

## Management of Soybean Diseases

### Fungicide Efficacy for Control of Foliar Soybean Diseases—April 2013

The North Central Regional Committee on Soybean Diseases and the Regional Committee for Soybean Rust Pathology (NCERA-212 and NCERA-208) have developed the following information on foliar fungicide efficacy for control of major foliar soybean diseases in the United States. Efficacy ratings for each fungicide listed in the table were determined by field-testing the materials over multiple years and locations by the members of the committee. Efficacy ratings are based upon level of disease control achieved by product, and are not necessarily reflective of yield increases obtained from product application. Efficacy depends upon proper application timing, rate, and application method to achieve optimum effectiveness of the fungicide as determined by labeled instructions and overall level of disease in the field at the time of application. Differences in efficacy among fungicide products were determined by direct comparisons among products in field tests and are based on a single application of the labeled rate as listed in the table, unless otherwise noted. **Table includes systemic fungicides available that have been tested over multiple years and locations. The table is not intended to be a list of all labeled products<sup>1</sup>.** Efficacy categories: NR=Not Recommended; P=Poor; F=Fair; G=Good; VG=Very Good; E=Excellent; NL = Not Labeled for use against this disease

Fungicide(s)				Aerial web blight	Anthracnose	Brown spot	Cercospora leaf blight <sup>2</sup>	Frogeye leaf spot <sup>3</sup>	Phomopsis/ Diaporthe (Pod and stem blight)	Soybean rust	White mold <sup>4</sup>	Harvest restriction <sup>5</sup>
Class	Active ingredient (%)	Product/Trade name	Rate/A (fl oz)									
QoI Strobilurins Group 11	Azoxystrobin 22.9%	Quadris 2.08 SC	6.0 - 15.5	VG	VG	G	F	VG	-- <sup>6</sup>	G-VG	P	14 days
	Fluoxastrobin 40.3%	Aftershock 480 SC Evito 480 SC	2.0 - 5.7	VG	G	G	-- <sup>6</sup>	VG	-- <sup>6</sup>	-- <sup>6</sup>	NL	R5 (beginning seed) 30 days
	Picoxystrobin	Approach 2.08 SC	6.0 - 12.0	VG	G	G	-- <sup>6</sup>	VG	-- <sup>6</sup>	G	-- <sup>6</sup>	14 days
	Pyraclostrobin 23.6%	Headline 2.09 EC/SC	6.0 - 12.0	VG	VG	G	F	VG	-- <sup>6</sup>	G-VG	NL	21 days
DMI Triazoles Group 3	Cyproconazole 8.9%	Alto 100SL	2.75 - 5.5	-- <sup>6</sup>	-- <sup>6</sup>	VG	-- <sup>6</sup>	F	-- <sup>6</sup>	VG	NL	30 days
	Flutriafol 11.8%	Topguard 1.04 SC	7.0 - 14.0	-- <sup>6</sup>	VG	VG	F	VG	---- <sup>6</sup>	E	G	21 days
	Propiconazole 41.8%	Tilt 3.6 EC Multiple Generics <sup>7</sup>	2.0 - 4.0	P	VG	G	NL	F	NL	VG	NL	R5 (beginning seed)
	Prothioconazole 41.0%	Proline 480 SC <sup>8</sup>	2.5 - 4.3	NL	NL	NL	NL	VG	NL	VG	G	21 days
	Tetraconazole 20.5%	Domark 230 ME	4.0 - 5.0	NL	VG	VG	F	VG	-- <sup>6</sup>	VG-E	G	R5 (beginning seed)
MBC Thiophanates Group 1	Thiophanate-methyl	Topsin-M Multiple Generics	10.0 - 20.0	--	--	--	F	VG		G	G	21 days

