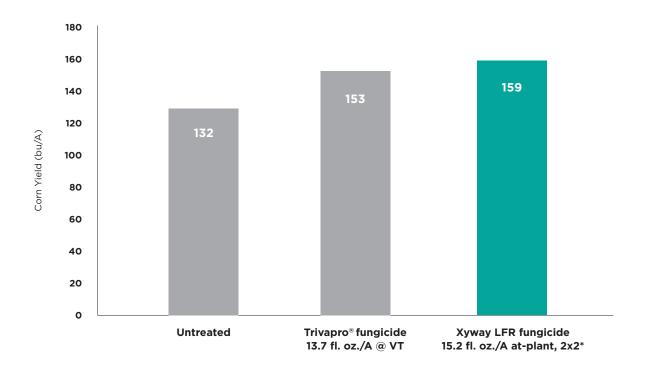
Planting Date: **05/02/2020** 

Hybrid: **P1366Q**Row Spacing: **30"** 

Target Population: 30,000 plants/A

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow



<sup>\*</sup>This Xyway LFR fungicide recommendation is made as permitted under FIFRA Section 2(ee) for 2x2 placement at-plant in corn (field, corn grown for seed, popcorn and sweet corn) in all registered states except Texas. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2025.

# Missouri Farmers Association Inc. Cedar Creek, MO

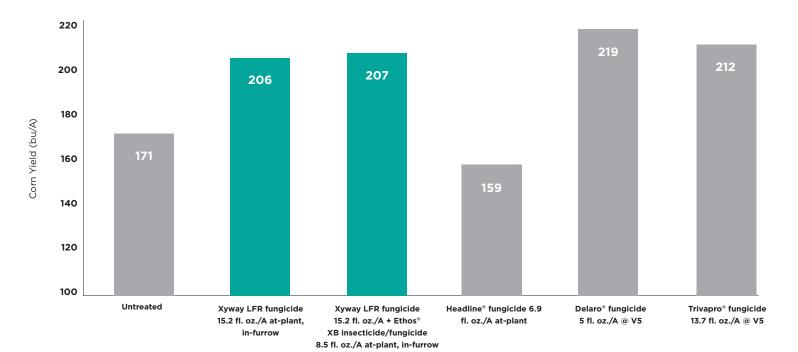
Planting Date: **05/11/2020** Hybrid: **MorCorn 4457** Row Spacing: **30"** 

Target Population: 32,000 plants/A

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow

#### **CORN YIELDS**



#### Ethos XB insecticide/fungicide is a Restricted Use Pesticide.

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## JD White Farm Kansas City, MO

Planting Date: **04/07/2020** 

Hybrid: **LG5525**Row Spacing: **30"** 

Target Population: **30,000 plants/A**Product & Use Rate: **Xyway**™ **3D fungicide** 

11.8 oz./A at-plant, in-furrow

#### 115 DAYS AFTER PLANTING

Average Stalk Thickness

0.5"

Average Rows/Ear

14.2

Average Kernels/Row

37.4

Estimated yield based on 32 ears per 1/1,000 A\*

189 bu

\*Yield estimate conducted 40+ days prior to harvest.



Untreated

Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow **Average Stalk Thickness** 

0.75"

Average Rows/Ear

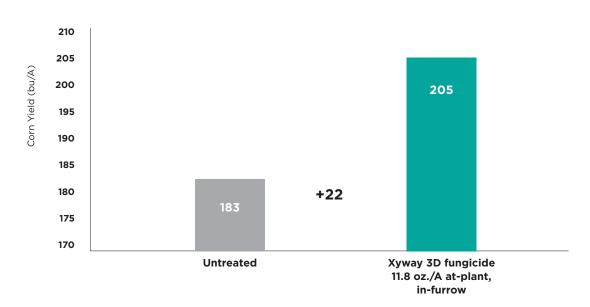
16

Average Kernels/Row

38.6

Estimated yield based on 32 ears per 1/1,000 A\*

220 bu



# FMC Internal Location Bradshaw, NE

Planting Date: **04/28/2020** 

Hybrid: **P1244 AM**Row Spacing: **30"** 

Target Population: 32,000 plants/A

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, 2x2\*

#### 150 DAYS AFTER PLANTING



Untreated

Xyway LFR fungicide 15.2 fl. oz./A at-plant, 2x2\*

<sup>\*</sup>This Xyway LFR fungicide recommendation is made as permitted under FIFRA Section 2(ee) for 2x2 placement at-plant in corn (field, corn grown for seed, popcorn and sweet corn) in all registered states except Texas. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2025.

Planting Date: **04/30/2020**Product & Use Rate: **Xyway**™ **3D fungicide 11.8 fl. oz./A at-plant, in-furrow** 

#### **GRAY LEAF SPOT | 105 DAYS AFTER PLANTING**



Untreated



Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow

# Ag Partners Wamego, KS

Planting Date: **04/23/2020** 

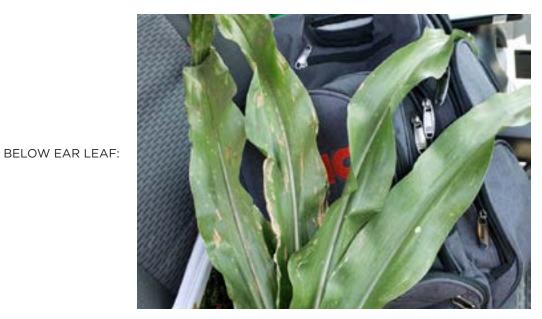
Hybrid: **DKC62-53**Row Spacing: **30"** 

Target Population: 32,000 plants/A

Product & Use Rate: **Xyway**™ **3D fungicide** 

11.8 oz./A at-plant, in-furrow

#### 150 DAYS AFTER PLANTING



Untreated

Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow



EAR LEAF:

Untreated Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow

# South Dakota State University Volga, SD Dr. E. Byamukama

Planting Date: **05/04/2020** Hybrid: **DKC31-10RIB** Row Spacing: **30"** 

Product & Use Rate: **Xyway**™ **3D fungicide** 

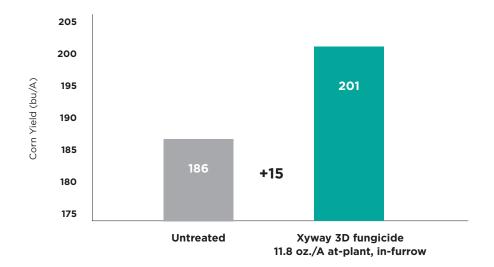
11.8 oz./A at-plant, in-furrow

#### **ROOT AND STALK COMPARISON**



Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow

Headline® fungicide 6.9 oz./A in-furrow









# MID-SOUTH & SOUTH

# Davis Brothers Inc. Martin, TN

Planting Date: 04/07/2020 Hybrid: DKC67-44 RIB Row Spacing: 30"

Target Population: **30,000 plants/A**Product & Use Rate: **Xyway™ 3D fungicide** 

11.8 oz./A at-plant, in-furrow

Scan this QR code on your mobile device camera to step into the field for a virtual 360 tour of this location.

