

Fungicide Efficacy for Control of Wheat Diseases

The North Central Regional Committee on Management of Small Grain Diseases (NCERA-184) has developed the following information on fungicide efficacy for control of certain foliar diseases of wheat for use by the grain production industry 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 is based on proper application timing 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.

The table includes most widely marketed products, and is not intended to be a list of all labeled products.

Many products have specific use restrictions. Restrictions may be present on the amount of active ingredient that can be applied within a period of time or on the number of sequential applications that can occur. **Read and follow all use restrictions before applying any fungicide.**

**Head scab**

Image: Mimi Broeske

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-184 and compiled by Kelsey Andersen Onofre, Kansas State University.



The information in this publication is only a guide, and the authors assume no liability for practices implemented based on this information. Reference to products in this publication is not intended to be an endorsement to the exclusion of others that may be similar. Individuals using such products assume responsibility for their use in accordance with current directions of the manufacturer.

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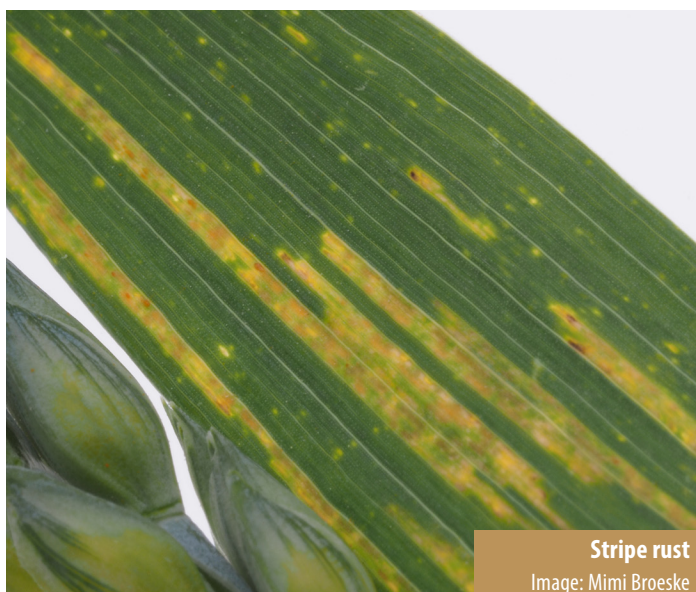
**Stripe rust**

Image: Mimi Broeske

Efficacy of Fungicides for Wheat Disease Control Based on Appropriate Application Timing (03/2023)

