

## Foliar Fungicides Registered for Disease Control in Pea, Lentil, and Chickpea

This table presents information on available fungicide products for the management of widespread fungal diseases of pulse crops (peas, lentils, and chickpeas) for use in the United States. The information is based on labeled application rates according to label instructions and the presence of disease. The table includes the most widely marketed products and is not intended to be a list of all labeled products nor is it an endorsement of any specific product.

This table is meant only as a quick-reference, and it should not be a substitute for label directions.

Fungicide				Crop <a href="#">[a]</a>	Disease Control <a href="#">[b]</a>									
Class <a href="#">[c]</a>	Active Ingredient	Product	Dosage (fl oz/A)		Mycosphaerella Blight	Ascochyta Blight	Alternaria	Anthracnose	Gray Mold (Botrytis)	Powdery Mildew	Rust	Septoria	Stemphylium	White Mold (Sclerotinia)
<b>Methyl Benzimidazole Carbamate (1)</b>	Thiophanate-methyl	Topsin 4.5FL	20.0 - 30.0 (multiple appl.); 30.0 – 40.0 (single appl.)	C	--	--	--	R	R	--	--	--	--	R
<b>Demethylation Inhibitors (3)</b>	Mefentrifluconazole	Provysol	2.5 - 5.0	C,L,P	R	R	R	--	--	R	R	--	--	--
	Prothioconazole	Proline 480 SC	C = 5.0-5.7; L = 4.3-5.7; P = 5.7	C,L,P	--	R	--	--	--	--	R <a href="#">[d]</a>	--	--	R <a href="#">[d]</a>
	Metconazole	Quash	4.0	C,L,P	--	R	R	--	R	R	R	--	--	S
	Propiconazole	Tilt	4.0	C	--	R	R	--	--	--	R	--	--	--

<b>Succinate Dehydrogenase Inhibitors (7)</b>	Boscalid	Endura	6.0 - 11.0	C,L,P	--	R	R	--	R	S	--	--	--	R
	Penthiopyrad	Vertisan	14.0 - 20.0	C,L,P	--	R	R	R	R	R	R	R	--	R
<b>Quinone Outside Inhibitors (11)</b>	Azoxystrobin	Quadris Flowable; Arius 250	6.0 - 15.5	C,L,P	R [e]	R [e]	R	R	--	--	--	--	R	--
	Fluoxastrobin	Evito 480 SC	2.0 - 4.75	C,L,P	R [e]	R [e]	R	R	--	--	R	--	--	--
	Picoxystrobin	Aproach	6.0 - 12.0	C,L,P	R [e]	R [e]	R	R	--	R	R	R	--	S
	Pyraclostrobin	Headline SC	6.0 - 9.0	C,L,P	R [e]	R [e]	R	R	--	R	R	--	--	--
<b>Chitan Synthase Inhibitor (19)</b>	Polyoxin D zinc salt	OSO 5% SC Fungicide	6.5 - 13.0	C, L, P	--	--	--	--	R	R	--	--	--	--
<b>Other (29)</b>	Fluazinam	Omega 500F	8.0 - 13.6	C	--	--	--	--	R	--	--	--	--	R
<b>Multi-site Inhibitors (M)</b>	Chlorothalonil	Bravo WeatherStik	C = 1.38 - 2 pt/A; L = 1.0 - 1.5 pt/A	C,L	--	R	--	R	--	--	--	--	--	--
	Copper Octanoate (Copper Soap)	Cueva Fungicide Concentrate	0.5 - 2.0 gal/A	P	--	R	--	R	R	R	--	--	--	R
	Copper Hydroxide	Kocide 2000-O	1.0 - 2.25 lb/A	P	--	--	--	--	--	R	--	--	--	--
<b>Biologicals – Plant Extracts (BM01)</b>	Tea Tree Oil	Timorex Act	13.0 – 35.0	C,L,P	--	--	--	--	R	R	R	--	--	R
<b>Biologicals - Microbials (BM02)</b>	Bacillus mycooides isolate J	LifeGard WG	4.5 oz/100gal	C,L,P	--	--	--	--	--	--	--	--	--	R