#### LATE-SEASON DISEASE CONTROL | 128 DAYS AFTER PLANTING





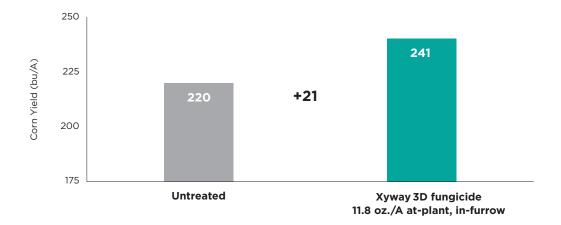
Untreated





Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow

#### **CORN YIELDS | YIELD ADJUSTED TO 15.5% MOISTURE**



# Garland Williams and Sons Farms Hickman, KY

Planting Date: 04/18/2020 Hybrid: DKC70-27 RIB Row Spacing: 20"

Target Population: 36,000 plants/A

Product & Use Rate: Xyway™3D fungicide

11.8 oz./A at-plant, in-furrow

#### **ROOT COMPARISON | 40 DAYS AFTER PLANTING**

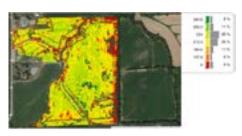


Untreated



Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow

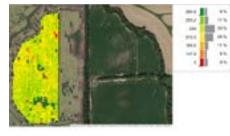
#### **NDVI 128 | DAYS AFTER PLANTING**



Entire Farm Average Dry Yield: 228 bu/A Total Area: 106 acres

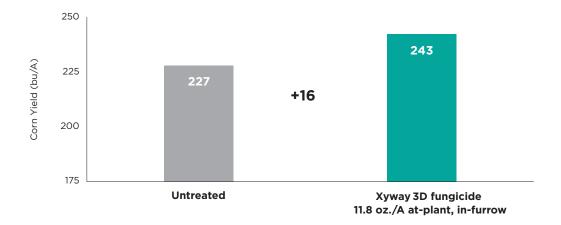


Untreated Average Dry Yield: 227.3 bu/A Plot Area: 2.4 acres



Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow Average Dry Yield: 243.1 bu/A Plot Area: 25.7 acres

#### **CORN YIELDS | YIELD ADJUSTED TO 15.5% MOISTURE**



# Wheat Tech Inc. Franklin, KY

Planting Date: **04/11/2020** Hybrid: **Pioneer® Pl1464AML** 

Row Spacing: 30"

Target Population: 30,000 plants/A

Product & Use Rate: **Xyway™ LFR® fungicide** 

15.2 fl. oz./A at-plant, in-furrow

Scan this QR code on your mobile device camera to step into the field for a virtual 360 tour of this location.





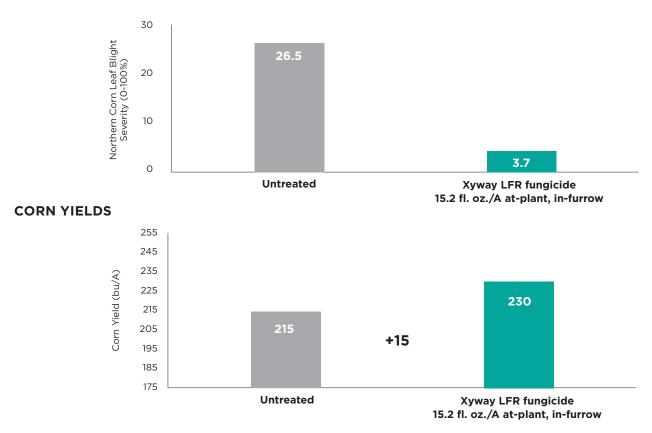




Untreated

Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

#### NORTHERN CORN LEAF BLIGHT | 136 DAYS AFTER PLANTING



## University of Kentucky Princeton, KY Dr. Kiersten Wise

Planting Date: 05/12/2020 Hybrid: DKC62-08 RIB Row Spacing: 30"

Target Population: 35,000 plants/A

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow

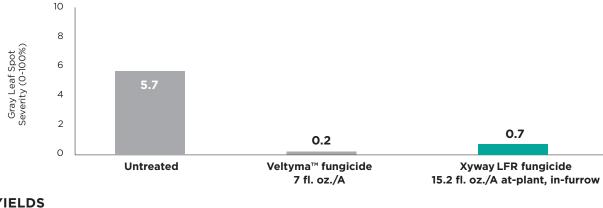


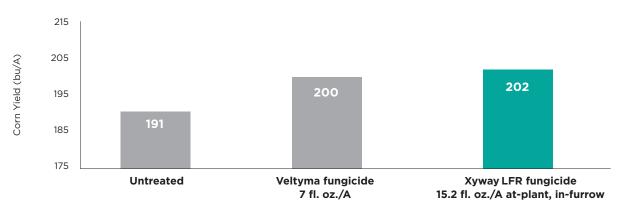




Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

#### **GRAY LEAF SPOT | 94 DAYS AFTER PLANTING**





## Mississippi State University Stoneville, MS Dr. Tom Allen

Planting Date: 05/06/2020 Hybrid: LS-AV8614YHB Row Spacing: 38"