		Active ingredient (%)	Product/Trade name	Rate/A (fl oz)	Powdery mildew	Stagonospora leaf/glume blotch	Septoria tritici blotch	Tan spot	Stripe rust	Leaf rust	Stem rust	Head scab ⁴	Harvest restriction
Strobilurins	11	Picoxystrobin 22.5%	Approach SC	6.0 – 12.0	G ¹	VG	VG ²	VG	E ³	VG	VG	NL	Feekes 10.5
		Pyraclostrobin 23.6%	Headline SC	6.0 – 9.0	G	VG	VG ²	E	E ³	E	G	NL	Feekes 10.5
		Azoxystrobin 22.9%	Quadris 2.08 SC ⁶	4.0 – 12.0 ⁵	G	VG	VG	E	E	E	VG	NL	Feekes 10.5.4
Triazoles	3	Metconazole 8.6%	Caramba 0.75 SL	10.0 – 17.0	VG	VG	VG	VG	E	E	E	G	30 days
		Tebuconazole 38.7%	Folicur 3.6 F ⁶	4.0	NL	NL	NL	NL	E	E	E	F	30 days
		Prothioconazole 41.0%	Proline 480 SC	5.0 – 5.7	--	VG	VG	VG	VG	VG	VG	G	30 days
		Prothioconazole 19.0%	Prosaro 421 SC	6.5 – 8.2	G	VG	VG	VG	E	E	E	G	30 days
		Tebuconazole 19.0%											
		Propiconazole 41.8%	Tilt 3.6 EC ⁶	4.0	VG	VG	VG	VG	VG	VG	VG	P	Feekes 10.5.4
		Metconazole 10.91% Prothioconazole 18.19%	Sphaerex	4.0 – 7.3	VG	VG	VG	VG	E	E	E	G	30 days
Mixed modes of action ⁸	11	Trifloxystrobin 22.6%	Absolute Maxx SC	5.0	G	VG	VG	VG	VG	E	VG	NL	35 days
	3	Tebuconazole 22.6%											
	11	Picoxystrobin 17.94%	Approach Prima SC	3.4 – 6.8	VG	VG	VG	VG	E	VG	--	NR	45 days
	3	Cyproconazole 7.17%											
	11	Trifloxystrobin 13.7%	Delaro 325 SC	8.0	G	VG	VG	VG	VG	VG	VG	NL	Feekes 10.5 35 days
	3	Prothioconazole 16.0%											
	7	Pydiflumetofen 13.7%	Miravis Ace SE	13.7	VG	VG	VG	VG	VG	VG	VG	G	Feekes 10.5.4
	3	Propiconazole 11.4%											
	7	Fluxapyroxad 2.8%	Nexicor EC	7.0 – 13.0	VG	VG	E	E	E	E	VG	NL	Feekes 10.5
	11	Pyraclostrobin 18.7%											
	3	Propiconazole 11.7%											
	7	Fluxapyroxad 14.3%	Priaxor	4.0 – 8.0	G	VG	VG	E	VG	VG	G	NL	Feekes 10.5
	11	Pyraclostrobin 28.6%											
	3	Prothioconazole 17.39%											
		Tebuconazole 8.7%	Prosaro Pro SC	10.3-13.6	G	VG	VG	VG	E	E	E	G	30 days
	7	Fluopyram 8.7%											
	11	Azoxystrobin 13.5%	Quilt Xcel 2.2 SE ⁶	10.5 – 14.0	VG	VG	VG	VG	E	E	VG	NL	Feekes 10.5.4
	3	Propiconazole 11.7%											
	11	Trifloxystrobin 32.3%	Stratego YLD ⁹	4.0	G	VG	VG	VG	VG	VG	VG	NL	Feekes 10.5 35 days
	3	Prothioconazole 10.8%											
	7	Benzovindiflupyr 2.9%	Trivapro SE	9.4 – 13.7	VG	VG	VG	VG	E	E	VG	NL	Feekes 10.5.4
	11	Azoxystrobin 10.5%											
	3	Propiconazole 11.9%											
	11	Azoxystrobin 25.30%	Topguard EQ	4.0 – 7.0	VG	NL	VG	VG	E	E	VG	NL	Feekes 10.5.4 35 days
	3	Flutriafol 18.63%											

¹Efficacy categories: NL=Not Labeled; NR=Not Recommended; P=Poor; F=Fair; G=Good; VG=Very Good; E=Excellent; -- = Insufficient data to make statement about efficacy of this product.

²Product efficacy may be reduced in areas with fungal populations that are resistant to strobilurin fungicides. ³Efficacy may be significantly reduced if solo strobilurin products are applied after stripe rust infection has occurred. ⁴Application of products containing strobilurin fungicides may result in elevated levels of the mycotoxin Deoxynivalenol (DON) in grain damaged by head scab.

⁵Label rate for powdery mildew is 7.5-11.0 fl. oz/A. ⁶Multiple generic products containing the same active ingredients also may be labeled in some states. ⁷A 7 oz/A rate has been approved in several states (Kansas, Nebraska, Colorado, South Dakota) for flag leaf applications when disease levels are low ⁸Products with mixed modes of action generally combine triazole and strobilurin active ingredients. Miravis Ace, Nexicor, Priaxor, and Trivapro include carboxamide active ingredients. ⁹Stratego is a product with the same active ingredients as Stratego YLD but a different formulation (11.4% Propiconazole and 11.4% Trifloxystrobin) and higher use rate (10 fl oz/A)