

Fig. 1. Climatic conditions at the trial site in Parlier, Fresno Co. in 2004 and 2005

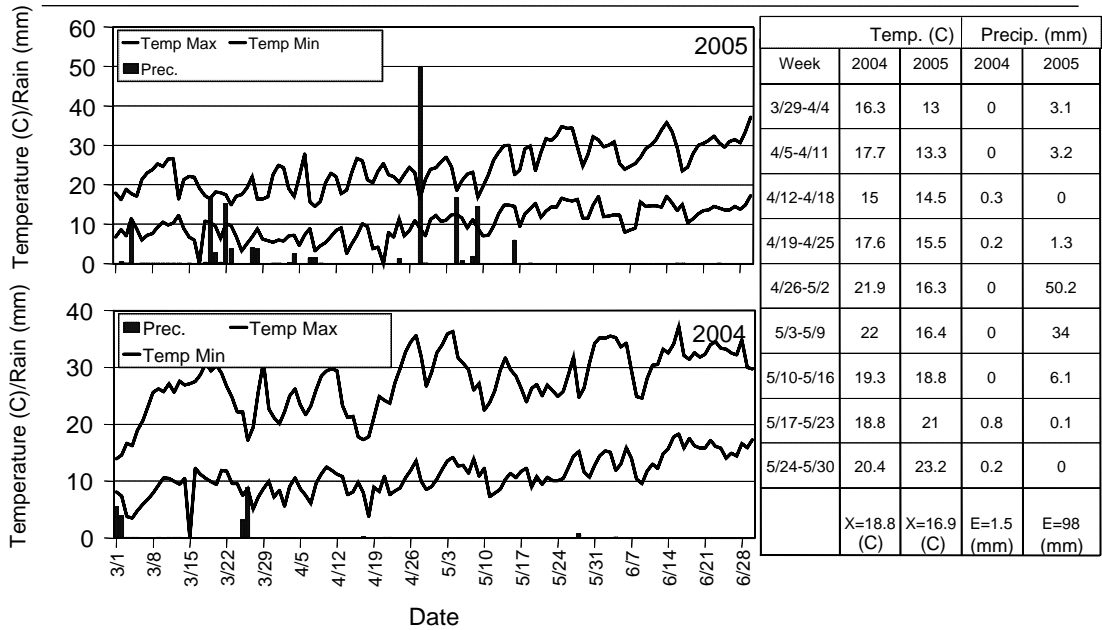


Fig. 2. Climatic conditions at the trial site in Durham, Butte Co. in 2004 and 2005