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow

#### **89 DAYS AFTER PLANTING**



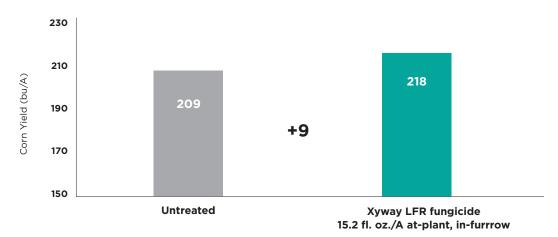


Untreated





Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow



## Louisiana State University Winnsboro, LA Dr. Trey Price

Planting Date: **04/08/2020** Hybrid: **Pioneer® 1916** Row Spacing: **40"** 

Target Population: 32,000 plants/A

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow

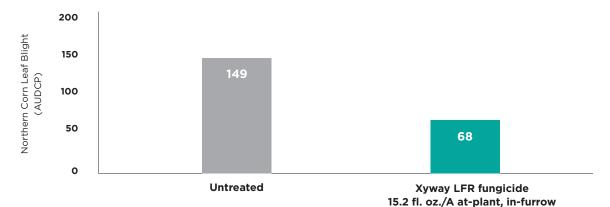


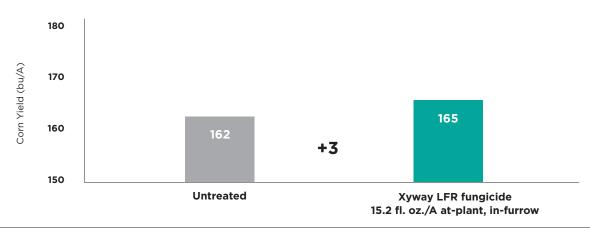


Untreated

Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

#### NORTHERN CORN LEAF BLIGHT | AREA UNDER DISEASE PROGRESS CURVE





## Southern Ag Services Mantee, MS

Planting Date: **05/02/2020** Hybrid: **Progeny® 5115** Row Spacing: **38"** 

Target Population: 34,000/A

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow

#### 104 DAYS AFTER PLANTING



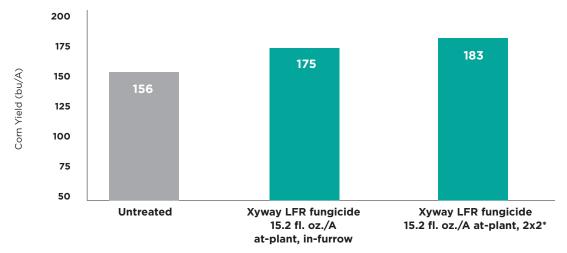


Untreated





Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow



<sup>\*</sup>This Xyway LFR fungicide recommendation is made as permitted under FIFRA Section 2(ee) for 2x2 placement at-plant in corn (field, corn grown for seed, popcorn and sweet corn) in all registered states except Texas. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2025.

# FMC Internal Location Sparks, GA

Planting Date: **06/27/2020** Hybrid: **Pioneer**® **1662 YHR** 

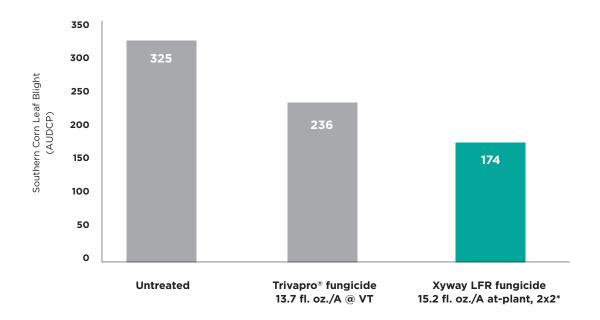
Row Spacing: 36"

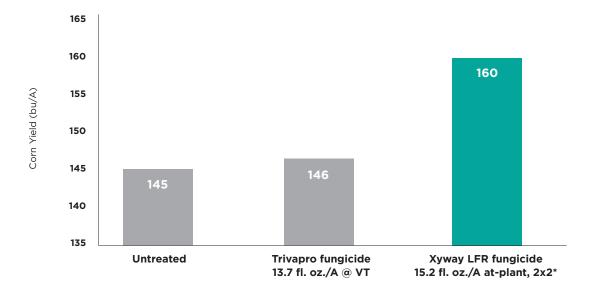
Target Population: 32,000/A

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, 2x2\*

#### SOUTHERN CORN LEAF BLIGHT | AREA UNDER DISEASE PROGRESS CURVE





<sup>\*</sup>This Xyway LFR fungicide recommendation is made as permitted under FIFRA Section 2(ee) for 2x2 placement at-plant in corn (field, corn grown for seed, popcorn and sweet corn) in all registered states except Texas. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2025.

# North Carolina State University Plymouth, NC Dr. Ron Heiniger

Planting Date: **05/07/2020** Hybrid: **Pioneer**® **1870 YHR** 

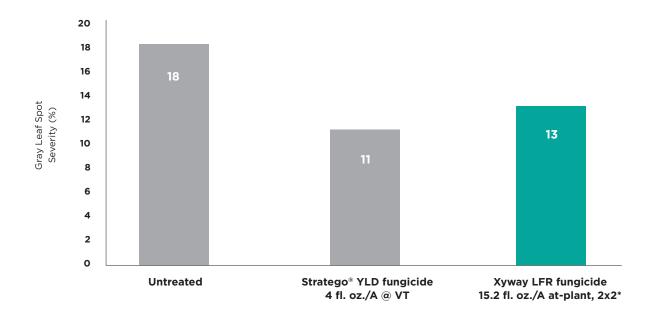
Row Spacing: 30"

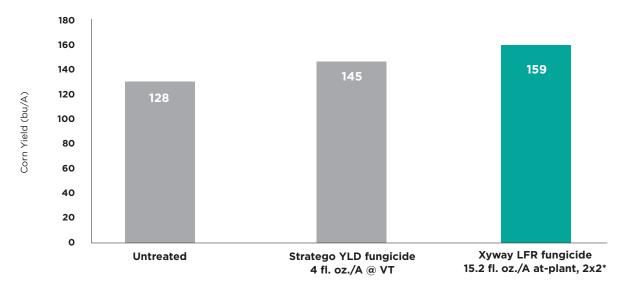
Target Population: 34,000/A

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, 2x2\*

#### **GRAY LEAF SPOT**





<sup>\*</sup>This Xyway LFR fungicide recommendation is made as permitted under FIFRA Section 2(ee) for 2x2 placement at-plant in corn (field, corn grown for seed, popcorn and sweet corn) in all registered states except Texas. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2025.



