



Fungicide Efficacy for Control of Soybean Foliar Diseases

The North Central Regional Committee on Soybean Diseases (NCERA-137) has 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 responses 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.

For application timing and use considerations, contact your local cooperative extension service. The table includes systemic fungicides available that have been tested over multiple years and locations. It is not intended to be a list of all labeled products.

This information is provided only as a guide. It is the applicator's and user's legal responsibility to read and follow all current label directions. Reference in this publication to any specific commercial product, process, or service, or the use of any trade, firm, or corporation name is for general informational purposes only and does not constitute an endorsement, recommendation, or certification of any kind by members of the group. Individuals using such products assume responsibility for their use in accordance with current directions of the manufacturer. Efficacy categories: E=Excellent; VG=Very Good; G=Good; F=Fair; P=Poor; NR=Not Recommended; NL=Not Labeled for Use Against this Disease; U=Unknown efficacy or insufficient data to rank product.

Fungicide Efficacy for Control of Soybean Foliar Diseases¹

Class	FUNGICIDE(S)			Aerial Web Blight	Anthracnose	Brown Spot ²	Cercospora Leaf Blight ³	Frogeye Leaf Spot ⁴	Diaporthe (Pod and Stem Blight)	Soybean Rust	Target Spot	White Mold ⁵	Harvest Restriction ⁶
	Active Ingredient (%)	Product/Trade Name	Rate/A fl. oz.)										
QoI Strobilurins Group 11	azoxystrobin 22.9%	Quadris 2.08SC [®] multiple generics ⁷	6.0-15.5	VG	VG	P-G	P	P	U	G-VG	P-F	P	14 days
	fluoxastrobin 40.3%	Afershock 480SC [®] Evito 480SC [®]	2.0-5.7	VG	G	P-G	P	P	U	U	U	NL	R5 (beginning seed) 30 days
	picoxystrobin 22.5%	Approach 2.08SC [®]	6.0-12.0	VG	G	P-G	P	P	U	G	U	G-VG ¹¹	14 days
	pyraclastrobin 23.6%	Headline 2.09EC/SC [®]	6.0-12.0	VG	VG	P-G	P	P	U	VG	P-F	NL	21 days
	cyproconazole 8.9%	Alto 100SL [®]	2.75-5.5	U	U	VG	F	F	U	U	VG	U	NL
DMI Triazoles Group 3	flutriafol 11.8%	Topguard 1.04SC [®]	7.0-14.0	U	VG	VG	P-G	G-VG	U	VG-E	P	F	21 days
	propiconazole 41.8%	Tilt 3.6EC [®] multiple generics ⁷	4.0-6.0	P	VG	G	NL	F	NL	VG	U	NL	R5 (beginning seed)
	prothioconazole 41.0%	Proline 480SC ^{®8}	2.5-5.0	NL	NL	NL	NL	G-VG	NL	VG	U	F	21 days
	tetraconazole 20.5%	Domark 230ME [®]	4.0-5.0	NL	VG	VG	P-G	F-G	U	VG-E	P	F	R5 (beginning seed)
	thiophanate-methyl	Topsin-M [®] multiple generics	10.0-20.0	U	U	U	F	VG	U	G	U	F	21 days
2,6-dinitro-anilines Group 29	fluazinam 40.0%	Omega 500DF [®] Lektivar 40SC [®]	12.0-16.0	NL	NL	NL	NL	NL	NL	NL	NL	G	R3 (beginning pod)
	boscalid 70%	Endura 0.7DF [®]	3.5-11.0	U	NL	VG	U	P	NL	NL	U	VG	21 days
SDHI Carboxamides Group 7	azoxystrobin 25.3% flutriafol 18.63%	Topguard EQ 4.29SC [®]	5.0-7.0	U	U	VG	U	G-VG	U	U	P	U	21 days
	azoxystrobin 18.2% difenoconazole 11.4%	Quadris Top 2.72SC [®]	8.0-14.0	U	U	G-VG	P-G	VG	F-G	VG	P	NL	14 days
	azoxystrobin 19.8% difenoconazole 19.8%	Quadris Top SBX 3.76SC [®]	7.0-7.5	U	U	G-VG	P-G	VG	F-G	VG	F-G	U	14 days
	azoxystrobin 7.0% propiconazole 11.7%	Quilt 1.66SC [®] multiple generics ⁷	14.0-20.5	U	U	G	F	F	U	VG	P	NL	21 days
	azoxystrobin 13.5% propiconazole 11.7%	Quilt Xcel 2.25E [®]	10.5-21.0	E	VG	G	F	F	U	VG	P	NL	R6

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Fungicide Efficacy for Control of Soybean Foliar Diseases¹ (continued)

