Summary of Cherry and Peach Trials for Control of Brown Rot Blossom Blight from 1989 to 2004.

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Frequent spring rains during bloom encourage the development of brown rot blossom blight (*Monilinia fructicola* and *M. laxa)* on many different *Prunus* sp. in the Willamette Valley of Oregon. Brown rot is an annual problem in the cherry and peach blocks located at OSU's Botany and Plant Pathology Field Laboratory which is located across the Willamette River from Corvallis, OR. The objective of this report is to summarize, in a simple way, the various cherry and peach brown rot blossom blight trials conducted from 1989 to 2004.

Trials were conducted on cherry 'Royal Ann' or 'Black Republican' and/or peach 'Elberta' or 'Red Haven'. Results have been averaged across cultivars but cherry data was separated from peach data. All materials were generally deployed at popcorn (or pink bud), full bloom and petal fall.

Several synthetic (Tables 1), organic and biological (Table 2) products have been evaluated. The number of times a product or program has been evaluated is indicated by the "number of trials" column. Some were tested only once while others were tested for multiple years. The more times a product is evaluated (or the higher the number of trials) the more confidence one can have in the summary statistic presented.

Trial results are summarized relative to the nontreated control and expressed on a percentage basis. For example, if the nontreated control had 20% blossom blight and a certain treatment had 1% blossom blight then the percent control would be calculated as (1 - (1/20)) x 100 = 95% control. It should be noted that this approach does not focus on rates, timing, weather or other factors highly important for interpretation of the data. Unfortunately, there are no statistical comparisons possible between any of these materials given the way this data was summarized. It is not possible to say that 75% control is significantly different from 63% control.

Overall, it appears that no one group of chemistry can be expected to result in consistent control of brown rot blossom blight. The strobilurine (QoI) group appears to result in good to excellent control, however, more testing of these products is necessary for more firm conclusions. It is interesting to note that the average control for cherry was generally better than for peach (with a few exceptions) when the same chemical was evaluated (Tables 1 and 2).

It is not recommended to use any single material for all applications to control brown rot. There are a wide variety of effective fungicides that a stone fruit grower could use such that one could use a different chemical from a different chemical class for every application. An example of such a program was to use Captan tank mixed with Benlate at popcorn, Indar at full bloom and Bravo at petal fall. Many different combinations were used over the years of this summary but overall the recommendation to rotate materials appears to provide good control of brown rot blossom blight.

Table 3 shows summary data for 1994 to 1997 for seaweeds and conventional fungicides. While disease control with conventional fungicides is good and consistent between years, disease control for seaweed was much more variable.

Table 1. Synthetic materials used alone or in rotation*.

Material	**Cherry**		**Peach**	
	# of Trials	**% Control of Brown Rot Blossom Blight**	**# of Trials**	**% Control of Brown Rot Blossom Blight**
Benlate	1	99	0	--
Botan	0	--	1	83
Bravo	10	75	6	63
Captan	8	60	9	38
Thiram	0	--	5	78
Ziram	0	--	5	80
Ronilan	0	--	7	75
Rovral	7	70	4	82
Vangard	4	89	1	74
Elite	5	77	0	--
Funginex	2	58	3	82
Indar	10	93	2	76
Orbit	2	99	2	76
Procure	6	94	0	--
Rally 40 W	5	76	3	73
Rubigan	2	71	0	--
Abound	7	96	6	96
Cabrio	2	81	0	--
Flint	1	91	0	--
Pristine	2	96	0	--
Rotation*	12	89	10	81

* The rotation program used a combination of tank mixes and alternations that included a different chemical from a different chemical class for every application. An example of such a program was to use Captan + Benlate at popcorn, Indar at full bloom and Bravo at petal fall. Many different combinations were used over the years of this summary.

Table 2. Organic and biological materials tested.

Material	**Cherry**		**Peach**	
	# of Trials	**% Control of Brown Rot Blossom Blight**	**# of Trials**	**% Control of Brown Rot Blossom Blight**
Water alone	1	21	0	--
Sulfur	6	74	2	53
Kocide	1	81*	0	--
M-Pede (soap)	2	80	1	83
Neem Oil	1	38	0	--
Seaweed	9	50	3	19
Compost Tea (plant based)	1	45	0	--

*Some phytotoxicity was observed on cherry fruit.

Table 3. Seaweed and conventional fungicides for control of brown rot blossom blight on cherry from 1994 to 1997.

Material	**% Control of Brown Rot Blossom Blight**			
	1994	**1995**	**1996**	**1997**
Seaweed	89**	53*	59*	13
Conventional fungicides	100**	95**	96**	97**

* Significantly different from the nontreated control and conventional fungicides.
** Significantly different from the nontreated control.