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Management of Soybean Diseases

Foliar Fungicide Efficacy for Control of Foliar Soybean Diseases January 2021

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This fungicide efficacy chart was adapted for Indiana from information developed by the North Central Regional Committee on Soybean Diseases (NCERA-137). 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 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. For application timing and use considerations, please contact your local cooperative extension service. 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[1].

January 2021

Efficacy categories: NR=Not Recommended; P=Poor; F=Fair; G=Good; VG=Very Good; E=Excellent; NL = Not a target disease listed on the label; U = Unknown efficacy or insufficient data to rank product efficacy.

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]
Class	Active ingredient (%)	Product/Trade name	Rate/A (fl oz)										
QoI Strobilurins Group 11	Azoxystrobin 22.9%	Quadris 2.08 SC Multiple Generics7	6.0 - 15.5	VG	VG	P-G	P	P	U	G-VG	P-F	P	14 days
	Fluoxastrobin 40.3%	Aftershock 480 SC Evito 480 SC	2.0 – 5.7	VG	G	P-G	P	P	U	U	U	NL	R5 (beginning seed) 30 days
	Picoxystrobin 22.5%	Aproach 2.08 SC	6.0 - 12.0	VG	G	P-G	P	P	U	G	U	G[11]	14 days
	Pyraclostrobin 23.6%	Headline 2.09 EC/SC	6.0 - 12.0	VG	VG	P-G	P	P	U	VG	P-F	NL	21 days
DMI Triazoles Group 3	Cyproconazole 8.9%	Alto 100SL	2.75 – 5.5	U	U	VG	F	F	U	VG	U	NL	30 days
	Flutriafol 11.8%	Topguard 1.04 SC	7.0 – 14.0	U	VG	VG	P-G	G-VG	U	VG-E	P	F	21 days
	Propiconazole 41.8%	Tilt 3.6 EC Multiple Generics[7]	4.0 – 6.0	P	VG	G	NL	F	NL	VG	U	NL	R5 (beginning seed)
	Prothioconazole 41.0%	Proline 480 SC8	2.5 – 5.0	NL	NL	NL	NL	G-VG	NL	VG	U	F	21 days
	Tetraconazole 20.5%	Domark 230 ME	4.0 – 5.0	NL	VG	VG	P-G	F-G	U	VG-E	P	F	R5 (beginning seed)
MBC Thiophanates Group 1	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 40.00%	Omega 500 DF	0.75 – 1.0 pints	NL	NL	NL	NL	NL	NL	NL	U	G	R3 (beginning pod)
SDHI Carboxamides Group 7	Boscalid 70%	Endura 0.7 DF	3.5 – 11.0	U	NL	VG	U	P	NL	NL	U	VG	21 days
	Inpyrfluxam 31.25%	Excalia 2.84 SC	2	E	NL	NL	NL	NL	NL	U	NL	NL	R5
Mixed Modes of Action 11 3	Azoxystrobin 25.3% Flutriafol 18.63%	Topguard EQ 4.29 SC	5.0 – 7.0	VG	U	VG	U	G-VG	U	E	P	U	21 days
Mixed Modes of Action 11 3	Azoxystrobin 18.2% Difenoconazole 11.4%	Quadris Top 2.72 SC	8.0 – 14.0	U	U	G-VG	P-G	VG	F-G	VG	P	NL	14 days
Mixed Modes of Action 11 3	Azoxystrobin 19.8% Difenoconazole 19.8%	Quadris Top SBX 3.76 SC	7.0 – 7.5	VG	U	G-VG	P-G	VG	F-G	VG	F-G	U	14 days
Mixed Modes of Action 11 3	Azoxystrobin 7.0% Propiconazole 11.7%	Quilt 1.66 SC Multiple Generics[7]	14.0 – 20.5	U	U	G	F	F	U	VG	P	NL	21 days