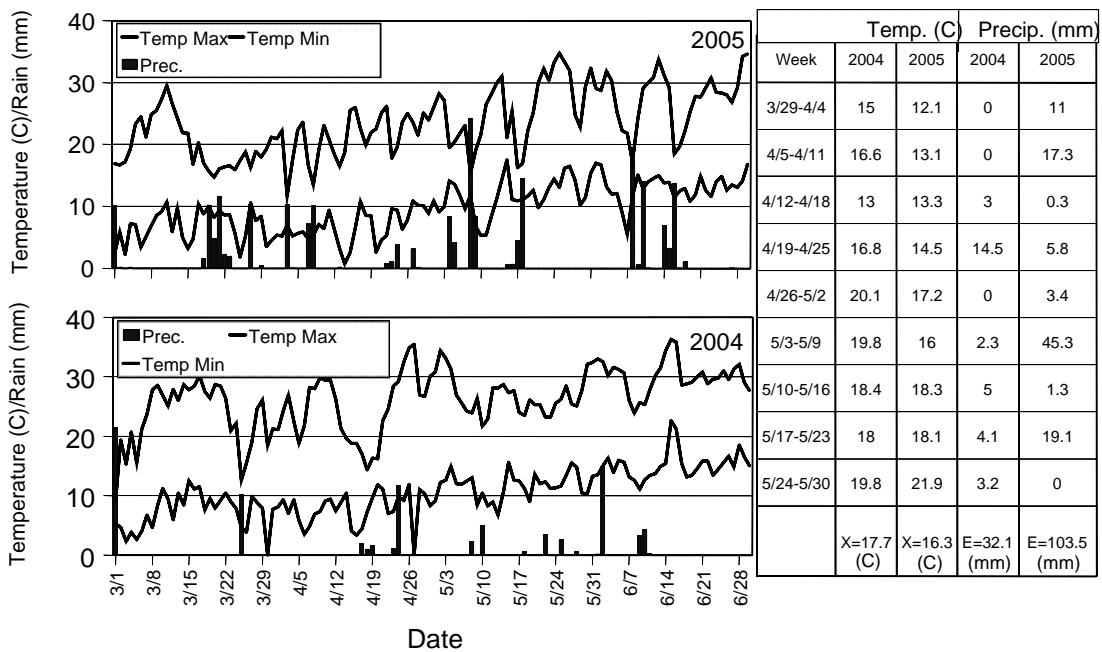
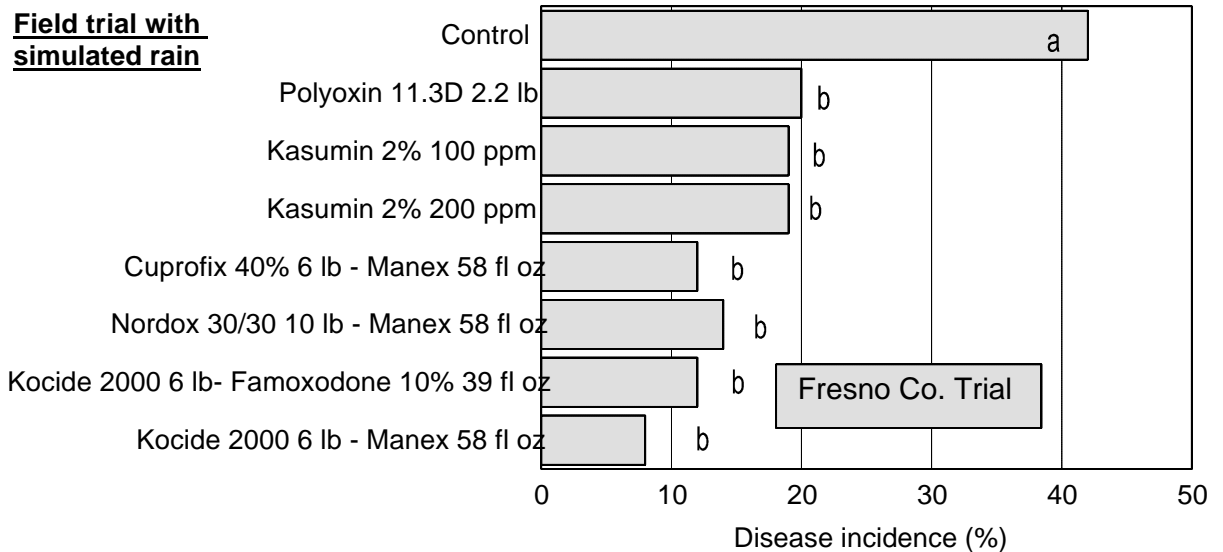
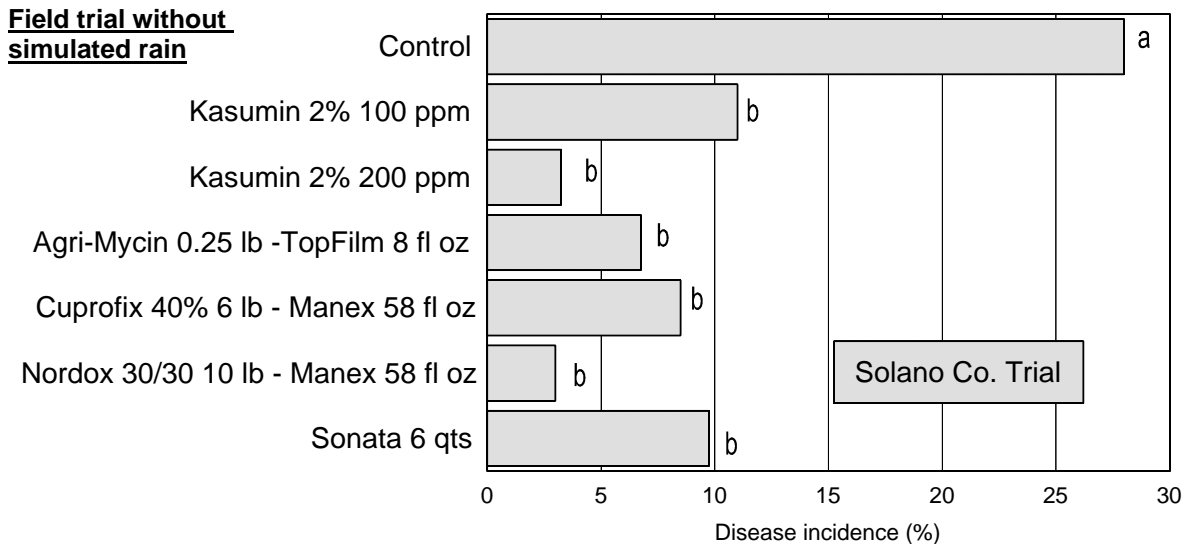


Fig. 3. Efficacy of new bactericides for management of walnut blight on cv. Chico walnuts 2005



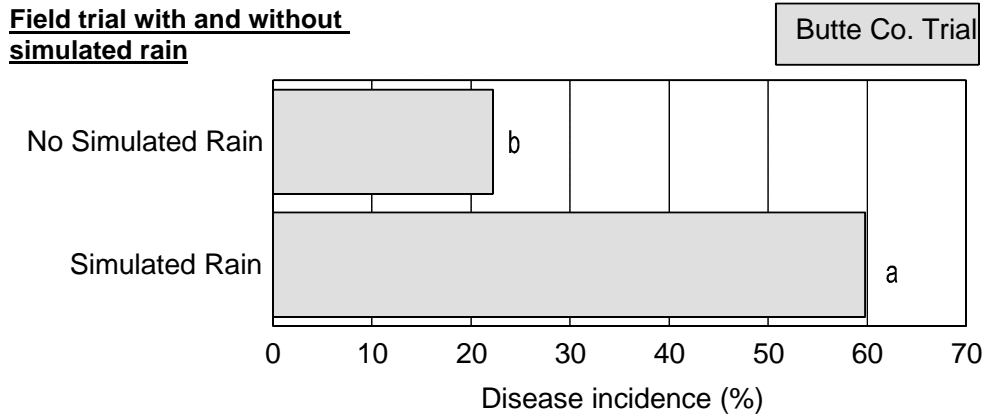
Bactericide applications were done on 3-18, 3-30, 4-6, 4-12, and 4-15-05. Trees were irrigated weekly with high-angle sprinklers for 4-6 h to simulate rain on 3-31, 4-7, 4-14/4-15, 4-22, 4-28, and 5-5-05. Disease was evaluated on 6-10-05. Disease incidence is the number of infected nuts per 50-100 nuts evaluated on each of four double-tree replications. No phytotoxicity was observed in any treatment.

