

Field evaluation of fungicides for management of rust on sunflowers

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KEY FINDINGS:

Rust control was optimized with two sequential applications: early R1 growth stage and mid-bloom (R5.2 to R5.8). The optimal timing for a single application was mid-bloom (R5.2 to R5.8).

Active ingredients in fungicides evaluated in this trial: Approach: 250 grams picoxystrobin per liter; Folicur: 430 grams tebuconazole per liter; Headline: 250 grams pyraclostrobin per liter; ProPulse: 200 grams prothioconazole + 200 grams fluopyram per liter; Quash: 500 grams metconazole per kilogram; Vertisan: 200 grams penthiopyrad per liter

SUMMARY OF KEY RESULTS:

Within-column means followed by different letters are significantly different

($P < 0.05$; Fisher's protected least significant difference).

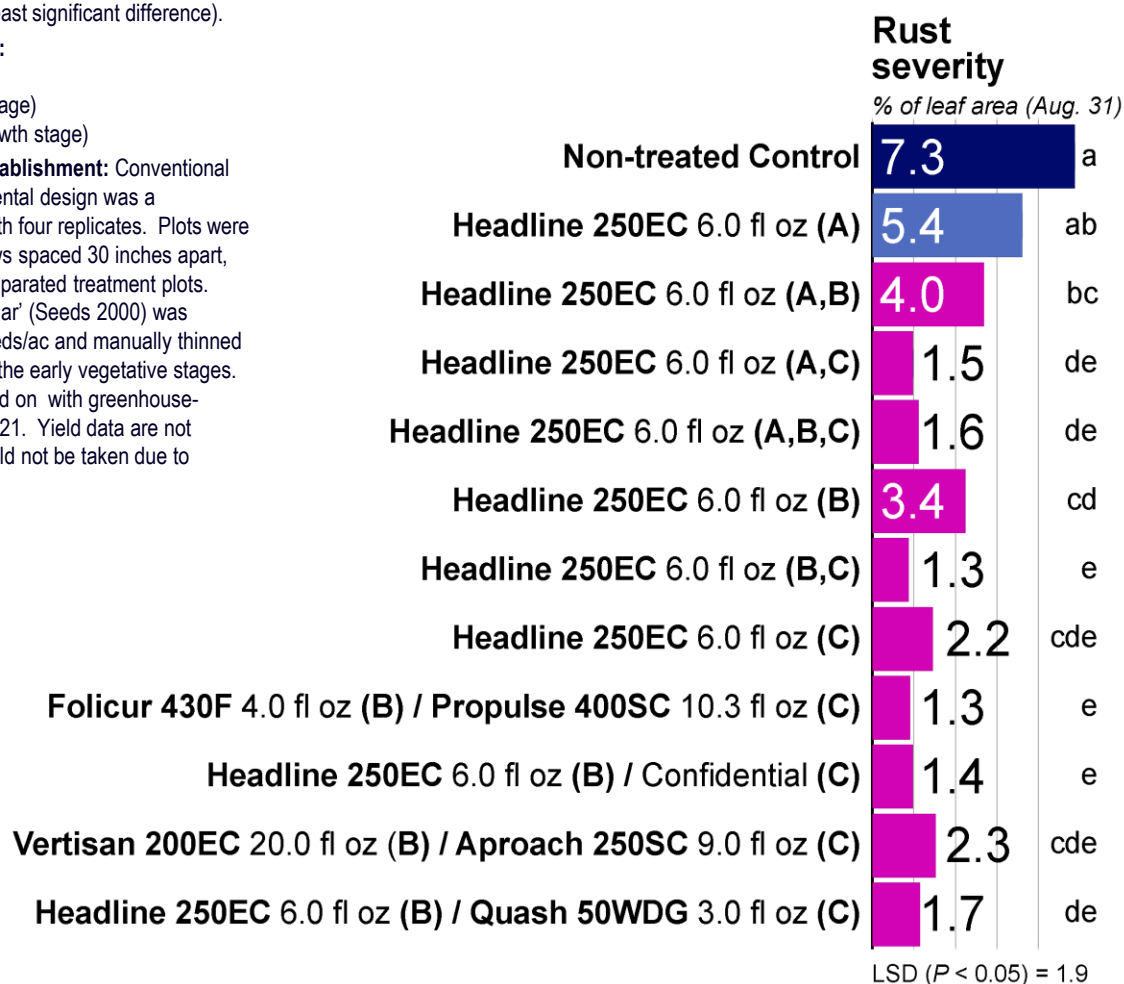
Fungicide application timing:

A: July 2 (V10 growth stage)

B: July 12 (early R1 growth stage)

C: August 5 (R5.2 to R5.8 growth stage)

Agronomics and disease establishment: Conventional tillage was used, and experimental design was a randomized complete block with four replicates. Plots were 5 ft x approx. 24 ft with two rows spaced 30 inches apart, and non-treated buffer plots separated treatment plots. The confectionary hybrid 'Jaguar' (Seeds 2000) was seeded at 60,000 pure live seeds/ac and manually thinned to approx. 18,000 plants/ac at the early vegetative stages. The sunflowers were inoculated on with greenhouse-produced rust spores on June 21. Yield data are not presented; accurate yields could not be taken due to severe lodging.



IMPORTANT NOTICE:

- Fungicide performance can differ in response to which diseases are present, levels of disease when products are applied, environmental conditions, plant architecture and the susceptibility to disease of the variety planted, crop growth stage at the time of fungicide application, and other factors.
- This report summarizes fungicide performance as tested at the NDSU Carrington Research Extension Center under the conditions partially summarized above.
- Fungicide efficacy may differ under other conditions; when choosing fungicides, always evaluate results from multiple trials.
- This report is shared for educational purposes and is not an endorsement of any specific products.