10-34-0 2x2

10-34-0 2x2 + Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

# FMC Internal Location Valrico, FL

Trial: **SWEET CORN** 

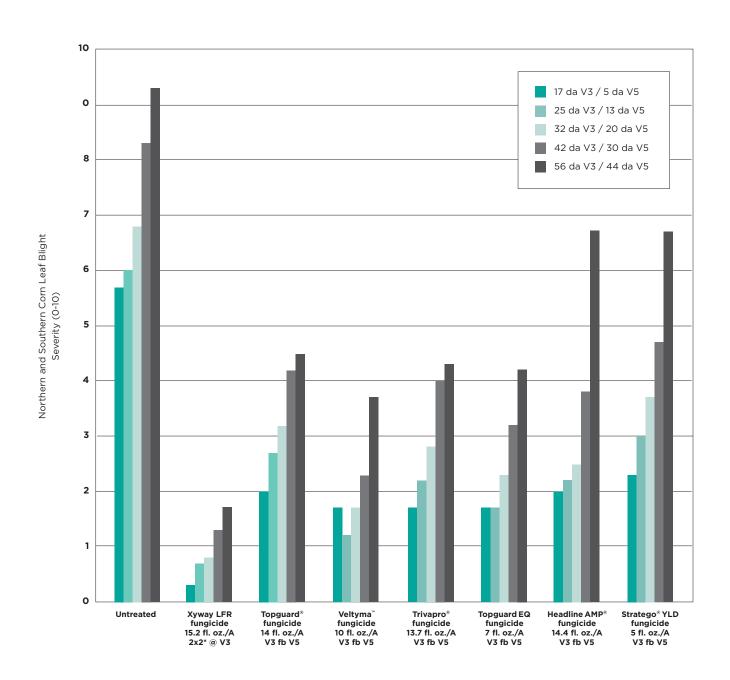
Planting Date: **08/03/2020** 

Hybrid: **Silver Queen**Row Spacing: **40**"

Product & Use Rate: **Xyway**™ **LFR® fungicide** 

15.2 fl. oz./A

#### NORTHERN AND SOUTHERN CORN LEAF BLIGHT | FUNGICIDE EFFICACY IN SWEET CORN



<sup>\*</sup>This Xyway LFR fungicide recommendation is made as permitted under FIFRA Section 2(ee) for 2x2 placement at-plant in corn (field, corn grown for seed, popcorn and sweet corn) in all registered states except Texas. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2025.

## **FMC Internal Location** Valrico, FL

Trial: **SWEET CORN** 

Planting Date: **08/03/2020** 

Hybrid: Silver Queen Row Spacing: 40"

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow



Untreated

Xyway LFR fungicide 15.2 fl. oz./A 2x2\* @ V3



Topguard® EQ fungicide 7 fl. oz./A @ V3 fb V5



Topguard fungicide 14 fl. oz./A @ V3 fb V5



Stratego® YLD fungicide 5 fl. oz./A V3 fb V5



Headline AMP® fungicide 14.4 fl. oz./A V3 fb V5



Trivapro® fungicide 13.7 fl. oz./A V3 fb V5



Veltyma<sup>™</sup> fungicide 10 fl. oz./A V3 fb V5



\*This Xyway LFR fungicide recommendation is made as permitted under FIFRA Section 2(ee) for 2x2 placement at-plant in corn (field, corn grown for seed, popcorn and sweet corn) in all registered states except Texas. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2025.





## Ohio State University Western Agricultural Research Station South Charleston, OH

Planting Date: **05/27/2020** 

Hybrid: **DKC 62-05** Row Spacing: **30"** 

Target Population: 34,000 plants/A

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow

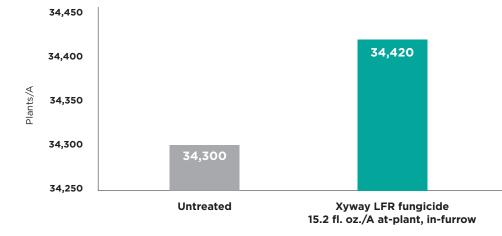
#### 100 DAYS AFTER PLANTING

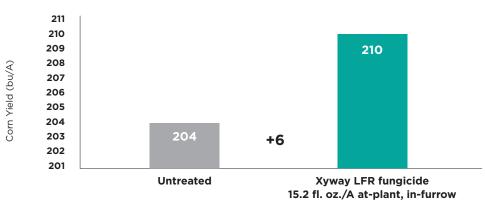


Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

Untreated

#### PLANT STANDS | 28 DAYS AFTER PLANTING





## Ohio State University Western Agricultural Research Station South Charleston, OH

Planting Date: **05/27/2020**Hybrid: **DKC 62-05** 

Row Spacing: **30"** 

Target Population: 34,000 plants/A

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow

#### 100 DAYS AFTER PLANTING



Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

Untreated



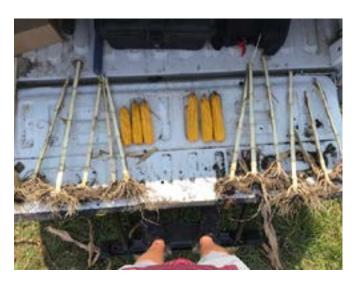
Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