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Class	Active ingredient (%)	Product/Trade name	Rate/A (fl oz)											
Mixed Modes of Action	11 3	Azoxystrobin 13.5% Propiconazole 11.7%	Quilt Xcel 2.2 SE	10.5 – 21.0	E	VG	G	F	F	U	VG	P	NL	R6
	7 11 3	Benzovindiflupyr 2.9% Azoxystrobin 10.5% Propiconazole 11.9%	Trivapro	13.7 – 20.7	E	U	G-VG	P-G	F-G	G	VG-E	U	NL	14 days R6
	3 11	Cyproconazole 7.17% Picoxystrobin 17.94%	Aproach Prima 2.34 SC	5.0 – 6.8	VG	U	G	P-G	F-G	U	VG-E	F-G	NL	14 days
	7 3	Fluopyram 17.4% Prothioconazole 17.4%	Propulse 3.34 SC	6.0 – 10.2	NL	NL	U	NL	U	U	U	NL	G	21 days
	3 7	Flutriafol 26.47% Bixafen 15.5%	Lucento 4.17 SC	3 – 5.5	VG	U	VG	F-G	VG	U	VG-E	F-G	U	21 days
	3 11	Flutriafol 19.3% Fluoxastrobin 14.84%	Fortix SC Preemptor SC	4.0 – 6.0	U	U	G-VG	P-G	G-VG	U	U	P	U	R5
	3 11	Prothioconazole 16.0% Trifloxystrobin 13.7%	Delaro 325 SC	8.0 – 11.0	VG	U	VG	U	G-VG	U	U	NL	NL	21 days
	3 11 7	Prothioconazole 14.9% Trifloxystrobin 13.1% Fluopyram 10.9%	Delaro Complete9 3.83 SC	8.0 – 11.0	U	U	VG	U	U	U	U	NL	U	21 days
	7 3	Pydiflumetofen 6.9% Difenoconazole 11.5%	Miravis Top 1.67 SC	13.7	VG	U	VG	F-G	VG	G	VG-E	F-G	U	14 days
	11 7	Pyraclostrobin 28.58% Fluxapyroxad 14.33%	Priaxor 4.17 SC	4.0 – 8.0	E	VG	G-VG	P-G	P-F	U	VG-E	F-G	P	21 days
	11 7 3	Pyraclostrobin 28.58% Fluxapyroxad 14.33% Tetraconazole 20.50%	Priaxor D 4.17 SC 1.9 SC	4.0 (each component)	VG	U	VG	P-G	F-G	G	VG-E	F-G	P	21 days R5
	11 3	Trifloxystrobin 32.3% Prothioconazole 10.8%	Stratego YLD 4.18 SC[10]	4.0 – 4.65	VG	VG	G	F	F-G	U	VG	P	NL	21 days
	3 11	Tetraconazole 7.48% Azoxystrobin 9.35%	Affiance 1.5 SC	10.0 – 14.0	U	VG	VG	F	F-G	U	U	U	U	R5 14 days

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Class	Active ingredient (%)	Product/Trade name	Rate/A (fl oz)										
Mixed Modes of Action: 3, 11	Tetraconazole 17.76% Fluoxastrobin 17.76%	Zolera FX 3.34 SC	4.4 – 6.8	U	U	U	U	F-G	U	U	U	U	R5 30 days
Mixed Modes of Action: 1, 3	Thiophanate-methyl 21.3% Tetraconazole 4.2%	Acropolis	20.0 – 23.0	NL	U	U	U	VG	U	VG-E	U	U	R5
Mixed Modes of Action: 3, 11, 7	Mefentrifluconazole 11.61% Pyraclostrobin 15.49% Fluxapyroxad 7.74%	Revytek	8.0 – 15.0	VG	U	VG	F-VG	VG	U	VG-E	F-VG	P	21 days

[1] Multiple 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.
[2] In areas where QoI-fungicide resistant isolates of the brown spot pathogen are present, QoI fungicides may result in poor disease control.
[3] 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 earlier or later applications; however, efficacy has been inconsistent with some products. Fungicides with a solo or mixed QoI or MBC mode of action may not be effective in areas where QoI or MBC resistance has been detected in the fungal population that causes Cercospora leaf blight.
[4] In areas where QoI-fungicide resistant isolates of the frogeye leaf spot pathogen are not present, QoI fungicides may be more effective than indicated in this table.
[5] White 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.
[6] 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.
[7] Multiple generic products containing this mode of action may also be labeled in some states.
[8] Proline has a supplemental label (2ee) for white mold in NY.
[9] Delaro Complete is not labeled for use on soybean in all states as of January 2020.
[10] Stratego YLD has a supplemental label (2ee) for white mold on soybean only in IL, IN, IA, MI, MN, NE, ND, OH, SD, WI.
[11] Rating is based on two applications of a 9 fl oz/A rate of Aproach at R1 and R3.

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 to the exclusion 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-137 group assume no liability resulting from the use of these products

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