

2013 Soybean Fungicide trials - Marshall & Pennington-Red Lake

Cooperators: Matt Knutson and Todd Bjorgaard
 Nearest Town: Red Lake Falls (Pennington-Red Lake Counties) and Newfolden (Marshall County)
 Soil Type: Clay loam at Red Lake Falls and sandy loam at Newfolden
 Previous Crop: Wheat and soybean rotation
 Planting Date: May 28 at Red Lake Falls and June 7 at Newfolden
 Variety: Northstar NS0096R2
 Harvest Date: October 3rd at Red Lake Falls and October 7th at Newfolden
 Field Info: Both producers used their own weed, pest, and fertility regimes

Purpose of Study:

Fungicides have been used effectively on wheat for years. Interest has grown in using fungicides to improve yields on soybeans as well, driven by higher prices and growing concern about potential soybean diseases, with white mold as a particular concern. This study was designed to look at the use of five fungicides, 2 new and 3 registered products, applied at growth stages R1 and R3 to evaluate the effect on disease control and yield. Effects on oil and protein content were also evaluated.

Fungicide

Rate per acre

Priaxor (BASF)	4 oz.
Headline (BASF)	8 oz.
Approach (DuPont)	9 oz. + NIS @ 1/4 of 1%
Bravo (Syngenta)	1 1/2 pints
Quilt (Syngenta)	10.5 oz.
Stratego/Proline	2 oz. + 2 oz.

Priaxor and Approach are new products released in 2012. All products were applied at both R1 and R3 growth stages.

Results:

2013 had a cool, wet spring followed by a dry fall. The Newfolden site received some timely rains in August which allowed for generally good yields, however the Red Lake Falls site did not and lower yields due to lack of moisture are clearly evident. There were also some issues with phytothora root rot at Red Lake Falls but neither site showed any issues with white mold which was prevalent in the area.

No significant yield increases as a result of fungicide treatment, regardless of timing were found at either site. Significant differences were not found for protein or oil, either.

Effects of fungicide on soybeans at Newfolden, MN.

Treatment	Yield Bu./A	Protein %	Oil %
Control	45	35.8	18.4
Priaxor R3	45	36.2	18.2
Headline R3	44.8	35.8	18.4
Quilt R3	44	36	18.3
Approach R3	43.8	35.7	18.3
Headline R1	43	36.2	18.3
Priaxor R1	42.6	35.8	18.3
Quilt R1	42.6	36.1	18.2
Strat/Proline R3	42.5	35.9	18.3
Bravo R1	41.6	36.2	18.3
Approach R1	40.5	36.2	18.2

Lack of fall rain at the Red Lake Falls site clearly limited yields and increased variability. The site had to be downsized due to planter malfunction so fewer treatments were made so replications and quality control could be maintained. The Newfolden site had good yields and higher moisture. This site was the last to be seeded in the spring and did stay green longer with the timely fall rains versus Red Lake Falls. By grower request, a Stratego Yield plus Proline R3 application was added this year. The Bravo applications at Red Lake Falls were discarded and only the R1 application made at Newfolden.

Effects of fungicides on soybeans at Red Lake Falls, MN.

Treatment	Yield Bu./A	Protein %	Oil %
Priaxor R3	26.2	34.6	20.5
Approach R1	25	34.6	20.4
Headline R3	24.5	34.5	20.6
Strat/Proline R3	24.2	34.2	20.8
Control	23.8	34.4	20.4
Headline R1	23.8	34.8	20.4
Approach R3	22.3	34.4	20.6
Priaxor R1	21.3	34.6	20.4

LSD (0.05) NS NS NS

In 2012, there appear to be a slight decrease in protein and increase in oil as yields increased.

For Additional Information:
 Howard Person

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