Fungicide control of Pear Scab: 2014 field trial

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Materials and Methods

A. Trial layout

Experimental unit	1 tree = 1 plot			
Row and tree spacing	ft (row) and ft (tree)		Plot unit area	200 ft^2
Area/treatment	800 ft^2 or 0.0184 acre/treatment (4 replicate trees = 1 treatment)			
Fungicide applications	A	green tip	13 Mar	100 gallons/acre	1.8 gallons/4 replicates
	B	early bloom	24 Mar	100 gallons/acre	1.8 gallons/4 replicates
	C	full bloom	4 Apr	100 gallons/acre	1.8 gallons/4 replicates
	D	petal fall	10 Apr	125 gallons/acre	2.3 gallons/4 replicates
	E	cover spray	21 Apr	125 gallons/arce	2.3 gallons/4 replicates

B. Trial Map

Pear Scab 2014 Map ● = skipped tree

									OS	BS	●
									LP/HP/K	●	●
								PKS	KS	Y	●
							B	●	HP	PKS	●
						B	YKS	BS	RS	PKD	●
						Y	RB	R	YS	●	YG
					KS	●	LP/HP/K	W	Y	B	●
				O	●	●	OS	O	RS	OS	R
				YS	●	●	YG	●	PKD	O	PKS
		HP	R	BS	●	YS	●	RD	●	KS	YKS
		RD	Y	PKD	●	LP	O	●	YG	LP/HP/K	●
	LP	●	RS	LP/HP/K	RD	●	●	●	R	●	RD
	B	KS	PKS	YG	HP	RS	BS	YS	HP	●	●
●	W	OS	YKS	●	YKS	PKD	W	LP	W	LP	●
1	2	3	4	5	6	7	8	9	10	11	12
ROAD		ROAD		ROAD		ROAD		ROAD		ROAD	

