Deciduous Orchard Diseases
Chemical Control
Erwinia amylovora on Pear

Sherman V. Thomson
Dept. of Biology
Utah State University
Logan, UT 84322-5305

CONTROL OF BLOSSOM BLIGHT WITH BACTERICIDES. Trials were conducted at the USU Kaysville Fruit Research Farm, Kaysville, UT and in a private orchard at Perry, UT. Trees were 15 and 18 yrs old respectively but were only about 12 ft tall due to the lack of nitrogen fertilization by the growers in an effort to inhibit fire blight. Bactericides were applied to drip (20 Apr) with a hand-pumped Solo backpack sprayer at 25 psi to entire trees in 100% bloom. Trees were inoculated with a John Bean hand-gun sprayer operated at 150 psi 24 hr later (21 Apr) using an aqueous suspension containing $1x10^7$ viable *E. amylovora* cells/ml. Blossom washes revealed $3x10^5$ and $1x10^5$ viable *E. amylovora* cells/flower immediately after inoculation in Kaysville and Perry respectively. The weather was optimum for fire blight infection on the day of inoculation with a mean temperature of 62F and .03 in of precipitation at Perry and 62F with no precipitation at Kaysville. The daily mean temperature was near 55F in both orchards for the week following inoculation with no precipitation. Symptoms were first noted on 1 May at Perry and 2 May at Kaysville. Plots were single trees replicated three times in a randomized complete block design. The number of strikes on the south half of treated trees was counted on 26 May at Kaysville and the number of strikes in 3 one-M^2 areas/tree were counted and totaled on 22 May at Perry.

None of the bactericides provided satisfactory control of fire blight. The high level of inoculum and the ideal environment for fire blight development precluded adequate control even with Agri-mycin. However the Agri-mycin (Perry site) and Aliette treatments had significantly fewer strikes than the check or Tecloftalam plots.

Effect of bactericides for control of Fire Blight

Treatment and rate/100 gal	Strikes Kaysville*	Strikes Perry**
Aliette 80W 4.0	48 a	39 a
Agri-mycin 17W 0.5	46 ab	41 a
Aliette 80W 2.0	66 ab	
Tecloftalam 10W 0.83	89 b	102 b
Check	88 b	105 b

* Number of strikes on south half of treated trees.
**Number of strikes in three one-M^2 areas.

Values are averages of three replications. Means followed by the same letter are not significantly different according to DMRT, P=0.05.