Untreated



Untreated

Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow



Untreated

Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

# Kinsler Farms Frankfort, IN

Planting Date: **05/27/2020** 

Hybrid: **NON-GMO**Row Spacing: **30"** 

Product & Use Rate: **Xyway**™ **3D fungicide** 

11.8 oz./A at-plant, in-furrow

#### 111 DAYS AFTER PLANTING



Untreated

Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow

#### **STALK SPLITS**



Untreated

Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow

# Kinsler Farms Frankfort, IN

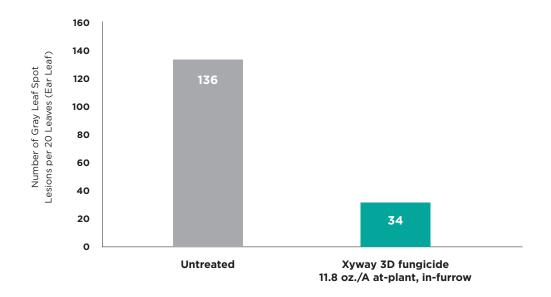
Planting Date: **05/27/2020** 

Hybrid: **NON-GMO**Row Spacing: **30"** 

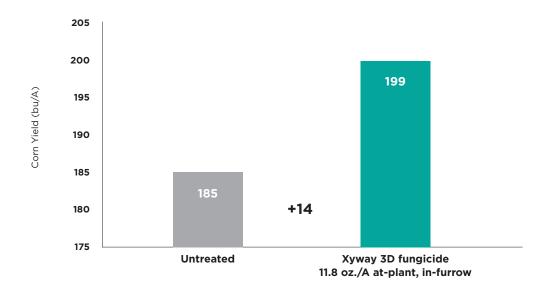
Product & Use Rate: Xyway™ 3D fungicide

11.8 oz./A at-plant, in-furrow

#### **GRAY LEAF SPOT**



#### **CORN YIELDS**



# Fulton Farms Troy, OH

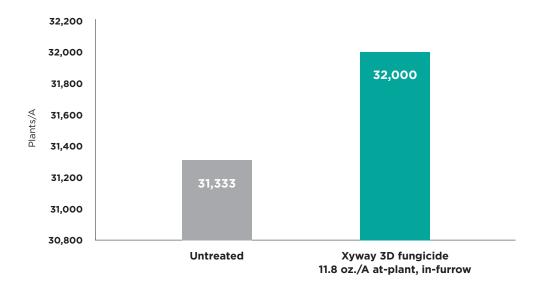
Planting Date: **05/12/2020**Hybrid: **Beck's 5140HR**Row Spacing: **30"** 

Target Population: **32,000 plants/A**Product & Use Rate: **Xyway**™ **3D fungicide** 

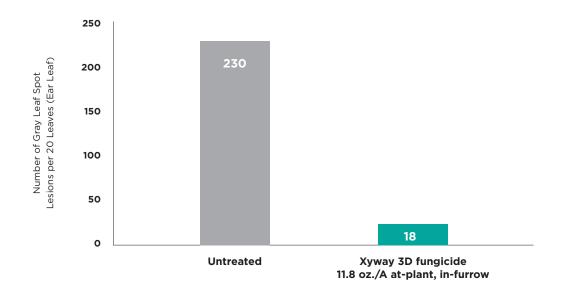
11.8 oz./A at-plant, in-furrow

Scan this QR code on your mobile device camera to step into the field for a virtual 360 tour of this location.

#### PLANT STANDS | 28 DAYS AFTER PLANTING



#### **GRAY LEAF SPOT**



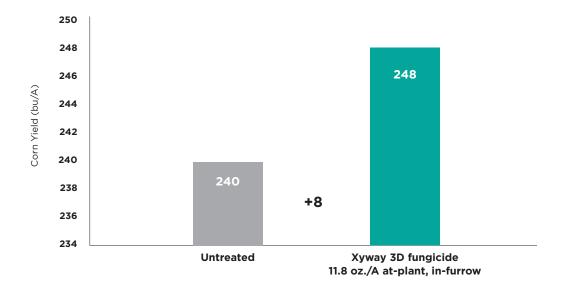
# Fulton Farms Troy, OH

Planting Date: 05/12/2020 Hybrid: Beck's 5140HR Row Spacing: 30"

Target Population: **32,000 plants/A**Product & Use Rate: **Xyway 3D fungicide** 

11.8 oz./A at-plant, in-furrow

#### **CORN YIELDS**



# Michigan State University East Lansing, MI

Planting Date: **05/09/2020** 

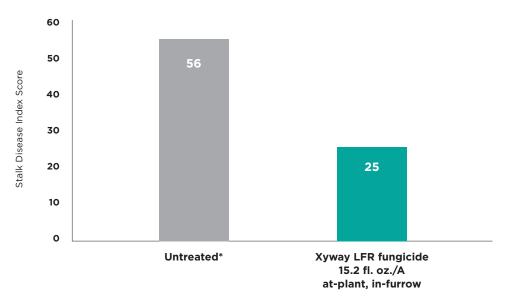
Hybrid: **DKC 52-61**Row Spacing: **30"** 

Target Population: 35,000 plants/A

Product & Use Rate: Xyway™ LFR® fungicide

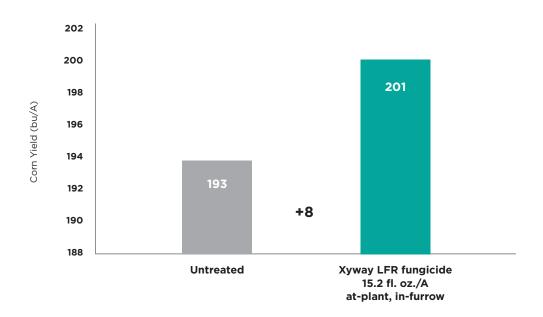
15.2 fl. oz./A at-plant, in-furrow

#### **STALK DISEASE**



<sup>\*</sup>Fusarium spp. and anthracnose stalk rot were both isolated from the UTC.

#### **CORN YIELDS**



# University of Delaware Georgetown, DE Dr. Alyssa Koehler

Planting Date: **05/18/2020** Hybrid: **Hubner H6187RCSS** 

Row Spacing: 30"

Target Population: 37,000/A

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow

Scan this QR code on your mobile device camera to step into the field for a virtual 360 tour of this location.

#### **100 DAYS AFTER PLANTING**



Untreated

Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

#### **100 DAYS AFTER PLANTING**



Untreated

Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

# University of Delaware Georgetown, DE Dr. Alyssa Koehler

Planting Date: **05/18/2020** Hybrid: **Hubner H6187RCSS** 

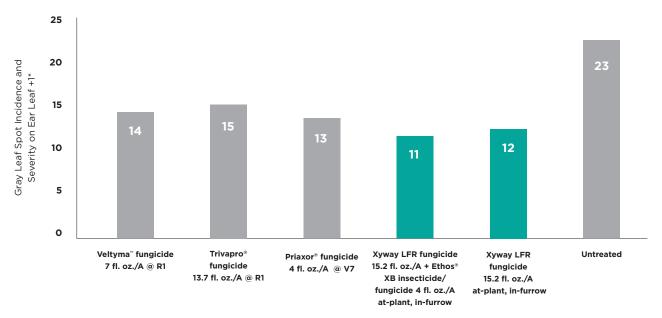
Row Spacing: 30"

Target Population: 37,000/A

Product & Use Rate: Xyway™ LFR® fungicide

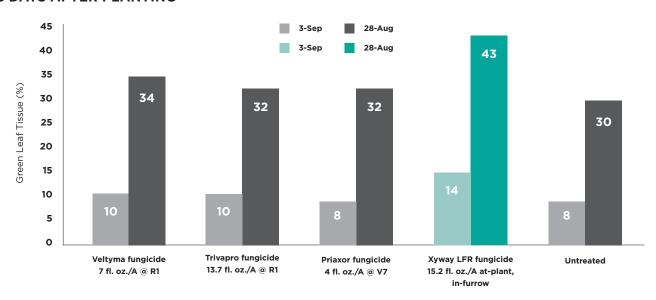
15.2 fl. oz./A at-plant, in-furrow

## GRAY LEAF SPOT | 99 DAYS AFTER IN-FURROW, 62 DAYS AFTER V7, 53 DAYS AFTER V10, 42 DAYS AFTER R1



Ethos XB insecticide/fungicides is a Restricted Use Pesticide.