Fig. 4. Efficacy of new bactericides for management of walnut blight on cv. Hartley walnuts 2005



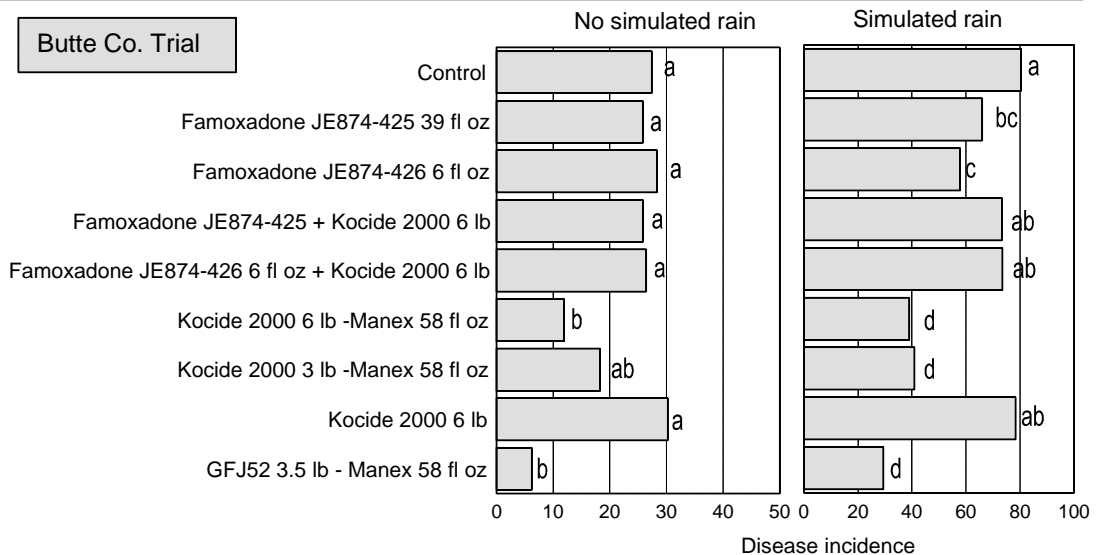
Six treatments were applied weekly from April through mid-May (4/5, 4/13, 4/21, 4/29, 5/10, and 5/17). Disease incidence was evaluated on 5/21 and is the number of infected nuts per 50-100 nuts evaluated on each of four single-tree replications. No phytotoxicity was observed in any treatment.

Fig. 5. Effect of simulated rain on the incidence of walnut blight on cv. Vina walnuts 2005



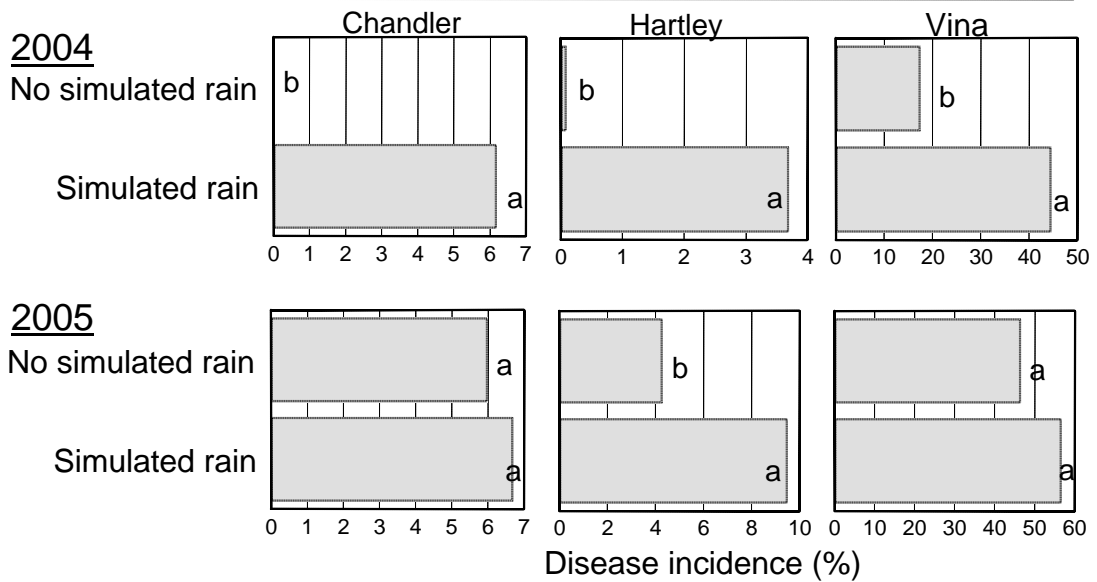
Evaluation of all treatment effects within simulated rain and outside of simulated rain main plots. Data was evaluated as a split-plot analysis of variance. Six treatments were applied weekly from April through mid-May. Disease incidence is the number of infected nuts per 50-100 nuts evaluated on each of four single-tree replications.

Fig. 6. Efficacy of new bactericides for management of walnut blight on cv. Vina walnuts 2005



Six treatments were applied weekly from April through mid-May. Disease incidence is the number of infected nuts per 50-100 nuts evaluated on each of four single-tree replications. No phytotoxicity was observed in any treatment.

Fig. 7. Effect of simulated rain on incidence of walnut blight on three walnut cultivars in Fresno Co.



In 2004, trees were irrigated with high-angle sprinklers for 4 h each on 4-2, 4-8, 4-18, 4-23, 4-29, and 5-7-04. Disease was evaluated on 6-17-04. In 2005, simulated rain applications were done on 3-31, 4-7, 4-14, 4-22, 4-28, and 5-5. Disease was evaluated in early-June. Incidence is the number of infected nuts per 150 nuts evaluated in each of 6-10 single-tree replications.

