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Technical Bulletin: Research Trial Update

Demonstration Field Trials

DuPont™
Approach™ Prima
fungicide

New Technology for Disease Control in Corn

Approach™ Prima has demonstrated healthier plants with:

- A combination of two premier fungicides for enhanced disease control
- Improved post-infection activity (curative)
- Control of strobilurin-resistant isolates, such as frogeye leaf spot

Trial Information

- Camilla, Georgia (SOH-12-657)
- Corn hybrid: Pioneer 31D58 — planted August 2, 2012
- Applications: V5 by ground; R1 by chemigation
- Rating: October 22, 2012, for common rust and Northern corn leaf blight

Control of Common Rust and Northern Corn Leaf Blight		
Treatment	Common rust (0–5 Severity index*)	Northern corn leaf blight (0–5 Severity index*)
Approach™ 12 fl oz/A + COC fb Approach™ Prima 6.8 fl oz/A + DuPont™ Prevathon® insect control 20 fl oz/A	0.5	1.5
Untreated	5.0	4.17

* Severity index: 0 = no disease; 5 = 100% of leaves infected

Trial Information

- University of Florida, Belle Glade, R. Raid
- Corn hybrid: SS Jubilee Plus planted February 10, 2012
- Applications: 1st application March 27, 2012; 2nd application April 3, 2012
- Ratings: April 12, 2012; April 19, 2012; and the rating used in the data summary was April 24, 2012

Control of Northern Corn Leaf Blight	
Treatment	Northern corn leaf blight severity (%)
Approach™ Prima at 3.5 fl oz/A + NIS at 0.25% v/v	7
Headline 2.09 EC at 6 fl oz/A	11
Untreated	54

LSD (0.5) = 3.67
Days after first application = 30
Days after second application = 23

DuPont™ Aproach™ Prima fungicide

The high rate of Aproach™ Prima gave excellent control of Northern corn leaf spot on September 8, 2011. Several treatments demonstrated excellent control of gray leaf spot.

Trial Information

- South Charleston, Ohio (USA-11-668, MWH-11-668)
- Inbred: MBS3651 — Northern corn leaf blight, Northern corn leaf spot
- Inbred: MBS2575 — Northern corn leaf blight, gray leaf spot
- Applications: July 6 (v5/6); July 20 (v7/8); 20 gpa, 45 psi, 8002 VSXR
- Evaluated:
 - August 19 on 2nd leaf below the ear leaf
 - September 8 on the ear leaf; leaves below the ear leaf showed severity ratings, varying from 30–90% from the three diseases.



Untreated check. Inbred MBS3651 — September 8, 2011. Average 10.2% NCLB severity; average 7.3% NCLS severity.



Aproach™ Prima at 7.5 fl oz/A. Inbred MBS3651 — September 8, 2011. Average 2.8% NCLB severity; Average 0.9% NCLS severity.

USA-11-668: Reduction in % severity of Northern corn leaf blight, Northern corn leaf spot or gray leaf spot on two inbreds sprayed at V5/6 and V7/8, South Charleston, Ohio, 2011*

MWH-11-668	% Severity on MBS3651		% Severity on MBS2575	
	Northern corn leaf blight	Northern corn leaf spot	Gray leaf spot	
	Two below ear leaf Sept 8	Ear leaf Sept 8	Two below ear leaf Aug 19	Ear leaf Sept 8
Treatment (product per acre)				
Aproach™ Prima at 7.5 fl oz/A at V5/6 fb 14D	2.8	0.9	0.3	0.4
Aproach™ Prima at 5 fl oz/A at V5/fb 14D	2.6	1.9	0.3	0.7
Quadris at 9.2 fl oz/A at V5/6 fb 14D	--	3.7	0.2	0.8
Quilt Xcel at 9.2 fl oz/A at V5/6 fb 14D	4.3	3.2	0.2	0.8
Untreated check	10.2	7.3	4.3	4.2

* Applications made on July 6 (V5/6) and July (V7/8). 20 gpa, 45 psi, 8002 nozzles. Evaluations made on August 19 on the leaf, two below the ear leaf, and on September 8 on the ear leaf.

Trial Information

- USA-12-668, MWH-12-668
- Northern corn leaf spot, Race 3, control with Aproach™, PZX7 (Aproach™ Prima) in inbred production
- Inbred: MBS3651
- Application timing: V5/V7 followed by 14 days applied June 23 and July 12, 2012 (delayed due to very hot weather)
- Evaluations: Northern corn leaf spot showed up early on the lower leaves.
 - Evaluations made on July 13 on leaf collars 3/4 and 5/6 — not shown
 - Evaluations made July 31 on 2nd leaf below the ear leaf — not shown
 - Evaluation made August 20, on the ear leaf

Reduction in Northern corn leaf spot, Race 3, after 2 fungicide applications to inbred corn MBS 3651

	Treatment rate (product per acre)	% Severity on ear leaf August 20
5	Aproach™ Prima 6.8 fl oz/A at V5/7 fb 14D	6.0
806	Quilt Xcel 14 fl oz at V5/7 fb 14D	6.5
999	Untreated check	14.4

* Applications made June 23 (V5/V7 predominant V6) and July 12 (V8/V9); the delay was due to unusually hot weather July 3-8, which was not conducive to spraying. Applications made at 20 gpa, 46 psi.



Untreated leaves, August 20, 2012, northern corn leaf spot, race 3, inbred MBS3651.



Aproach™ Prima at 6.8 fl oz applied twice, August 20, 2012, MBS inbred.

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