

Corn

Fungicide Efficacy for Control of Foliar Diseases

The Corn Disease Working Group (CDWG) developed ratings for how well fungicides control major corn diseases in the United States. The CDWG determined efficacy ratings for each fungicide listed in the table by field testing the materials over multiple years and locations. Ratings are based on the product's level of disease control and does not necessarily reflect yield increases obtained from product application. A product's efficacy depends upon proper application timing, rate, and application method as determined by the product label and overall disease level in the field at the time of application. Differences in efficacy among each fungicide product were determined by directly comparing products in field tests using a *single application* of the labeled rate. For application timing and use considerations, please contact your local cooperative extension service. The table includes marketed products available that have been tested over multiple years and locations. The table is not intended to be a list of all labeled products. Additional fungicides are labeled for disease on corn, including contact fungicides such as chlorothalonil. Other fungicides may be available for diseases not listed in the table, including Diplodia, Gibberella and Fusarium ear rots. 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. Read and follow all use restrictions prior to applying any fungicide.

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

Fungicide(s)			Diseases						
Class	Product/Trade name	Active ingredient (%)	Anthracnose leaf blight	Common rust	Eyespot	Gray leaf spot	Northern corn leaf blight	Southern rust	Tar spot
DMI Triazoles (Group 3)	Tilt 3.6 EC Multiple Generics	Propiconazole 41.8%	U	VG	E	G	G	F	NL
	Proline 480 SC	Prothioconazole 41.0%	U	VG	E	U	VG	G	NL
	Folicur 3.6 F Multiple Generics	Tebuconazole 38.7%	NL	U	NL	U	VG	F	NL
	Domark 230 ME	Tetraconazole 20.5%	U	U	U	E	VG	G	NL
QoI Strobilurins (Group 11)	Quadris 2.08 SC Multiple Generics	Azoxystrobin 22.9%	VG	E	VG	E	G	VG	NL
	Headline 2.09 EC/SC	Pyraclostrobin 23.6%	VG	E	E	E	VG	VG	NL
	Aproach 2.08 SC	Picoxystrobin 22.5%	VG	VG-E	VG	F-VG	VG	G	NL
Mixed modes of action	Quilt Xcel 2.2 SE Multiple Generics	Azoxystrobin 13.5% Propiconazole 11.7%	VG	VG-E	VG-E	E	VG	VG	U ¹
	Trivapro 2.21 SE	Benzovindiflupyr 2.9% Azoxystrobin 10.5% Propiconazole 11.9%	U	U	U	E	VG	E	U
	Aproach Prima 2.34 SC	Cyproconazole 7.17% Picoxystrobin 17.94%	U	U	U	E	VG	G	NL
	Fortix 3.22 SC Preemptor 3.22 SC	Flutriafol 19.3% Fluoxastrobin 14.84%	U	U	U	E	VG-E	VG	NL
	Delaro 325 SC	Prothioconazole 16.0% Trifloxystrobin 13.7%	VG	E	VG	E	VG	VG	U
	Miravis Neo 2.5 SE	Pydiflumetofen 7.0% Azoxystrobin 9.3% Propiconazole 11.6%	U	U	U	E	VG-E	VG	U
	Priaxor 4.17 SC	Pyraclostrobin 28.58% Fluxapyroxad 14.33%	U	VG	U	VG	VG-E	VG	U
	Headline AMP 1.68 SC	Pyraclostrobin 13.6% Metconazole 5.1%	U	E	E	E	VG	G	U
	Stratego YLD 4.18 SC	Trifloxystrobin 32.3% Prothioconazole 10.8%	VG	E	VG	E	VG	G	NL
	Affiance 1.5 SC	Tetraconazole 7.48% Azoxystrobin 9.35%	U	G-VG	U	G-VG	G-VG	G	NL

¹ A 2ee label is available for several fungicides for control of tar spot, however efficacy data are limited

This information is provided only as a guide. It is the applicator's legal responsibility to read and follow all current label directions. Reference in this publication to any specific commercial product is for general information only, and does not constitute an endorsement or recommendation by the CDWG. Individuals using such products assume responsibility for their use in accordance with current directions of the manufacturer. Members or participants in the CDWG assume no liability resulting from the use of these products.