Fig. 8. Temperature, precipitation, walnut blight disease progress on cv. Vina and Xanthocast indices based on AgVise telemetry data for Durham, Butte Co. 2005

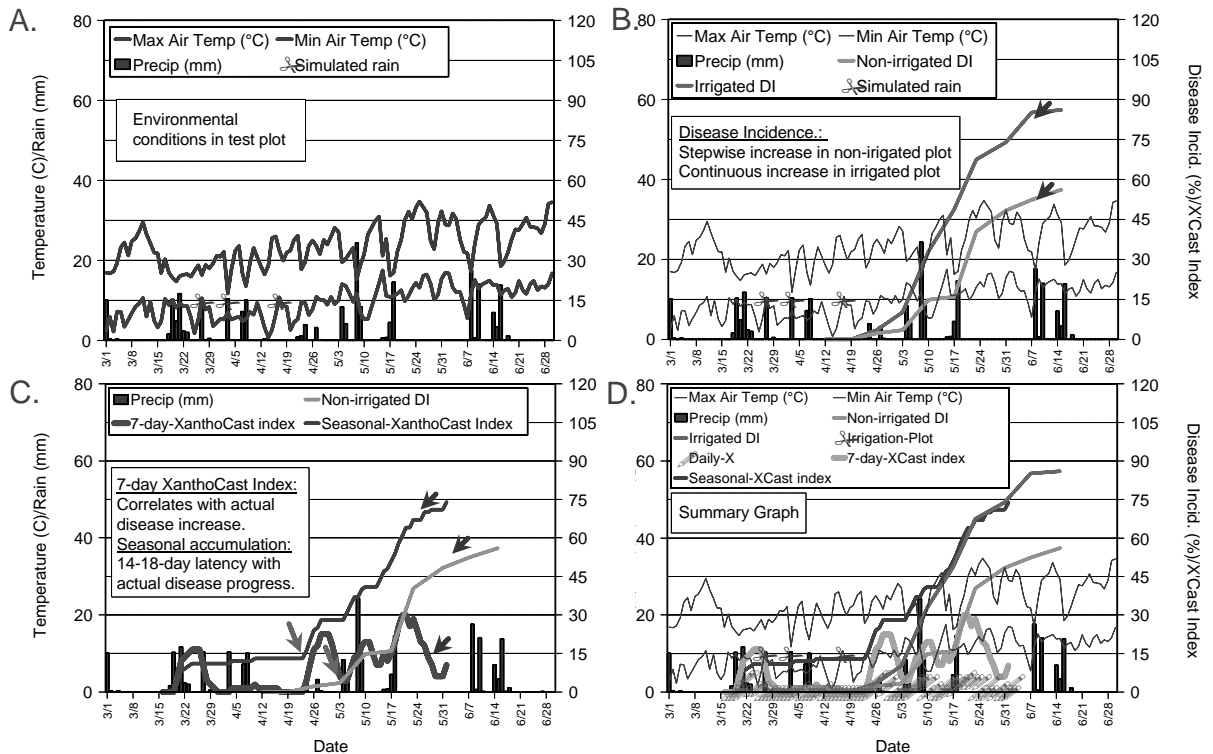
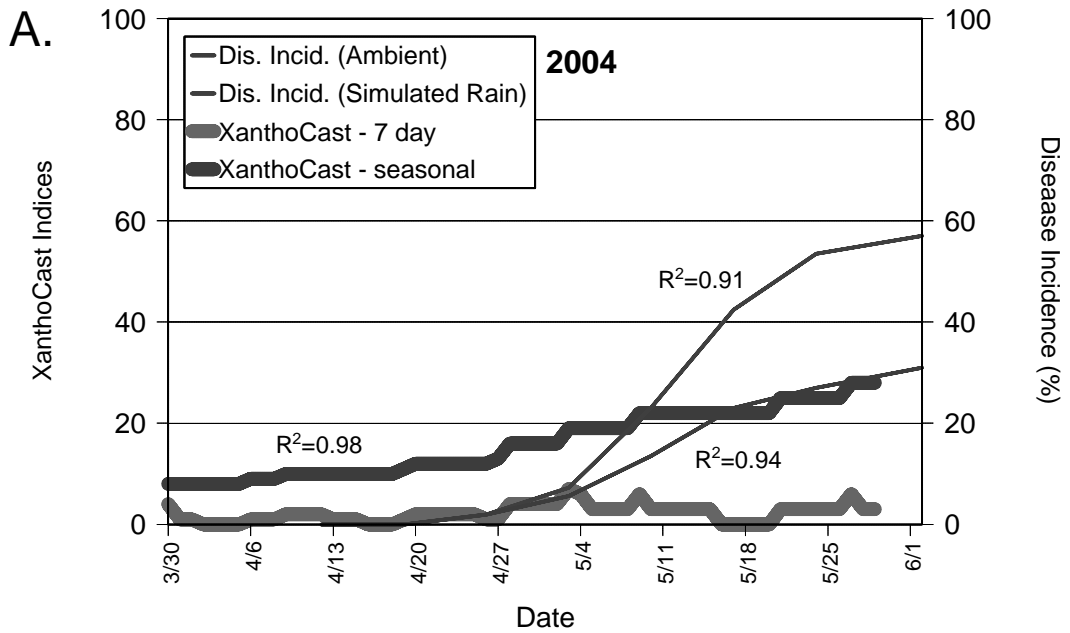
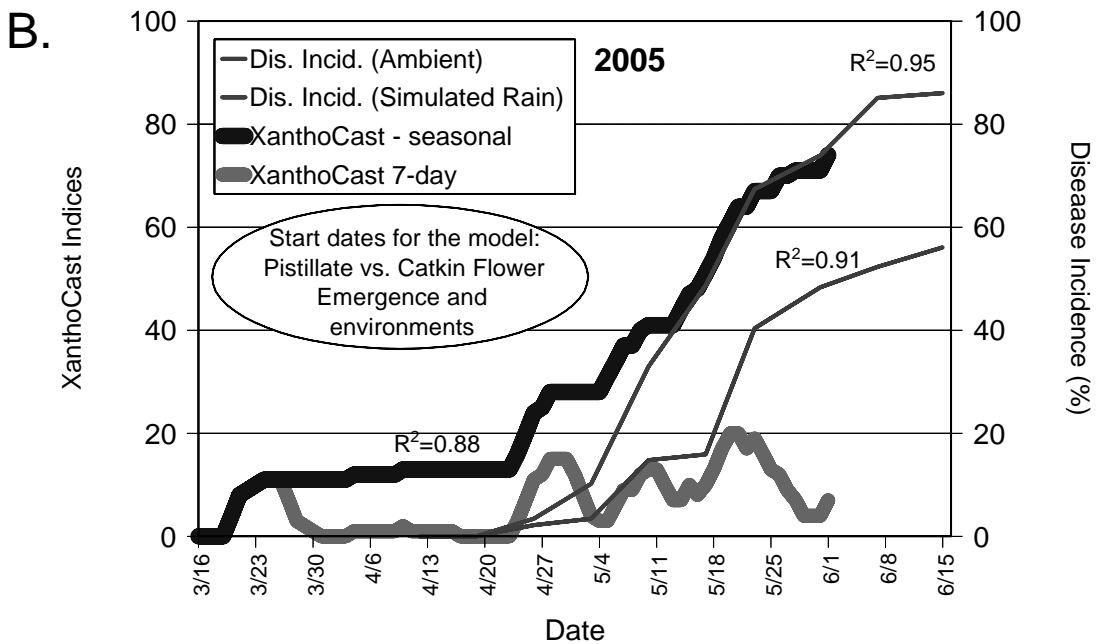