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Class	Active ingredient (%)	Product/Trade name	Rate/A (fl oz)									
SDHI Carboximides Group 7	Boscalid 70%	Endura 0.7 DF	3.5 – 11.0	-- <sup>6</sup>	NL	VG	-- <sup>6</sup>	P	NL	NL	G	21 days
	Azoxystrobin 18.2% Difenoconazole 11.4%	Quadris Top 2.72 SC	8.0 – 14.0	-- <sup>6</sup>	-- <sup>6</sup>	-- <sup>6</sup>	-- <sup>6</sup>	VG	-- <sup>6</sup>	VG	NL	14 days
Mixed mode of action	Azoxystrobin 7.0% Propiconazole 11.7%	Avaris 1.66 SC Quilt 1.66 SC HM-0812 1.66 SC	14.0 – 20.5	--	-- <sup>6</sup>	G	-- <sup>6</sup>	G	-- <sup>6</sup>	VG	NL	21 days
	Azoxystrobin 13.5% Propiconazole 11.7%	Quilt Xcel 2.2 SE	10.5 - 21.0	E	VG	G	F	VG	-- <sup>6</sup>	VG	NL	R6
	Fluoxastrobin 18.0% Tebuconazole 25.0%	Evito T 3.99 F	4.0 - 6.0	-- <sup>6</sup>	F	VG	-- <sup>6</sup>	F	-- <sup>6</sup>	-- <sup>6</sup>	NL	30 days
	Pyraclostrobin 28.58% Fluxapyroxad 14.33%	Priaxor 4.17 SC	4.0 – 8.0	E	VG	E	F	VG	-- <sup>6</sup>	E	-- <sup>6</sup>	21 days
	Trifloxystrobin 11.4% Propiconazole 11.4%	Stratego 250 EC	10.0	G-VG	VG	G	F	VG	-- <sup>6</sup>	VG	NL	21 days
	Trifloxystrobin 32.3% Prothioconazole 10.8%	Stratego YLD 4.18 SC <sup>9</sup>	4.0 – 4.65	VG	VG	VG	F	VG	-- <sup>6</sup>	VG	NL	21 days

<sup>1</sup>Multiple fungicides are labeled for soybean rust only, powdery mildew, and alternaria leaf spot, including tebuconazole (multiple products) and Laredo (myclobutanil). Contact fungicides such as chlorothalonil may also be labeled for use.

<sup>2</sup>Cercospora leaf blight efficacy relies on accurate application timing, and standard R3 application timings may not provide adequate disease control. Fungicide efficacy may improve with later applications.

<sup>3</sup>Fungicides with a solo or mixed QoI mode of action may not be effective in areas where QoI-resistance has been detected in the fungal population that causes frogeye leaf spot.

<sup>4</sup>White mold efficacy is based on an R1 application timing, and lower efficacy is obtained at an R3 application timing, or if disease symptoms are already present at the time of application.

<sup>5</sup>Harvest restrictions are listed for soybean harvested for grain. Restrictions may vary for other types of soybean (edamame, etc.) and soybean for other uses such as forage or fodder.

<sup>6</sup>Insufficient data is available at this time to make statements about efficacy of these products for diseases listed in the table.

<sup>7</sup>Multiple generic products containing this mode of action may also be labeled in some states.

<sup>8</sup>Proline has a supplemental label (2ee) for soybean, only for use on white mold in IL, IN, IA, MI, MN, NE, ND, OH, SD, WI. A separate 2ee for NY exists for white mold.

<sup>9</sup>Stratego YLD has a supplemental label (2ee) for white mold on soybean only in IL, IN, IA, MI, MN, NE, ND, OH, SD, WI.

Many products have specific use restrictions about the amount of active ingredient that can be applied within a period of time or the amount of sequential applications that can occur. Please read and follow all specific use restrictions prior to fungicide use. This information is provided only as a guide. It is the responsibility of the pesticide applicator by law to read and follow all current label directions. Reference to products in this publication is not intended to be an endorsement of others that may be similar. Persons using such products assume responsibility for their use in accordance with current directions of the manufacturer. Members or participants in the NCERA-212 or NCERA-208 group assume no liability resulting from the use of these products.