Wheat Systems Research

Trial Objective

- Wheat products, seed treatments, and fungicides are common agronomic factors that can promote plant health and grain yield.
- The objectives of this trial were to:
  - Determine interactions between agronomic factors.
  - Find the combination of factors that maximized wheat grain yield.

Research Site Details

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Planting Rate (seeds/acre)
Gothenburg, NE	Hord silt loam	Corn	Conventional	9/28/19	7/13/20	80	1M

- A study was initiated to evaluate the impact on wheat yield from the following agronomic factors:
  - Three WestBred® wheat products
    - WB-GRAINFIELD
    - WB4418
    - WB4792
  - Two seed treatments
    - Untreated
    - Raxil® PRO Shield Seed Treatment (5 fl oz/100 lbs seed)
  - Two fungicide treatments.
    - No Fungicide
    - Prosaro® Fungicide (8 fl oz/acre)
- Trial setup included a randomized complete block study with four replications.
- Wheat was sprinkler-irrigated with weeds controlled uniformly throughout the field.
- Nitrogen (90 lb/acre), phosphorus (40 lb/acre), and sulfur (20 lb/acre) were applied with 360 Y-DROP® applicators on 4/1/20.
- Fungicide treatments were applied 6/20/20.
- Wheat products were combine-harvested, and a subsample of each replication was taken to determine moisture percent, test weight, and total weight.

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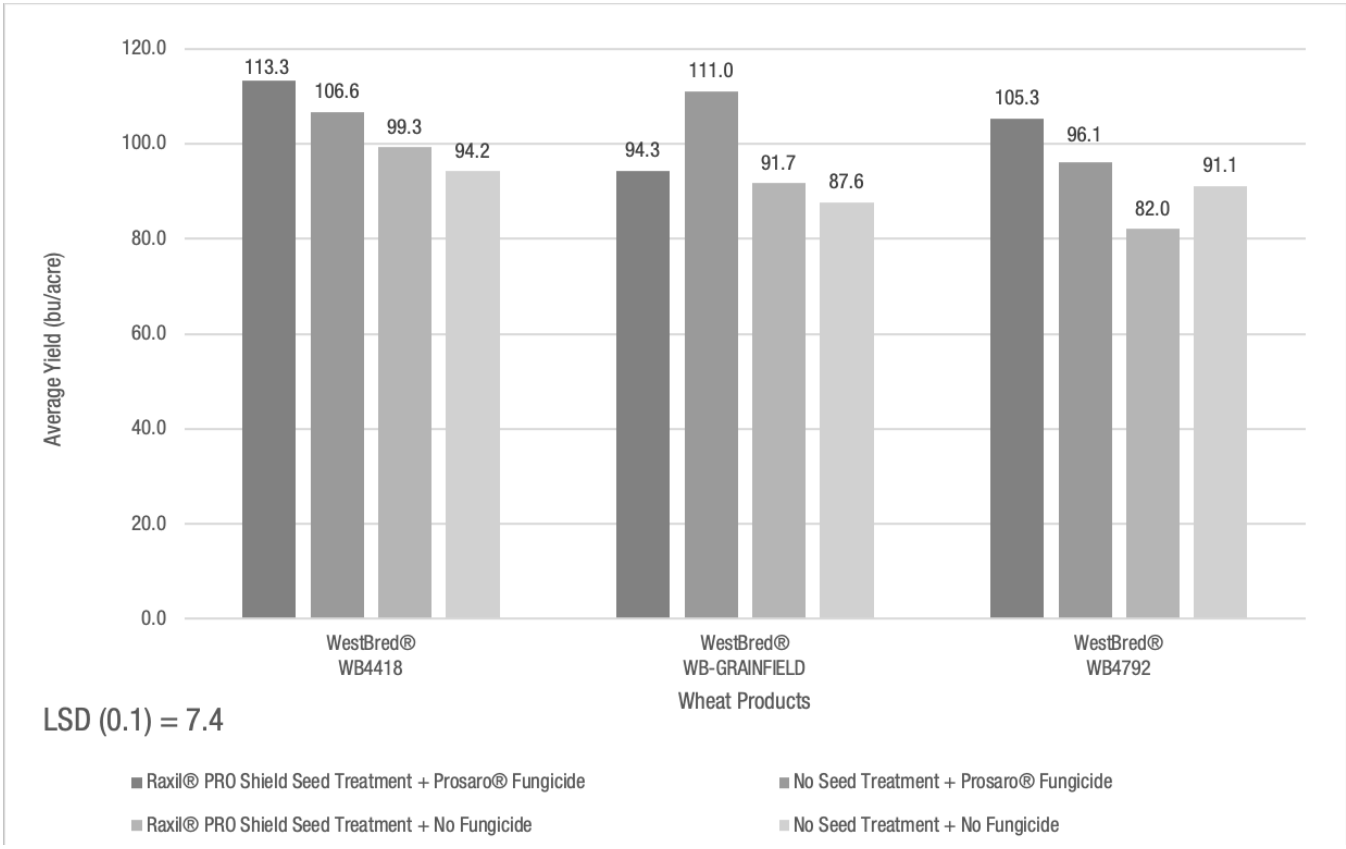