Pear Scab – 2014 Experimental treatments

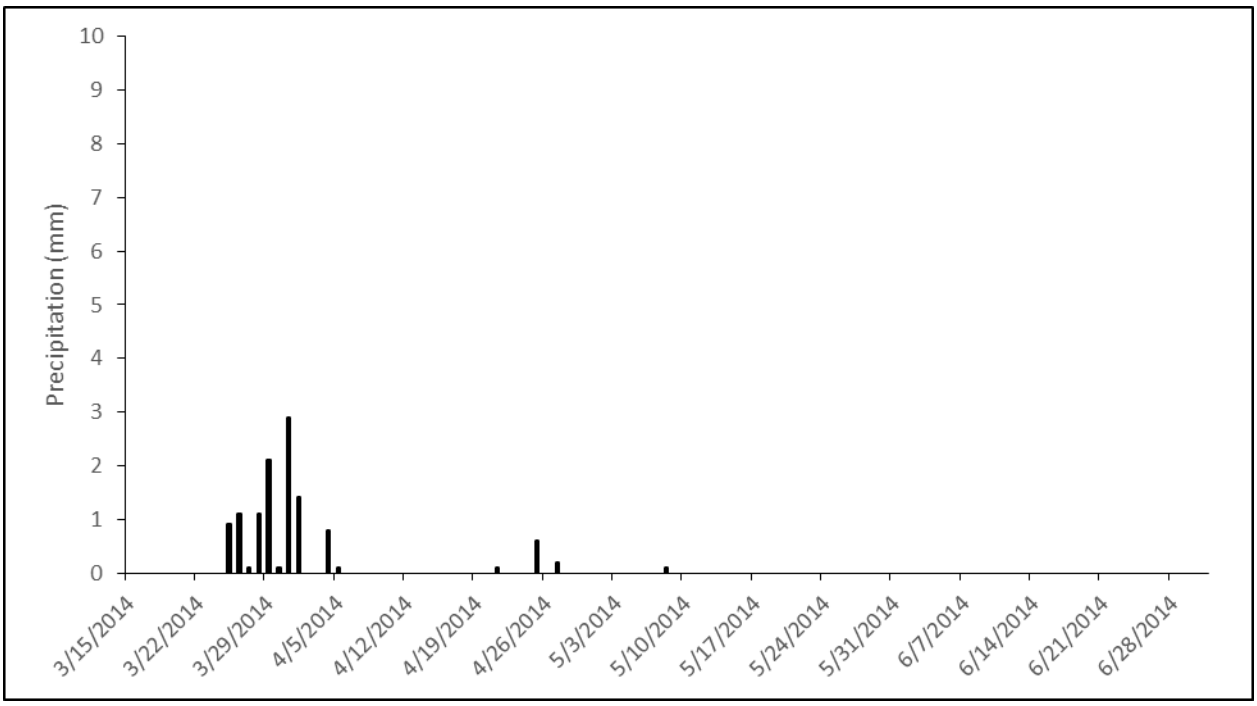
No.	Flag	Product(s)	FP/Acre	FP/Treatment
1	W	Unsprayed control	none	none
2	B	Vangard 75WG then Manzate Pro-stick then A15457 then Inspire super 2.82EW then A15457	5 oz then 96 oz then 6.84 fl oz then 13.7 fl oz then 6.84 fl oz	2.6 g then 50.1 g then 3.7 ml then 7.5 ml then 3.7 ml
3	LP	Vangard 75WG then Manzate Pro-stick then A15457 then Inspire Super 2.82EW then A15457 (2 weeks interval after green tip) (3/13 1.8 gal, 3/27 1.8 gal, 4/10 2.3 gal, 4/24 2.3 gal)	5 oz then 96 oz then 6.84 fl oz then 12 fl oz then 6.84 fl oz	2.6 g then 50.1 g then 3.7 ml then 6.5 ml then 3.7 ml
4	HP	Vangard 75WG then Manzate Pro-stick then A19334 then Inspire Super 2.82EW then A19334	5 oz then 96 oz then 7.04 fl oz then 13.7 fl oz then 7.04 fl oz	2.6 g then 50.1 g then 3.8 ml then 7.5 ml then 3.8 ml
5	RD	ISOFETAMID (4x) then Manzate Pro-stick	12.5 fl oz (4x) then 3 lb	6.8 ml (4x) then 25.0 g
6	KS	ISOFETAMID + IB18111 (4x) then Manzate Pro-stick	6.85 fl oz + 5.57 fl oz (4x) then 3 lb	3.7 ml + 3.0 ml (4x) then 25.0 g
7	OS	ISOFETAMID + IB18111 (4x) then Manzate Pro-stick	6.85 fl oz + 2.97 fl oz (4x) then 3 lb	3.72 ml + 1.61 ml (4x) then 25.0 g
8	YKS	ISOFETAMID + IB18111 (4x) then Manzate Pro-stick	3.43 fl oz + 5.57 fl oz (4x) then 3 lb	1.86 ml + 3.02 ml (4x) then 25.0 g
9	PKS	Sovran	4 oz	2.1 g
10	RS	Syllit (3 apps) then Manzate Pro-stick	3 pt (3x) then 3 lb	26.1 ml (3x) then 25.0 g
11	Y	Syllit (36 hrs eradicant after rain event) (3/27 1.8 gal, 4/3 1.8 gal)	3 pt	26.1 ml
12	R	Tebuconazole	2 oz/100 gal	1.0 g
13	O	Manzate Pro-stick	3 lb	25.0 g
14	YS	Ziram (4x) then Manzate Pro-stick	6 lb then 3 lb	50.0 g then 25.0 g
15	BS	Microthiol (sulfur)	30 lb	250.0 g
16	PKD	Merivon (4x) then Manzate Pro-stick	5 fl oz (4x) then 3 lb	2.7 ml (4x) then 25.0 g
17	LP/HP/K	Topsin-M	16 oz	8.4 g
18	YG	Serenade Optimum	24 oz	12.5 g