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Foliar Fungicide and Bactericide Product Information

Fungicides / Bactericides				Application			REI (hours)	PHI (days)	Labeled Corn ³
Class	Trade Name Active Ingredient (%)	Rate ¹ (per acre)	Formulation ²	Aerial	Chemigation	Ground			
DMI Triazole (Group 3)	Bumper 41.8 EC Propiconazole 41.8%	2.0-4.0	EC	2 gpa minimum	Allowed, 0.1-0.25" application	10 gpa minimum	12	30 14 (SW)	F, P, SD, SW
	Bumper ES Propiconazole 40.85%	2.0-4.0	EC	2 gpa minimum	Allowed, 0.1-0.25" application	10 gpa minimum	12	30 14 (SW)	F, P, SD, SW
	Domark 230 ME Tetraconazole 20.5%	4.0-6.0	EC	2 gpa minimum	Allowed	10 gpa minimum	12 72 (SD)	Do not apply after R3 (milk)	F, P, SD
	Fitness Propiconazole 41.8%	2.0-4.0	EC	2 gpa minimum	Allowed, 0.1-0.25" application	10 gpa minimum	12	30 14 (SW)	F, P, SD, SW
	Monsoon Tebuconazole 38.7%	4.0-6.0	F	5 gpa minimum	Not allowed	10 gpa minimum	12 456 (SW)	36 7 (SW)	F, P, SD, SW
	Orius 3.6F Tebuconazole 38.7%	4.0-6.0	EC	5 gpa minimum	Not allowed	10 gpa minimum	12 456 (SW)	36 (F, P, SD)	F, P, SD, SW
	Proline 480 SC Prothioconazole 41.0%	5.7	SC	3 gpa minimum	Allowed, 0.125- 0.5" application	10 gpa minimum	12	14	F, P, SD
	PropiMax EC Propiconazole 41.8%	2.0-8.0	EC	2 gpa minimum	Allowed, 0.1-0.25" application	10 gpa minimum	12	30 14 (SW)	F, P, SD, SW
	Prosaro 421 SC Prothioconazole 19.0% + Tebuconazole 19.0%	6.5	SC	2 gpa minimum	Allowed 0.125- 0.5" application	10 gpa minimum	12	36 7 (SW)	F, P, SD, SW
	TebuStar 3.6L Tebuconazole 38.7%	4.0-6.0	F	5 gpa minimum	Not Allowed	10 gpa minimum	12 456 (SW)	36 7 (SW)	F, P, SD, SW
	Tebuzol 3.6F Tebuconazole 38.7%	4.0-6.0	EC	5 gpa minimum	Not Allowed	10 gpa minimum	12 456 (SW)	36 7 (SW)	F, P, SD, SW
	Tilt Propiconazole 41.8%	2.0-4.0	EC	2 gpa minimum	Allowed, 0.1-0.25" application	10 gpa minimum	24	30 14 (SW)	F, P, SD, SW
	Topguard Flutriafol 11.8%	7.0-14.0	SC	2 gpa minimum	Not allowed	10 gpa minimum	120 (SD, P)	7	F, P, SD
SDHI Carbox- amides (Group 7)	Vertisan Penthiopyrad 20.6%	10.0-24.0	EC	2 gpa minimum	Allowed	15 gpa minimum	12	7	F, P, SD, SW

¹Rate is fluid ounces per acre unless otherwise noted

²Formulations: DF=Dry Flowable; EC=Emulsifiable Concentrate; F=Flowable; SC=Suspension Concentrate; SE=Suspo-Emulsion; ; G=Granule; WP=Wettable Powder

³Type of Corn: F = field or dent corn; P = popcorn; SD = seed corn; SW = sweetcorn

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Foliar Fungicide and Bactericide Product Information *(continued)*