## CANOPEO GREEN LEAF TISSUE MEASUREMENTS | 102 DAYS AFTER PLANTING AND 108 DAYS AFTER PLANTING



<sup>\*</sup>Sample taken from one leaf above ear leaf to have viable leaf rate.

# FMC Stine Research Center Elkton, MD Bill Cissel & Chris Leon

Planting Date: **05/15/2020** Hybrid: **Dyna-Gro® D52VC91RIB** 

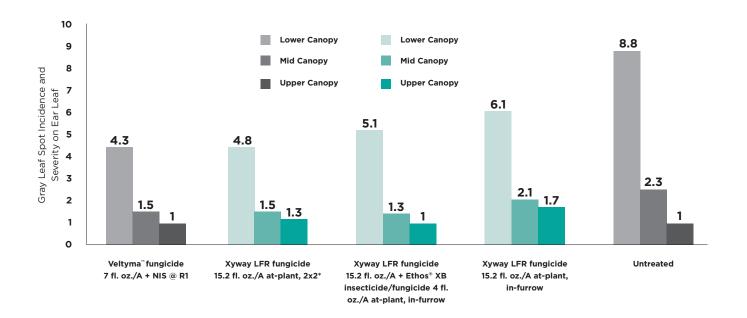
Row Spacing: 30"

Target Population: 34,800 plants/A

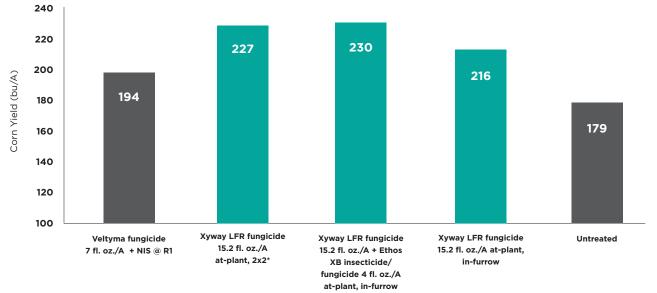
Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow

#### GRAY LEAF SPOT | 110 DAYS AFTER IN-FURROW, 39 DAYS AFTER R1



#### **CORN YIELDS**



Ethos XB insecticide/fungicides is a Restricted Use Pesticide.

\*This Xyway LFR fungicide recommendation is made as permitted under FIFRA Section 2(ee) for 2x2 placement at-plant in corn (field, corn grown for seed, popcorn and sweet corn) in all registered states except Texas. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2025.

# Gould Farms Elburn, IL

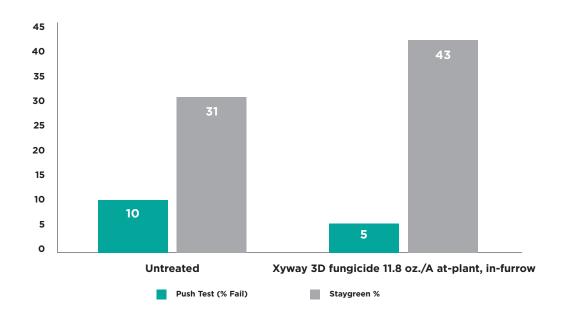
Planting Date: **04/20/2020** 

Row Spacing: 30"

Target Population: **32,000 plants/A**Product & Use Rate: **Xyway 3D fungicide** 

11.8 oz./A at-plant, in-furrow

#### **PUSH TEST AND STAYGREEN | 107 DAYS AFTER PLANTING**



#### **ROOT COMPARISON | 107 DAYS AFTER PLANTING**



Untreated

Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow

# Gould Farms Elburn, IL

Planting Date: **04/20/2020** 

Row Spacing: 30"

Target Population: 32,000 plants/A

Product & Use Rate: **Xyway**™ **3D fungicide** 

11.8 oz./A at-plant, in-furrow

#### STALK COMPARISON | 151 DAYS AFTER PLANTING



Untreated



Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow



Untreated



Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow



Untreated



Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow

# Gould Farms Elburn, IL

Planting Date: **04/20/2020** 

Row Spacing: 30"

Target Population: 32,000 plants/A

Product & Use Rate: **Xyway™ 3D fungicide** 

11.8 oz./A at-plant, in-furrow

#### **151 DAYS AFTER PLANTING**



Untreated

Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow

#### **EAR COMPARISON | 151 DAYS AFTER PLANTING**



Untreated



Xyway 3D fungicide 11.8 oz./A at-plant, in-furrow

## Purdue University West Lafayette, IN Dr. Darcy Telenko

Planting Date: **05/12/20** Hybrid: **P9998AM** 

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow

#### **GRAY LEAF SPOT | 106 DAYS AFTER PLANTING**

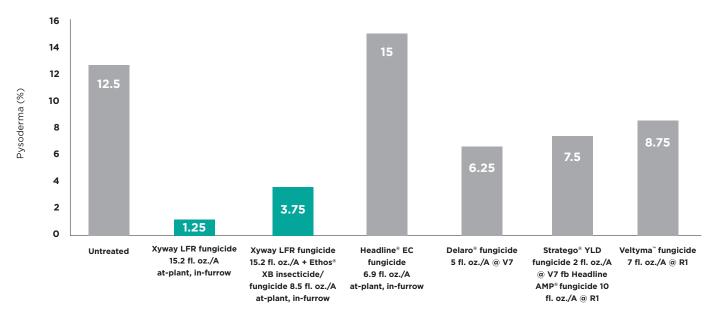




Untreated

Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

#### **PYSODERMA\* | 114 DAYS AFTER PLANTING**



#### Ethos XB insecticide/fungicides is a Restricted Use Pesticide.

\*This Xyway LFR fungicide recommendation is made as permitted under FIFRA Section 2(ee) for suppression of Physoderma brown spot in corn. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2025.

