CROP PROTECTION NETWORK
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SOYBEAN DISEASE MANAGEMENT

CPN-1019-W

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 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. The table (following page) 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].

Target spot
Image: Tristan Mueller

Frogeye leaf spot
Image: Daren Mueller

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.

Find more crop disease resources at
CropProtectionNetwork.org

This publication was developed by members of NCERA-137. It was compiled by Kiersten Wise, University of Kentucky.

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Fungicide mode of action groups:
Group 11 QoI Strobilurins
Group 3 DMI Triazoles
Group 1 MBC Thiophanates
Group 7 SDHI Carboxamides
Group 29 2,6-Dinitro-anilines

Efficacy categories:
P=Poor; F=Fair; G=Good; VG=Very Good; E=Excellent;
NL=Not Labeled for use against this disease; NR=Not Recommended;
U=Unknown efficacy or insufficient data to rank product

Fungicide Efficacy for Control of Soybean Foliar Diseases Table (02/2022)

	Active ingredient (%)	Product/Trade name	Rate/A (fl oz)	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]
11	Azoxystrobin 22.9%	Quadris 2.08 SC, multiple generics	6.0 – 15.5	VG	VG	P-G	P	P	U	G-VG	P-F	P	14 days
11	Fluoxastrobin 40.3%	Aftershock 480 SC, Evito 480 SC	2.0 – 5.7	VG	G	P-G	P	P	U	U	U	NL	30 days, R5
11	Picoxystrobin 22.5%	Aproach 2.08 SC	6.0 – 12.0	VG	G	P-G	P	P	U	G	U	G[8]	14 days
11	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
3	Cyproconazole 8.9%	Alto 100SL	2.75 – 5.5	U	U	VG	F	F	U	VG	U	NL	30 days
3	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
3	Propiconazole 41.8%	Tilt 3.6 EC, multiple generics	4.0 – 6.0	P	VG	G	NL	F	NL	VG	U	NL	R5
3	Prothioconazole 41.0%	Proline 480 SC	2.5 – 5.0	NL	NL	NL	NL	G-VG	NL	VG	U	F	21 days
3	Tetraconazole 20.5%	Domark 230 ME	4.0 – 5.0	NL	VG	VG	P-G	F-G	U	VG-E	P	F	R5
7	Boscalid 70%	Endura 0.7 DF	3.5 – 11.0	U	NL	VG	U	P	NL	NL	U	VG	21 days
7	Inpyrfluxam 31.25%	Excalia SC	2.0	E	NL	NL	NL	NL	NL	U	NL	NL	R5
1	Thiophanate-methyl	Topsin-M, multiple generics	10.0 – 20.0	U	U	U	F	VG	U	G	U	F	21 days
29	Fluazinam 40.0%	Omega 500 DF	0.75 – 1.0 pts	NL	NL	NL	NL	NL	NL	NL	U	G	R3
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
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
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
11 3	Azoxystrobin 7.0% Propiconazole 11.7%	Quilt 1.66 SC, multiple generics	14.0 – 20.5	U	U	G	F	F	U	VG	P	NL	21 days
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

Indicates product with mixed fungicide classes

[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] Stratego YLD has a supplemental label (2ee) for white mold on soybean only in IL, IN, IA, MI, MN, NE, ND, OH, SD, WI. [8] 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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7 3	Bixafen 15.5% Flutriafol 26.47%	Lucento 4.17 SC	3.0 – 5.5	VG	U	VG	F-G	VG	U	VG-E	F-G	U	21 days
11 3	Fluoxastrobin 14.84% Flutriafol 19.3%	Fortix SC, Preemptor SC	4.0 – 6.0	U	U	G-VG	P-G	G-VG	U	U	P	U	R5
11 3	Trifloxystrobin 13.7% Prothioconazole 16.0%	Delaro 325 SC	8.0 – 11.0	VG	U	VG	U	G-VG	U	U	NL	NL	21 days
7 11 3	Fluopyram 10.9% Trifloxystrobin 13.1% Prothioconazole 14.9%	Delaro Complete 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	NL	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
7 11 3	Fluxapyroxad 14.33% Pyraclostrobin 28.58% 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 [7]	4.0 – 4.6	VG	VG	G	F	F-G	U	VG	P	NL	21 days
11 3	Azoxystrobin 9.35% Tetraconazole 7.48%	Affiance 1.5 SC	10.0 – 14.0	U	VG	VG	F	F-G	U	U	P	NL	14 days, R5
11 3	Fluoxastrobin 17.76% Tetraconazole 17.76%	Zolera FX 3.34 SC	4.4 – 6.8	U	U	U	U	F-G	U	U	U	U	30 days, R5
1 3	Thiophanate-methyl 21.3% Tetraconazole 4.2%	Acropolis	20.0 – 23.0	NL	U	U	U	VG	U	E	U	U	R5
7 11 3	Fluxapyroxad 7.74% Pyraclostrobin 15.49% Mefentrifluconazole 11.61%	Revytek	8.0 – 15.0	VG	U	VG	F-VG	VG	U	E	F-VG	P	21 days
11 3	Pyraclostrobin 17.56% Mefentrifluconazole 17.56%	Veltyma	7.0-10.0	U	U	U	U	U	U	U	U	NL	21 days

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