

Corn

NDSU Carrington Research Extension Center

2011

BASF : Evaluation of Fungicide Programs for Disease Control and Plant Health in Corn

Trt. ID	Product Name	Form.	Product Rate	Applic. Timing	Ear Height inch	Hail Damage	Grain Protein %	Starch Content %	Harvest Moisture %	Test Weight lb/bu	Grain Yield bu/ac
1	Untreated Check	NA	NA	NA	40.2	17.5	9.8	72.0	15.3	55.1	119.4
2	Headline	SC	3.0 fl oz	V6	39.2	17.5	9.8	72.1	15.1	55.5	128.5
	Headline AMP + NIS	SC	10.0 fl oz + 0.25% v/v	R1	40.9	18.8	9.7	72.5	15.1	55.3	132.7
3	Headline	SC	3.0 fl oz	V6	40.4	16.3	9.5	72.2	15.2	55.4	139.5
4	Headline	SC	6.0 fl oz	V6	39.2	16.3	9.7	72.4	15.1	55.2	132.9
	Headline AMP + NIS	SC	10.0 fl oz + 0.25% v/v	R1	40.0	17.5	9.8	72.7	15.2	55.4	132.6
5	Headline	SC	6.0 fl oz	V6	39.4	20.0	9.7	72.1	15.1	55.2	119.2
6	Headline AMP + NIS	SC	10.0 fl oz + 0.25% v/v	R1	40.7	18.8	9.8	72.1	15.3	55.4	125.1
7	Quadris	FL	6.0 fl oz	V6	39.6	17.5	9.7	72.2	15.4	55.6	126.3
8	Quadris	FL	6.0 fl oz	V6	40.0	16.3	9.9	72.3	15.2	55.3	123.1
	Quilt Xcel + NIS	SE	10.5 fl oz + 0.25% v/v	R1	40.0	16.3	9.8	72.3	15.4	55.1	130.2
9	Stratego YLD	EC	2.0 fl oz	V6	40.7	20.0	9.9	71.8	15.0	55.6	127.7
10	Stratego YLD	EC	2.0 fl oz	V6	40.0	17.7	9.7	72.2	15.2	55.3	128.1
	Stratego YLD + NIS	EC	4.0 fl oz + 0.25% v/v	R1	2.9	16.4	2.2	0.6	3.0	0.9	7.4
11	Evito	SC	2.0 fl oz	V6	NS	NS	NS	NS	NS	NS	NS
	Evito + NIS	SC	2.0 fl oz + 0.25% v/v	R1	NS	NS	NS	NS	NS	NS	NS
12	PowerMax	NA	22.0 fl oz	V6	NS	NS	NS	NS	NS	NS	NS
	MEAN				4	4	4	4	4	4	4
	C.V.%				4	4	4	4	4	4	4
	LSD.05				4	4	4	4	4	4	4
	LSD.01				4	4	4	4	4	4	4
	#REPS				4	4	4	4	4	4	4

** Trial was impacted by a hail storm on July 24. Hail damage included leaf defoliation along with a moderate level of stem breakage.

** Hail damage score represents the percent of plants with stem breakage/stalks that were broken by hail stone impacts.

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BASF : Evaluation of Fungicide Programs for Disease Control and Plant Health in Corn
Objective: Evaluate multiple early programs for disease control and yield (plant health effects).

Crop: Corn ; Hybrid = Dekalb 33-53 ; Planting Date = May 17 ; Harvest Date = October 18 ; Previous Crop = Spring Wheat.

Additional Study Observations:

- ** Around 2 weeks after the V6 treatments were applied the plots were reviewed to assess plant response, no differences were observed.
- ** About 1 week prior to harvest, the plots were observed to determine 'stay green' effects. No differences among treatments were noted.
- ** The Pr > F for grain yield was 0.1569

Treatment Application Information:

Application Timing: V6, corn at the 6th leaf stage.

- ** Corn was just at the 6th leaf stage when treatment timing applied on July 1 at 11:00 AM, partly cloudy skies, 73F, 61% RH, 2.0 mph win
- Application Timing: R1, corn at initial to early silk stage.**
- ** Corn had just begun to silk on August 1 while these treatments were applied on August 2.

Sprayer Detail and Water Volume:

Application Timing: V6, corn at the 6th leaf stage.

- ** Treatments hand applied with a R&D research sprayer at 17.25 gallons of water per acre at 35 psi pressure using 80015 flat fan tips.
- Application Timing: R1, corn at initial to early silk stage.**

- ** Treatments applied with a CO2 pressurized sprayer mounted no tractor with high-boy boom.
- ** Water carrier volume of 15.0 gallons per acre at 35 psi pressure using 80015 flat fan tips.

- ** 'Roundup' PowerMax at 22.0 fl oz/Ac was added to all fungicide treatments that were applied at the V6 timing.

Corn Fungicide Study by Joel Ransom

Effect of fungicide treatments and timing on disease and agronomics of corn, Prosper, ND, 2011.

Treatment	Formulation Rate	(Fl oz per acre)	Stage	Disease (%)	Lodging (%)	Push Test (No./row)	Moisture (%)	Test Wt (lb/bu)	Yield Bu/A
1 Untreated Check	NA	NA	NA	0.5	0.0	14.1	12.2	55.7	93
2 Headline	SC	3.0 fl oz	V6	0.3	0.5	14.3	12.0	56.2	100
Headline AMP + NIS	SC	10.0 fl oz + 0.25% v/v	R1						
3 Headline	SC	3.0 fl oz	V6	0.2	1.0	14.8	11.6	56.2	93
4 Headline	SC	6.0 fl oz	V6	0.0	0.0	12.4	11.8	56.2	100
Headline AMP + NIS	SC	10.0 fl oz + 0.25% v/v	R1						
5 Headline	SC	6.0 fl oz	V6	0.5	1.5	14.5	12.1	55.8	94
6 Headline AMP + NIS	SC	10.0 fl oz + 0.25% v/v	R1	0.7	0.0	17.3	11.6	56.0	93
7 Quadris	FL	6.0 fl oz	V6	0.5	0.5	15.2	11.8	56.0	102
8 Quadris	FL	6.0 fl oz	V6	0.0	0.5	15.6	11.5	56.3	94
Quilt Xcel + NIS	SE	10.5 fl oz + 0.25% v/v	R1						
9 Stratego YLD	EC	2.0 fl oz	V6	0.7	0.0	18.9	12.4	56.2	97
10 Stratego YLD	EC	2.0 fl oz	V6	0.3	0.5	13.0	11.8	56.2	94
Stratego YLD + NIS	EC	4.0 fl oz + 0.25% v/v	R1						
11 Evito	SC	2.0 fl oz	V6	0.7	0.5	15.7	12.2	56.1	97
Evito + NIS	SC	2.0 fl oz + 0.25% v/v	R1						
Average				0.4	0.5	15.1	11.9	56.1	96
cv				119	320	103	5.7	1.5	14
LSD 0.1				0.45	ns	ns	ns	ns	ns

Disease ratings at about the R5 stage

Stay green was not measured as all leaves were killed prior to physiological maturity. It appeared that all treatments were equally impacted by the frost

The push test was on 40 plants.

The entire trial was subject to periods of excess water during the growing season, which largely explains the low yield obtained.

5/26/11 Planted

6/3/11 Fertilized 170 lbs plus

7/5/11 V6 Headline Application

8/5/11 R1 Headline Application

10/20/11 Harvested

Extra 100 lbs. N 7/8/11