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To Treat Or Not To Treat For Wheat Stripe Rust

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Extensive testing of fungicides over the last four years by University of California Cooperative Extension has shown on average, a 35% yield difference between treated and non-treated plots when stripe rust is present at the time of fungicide application in the Sacramento Valley. This has occurred on all varieties susceptible to stripe rust.

Although there has been no sign of wheat stripe rust so far in 2007, unlike the previous four years, the disease may still appear and cause damage. Only time will tell if wheat stripe rust will appear this year and infect the previously resistant, but now susceptible, varieties and/or the newer stripe rust resistant wheat varieties.

The following three tables and one figure show results of fungicide evaluation tests for all of the fungicides tested (Table 1), for different application rates (Figure 1), timed either early, just after flag leaf emergence, or late, just before flowering (Table 2), and yield responses averaged over four years (Table 3). A single fungicide application increased yields an average of 35% compared to no fungicide.

So any fungicide listed in Table 1, at any tested rate and at any tested timing, gave the same significant yield response. In addition to the yield response, bushel weights were increased an average of 3.7 pounds per bushel. These results are based on over 450 individually treated and harvested plots over four years in the Sacramento Valley.

Table 1: Wheat Yield (as % of non-treated) Response To Different Fungicides.

| Fungicide | All Timings Yield (% of non-treated) |
|--------------------|---|
| Headline | 140 |
| Quilt | 139 |
| Stratego | 133 |
| Quadris | 133 |
| Tilt | 130 |
| LSD _{.05} | NS |



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Figure 1: Wheat Yield Response (no significant difference) To Different Rates Of Fungicides.

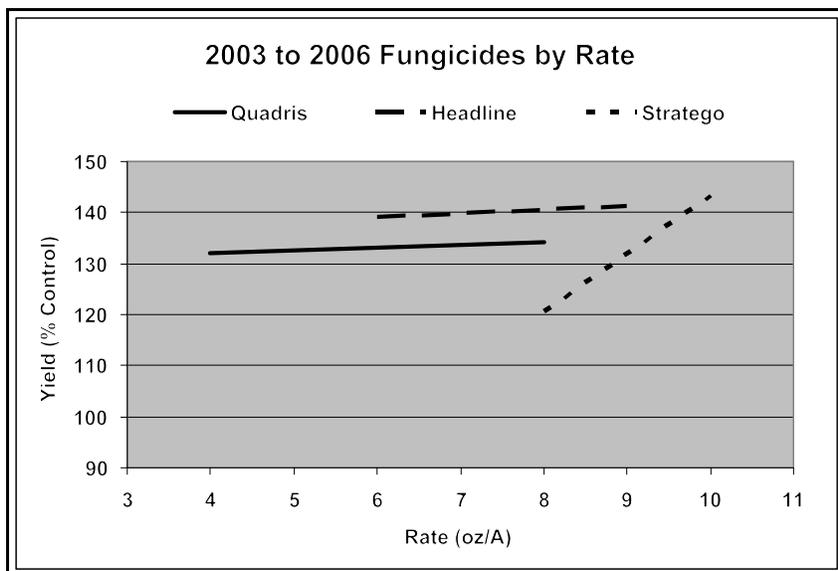


Table 2: Wheat Yield (as % of non-treated) Response To Fungicide Timing.

| Fungicide | Early (Feeks 8.0) | Later (Feeks 10.5) | LSD _{.05} |
|-----------|-------------------|--------------------|--------------------|
| Quadris | 132.4 | 133.4 | NS |
| Headline | 140.3 | 138.6 | NS |

Table 3: Wheat Yield (as % of non-treated) Response By Year.

| Year | All Fungicide Yields (% non-treated) |
|--------------------|--------------------------------------|
| 2006 | 166 |
| 2005 | 137 |
| 2004 | 103 |
| 2003 | 135 |
| 2003-06 | 135 |
| LSD _{.05} | 13 |