

2011 Tomato Fungicide Roster and Ratings (in order of preference – Best to Poorest) with specific emphasis on Late Blight (LB) (*Phytophthora infestans*), as well as Early Blight (EB) (*Alternaria tomatophila*), and Septoria leaf spot (SLS) (*Septoria lycopersici*). TEP = Tomato, Eggplant, Pepper

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Tomato fungicides (Eggplt. or Pep.)	MOA for LB (Protectant/Curative/Ant isporulant)/Mobility	¹ FRAC Group	² Risk mtg	REI (hrs.)	PHI (day s)	No. applic./ amt/season	³ Usage rate for tomato	⁴ Efficacy			⁵ Special comments & Resistance Mtg. measures
								LB	EB	SLS	
Ridomil Gold Bravo (<i>mefenoxam</i> + <i>chlorothalonil</i>) (T); also RG/MZ or CU	<u>P, C, A/Systemic</u> <i>mefenoxam</i> - effectiveness based upon isolate – i.e. US22 ^{T&P} , 23 ^{T&P}	4 + M5	H ^f for Gp 4; mix = M	48	5	Don't exceed 11.25 lb a.i. /S of chloro.	2.5 pt (rate = 1 lb a.i. chloro.)	++++ US- 22,23	++	++	<i>mefenoxam</i> is effective for US22 and US23, but not for most other isolates of LB; Alternate with different MOA between each spray
*Previcur Flex (<i>propamocarb</i>) add Contact (T,P)	<u>P, C, A/Systemic</u> Good upper movement to stems and leaves	28	L-M	12	5	7.5 pt per season	LB @ 0.7-1.5 pt. + contact	++(+)	++ TM	++ TM	TM with contact fungicide; Suggest alternating diff. MOA with each spray; also GH for Pyth & Phytophthora spp. Damping-off.
*Presidio SC (<i>fluopicolide</i>) add Contact (TEP)	<u>P, C, A/Translaminar/Sys.</u> Preventative; some curative reach-back activity	43	H	12	2+ by TM part ner	4 applic./12 fl oz/season	LB @ 3-4 fl oz + contact	+++	++ TM	++ TM	TM with contact fungicide; no more than 2 consecutive applic. before alternating to diff. MOA; Also for Phytophthora blight.
Revus (<i>mandipropamid</i>) add Contact (TE?P)	<u>P, c, a/ Translaminar</u> Locks into waxy layer (rainfast), then moves through leaf	40	L-M	12	1	4 applic./32 fl oz/season	LB @ 5.5-8 fl oz + contact	++	++ TM	++ TM	TM with contact fungicide; no more than 2 consecutive applic. before alternating to diff. MOA; addition of spreader/adj. recomm.
Revus Top (<i>mandipropamid</i> + <i>difenoconazole</i>) (T)	<u>P, c, a/Translaminar</u> Added broad spectrum component	40 + 3	L-M	12	1	4 applic./28 fl oz/season	LB @ 5.5-7 floc	++	++	++	No more than 2 consecutive applic. before alternating to diff. MOA; See adjuvant recomm.
Ranman 400SC (<i>cyazofamid</i>) add Contact (TEP)	<u>P, -, -/Contact</u> Limited systemic activity	21	H	12	0	6 applic./16.5 fl oz/season	LB @2.1-2.75 fl oz + contact	++	++ TM	++ TM	TM important; No more than 3 consecutive applic., then switch to 3 sprays of diff. MOA; GrHs use for Pythium Damping-off
*Gavel 75DF (<i>zoxamide</i> + <i>mancozeb</i>) (T)	<u>P, -, -/Contact</u> Not sys., vapor activity reported	22 + M3	L-M	48	5	8 applic. or 16 lb/sea.	LB @ 1.5-2 lb	+(+)	++	+(+)	Suggest alternating diff. MOA with each spray.
*Zoxium 80WSP (<i>zoxamide</i>) add Contact (T)	<u>P, -, -/Contact</u> Same as above w/o mancozeb	22	L-M	48	5	8 applic. or 2 lb/season	LB @ 2.5-4.0 oz/A	+(+)	++ TM	+(+) TM	Product alone will only control LB; Do not make more than 2 consecutive applic.
Forum (<i>dimethomorph</i>) add Contact (TEP)	<u>P, c, A/Translaminar</u> Use as preventative	40	L-M	12	4 +	30 oz/season	LB @ 6 oz/A + contact	++	++	++	TM suggestion and addition of spreading/penetrating adjuvant;

