

## EVALUATION OF FLINT AND ELITE FOR BROWN ROT CONTROL ON PEACH

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This test was conducted to evaluate fungicides targeted for use in the preharvest period for control of brown rot. The fungicides Elite and Flint were evaluated at various rates individually, and as tank-mix partners. Results showed no differences in brown rot control among the treatments though all were more effective than the unsprayed control treatment. These fungicides did not appear to have a beneficial effect in controlling Rhizopus rot, another postharvest disease of peaches.

The experiment was conducted on a block of 'Harvester' peach trees at the Chilton Research and Extension Center in Clanton, Alabama. The experiment consisted of eight treatments, replicated five times, in a randomized complete block design. Treatments consisted of preharvest spray programs that compared Elite, Flint, or tank mixes of the two products in various combinations. All trees were maintained during the bloom and cover period following commercial production practices typical for the area. All trees were sprayed with Captan 50 WP at 5 pounds per acre on March 13, and with Captan 50 WP 3 pounds per acre plus sulfur 80% at 5.5 pounds per acre on March 22, April 2, April 6, April 20, May 4, and May 14. Preharvest treatments were applied on June 4, June 7, June 11, and June 13. The station superintendent decided on the closely spaced application schedule, which he felt was necessary as he suspected the fungicides did not have a sufficient time to dry on the fruit before heavy rains prevailed shortly after the fungicides were applied.

No symptoms of brown rot or any signs of phytotoxicity were observed on trees one day prior to the first harvest date. A total of 40 fruit per plot was sub-sampled at harvest (June 14) and stored in trays at approximately 75°F for eight days. Percent fruit with brown rot and Rhizopus rot was determined four and eight days after the first harvest date.

A second harvest was conducted on June 18, five days after the last fungicide application. A total of 20 fruit per plot were sub-sampled on the second harvest date and stored in trays at approximately 75°F for four days. Percent of fruit with brown rot and Rhizopus rot was determined four days after the second harvest (June 22), which was nine days after the final fungicide application. Yield in pounds of marketable fruit was determined.

All the fungicide treatments had significantly less brown rot than the unsprayed control at both four and eight days postharvest (with the last fungicide application one day prior to harvest) (Table 1). There were no significant differences in Rhizopus rot among the treatments at either rating period.

All the fungicide treatments had significantly less brown rot than the unsprayed control four days postharvest (with the last fungicide application five days prior to harvest) (Table 2). There were no significant differences in Rhizopus rot among the treatments.

The Flint 50 WG treatment at 3 ounces per acre had the highest yield, significantly higher than the two lower rates of Elite treatments. In general, yields were highest in the Flint-only treatments followed by the Flint/Elite tank-mix treatments and the Elite-only treatments.

**TABLE 1. PERCENT BROWN ROT AND RHIZOPUS ROT FOUR AND EIGHT DAYS POSTHARVEST<sup>1</sup>**

Treatment	Rate/acre	-Four days postharvest-		-Eight days postharvest-	
		Brown rot (%)	Rhizopus (%)	Brown rot (%)	Rhizopus (%)
Unsprayed control	—	5.0 a <sup>2</sup>	1.5 a	20.5 a	8.5 a
ELITE 45 WG w/t Induce 0.06%	5 oz	0.0 b	0.5 a	0.0 b	9.5 a
ELITE 45 WG w/t Induce 0.06%	6 oz	0.0 b	0.5 a	0.0 b	10.0 a
ELITE 45 WG w/t Induce 0.06%	8 oz	0.0 b	1.0 a	0.0 b	9.5 a
FLINT 50 WG	2 oz	0.0 b	0.6 a	0.0 b	8.7 a
FLINT 50 WG	3 oz	1.5 b	1.5 a	1.5 b	9.5 a
ELITE 45 WG +	2.9 oz	0.0 b	0.0 a	0.0 b	3.0 a
FLINT 50 WG	2.6 oz				
ELITE 45 WG +	3.5 oz	0.5 b	1.5 a	0.0 b	11.0 a
FLINT 50 WG	3.1 oz				

<sup>1</sup> The last fungicide application was one day prior to harvest, 2001.

<sup>2</sup> Numbers followed by the same letter are not significantly different.

**TABLE 2. PERCENT BROWN ROT AND RHIZOPUS ROT FOUR DAYS POSTHARVEST<sup>1</sup>**

Treatment	Rate/acre	-Four days postharvest-		Yield (lbs/plot)
		Brown rot (%)	Rhizopus (%)	
Unsprayed control	—	22.0 a <sup>2</sup>	8.0 a	141.4 ab
ELITE 45 WG w/t Induce 0.06%	5 oz	0.0 b	3.6 ab	129.5 b
ELITE 45 WG w/t Induce 0.06%	6 oz	0.0 b	5.0 ab	119.2 b
ELITE 45 WG w/t Induce 0.06%	8 oz	0.0 b	0.0 b	140.1 ab
FLINT 50 WG	2 oz	0.0 b	2.2 ab	168.7 ab
FLINT 50 WG	3 oz	0.0 b	5.7 ab	205.1 a
ELITE 45 WG +	2.9 oz	0.0 b	1.3 ab	162.0 ab
FLINT 50 WG	2.6 oz			
ELITE 45 WG +	3.5 oz	0.0 b	2.5 ab	181.5 ab
FLINT 50 WG	3.1 oz			

<sup>1</sup> The last fungicide application was five days prior to harvest, 2001.

<sup>2</sup> Numbers followed the same letter are not significantly different.