

## Tomato Late Blight Fungicides Registered for WI, 2020.

This is not a comprehensive list. Most fungicides listed are for use in conventional production systems. List updates August 11, 2020.

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Trade Name (rate/A)	Active Ingredient(s)	PHI	REI	FRAC #	Activity of fungicide	Comments
<b><u>Ariston</u></b> <b>(1.9-3.0 pt)</b>	chlorothalonil+ cymoxanil	3 day	12 hours	M5+27	protectant + locally systemic	Newly registered fungicide. Additional chlorothalonil may be tank-mixed with this formulation to enhance % active ingredient applied, but be sure to include the Ariston component in overall season total. Cymoxanil is same active ingredient in Curzate which is a good curative fungicide for late blight.
<b><u>Fosphite,</u></b> <b><u>Rampart (1-3 qt</u></b> <b><u>in 20 - 100 gal</u></b> <b><u>water/A)</u></b>	potassium phosphite	0 days	4 hours	33	upregulates resistance/ disease protection in plant	Foliar post-emergence spray. Do not apply at less than 3 day intervals. Water dilution of rate is dependent upon specific product label.
<b><u>Badge SC (0.75-</u></b> <b><u>1.8 pt/acre)</u></b>	copper hydroxide, copper oxychloride	0 days	24 hours	M1	protectant	Protectant activity only.
<b><u>Bravo Ultrex 1.3-</u></b> <b><u>2.6 lb)</u></b>  <b><u>Bravo</u></b> <b><u>WeatherStik,</u></b> <b><u>Equus 720 SST,</u></b> <b><u>Initiate 720,</u></b> <b><u>Chloronil 720</u></b> <b><u>(1.375 – 2.75 pt)</u></b>  <b><u>Echo 720</u></b> <b><u>(1.375-3.0 pt)</u></b>  <b><u>Bravo Zn, Echo</u></b> <b><u>Zn, Equus 500 Zn</u></b> <b><u>(2.0-4.0 pt)</u></b>  <b><u>Equus DF</u></b> <b><u>(1.3 – 2.6 lb)</u></b>  <b><u>Echo 90DF</u></b> <b><u>(1.125 - 2.5 lb)</u></b> <b><u>Cabrio EG</u></b> <b><u>(8.0 – 16.0 oz)</u></b>	chlorothalonil	0 days	12 hours	M5	protectant	Foliage protection rates are typically lower than fruit protection rates. See specific product labels for rate ranges. Do not apply more than 15.1 lb of active ingredient per acre per year. Minimum retreatment interval is 7 days.
	pyraclostrobin	0 days	12 hours	11		Make no more than 1.2 lb of active ingredient per acre per year. Make no more than 2 sequential applications on tomato before alternating to a different mode of action fungicide.

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<b><u>Champ WG</u></b> (1.06 lb)	copper hydroxide	0 days	24 hours	M1	protectant	Use high label rates for foliar late blight protection. Minimal interval between treatments is 3 days.
<b><u>Champ Formula 2 Flowable</u></b> (1.33 pt)						
<b><u>Champ DP Dry Prill</u></b> (1.33 – 2.0 lb)						
<b><u>Kentan DF</u></b> (1.32 lb)						
<b><u>Kocide 2000</u></b> (1.5-3.0 lb)						
<b><u>Kocide 3000</u></b> (0.75-1.75 lb)						
<b><u>Nu-Cop 3L</u></b> (1.33-4.0 pt)						
<b><u>Nu-Cop 50DF</u></b> (1.0-3.2 lb, rates depend upon processing/fresh market)						
<b><u>C-O-C-S WDG</u></b> (1.0 lb)	copper oxychloride, basic copper sulfate	0 days	24 hours	M1	protectant	Use high label rates for foliar late blight protection.
<b><u>Cuprofix-Ultra 40 Disperss</u></b> (0.75-3.0 lb)						
<b><u>Mastercop</u></b> (0.5-3.0 pt)	copper sulfate pentahydrate	0 days	24 hours	M1	protectant	Use high label rates for foliar late blight protection.
<b><u>Cueva</u></b> (2 gal in 50-100 gal water/acre)	copper octanoate	0 days	24 hours	M1	protectant	Use high label rates for foliar late blight protection.
<b><u>Curzate 60DF</u></b> (3.2-5.0 oz)	cymoxanil	3 days	12 hours	27	locally systemic	Locally-systemic fungicide. Must be tank-mixed with a protectant fungicide. Rainfast within 2 hours. Excellent curative activity.
<b><u>Dithane F45 Rainshield</u></b> (1.2-2.4 qt)	mancozeb	5 days	24 hours	M3	Protectant	Max rate per acre/season is 16.8 lb a.i. (east of Mississippi River). Latron surfactant addition will improve performance of Dithane F45.
<b><u>Dithane M45</u></b> (1.5-3.0 lb)						
<b><u>Koverall, Roper DF Rainshield, Manzate ProStick</u></b> (0.75-1.5 lb)						
<b><u>Penncozeb 80WP, Penncozeb 75DF</u></b> (0.75 to 3.0 lb)						
<b><u>ManKocide</u></b> (1.0-3.0 lb)	mancozeb + copper hydroxide	5 days	24 hours	M3	protectant	