Fig. 9. Comparison of disease incidence and XanthoCast indices in 2004 and 2005

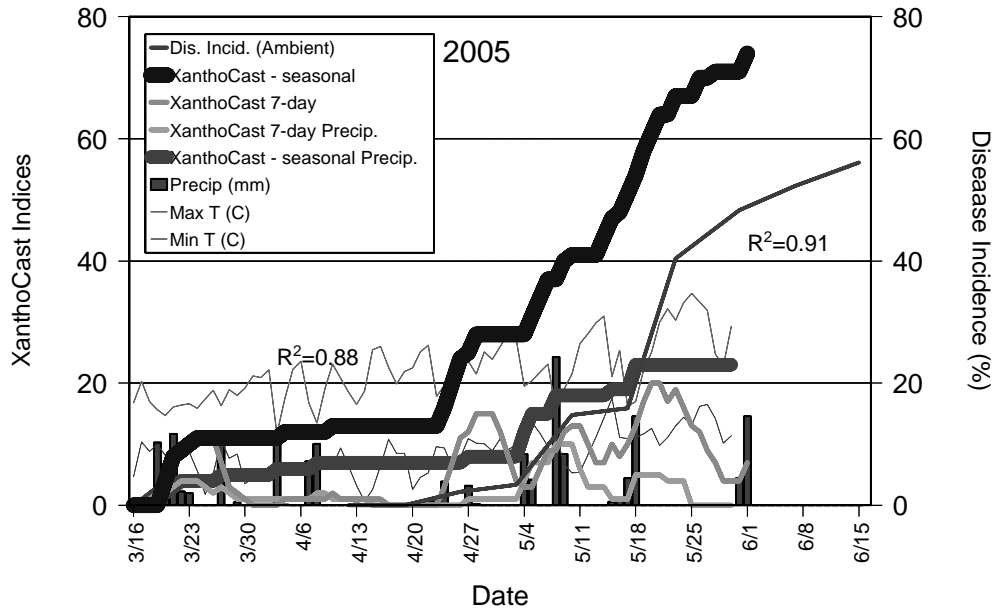


\* - The XanthoCast 7-day and total indices are for the non-simulated rain plot.  
 $R^2$  = Coefficient of determination (relationship of x to y).



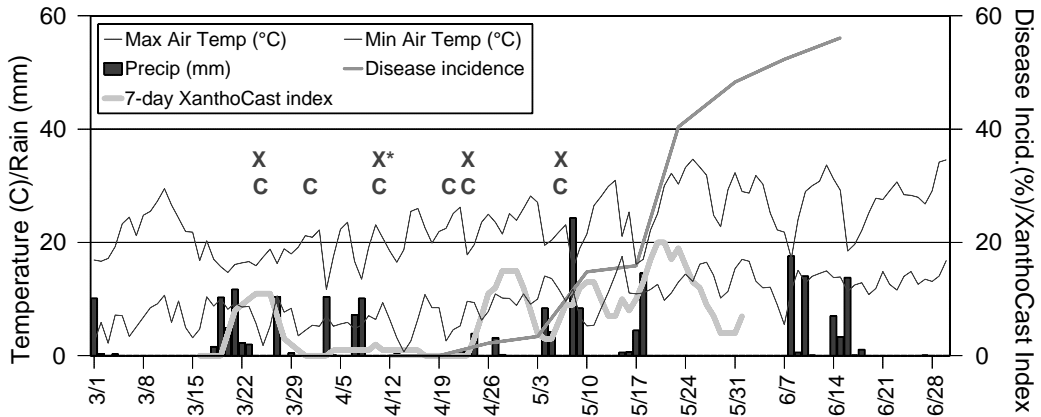
\* - The XanthoCast 7-day and total indices are for the non-simulated rain plot.  
 $R^2$  = Coefficient of determination (relationship of x to y).