Fungicides / Bactericides				Application			REI (hours)	PHI (days)	Labeled Corn ³	
Class	Trade Name Active Ingredient (%)	Rate ¹ (per acre)	Formulation ²	Aerial	Chemigation	Ground				
QoI Strobilurins (Group 11)	Aftershock Fluoxastrobin 40.3%	2.0-5.7 2.0-3.8 (SW)	F	5 gpa minimum	Allowed, < 0.4" application	10 gpa minimum	12	30 7 (SW)	F, SD, SW	
	Approach Picoxystrobin 22.5%	3.0-12.0	SC	Adequate for coverage and canopy penetration	Allowed	Adequate for coverage and canopy penetration	12	7	F, P, SD, SW	
	Evito 480 SC Fluoxastrobin 40.3%	2.0-5.7 2.0-3.8 (SW)	SC		2 gpa minimum	Allowed, < 0.4"	10 gpa minimum	12	30 7 (SW)	F, SD, SW
	Headline Pyraclostrobin 23.6%	6.0-12.0	EC		1 gpa minimum	Allowed, < 0.5" application	Adequate for coverage and canopy penetration	12	7	F, P, SD, SW
	Quadris Flowable Azoxystrobin 22.9%	6.0-15.5	SC		Adequate for coverage and canopy penetration	Allowed, 0.1-0.25" application	Adequate for coverage and canopy penetration	4	7	F, P, SD, SW
	Satori Azoxystrobin 22.9%	6.0-15.5	SC		Adequate for coverage and canopy penetration	Allowed, 0.1-0.25" application	Adequate for coverage and canopy penetration	4	7	F, P, SD, SW
Dithiocarbamates (Group M3)	Dithane F-45 Rainshield Mancozeb 37.0%	1.2 qt	F	2 gpa minimum	Allowed, <0.25" application	Adequate for coverage and canopy penetration	24	40 (SD, F) 7 (SW, P)	F, P, SD, SW	
	Dithane M-45 Mancozeb 80.0%	1.5 lb	WP	2 gpa minimum	Allowed, <0.25" application	Adequate for coverage and canopy penetration	24	40 7 (SW, P)	F, P, SD, SW	
	Penncozeb Mancozeb 75.0%	1.0-1.5 lb	DF	2 gpa minimum	Allowed, 0.1- 0.25" application	Adequate for coverage and canopy penetration	24	40 7 (P, SW)	F, P, SD, SW	
	Penncozeb 80WP Mancozeb 80.0%	1.0-1.5 lb	WP	2 gpa minimum	Allowed, 0.1- 0.25" application	10 gpa minimum	24	40 (E, SD) 7 (P, SW)	F, P, SD, SW	
Inorganics (Group M1)	Badge SC Copper oxychloride 16.81% + Copper hydroxide 15.36%	0.5-2.5 pt	SC	3 gpa minimum	Allowed	Adequate for coverage and canopy penetration	48	0	F, P, SD, SW	
	Kocide 2000 Copper hydroxide 53.8%	1.0-3.0 lb	G	3 gpa minimum	Allowed	20 gpa minimum	48	0	F, P, SD, SW	
	Kocide 3000 Copper hydroxide 46.1%	0.5-1.75 lb	G	3 gpa minimum	Allowed	20 gpa minimum	48	0	F, P, SD	

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Foliar Fungicide and Bactericide Product Information (continued)