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<b><u>Evito 480SC,</u></b> <b><u>Aftershock</u></b> <b>(5.7 fl oz)</b>	fluoxastrobin	3 days	12 hours	11	locally systemic	Follow label for resistance management. Make no more than 4 applications per season. Do not apply to fruiting vegetables in the greenhouse.
<b><u>Flint</u></b> <b>(4.0 oz)</b>  <b><u>Gem 500SC</u></b> <b>(3.8 fl oz)</b>	trifloxystrobin	3 days	12 hours	11	locally systemic	Do not make more than 5 applications per acre per season. Do not apply more than 16 oz per acre per season. Tank mix and alternate with broad spectrum base protectants to mitigate resistance development.
<b><u>Forum</u></b> <b>(6 fl oz)</b>	dimethomorph	4 days	12 hours	40	systemic	May be tank-mixed with another effective fungicide for enhanced management. Addition of an adjuvant may enhance management. Do not make more than 5 applications per acre per season. Do not exceed 30 fl oz per acre per season. Good antisporeulant.
<b><u>Gavel 75DF</u></b> <b>(1.5 to 2 lb)</b>	zoxamide+ mancozeb	5 days	48 hours	22+M3	protectant	Do not make >8 applications/crop. Contact fungicide. Excellent in limiting leaf blight.
<b><u>Orondis</u></b> <b><u>(Ultra/Opti)</u></b> <b>(2.0-4.8 fl oz)</b>	oxathiapiprolin	0 days	4 hours	U15	Systemic, trans- laminar movement	Do not exceed 19.2 fl oz/acre/season. Orondis Ultra – includes mandipropamid; Orondis Opti – includes chlorothalonil.
<b><u>Presidio</u></b> <b>(3.0-4.0 fl oz)</b>	fluopicolide	2 days	12 hours	43	locally systemic + translaminar	Must be tank mixed with another effective fungicide with a different mode of action for resistance management.
<b><u>Previcur Flex</u></b> <b>(.7 to 1.5 pt)</b>	propamocarb hydrochloride	5 days	12 hours	28	systemic antisporeulant	Apply in a tank-mix with effective protectant. Excellent at killing spores if used on a field with new and sporulating late blight lesions. Good curative activity.
<b><u>Priaxor</u></b> (8.0 fl oz)	fluxapyroxad+ pyraclostrobin	0 day	12 hours	7+11	protectant + locally systemic	Cannot apply more than 3 applications/season. Follow label for resistance management. Do not mix with other pesticides, nutrients, additives, or adjuvants. Xemium and Headline pre-mix.
<b><u>Quadris, Satori</u></b> <b>(6.2 fl oz)</b>	azoxystrobin	0 day	4 hours	11	locally systemic	Alternate away from Group 11 fungicides to manage resistance. Do not apply more than 37 fl oz per acre per season.

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<b><u>Quadris Opti</u></b> <b>(1.6 pt)</b>	azoxystrobin+ chlorothalonil	0 day	12 hours	11+M5	locally systemic + protectant	Alternate away from Group 11 fungicides to manage resistance.
<b><u>Ranman</u></b> <b>(2.1 to 2.75 fl oz)</b>	cyazofamid	0 days	12 hours	21	protectant	Follow label for resistance management. Do not apply more than 16.5 fl oz per acre per year.
<b><u>Reason 500SC</u></b> <b>(5.5 to 8.2 fl oz)</b>	fenamidone	14 days	12 hours	11	locally systemic	Follow label for resistance management. Make no more than 1 application before alternating to a different effective fungicide of a different mode of action.
<b><u>Revus</u></b> <b>(8 fl oz)</b>	mandipropamid	1 day	12 hours	40	locally systemic	Do not apply more than 32 fl oz per acre per season.
<b><u>Revus Top</u></b> <b>(5.5 to 7 fl oz)</b>	mandipropamid+ difenoconazole	1 day	12 hours	40+3	locally systemic + contact	Addition of an adjuvant is recommended. Do not apply more than 28 fl oz per acre per season.
<b><u>Ridomil Gold SL</u></b> <b>(1.0 pt)</b>	mefenoxam	14 days	48 hours	4	systemic	Do not apply beyond the at-planting stage. Excellent two-way systemic activity when pathogen strain is sensitive (ie: US-23).
<b><u>Ridomil Gold</u></b> <b><u>Bravo SC</u></b> <b>(2.5 pt)</b>	mefenoxam+ chlorothalonil	14 days	48 hours	4+M5	systemic + protectant	Follow label for resistance management. Excellent two-way systemic activity when pathogen strain is sensitive (ie: US-23).
<b><u>Ridomil Gold</u></b> <b><u>Copper</u></b> (varies for fresh market and processing production – see label)	mefenoxam+ copper hydroxide	14 days	48 hours	4+M1	systemic + protectant	Excellent two-way systemic activity when pathogen strain is sensitive (ie: US-23).
<b><u>Ridomil Gold MZ</u></b> <b><u>WG</u></b> (2.5 lb)	mefenoxam+ mancozeb	5 days	48 hours	4+M3	systemic + protectant	Follow label for resistance management. Excellent two-way systemic disease management if late blight strain is sensitive (ie: US-23)
<b><u>Tanos</u></b> <b>(8.0 oz)</b>	cymoxanil + famoxadone	3 days	12 hours	27+11	locally systemic + contact	Must be tank-mixed with an effective protectant fungicide. Good protectant for limiting leaf blight. Excellent curative.
<b><u>Zampro</u></b> <b>(14.0 fl oz)</b>	ametoctradin+ dimethomorph	4 days	12 hours	45+40	systemic + protectant	Do not make more than 2 sequential applications. Follow label for resistance management. Ametoctradin is new a.i.; dimethomorph is Forum (formerly Acrobat). Highly effective late blight treatment in several states in research trials (high rate gave significantly better control). Has curative activity.
<b><u>Zing!</u></b> <b>(36.0 fl oz)</b>	zoxamide+ chlorothalonil	5 days	12 hours	22+M5	protectant	Do not make more than 2 sequential applications before alternating with another fungicide of a different mode of action. Do not make >8 applications or apply >1.6 lb of zoxamide and 9.44 lb of chlorothalonil per season per acre. Excellent protectant with good rainfastness. No curative activity or antisporeulant.