Fig. 10. Comparison of XanthoCast calculations based on leaf wetness vs. precipitation



\* - The XanthoCast 7-day and total indices are for the non-simulated rain plot.  
 $R^2$  = Coefficient of determination (relationship of x to y).

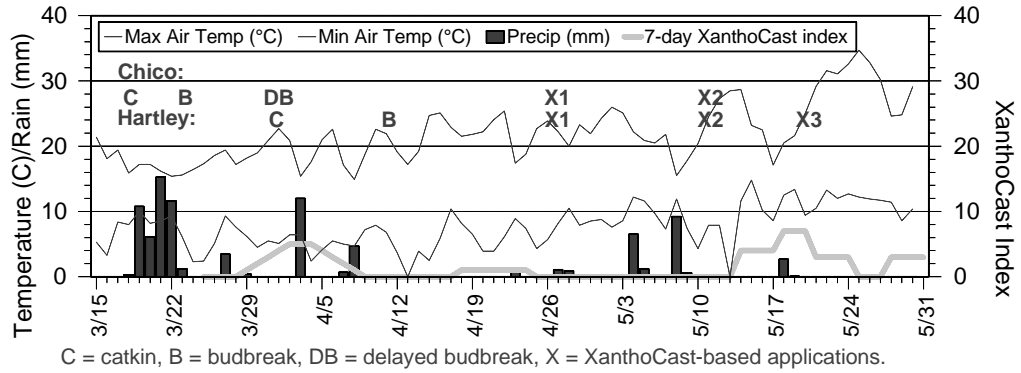
Fig. 11. Evaluation of bactericide application timings on cv. Vina walnut based on calendar dates or on XanthoCast indices - Natural rain conditions - Durham, Butte Co. 2005 -



No.	Treatments (Kocide-Manex)	24-Mar	31-Mar	11-Apr	20-Apr	25-Apr	9-May	Inc (%)	LSD
1	Check	---	---	---	---	---	---	82	a
2	w/ Vaporgard 1% + XanthoCast	@		@		@	@	75.2	a
3	XanthoCast - Season Long	@		@		@	@	59.2	b
4	Calendar	@	@	@	@	@	@	46.3	b

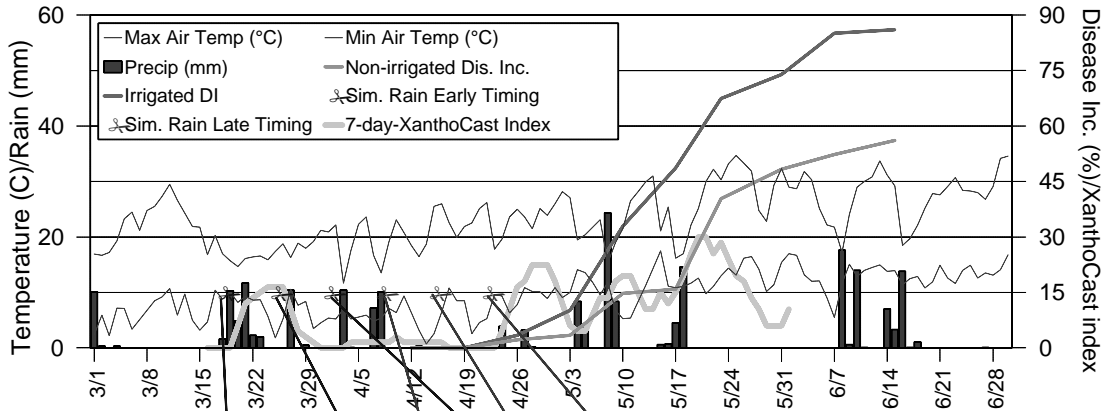
**c = calendar-based application, x = XanthoCast-based application.**  
**x\* = The XanthoCast application on 4/11 was based on the forecasts made on 4/7 (4,1,1,1 - for the 2, 3, 4, and 5 day predictions) and 4/9 (0,0,5,2 - for the 2, 3, 4, and 5 day predictions)**

Fig. 12. Evaluation of bactericide application timings on cvs. Chico and Hartley walnut based on phenology and XanthoCast indices - Natural rain conditions - Solano Co. 2005 -



