

# 2005 Soybean Rust Fungicide Use Guidelines

Crop stage <sup>1</sup>	Disease Level and Risk <sup>2</sup>	Fungicide application <sup>3</sup>	
		1st Application	Reapplication (if needed)
Vegetative	No disease	SPRAYING NOT RECOMMENDED	
R1 (flowering begins to R5 (Beginning Seed))	No disease; Risk LOW	SPRAYING NOT RECOMMENDED	
	No disease, but Risk HIGH  Rust observed in sentinel plots or predicted in area and weather favorable.	chlorothalonil <sup>4</sup> or	triazole <sup>6</sup> or premix / tank mix <sup>7</sup>
		strobilurin <sup>5</sup> or	triazole <sup>6</sup> or premix / tank mix <sup>7</sup>
		triazole <sup>6</sup> or	premix / tank mix <sup>7</sup>
		premix / tank mix <sup>7</sup>	triazole <sup>6</sup> or premix / tank-mix <sup>7</sup>
R6 (Full Seed) or later	Irrelevant	NO BENEFIT TO SPRAYING	
Vegetative - early	Rust in field	BENEFIT TO SPRAYING UNCERTAIN	
Late vegetative to R5 (Beginning Seed)	Rust in field but low incidence (0-10%) Risk HIGH	triazole <sup>6</sup> or	premix / tank mix <sup>7</sup>
		premix / tank mix <sup>7</sup>	triazole <sup>6</sup> or premix / tank-mix <sup>7</sup>
	Rust Incidence High	BENEFIT TO SPRAYING UNCERTAIN	
R6 or later	Irrelevant	NO BENEFIT TO SPRAYING	

= beginning flowering; R5 = beginning seed formation (small seed (1/8-inch) in pods at one of the four top nodes on main stem); R6 = full seed (green seed fills pod cavity at one of four uppermost nodes); R7 = beginning maturity.

2. Risk is determined according to national, regional, and local reports of rust activity and disease forecasts. Low risk is defined as no rust in the region and forecasts do not project an influx of spores into area. Incidence is the percentage of leaves with symptoms.

3. One or two applications may be needed depending on when rust appears. Spraying before flowering is not recommended, except when the crop is approaching R1. This is especially true for late planted crops and/or very late-maturing cultivars that may develop a large canopy before flowering. Spray coverage and penetration into the canopy are essential. Before making applications late in the season, consult label for days to harvest restrictions. Consecutive applications of the same class of product (strobilurin -> strobilurin or triazole -> triazole) should not be made due to resistance concerns. A maximum of three applications of Section 18 products may be applied collectively; however, no more than two applications of any given active ingredient can be made. Tetraconazole (Domark) may only be applied once. Other restrictions may apply. All products should be applied according to label directions. You must be in possession of appropriate state label to use section 18 product.

4. Chlorothalonil (e.g., Bravo, Echo) is a protectant fungicide that should only be used in a pre-infection program.

5. Strobilurins (e.g., Quadris, Headline) work best if applied before infection. Due to high risk of resistance development solo applications should be restricted to the first application before disease develops in field.

6. Triazoles (e.g., Bumper, Domark, Folicur, Laredo, Orius, PropiMax, Tilt) have limited after-infection activity and may not perform well if more than 10% of leaves are infected.

7. Premixed products (e.g. Headline SBR, Quilt and Stratego) are manufactured combinations of a strobilurin and a triazole. Tank mixes of label-approved products may also be used as you would a premix.

For use in Delaware, adapted by A. Grybauskas Univ. of Maryland (version 29 June 05) from Dorrance, A.E., Draper, M.A., and Hershman, D.E., eds. 2005. Using foliar fungicides to manage soybean rust. Land Grant Universities Cooperating NC-504 and OMAF, SR-2005.