Class	FUNGICIDE(S)		Harvest Restriction ⁶	White Mold ⁵	Target Spot	Soybean Rust	Diaporthe (Pod and Stem Blight)	Frogeye Leaf Spot ⁴	Cercospora Leaf Blight ³	Brown Spot ²	Anthracnose	Aerial Web Blight	Rate/A fl. oz.)	Trade Name	Active Ingredient (%)
	Rate/A fl. oz.)	Trade Name													
Mixed Modes of Action (continued)		benzovindiflupyr 2.9%		NL	U	VG-E	G	F-G	P-G	VG	U	E	13.7-20.7	Trivapro [®]	
		azoxystrobin 10.5%		NL	U	VG									
		propiconazole 11.9%		NL	U	VG									
		cyproconazole 7.17%		NL	U	VG									
		picoxystrobin 17.94%		NL	U	VG									
		fluopyram 17.4%		NL	U	VG									
		prothioconazole 17.4%		NL	U	VG									
		flutriafol 26.47%		NL	U	VG									
		bixafen 15.5%		NL	U	VG									
		flutriafol 19.3%		NL	U	VG									
		fluoxastrobin 14.84%		NL	U	VG									
		prothioconazole 16.0%		NL	U	VG									
		trifloxystrobin 13.7%		NL	U	VG									
		pydiflumetofen 7.0%		NL	U	VG									
		azoxystrobin 9.3%		NL	U	VG									
		propiconazole 11.6%		NL	U	VG									
		pydiflumetofen 6.9%		NL	U	VG									
		difenoconazole 11.5%		NL	U	VG									
		pyraclostrobin 28.58%		NL	U	VG									
		fluxapyroxad 14.33%		NL	U	VG									
	pyraclostrobin 28.58%		NL	U	VG										
	fluxapyroxad 14.33%		NL	U	VG										
	tetraconazole 20.50%		NL	U	VG										
	trifloxystrobin 32.3%		NL	U	VG										
	prothioconazole 10.8%		NL	U	VG										
	tetraconazole 7.48%		NL	U	VG										
	azoxystrobin 9.35%		NL	U	VG										
	tetraconazole 17.76%		NL	U	VG										
	fluoxastrobin 17.76%		NL	U	VG										
	thiophanate-methyl 21.3%		NL	U	VG										
	tetraconazole 4.2%		NL	U	VG										
	Mefenflufenconazole 11.61%		NL	U	VG										
	Pyraclostrobin 15.49%		NL	U	VG										
	Fluxapyroxad 7.74%		NL	U	VG										

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

²In areas where Qol-fungicide resistant isolates of the brown spot pathogen are present, Qol fungicides may result in poor disease control.

³Cercospora leaf blight efficacy relies on accurate application timing, and standard R3 application timings may not provide adequate disease control. Fungicide efficacy may improve with earlier or later applications; however, efficacy has been inconsistent with some products. Fungicides with a solo or mixed Qol or MBC mode of action may not be effective in areas where Qol or MBC resistance has been detected in the fungal population that causes Cercospora leaf blight.

⁴In areas where Qol-fungicide resistant isolates of the frogeye leaf spot pathogen are not present, Qol fungicides may be more effective than indicated in this table.

⁵White mold efficacy is based on R1-R2 application timing, and lower efficacy is obtained at R3 or later application timings, or if disease symptoms are already present at the time of application.

⁶Harvest 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.

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

⁸Proline has a supplemental label (2cc) for white mold in NY.

⁹Stratego YLD is not labeled for use on soybean in all states as of January 2020.

¹⁰Stratego YLD has a supplemental label (2cc) for white mold on soybean only in IL, IN, IA, MI, MN, NE, ND, OH, SD, WI.

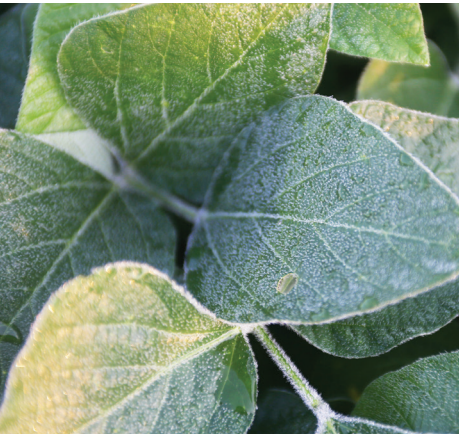
¹¹Rating is based on two applications of a 9 fl oz/A rate of Aproach at R1 and R3.

¹²Revytek is not labeled for use on soybean in all states as of January 2020.

Find Out More

The Crop Protection Network (CPN) is a multi-state and international collaboration of university and provincial extension specialists, and public and private professionals who provide unbiased, research-based information to farmers and agricultural personnel. Our goal is to communicate relevant information that will help professionals identify and manage field crop diseases.

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Technical Editor: Kevin Leigh Smith, Purdue Agricultural Sciences Education and Communication. Design: Purdue Agricultural Communication. Production and layout by Iowa State University Extension and Outreach Agriculture and Natural Resources.

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March 2020

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