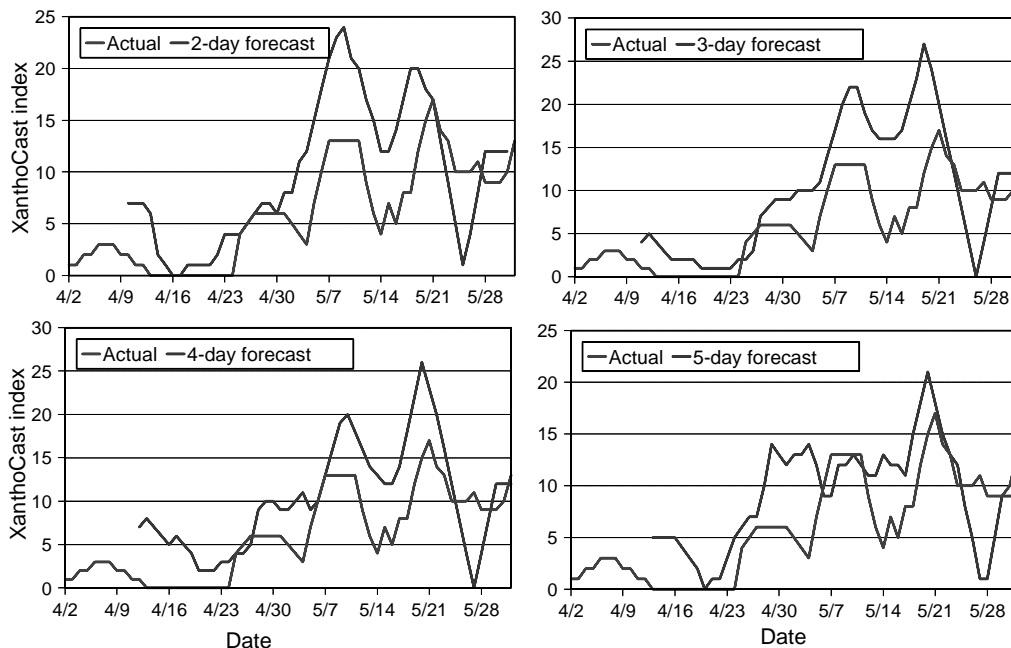
Variety	Treatments (Kocide-Manex)	Catkin 18-Mar	Budbreak 23-Mar	DB 1-Apr	X'Cast 26-Apr	X'Cast 11-May	Inc (%)	LSD
Chico	Control	---	---	---	---	---	23.9	a
	DB+X'Cast	---	---	@	@	@	11.2	b
	C+X'Cast	@	---	---	@	@	8	b
	B+X'Cast	---	@	---	@	@	7.2	b
	C+B+X'Cast	@	@	---	@	@	2	c
Variety	Treatments (Kocide-Manex)	Catkin 1-Apr	Budbreak 11-Apr	X'Cast 26-Apr	X'Cast 11-May	X'Cast 20-May	Inc (%)	LSD
Hartley	Control	---	---	---	---	---	30.9	a
	B	---	@	---	---	---	24.7	b
	C+B	@	@	---	---	---	17.4	bc
	B+X'Cast	---	@	@	@	@	12.4	c

Fig. 13. Evaluation of bactericide application timings in early- and late-season rain environments (simulated rain study) in Butte Co.



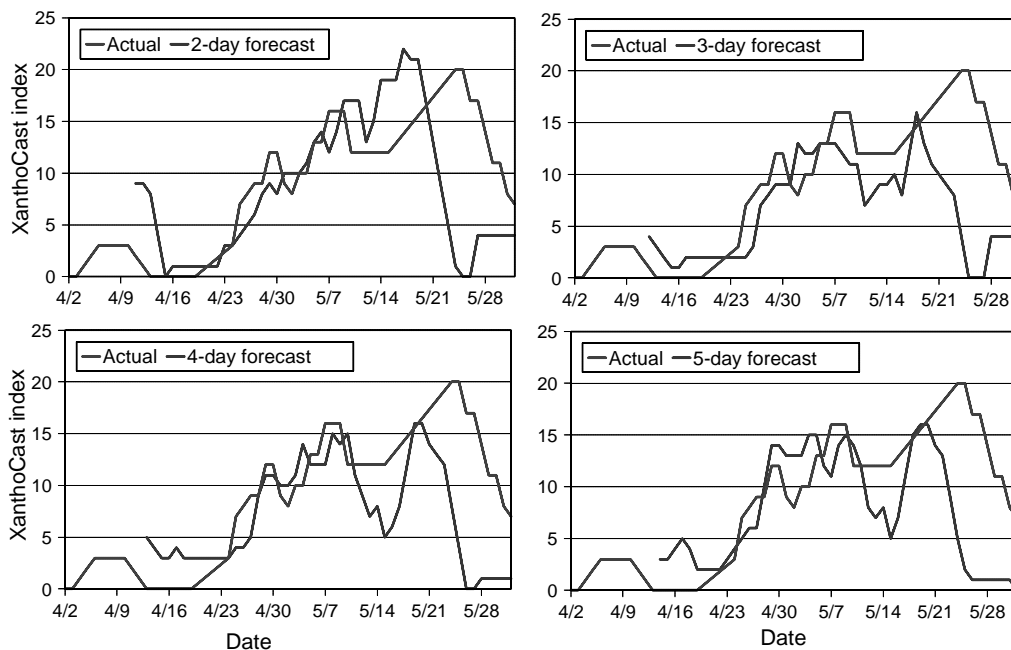
No.	Treatment	Catkin	Irrig.	Term BB (Pistill.)	Irrig.	X'cast	Irrig.	X'cast	Irrig.	X'cast	Irrig.	X'cast	No. applic.	Incidence (%)	LSD
1	Control	---	3/18	---	3/25	---	1-Apr	---	---	---	---	---	0	78.3	a
2	Kocide-Manex	@	3/18	---	3/25	---	1-Apr	---	---	---	---	---	1	73.3	ab
3	Kocide-Manex	---	3/18	@	3/25	---	1-Apr	---	---	---	---	---	1	71.7	ab
4	Kocide-Manex	@	3/18	@	3/25	31-Mar	1-Apr	11-Apr	---	---	---	---	4	74.6	ab
5	Kocide-Manex	---	3/18	@	3/25	@	1-Apr	@	---	---	---	---	3	57.8	b
1	Control	---	---	---	---	---	8-Apr	---	14-Apr	---	22-Apr	---	0	85.6	a
2	Kocide-Manex	@	---	---	---	---	8-Apr	---	14-Apr	---	22-Apr	---	1	76.2	ab
3	Kocide-Manex	---	---	@	---	---	8-Apr	---	14-Apr	---	22-Apr	---	1	72	ab
4	Kocide-Manex	@	---	@	---	6-Apr	8-Apr	11-Apr	14-Apr	20-Apr	22-Apr	9-May	6	75.5	ab
5	Kocide-Manex	---	---	@	---	@	8-Apr	@	14-Apr	@	22-Apr	---	4	60.6	b

Fig. 14. Actual XanthoCast and 2-, 3-, 4-, and 5-day predictions of 7-day indices for Cana Hwy. 2005



\* - The XanthoCast indices are plotted against either 2, 3, 4, or 5 day forecasted values by Fox Weather and shown for actual dates.

