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# Trivapro A + Trivapro B Application Timing and Disease Efficacy in Field Corn in Nebraska, 2015

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CORN (*Zea mays* 'DKC 65-79 RIB')  
 Grey leaf spot (*Cercospora zea-maydis*)  
 Southern rust (*Puccinia polysora*)

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### Trivapro A + Trivapro B application timing and disease efficacy in field corn in Nebraska, 2015.

The objective of the trial was to evaluate foliar fungicides and application timings for crop response and foliar disease efficacy. Irrigated corn was grown based on Nebraska Extension irrigation recommendations at the South Central Ag Lab near Clay Center, NE. Soils were a silt loam with 6.7 pH and 1.8 % OM and the previous crop was soybean. Reduced tillage was performed to the field prior to planting. Corn (DKC 65-79 RIB, tolerant to grey leaf spot (GLS)) was planted at approximately 34,000 seed/A on 26 May. Seven treatments were arranged in a randomized complete block design with six replications. Treatments were applied to V8 corn on 8 Jul and R1 (silk) corn on 7 Aug using a high-clearance sprayer equipped with a 10 ft wide spray boom housing six TeeJet XR11002 spray nozzles with 20-in. spacing. Spray solutions were delivered at 3 mph with 40 psi compressed air for a spray volume of 20 gpa. Plots were assessed for phytotoxicity, GLS and SR severity (5 Oct), stay green and push lodging (16 Oct). Corn stalk lodging (push lodging) was assessed by pushing 20 random stalks, at shoulder height, to the 45° position. Plots were taken to yield from the center two rows using a Gleaner K2 plot combine (10 Nov). Grain yield was adjusted to 15.5% moisture. All treatments were analyzed using ANOVA, and means were separated using Fisher's protected LSD with  $P = 0.10$ . Precipitation was greater than normal in Jun (8.05 in. vs 2.9 in.), and 4.74 in. rain fell on 4 Jun. The longest rain-free period occurred from 20 Aug to 3 Sep. An overhead linear-move sprinkler irrigator delivered approximately 1.6 in. water to the trial on 18, 27, and 29 Jul, 17, 24 Aug, and 1 Sep. Average monthly temperatures (°F) were 72 (Jun), 76 (Jul), 73 (Aug), 72 (Sep) and 58 (Oct). The hottest month was Jul with a high of 97°F on 5 Jul. The longest consecutive days with temperatures >90°F were 31 Aug to 6 Sep. High temperatures at the R1 through R2 stage (29 Jul - 13 Aug) ranged in the low-80s (°F) and decreased to the mid-70s (°F).

Phytotoxicity was not observed from any fungicide treatment. GLS and SR severity was significantly less when plots were treated at R1, except for Aproach Prima, compared to the V8 fungicide application and the non-treated check. Plots treated with Trivapro A + B at R1 had significantly less SR severity than all other treatments. Plots treated with Priaxor had significantly greater percent stay green than plots treated at V8, Aproach Prima, and the non-treated check. All other R1-applied fungicides provided significantly greater stay green versus the non-treated check. Push lodging was not significantly different between treatments and the non-treated check. Yield differences were nonsignificant between treated plots and the non-treated check.

Treatment, Formulation, Rate/A <sup>z</sup>	GLS Severity <sup>y</sup> %	SR Severity <sup>x</sup> %	Stay Green <sup>w</sup> %	Push Lodging <sup>v</sup> %	Yield, bu/A <sup>u</sup>
Non-treated Check	4.8 a <sup>ts</sup>	13 a <sup>s</sup>	22.7 c	26	266
Trivapro A 0.83 EC, 4.1 fl oz + Trivapro B 2.28 SE, 10.5 fl oz (V8)	4.5 a	13 a	27 bc	16	251
Aproach Prima 2.34 SC, 5.375 fl oz (R1)	4.1 a	10 a	28.3 bc	21	251
Headline AMP 1.66 SE, 10 fl oz (R1)	2.5 b	2.8 c	30.5 ab	16	251
Priaxor 4.17 SC, 4 fl oz (R1)	2.7 b	2.7 c	35.3 a	11	247
Stratego YLD 4.18 SC, 4 fl oz (R1)	2.6 b	5.3 b	30.8 ab	15	255
Trivapro A 0.83 EC 4.1 fl oz + Trivapro B 2.28 SE, 10.5 fl oz (R1)	2.8 b	1.2 d	33 ab	17	256
<i>P</i> -value	0.0024	0.0001	0.0725	0.249	0.9557
CV (%)	34.98	36.29	23.2	57.4	8.72

<sup>z</sup> All fungicide treatments included Induce @ 0.25% (v/v) and applied to V8 (8 Jul) and R1 (7 Aug 2015) corn.

<sup>y</sup> GLS Severity evaluated on 5 Oct 2015.

<sup>x</sup> SR Severity evaluated on 5 Oct 2015.

<sup>w</sup> Stay green was determined by visually estimating the percentage of green foliage on each on leaf on 16 Oct 2015.

<sup>v</sup> Push lodging determined by pushing 20 random stalks, at shoulder height, to the 45° position (16 Oct 2015).

<sup>u</sup> Yield, where plots were harvested on 10 Nov 2015.

<sup>t</sup> Data followed by the same letter or without letters within the column are not significantly different at  $P=0.10$  according to Fisher's protected LSD test.

<sup>s</sup> Data transformed using Log(n+1). Original data presented with mean descriptions reported for the transformed data.