Disease Management: Corn

Fungicides / Bactericides				Application			REI (hours)	PHI (days)	Labeled Corn ³	
Class	Trade Name Active Ingredient (%)	Rate ¹ (per acre)	Formulation ²	Aerial	Chemigation	Ground				
Mixed Modes of Action	3+7	Lucento Flutriafol 26.5% Bixafen 15.6%	3.0-5.5	SC	2 gpa minimum	Allowed	10 gpa minimum	120 (SD)	30 10 ⁷	F, P, SD
	3+11	Absolute Maxx Tebuconazole 22.63% + Trifloxystrobin 22.63%	5.0-6.0	SC	2 gpa minimum	Allowed, 0.125- 0.5" application	10 gpa minimum	12 456 (SW)	36 7 (SW)	F, P, SD, SW
		Affiance Azoxystrobin 9.35% + Tetraconazole 7.48%	10.0-17.0	SC	2 gpa minimum	Allowed, 0.1-0.25" application	10 gpa minimum	12 72 (SD)	7 21 ⁴	F, P, SD
		Approach Prima Picoxystrobin 17.94% + Cyproconazole 7.17%	3.4-6.8	SC	Adequate for coverage and canopy penetration	Allowed	Adequate for cover- age and canopy penetration	12	30 21 ⁴	F, SD
		Delaro Prothioconazole 16% +Trifloxystrobin 13.7%	4.0-12.0 8 (SW)	SC	2 gpa minimum	Allowed, 0.125- 0.5" application	10 gpa minimum	12	14 0 (SW)	F, P, SD, SW
		Evito T Fluoxastrobin 18.0% + Tebuconazole 25.0%	4.0-9.0	SC	3 gpa minimum	Allowed, <0.4" application	10 gpa minimum	12 456 (SW)	36 7 (SD)	F, SD, SW
		Fortix / Preemptor Fluoxastrobin 14.84% + Flutriafol 19.3%	4.0-6.0	SC	2 gpa minimum	Not allowed	10 gpa minimum	12 120 (SD)	30	F, SD
		Headline AMP Pyraclostrobin 13.64% + Metconazole 5.14%	8.0-14.4	SC	2 gpa minimum	Allowed, <0.5" application	10 gpa minimum	12	20 (F,P) 7 (SD, SW)	F, P, SD, SW
		Quilt Azoxystrobin 7.0% + Propiconazole 11.7%	7.0-14.0	SE	2 gpa minimum	Allowed, 0.1-0.25" application	10 gpa minimum	12	30 14 (SW)	F, P, SD, SW
		Quilt Xcel Azoxystrobin 13.5% + Propiconazole 11.7%	10.5-14.0	SE	2 gpa minimum	Allowed, 0.125-0.25" application	10 gpa minimum	12	30 (E, P, SD) 14 (SW)	F, P, SD, SW
		Stratego YLD Prothioconazole 10.8% + Trifloxystrobin 32.3%	2.0-5.0 4.0-5.0 (SW)	SC	2 gpa minimum	Allowed	10 gpa minimum	12	14 0 (SW)	F, P, SD, SW
		Topguard EQ Azoxystrobin 25.3% + Flutriafol 18.6%	5.0-7.0	SC	2 gpa minimum	Not allowed	10 gpa minimum	12 (F,P) 120 (SD)	7	F, P, SD
		Veltyma Mefentrifluconazole 17.56% Pyraclostrobin 17.56%	7.0-10.0	SC	2 gpa minimum	Allowed, <0.5" application	10 gpa minimum	12	21	F, P, SD, SW
		Zolera FX Fluoxastrobin 17.76% + Tetraconazole 17.76%	4.4-6.8	EC	2 gpa minimum	Adequate for coverage and canopy pene- tration	10 gpa minimum	12 480 (SD)	30	F, SD
		7+11	Priaxor Xemium Fluxapyroxad 14.33% + Pyraclostrobin 28.58%	4.0-8.0	SC	2 gpa minimum	Allowed, <0.5" application	Adequate for coverage and canopy penetration	12	21 7 (SW)

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⁴PHI days for silage

⁵A more extensive list of products that includes more generic products can be found at: <https://cropwatch.unl.edu/UNL-EC130Disease-mgmt-prods-2019.pdf>

⁶Except detasslers REI is 5 days

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Foliar Fungicide and Bactericide Product Information *(continued)*

Fungicides / Bactericides				Application			REI (hours)	PHI (days)	Labeled Corn ³	
Class	Trade Name Active Ingredient (%)	Rate ¹ (per acre)	Formulation ²	Aerial	Chemigation	Ground				
Mixed Modes of Action	3+7+11	Miravis Neo Propiconazole 11.6% Pydiflumetofen 7.0% Azoxystrobin 9.3%	10.0-13.7	SE	2 gpa minimum	Allowed, 0.1-0.25" application	10 gpa minimum	14 (SW)	30	F, P, SD, SW
		Revytek Mefentrifluconazole 11.61% Pyraclostrobin 15.49% Fluxapyroxad 7.74%	8.0-15.0	SC	2 gpa minimum	Allowed, <0.5" application	10 gpa minimum	12	21	F, P, SD, SW
		Trivapro Benzovindiflupyr 2.9% + Azoxystrobin 10.5% + Propiconazole 11.9%	13.7	SE	2 gpa minimum	Allowed, 0.1-0.25" application	10 gpa minimum	12	30 14 (SW)	F, P, SW
		Trivapro Co-Pack Trivapro A Benzovindiflupyr 9.63%	4.0 -10.5	EC	2 gpa minimum	Allowed, 0.1-0.25" application	10 gpa minimum	12	30 (F, P) 14 (SW)	F, P, SD, SW
		Trivapro B Azoxystrobin 13.5% + Propiconazole 11.7%	10.5 -14.0	SE						

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³Type of Corn: F = field or dent corn; P = popcorn; SD = seed corn; SW = sweetcorn

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⁵A more extensive list of products that includes more generic products can be found at: <https://cropwatch.unl.edu/UNL-EC130Disease-mgmt-prods-2019.pdf>

⁶Except detasslers REI is 5 days

⁷PHI 10 for forage