	Bacillus amylolique-faciens strain D747	Double Nickel LC	0.5 - 4.5 qt/A	C,L,P	--	--	--	--	R	R	R	--	--	R
	Bacillus subtilis strain QST 713	Serenade ASO	0.5 - 4.0 qt/A	C,L,P	--	--	--	--	R	R	R	--	--	R
		Serenade Opti	14.0 - 20.00	C,L,P	--	--	--	--	R	--	--	--	--	R
<b>Mixed Modes of Action</b>	Difenoconazole, Benzovindiflupyr	Aprovia Top	10.5 - 11.0	C,L,P	R	R	R	R	--	R	R	--	--	--
	Prothioconazole, Trifloxystrobin	Delaro 325 SC	12.0	C,L,P	R	R	--	R	R	--	--	--	--	R
	Mefentrifluconazole, Pyraclostrobin	Veltyma	7.0 – 10.0	C,L,P	R	R	R	R	--	R	R	--	--	--
	Mefentrifluconazole, Pyraclostrobin, Fluxapyroxad	Revytek	9.0 – 13.0	C,L,P	R	R	R	R	R	R	R	--	--	--
	Pydiflumetofen, Difenoconazole	Miravis Top	9.0 - 14.0	C,L,P	R	R	R	S	--	R	R	--	--	S
	Pydiflumetofen, Azoxystrobin, Propiconazole	Miravis Neo	13.7	C	--	R	R	R	--	R	R	--	--	S
	Fluxapyroxad, Pyraclostrobin	Priaxor Xemium	4.0 - 8.0	C,L,P	R	R	R	R	R	R	R	--	--	S
	Fluopyram, Prothioconazole	ProPulse	8.0 - 13.6	C,L	R	R	--	R	R	--	--	--	--	R

	Cyprodinil, Fludioxonil	Switch 62.5 WG	11.0 - 14.0	C	--	--	--	--	R	--	--	--	--	R
	Azoxystrobin, Chlorothalonil	Quadris Opti	1.6 - 2.4 pt/A	C	--	R	R	--	--	--	R	--	--	--
	Azoxystrobin, Difenoconazole	Quadris Top	C = 8 - 14; L,P = 12-14	C,L,P	R	R	R	--	--	R	R	--	--	--
	Azoxystrobin, Propiconazole	Quilt Xcel	10.5 - 14.0	C	--	R	R	R	--	--	R	--	--	--
	Tea tree oil, Difenoconazole	Regev	4.0 – 8.5	L,P	--	--	--	--	R	R	R	--	--	R

### Table Index

- Crop on which the fungicide is registered: C= Chickpea; L = Lentil; P = Dry Pea (Field Pea)
- Product categories: R = Registered for use; S = Registered for suppression only
- Fungicide Mode of Action (MOA): letter followed by number and Fungicide Resistance Action Committee Code
- Only registered for pea
- Where fungicide resistant strains are not present
  - Chickpea, MT and ND med-high risk; in pea, a few fungicide resistant isolates have been found

### Table Summary

The table contains data that is arranged in rows and columns. The table is large, consisting of 3 primary columns, row 1 contains their headings. Column 1, Fungicide, divides into 4 sub-columns, their headings are in row 2. Column 2, Crop, contains no sub-divisions. Column 3, Disease Efficacy, divides into 10 different sub-columns, their headings are in row 2. Each cell in row 3 and below describes a fungicide class, fungicide active ingredients within each class, associated commercial product name, recommended application dose according to the product label, the pulse crops for which the product is labeled, and which pulse crop diseases are controlled by the product. An [index](#) is located below the table. This table is meant only as a quick-reference, and it should not be a substitute for label directions.

## Further Information

To learn more about fungicides or other management strategies for diseases control in pulse crops, contact MSU Extension specialists [Dr. Uta McKelvy](#). For help with identifying crop disorders, contact your [local extension agent](#) or the [Schutter Diagnostic Lab](#) at Montana State University. The table is also available online at <https://plantpath.msuextension.org/resources/>.

Published April, 2022.

The Foliar Fungicide and Disease Efficacy Table was developed with support from Montana State University Extension Integrated Pest Management, the North Central Integrated Pest Management Center – Pulse Crop Working Group, and the Montana Department of Agriculture.