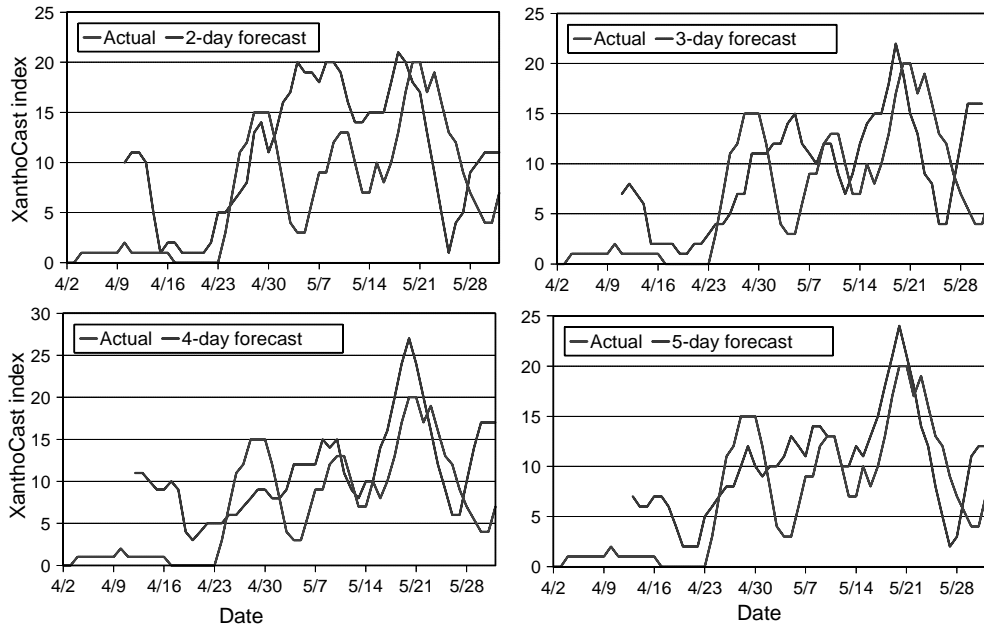
Fig. 15. Actual XanthoCast and 2-, 3-, 4-, and 5-day predictions of 7-day indices for Gerber 2005



\* - The XanthoCast indices are plotted against either 2, 3, 4, or 5 day forecasted values by Fox Weather and shown for actual dates.

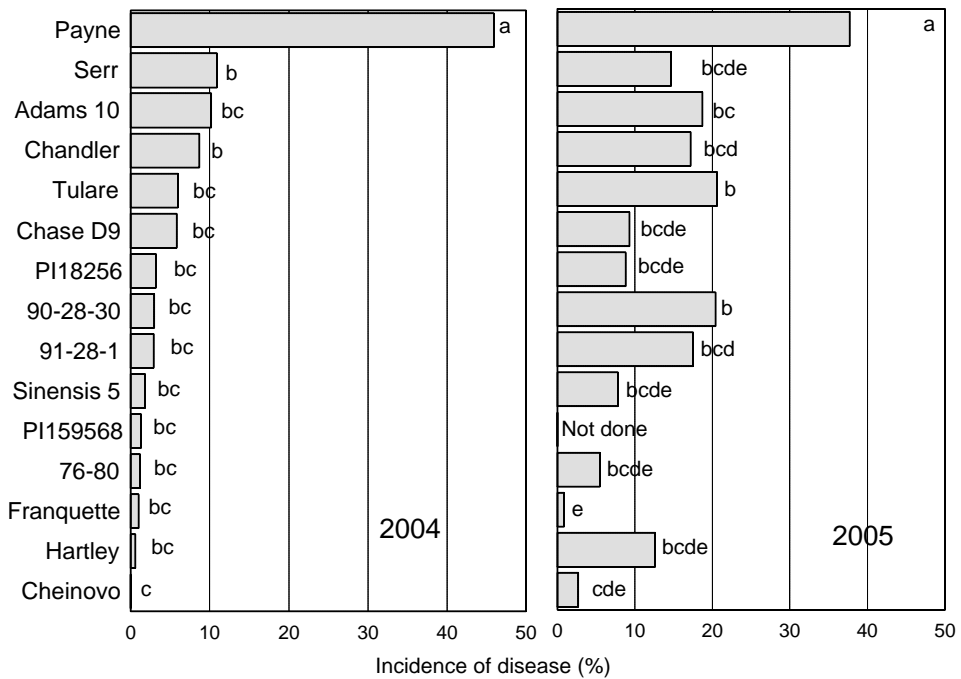


Fig. 16. Actual XanthoCast and 2-, 3-, 4-, and 5-day predictions of 7-day indices for Durham 2005



\* - The XanthoCast indices are plotted against either 2, 3, 4, or 5 day forecasted values by Fox Weather and shown for actual dates.

Fig. 17. Evaluation of walnut genotypes for natural host resistance against walnut blight in a simulated-rain field trial in Fresno Co.



Trees were irrigated weekly with high-angle sprinklers for 4 h. Disease was evaluated on 6-10-05. Disease incidence is the number of infected nuts per 50-100 nuts evaluated on each of four double-tree replications.