

Evaluation of copper and non-copper bactericides for the management of bacterial spot of tomato, fall 2011.

Treatment, rate/A (application) ^z	Bacterial spot severity (%) ^y			AUDPC ^x	Diseased fruit (% of total)	Marketable fruit (lbs/plot)	
	14 Nov	21 Nov	28 Nov			Total	Extra large
MBI-10605, 0.5% v/v (1-7); Nordox 75WG, 1.25 lb (1-7).....	50.0 abc ^w	56.3 cd	91.0 a	701 b-g	1.45	78.0 a-f	46.9
MBI-10605, 0.5% v/v (1-7); Penncozeb 75DF, 1 lb (1-7)	56.3 ab	67.3 abc	88.6 ab	762 a-e	1.51	85.3 a-d	51.8
MBI-10605, 0.5% v/v (1-7); Kocide 3000, 1.75 lb (1-7); Penncozeb 75DF, 1 lb (1-7).....	37.5 cd	67.3 abc	86.3 abc	721 b-f	0.88	81.9 a-e	45.3
Firewall, 16 oz/100 gal (1-7).....	18.5 e	32.8 e	81.5 cd	490 i	1.13	88.4 a	51.7
Heads-up (7d pre-plant), 0.134 oz/gal; Heads-up (weekly), 0.134 oz/gal (1-7).....	43.8 bcd	67.3 abc	86.3 abc	732 a-f	1.94	81.9 a-e	48.3
Actigard, 0.75 oz (1-7).....	37.5 cd	56.3 cd	81.5 cd	646 fgh	0.90	81.2 a-f	81.2
SeaCide, 2% v/v (1-7).....	56.3 ab	76.8 a	91.0 a	820 a	1.57	70.6 f	70.6
SeaCide, 1% v/v (1-7); Kocide 3000, 1.75 lb (1-7); Penncozeb, 1 lb (1-7)	50.0 cde	56.3 cd	88.6 ab	693 c-h	1.13	72.6 ef	42.3
Kasumin 2L, 64 fl oz/100 gal (1-7)	32.8 de	62.5 bcd	86.3 abc	687 d-h	1.85	77.3 b-f	48.6
Kasumin 2L, 64 fl oz/100 gal (1-7); Tactic, 0.125% v/v (1-7).....	28.0 de	50.0 d	83.9 bc	605 h	0.92	85.7 a-d	50.3
Penncozeb, 1.5 lb (1-7); Tactic, 0.125% v/v (1-7).....	56.3 ab	62.5 bcd	88.6 ab	734 a-f	1.05	83.4 a-e	47.1
Kasumin 2L, 64 fl oz/100 gal (1-7); Penncozeb, 1.5 lb (1-7); Tactic, 0.125% v/v (1-7).....	50.0 abc	56.3 cd	83.9 bc	676 e-h	1.92	85.9 a-d	48.0
Kasumin 2L, 64 fl oz/100 gal (1-7); Tactic, 0.125% v/v (1-7); Actigard, 0.75 oz (1-7).....	28.0 de	56.3 cd	76.8 de	613 gh	0.89	73.5 ef	42.8
Kasumin 2L, 64 fl oz/100 gal (1-7); Kocide 3000, 1.5 lb (1-7); Tactic, 0.125% v/v (1-7).....	62.5 a	67.3 abc	91.0 a	781 a-d	0.35	80.4 a-f	47.5
Phyton-27 AG, 40 floz/100gal (1-7)	56.3 ab	67.3 abc	91.0 a	770 a-e	1.43	78.6 a-f	44.8
SynBiont, 24 floz/100gal (1-7); Actigard, 0.75 oz (1-7)	39.0 cd	54.8 cd	74.4 e	616 gh	0.64	76.8 c-f	45.0
Kocide 3000, 1.75 lb (1-7); Penncozeb, 1 lb (1-7).....	50.0 abc	72.0 ab	92.1 a	788 abc	1.33	83.2 a-e	51.5
NAI-5750, 0.426 fl oz/gal (foliar; 1-7).....	56.3 ab	72.0 ab	91.0 a	795 ab	0.63	87.8 ab	49.6
NAI-5750, 2.12 fl oz/gal (foliar; 1-7).....	50.0 abc	62.5 bcd	91.0 a	734 a-f	1.64	87.6 abc	51.2
NAI-5750, 0.426 fl oz/gal (drip; 1-7).....	56.3 ab	62.5 bcd	91.0 a	745 a-e	0.37	76.7 edf	44.4
NAI-5750, 2.12 fl oz/gal (drip; 1-7).....	56.3 ab	62.5 bcd	86.3 abc	728 a-f	0.85	74.4 ef	42.8
NAI-5750, 2.12 fl oz/gal (foliar; 1- 7); Kocide 3000, 1.75 lb (1-7); Penncozeb, 1 lb (1-7).....	43.8 bcd	56.3 cd	88.6 ab	682 e-h	0.36	79.3 a-f	43.4
NAI-5750, 2.12 fl oz/gal (foliar; 1- 7); Firewall, 16 oz/100 gal (1-7).....	18.5 e	28.0 e	81.5 cd	465 i	0.86	87.6 abc	51.1
Non-treated control.....	56.3 ab	67.3 abc	88.6 ab	762 a-e	1.35	80.9 a-f	46.1
<i>P > F</i>	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.6131	0.0320	0.5390

^z Listed treatments were applied on a weekly interval (1-7) at a per acre rate basis unless noted otherwise.

^y The severity of bacterial spot was assessed as the percentage of canopy affected. The Horsfall-Barratt scale was used for all ratings, but values were converted to mid-percentages prior to statistical analyses.

^x Area under the disease progress curve (AUDPC) values were calculated using the formula: $\Sigma[(x_i + x_{i-1})/2](t_i - t_{i-1})$ where x_i is the rating at each evaluation time and $(t_i - t_{i-1})$ is the time between evaluations.

^w Means followed by the same letter are not significantly different according to Fisher's LSD test ($\alpha=0.05$).