											alternate with diff. MOA.
Curzate 60DF (<i>cymoxanil</i>) add Contact (T)	P, C, a/Translaminar	27	L-M	12	3 +	No more than 30 oz /season	LB @ 3.2-5.0 oz/A	+(+)	++	++	TM required; Alternate sprays with fungicide with diff. MOA; Kick back activity is only 2 days if cool and zero if above 80F.
	Short residual, stronger curative properties								TM	TM	
Tanos 50DF (<i>famoxadone</i> + <i>cymoxanil</i>) + Contact (T,P)	P, C, a/Translaminar	11 + 27	M-H	12	3 +	72 oz/season	LB @ 8 oz + contact	++	++	++	See the limitations above for Curzate 60DF ; treat essentially like a preventative spray.
	Needs to be applied before infection occurs							TM	TM	TM	
Strobilurin Fungicides (ex. Quadris F) (TEP)	P, -, a/Translaminar	11	H is used alone	4	0	Limit to 37 fl oz/season	LB @6.2 fl oz; others at 5.0-6.2 fl oz	+(+)	+	++	Res. to Group 11 fungicides exists in NYS; Other Gp.11 = Cabrio ⁰ , Flint ³ , Heritage ^{0(GrHs)} , Reason ¹⁴
	TM with or choose Product better for LB							TM	Res.		
Quadris Opti (azoxy + chloro.)(T)	P, -, -/Translaminar	11 + M5	M	12	0	15.0 lb a.i. of chloro.	LB @1.6 pt/A	+(+)	++	+++	No more than 1 applic. before rotating.
Quadris Top (TEP)	P, -, -/Translaminar	11+3	M	12	0	47 fl oz	8 fl oz	0	+++	+++	No more than 2 consec. sprays.
Catamaran (<i>chlorothalonil</i> + <i>K phosphite</i>) (T)	P, -, -/Contact	M5 + 33	L	12	0	50 pt/A/season	5-7 pt/A	+(+)	++	++	Apply highest rate at shortest interval under severe disease conditions.
	Broad spectrum										
chlorothalonil (ex. Bravo Weather Stik) (TEP); Fung-onil HO	P, -, -/Contact	M5	L	12	0	20 pt (15 lb a.i.) /season	LB @ 1 3/8-2.75 pt	++	++	+++	Good TM partner; Other formulations and generics exist; BravoWS is most complete label.
	Broad spectrum; HO = Homeowner										
mancozeb (ex. *Dithane DF Rain Shield) (T)	P, -, -/Contact	M3	L	24	5	Limit 22.4 lb (16.8 lb a.i./season)	LB @ 0.75-1.5 lb/A	++	++	++	Good TM partner; rate can be adjusted depending on plant; Other formulations exist; see Manzate P-S , or Penncozeb 75DF .
	Broad spectrum – for LB and EB										
Endura (boscalid) (TEP)	P, -, -/Contact	7		12	0	6 applic. (21oz) @ low rate	EB @ 2.5-3.5 oz	0	+	0	Also higher rates for <i>Botrytis</i> ; could be combined with Cabrio for better control of EB and SLS.
Ziram (ex. Ziram 76DF) (ziram) (T)	P, -, -/Contact	M3	L	48	7	Limit to 24 lb/season	EB & SLS @ 3-4lb/A	0	++	++	See also Ziram Granuflo
Scala (<i>pyrimethanil</i>) + Contact (T)	P, -, -/Contact	9	M	12	1	Limit to 35 fl oz/season	EB & Botrytis 7 fl oz	0	++	0	TM with chlorothalonil; Alone can be used in well-ventilated tunnel or GrHs.
	Requires TM with a protectant fungicide							0	TM		
copper (ex. Champ WG, since OMRI also HO) (copper hydroxide) (TEP)	P, -, -/Contact	M1	L	24	0	No limits listed	LB @2-4 lb /A	+	+	+	<u>Other OMRI coppers</u> : Basic copper 53 ; Cueva ; Nu-Cop 50WP ; Many other <u>Conventional coppers</u> avail.
	Broad spectrum, avail. for Organic production and HO= Homeowner										

^{1,2} FRAC = Fungicide Resistance Action Committee Group No. and Risk for fungicide resistance development; ³ Usage rate for LB as range or highest value; ⁴ Foliar blight ratings where 0 = no effect or not labeled; 0(+) = some effect; + = poor; ++ = OK-good; +++ = very good; ++++ = excellent. ⁵ Special comments: **TM** = tank mix with another fungicide for resistance management and control of other diseases like early blight; **MOA** = mode of action means selecting a fungicide from a different Fungicide Group * = Restricted applicator use in NYS per DEC requirements; † = Not for use on Long Island.