All treatments included NIS 0.25% v/v.

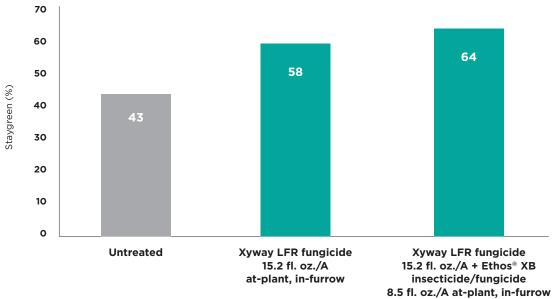
# Purdue University West Lafayette, IN Dr. Darcy Telenko

Planting Date: **05/12/20**Hybrid: **P9998AM** 

Product & Use Rate: Xyway™ LFR® fungicide

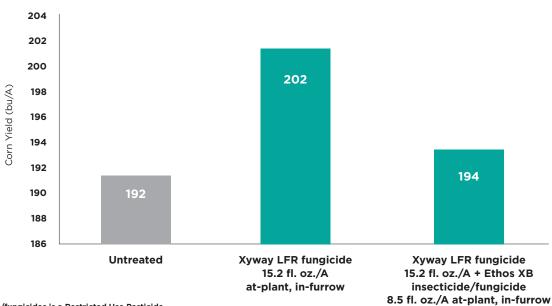
15.2 fl. oz./A at-plant, in-furrow

#### STAYGREEN | 114 DAYS AFTER PLANTING



All treatments included NIS 0.25% v/v.

#### **CORN YIELDS**



Ethos XB insecticide/fungicides is a Restricted Use Pesticide. All treatments included NIS 0.25% v/v.

# FMC Internal Location Whitestown, IN

Planting Date: 05/10/20 Hybrid: DKC 62-08 Row Spacing: 30"

Target Population: 32,000 plants/A

Product & Use Rate: Xyway™ LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow

Scan this QR code on your mobile device camera to step into the field for a virtual 360 tour of this location.

#### **GRAY LEAF SPOT | 108 DAYS AFTER PLANTING**





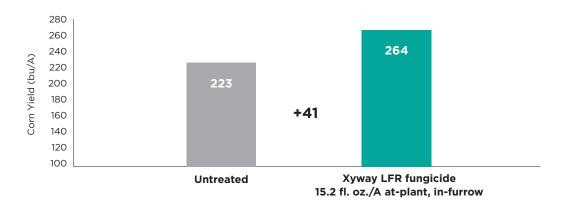
Untreated





Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

#### **CORN YIELDS**



# FMC Internal Location Whitestown, IN

Trial: **POPCORN** 

Planting Date: **05/19/20** 

Cultivars: 4 unnamed cultivars tested
Product & Use Rate: Xyway" LFR® fungicide

15.2 fl. oz./A at-plant, in-furrow

#### **CANOPEO GREEN LEAF TISSUE MEASUREMENT | 103 DAYS AFTER PLANTING**









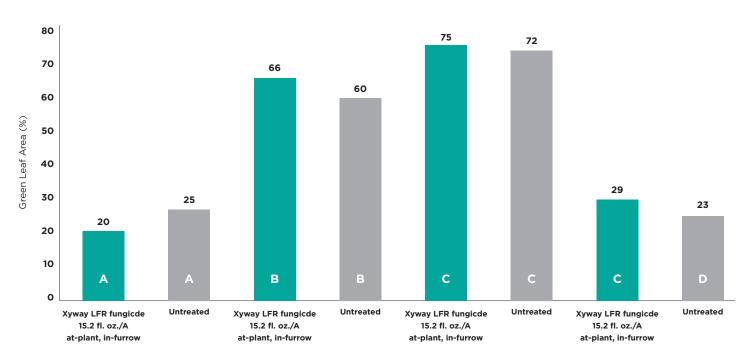
Untreated

61.98% green leaf tissue

Xyway LFR fungicide 15.2 fl. oz./A at-plant, in-furrow

78.23% green leaf tissue

#### **GREEN LEAF AREA | 122 DAYS AFTER PLANTING**



# FMC Internal Location Whitestown, IN

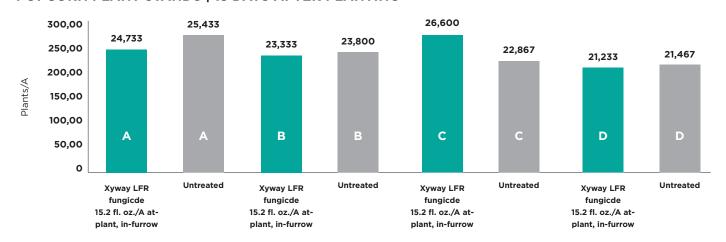
Trial: POPCORN

Planting Date: **05/19/20** 

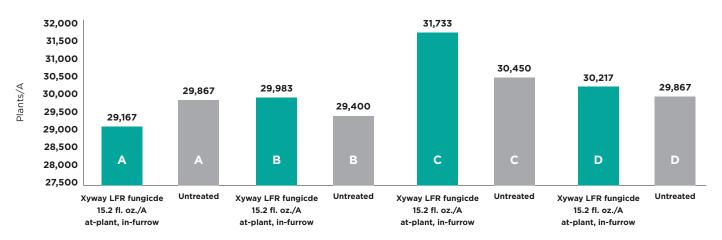
Cultivars: **4 unnamed cultivars tested**Product & Use Rate: **Xyway™ LFR® fungicide** 

15.2 fl. oz./A at-plant, in-furrow

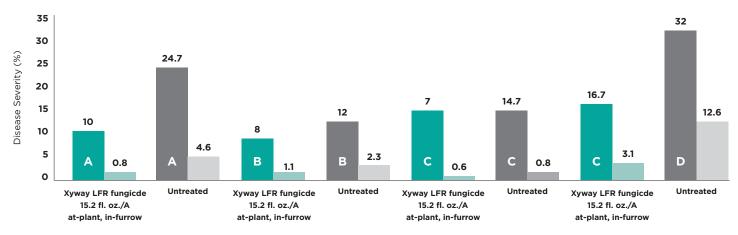




#### POPCORN PLANT STANDS | 27 DAYS AFTER PLANTING



#### **GRAY LEAF SPOT & NORTHERN CORN LEAF BLIGHT | 103 DAYS AFTER PLANTING**







# LATE-SEASON DISEASES

With disease protection beginning at germination, Xyway™ brand fungicides provide flexibility to schedule the foliar application timing. Including Xyway brand fungicides in your foliar fungicide protocol could be the best scenario for diseases that can come in very late and significantly reduce yields such as Southern rust and tar spot.

