

# 2005 Soybean Rust Fungicide Use Guidelines

| Fungicide strategy for 1 <sup>st</sup> application | Crop and disease status <sup>1, 2</sup> |   | Fungicide application         |  |                             |  |
|--|---|---|-------------------------------|--|-----------------------------|--|
|  | Crop stage                              | Disease level                           | 1 <sup>st</sup> application   | Re-application, if needed <sup>3</sup> |                             |  |
|  |   |   |                               | 2 <sup>nd</sup> application            | 3 <sup>rd</sup> application |  |
| Pre-infection →                                    | Vegetative →                            | No Disease Observed →                   | SPRAYING NOT RECOMMENDED      |  |                             |  |
|  | R1 through R6 →                         | No Disease Observed →                   | SPRAYING NOT RECOMMENDED      |  |                             |  |
|  |   | No Disease Observed but RISK HIGH →     | Chlorothalonil <sup>4</sup> → | Triazole <sup>5</sup> →                | Premix <sup>6</sup>         |  |
|  |   |   | OR                            | OR                                     | Premix <sup>6</sup> →       | Premix <sup>6</sup> OR Triazole <sup>5</sup> |
|  |   | Strobilurin <sup>7</sup> →              | OR                            | Triazole <sup>5</sup> →                | Premix <sup>6</sup> →       | Premix <sup>6</sup>                          |
|  |   |   | OR                            | OR                                     | Premix <sup>6</sup> →       | Triazole <sup>5</sup> OR Premix <sup>6</sup> |
|  | Triazole <sup>5</sup> →                 | OR                                      | Premix <sup>6</sup>           |  |                             |  |
| Premix <sup>6</sup> →                              | OR                                      | Triazole <sup>5</sup>                   |                               |  |                             |  |
|  |   | Premix <sup>6</sup>                     |                               |  |                             |  |
| R7 or later →                                      | Irrelevant →                            | NO BENEFIT TO SPRAYING                  |                               |  |                             |  |
| Early-Post Infection →                             | Early-vegetative →                      | Increasing →                            | BENEFIT TO SPRAYING UNCERTAIN |  |                             |  |
|  | Late-vegetative Through R6 →            | 10% or less incidence in lower canopy → | Triazole <sup>5</sup> →       | Premix <sup>6</sup>                    |                             |  |
|  |   |   | OR                            | OR                                     |                             |  |
| Premix <sup>6</sup> →                              | OR                                      | Triazole <sup>5</sup>                   |                               |  |                             |  |
|  |   | Premix <sup>6</sup>                     |                               |  |                             |  |
| R7 or later →                                      | Irrelevant →                            | NO BENEFIT TO SPRAYING                  |                               |  |                             |  |

1. Vegetative = collective stages before flowering; R1 = beginning flowering; R6 = full seed; R7 = beginning maturity. The vast majority of reports from Africa and Brazil indicate that soybean rust does not need to be controlled when detected in the vegetative crop stages as long as a curative spray program is initiated as soon as crop flowering begins. Spraying before crop flowering, however, may be prudent if disease is increasing and the crop is approaching R1. This is especially true for late-planted crops and/or very late-maturing varieties that may develop a large canopy before flowering.

2. Incidence is number of leaves out of 100 with any rust. Risk is determined according to national, regional, and local reports of rust activity and disease forecasts. **Yield loss is very likely once rust can be found in the mid crop canopy.** Numerous factors play into the decision as to the latest one should apply a fungicide. Factors such as crop stage, disease level, yield potential, crop insurance, and many other factors should be considered. Fungicide labels specify upper limits for their products.

3. One, two, or three applications may be needed, depending upon when the disease comes in and at what crop stage the first application is made. Spray coverage and penetration into the canopy are essential to success. Before making applications late in the season, be sure to consult the product label for days to harvest restrictions. Labels also indicate specific intervals between sprays for different disease situations. These spray intervals must be followed or rust control may be lost. **Consecutive, solo applications of a Strobilurin or a Triazole should never be made due to resistance concerns.**

4. Chlorothalonil (e.g., Bravo, Echo) is a protective fungicide that should only be used as the 1st application in a pre-infection program.

5. Triazoles (e.g., Bumper, Domark, Folicur, Laredo, PropiMax, Tilt) have **limited curative ability** and may not perform well if more than 10% disease exists in the lower plant canopy. No more than two collective section 18 products can be applied in a single season. Only one application of Domark can be made and none after R5.

6. A Premix (e.g., Quilt, Stratego) is a manufactured combination product of a Strobilurin + Triazole. Use label-approved tank mixes of a Strobilurin + Triazole the same as you would a premix. No more than two collective section 18 products can be applied in a single season.

7. Strobilurins (e.g., Quadris, Headline) are protective products and have NO curative activity. Solo applications of a Strobilurin should be restricted to the 1<sup>st</sup> application in a pre-infection program.