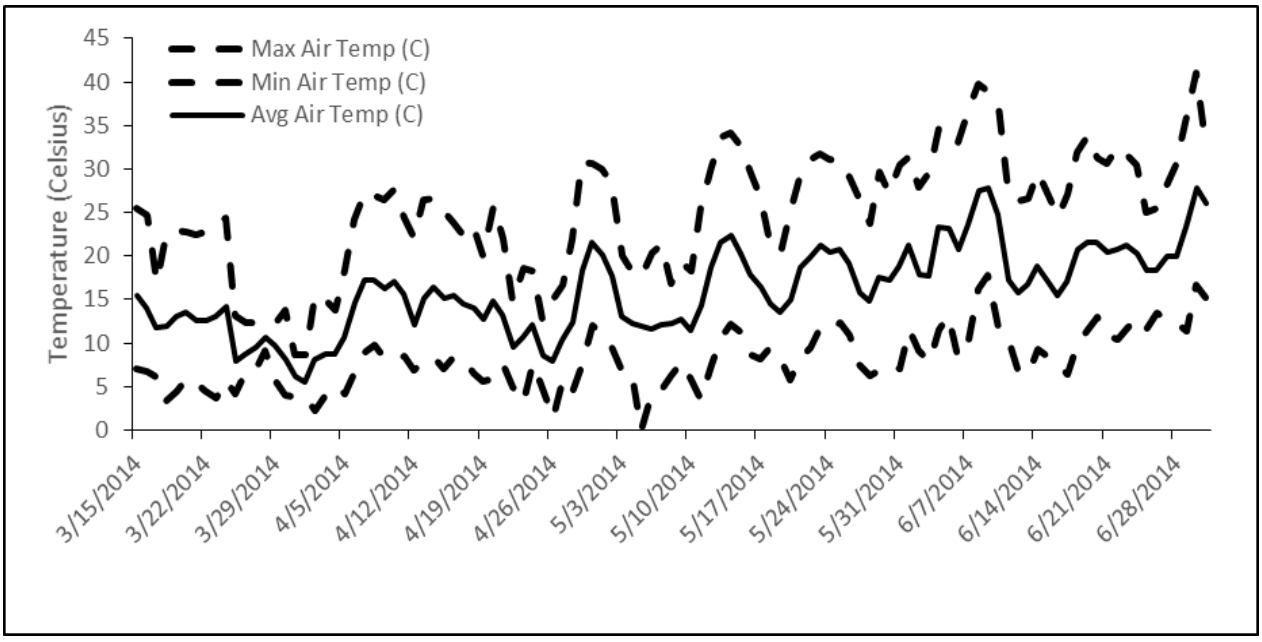
C. Disease and Statistical Analysis

Disease was assessed on June 18 2014 when fruits were large enough to observe scab lesions. No disease was present due to dry conditions.

D. Weather and Disease

Weather for the spray season was dry with 8 rain events (Mar 15 – July 1) of 0.6 – 2.9 mm of rain.





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Appendix: Products tested

Product	Active ingredient(s) and concentration	Class	Manufacturer
A15457	Proprietary	N/A	Proprietary
A19334	Proprietary	N/A	Proprietary
IB18111	Proprietary	N/A	Proprietary
Inspire Super 2.82EW	Cyprodinil (24.1%)/ Difenoconazole (8.4%)	DMI-triazole (3)/ AP (9)	Syngenta
Isofetamid	Proprietary	N/A	Proprietary
Manzate Pro-stick	Mancozeb (75%)	Carbamate	United Phosphorous
Merivon	Fluxopyroxad (21%), Pyraclostrobin (21%)	SDHI (7)/QoI (11)	BASF
Microthiol Disperss	Sulfur (80%)	Inorganic (M2)	United Phosphorous
Serenade Optimum	Bacillus subtilis (26%)	Microbial	Bayer

Sovran	Kresoxim-methyl (50%)	QoI (11)	Cheminova
Syllit	Dodine (40%)	Guanidine (M7)	Agriphar
Tebuzol 45 DF (Elite)	Tebuconazole (45%)	DMI-triazole (3)	United Phosphorous
Topsin-M	Thiphanate-methyl (70%)	MBC (1)	UPI
Vanguard 75WG	Cyprodinil (75%)	AP7 (9)	Syngenta
Ziram 76DF	Ziram (76%) Zinc (16.25%)	Carbamate (DMDC)3 (M3)	UPI

Appendix references: (1) Adaskaveg, et al. 2012. Efficacy and timing of fungicides, bactericides and biologicals for deciduous tree fruit, nut, strawberry, and vine crops 2012, available at http://www.ipm.ucdavis.edu/PDF/PMG/fungicideefficacytiming.pdf.
(2) Gubler Lab fungicide efficacy field trials, available at http://plantpathology.ucdavis.edu/Cooperative_Extension/.
(3) Various sources including product labels and/or MSDS, product websites, and personal communications.