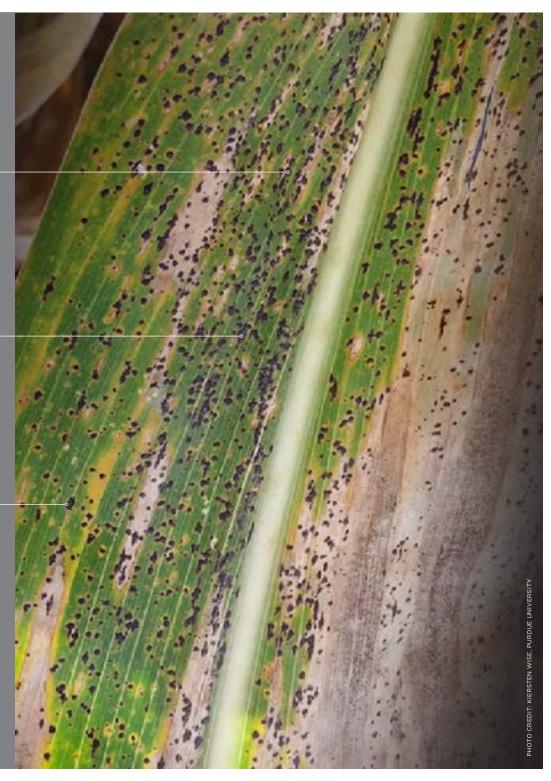
# Tar Spot

Complex with *Phyllachora maydis* and *Monographella maydis*. Sometimes associated with *Coniothyrium phyllachorae*.

Tar spot is the physical manifestation of the fungal fruiting body, the ascomata, developing on the leaf.

Black lesions may densely cover the leaf.

The ascomata looks like a spot of tar developing black oval or circular lesions.



A new disease in the United States, it was first identified in 2015 in Illinois and Indiana. Recent reports indicate it is now present in seven states: IL, IN, IA, OH, MI, WI and FL. It is native to Latin America in cool, high altitudes.

#### **Timing and Transmission**

Tar spot is formed by producing a complex with *Phyllachora maydis* and *Monographella maydis* organisms. A third organism, *Coniothyrium phyllachorae*, has also been associated with the complex. *M. maydis* is thought to be the primary contributor to yield losses in its native Latin America. However, *P. maydis* is the only tar spot organism in corn that has been identified in the United States and significant yield losses have been reported. Therefore, researchers are investigating other pathogens such as gray leaf spot that may be forming a complex with *P. maydis*. Nonetheless, it is possible that *P. maydis* alone is impacting yields in United States environments.

#### **Identification and Dissemination**

TS is an obligate fungal pathogen that initiates lower in the canopy as a yellow-brown spot on the undersides of leaves and forms a raised black spot resembling tar that covers the ascomata. It is capable of occupying corn leaves, sheathes and husks. Yield losses have been reported from 0-30% with an average of 8% in Central and South America. TS can influence corn yields directly by reducing photosynthetic leaf area, in addition to causing plants to redistribute photo assimilates by scavenging stalks to fill grain, resulting in lodging. Researchers are also studying *P. maydis* complexes with other pathogens including fusarium ear rot, which encompasses mycotoxin properties. However, TS alone is not recognized as a mycotoxin.

#### Management

Management tactics for TS include selecting tolerant hybrids, if available, crop rotation, tillage and fungicide applications. Selecting premixes including multiple sites of action is critical. Optimal application timing is not well understood, but field observations indicate symptoms occurring during reproductive stages. Therefore, R1 applications will likely coincide with infection, but this will vary on a yearly basis. Research has demonstrated suppression with fungicide applications and the importance of a diversified management strategy.

Topguard® EQ fungicide recommendation is permitted under FIFRA Section 2(ee) for use in corn (field, corn grown for seed and popcorn) for control of tar spot in 32 states. The 2(ee) expiration date is 05/25/25.

Do not apply more than 0.228 lb. active ingredient per acre (11.8 fl. oz. /A) per year including at-plant plus foliar applications of other flutriafol products.

# **Southern Rust**

Puccinia polysora

Small circular to oval pustules with orange to light brown spores.

Pustules are more abundant on the upper leaf surfaces.

Pustule size is usually smaller and less ragged than common rust.



For more information on how Xyway<sup>™</sup> brand fungicides set you up for success against late-season yield-impacting diseases, see FMC Freedom Pass Performance Assurances at **fmcfreedompass.com/performanceassurances**.



An aggressive, yield-reducing disease if epidemics initiate early i.e., prior to or at tasseling. Spores are lighter in color, and pustule size is usually smaller compared to common rust.

#### **Timing and Transmission**

Southern rust does not overwinter in the Corn Belt. Infections in this region result from spores carried northward with prevailing weather systems from the southern United States. This is a warm-season rust as compared to common rust and usually occurs late season.

#### **Identification and Dissemination**

Southern rust appears as small circular to oval pustules with orange to light brown spores. When compared to common rust, the spores are lighter in color, and pustule size is usually smaller and less ragged looking than those produced by the common rust pathogen. Pustules are more abundant on the upper leaf surface and can also be found on the stalks, sheath and husks when disease is severe.

#### Management

Because Southern rust is windborne and doesn't overwinter in the United States, the practice of rotation of crops or deep tillage are not effective in controlling this disease. Corn hybrids vary in susceptibility to Southern rust, and the least susceptible hybrid should be planted in areas with a history of early-season rust development. Since rust spores are windblown from Southern states and initial infection at later stages of corn development is less likely to impact disease, early-planted corn may avoid significant disease pressure. Fungicides are effective at suppressing Southern rust though there is no economic threshold for a fungicide application.



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