Figure 1. Average grain yield by wheat product, seed treatment, and fungicide treatment combination.

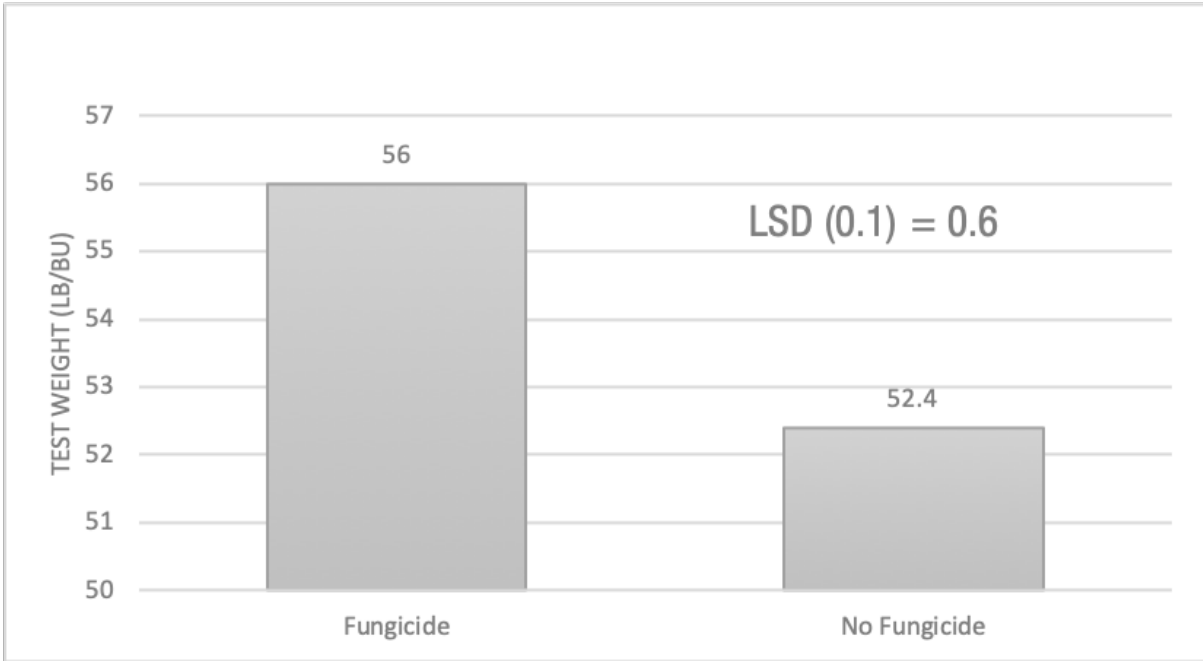

Figure 2. Average test weight by fungicide treatment.

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Understanding the Results

- For this study, there was a significant interaction between wheat product, seed treatment, and fungicide treatment for yield (Figure 1).
  - Average yield in this study was increased for treatments that included fungicide application.
  - The WestBred® WB4418 product had higher average yields across all treatments in the study, except WB-GRAINFIELD with fungicide application.
  - The overall highest average yield combination for this study was WestBred® WB4418 with a seed treatment and a fungicide application.
- Average test weight for all wheat products were greater when fungicide was applied compared to no fungicide application (Figure 2).

Key Learnings

- In this study, fungicide application to wheat had a positive effect on yield and test weight.

Legal Statements

The information discussed in this report is from a single site, replicated demonstration. This informational piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Performance may vary, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields.

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