

8. Tree Fruit Diseases  
 c. Biological Control  
 1. Fireblight, frost and russet, Bartlett pears

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### REDUCTION OF FIREBLIGHT, FROST AND RUSSET USING FROSTBAN B® (A506)

The antagonistic bacteria A506 was registered for use in pears in January, 1995 (Frostban B®, Plant Health Technologies, Inc.; Boise, ID). To demonstrate efficacy on a large scale basis, a trial was conducted in a 13-acre block of Bartlett pears in Lake County, California. Treatments were applied by air-blast sprayer to .90 or 1.4 acre plots. They included: 100% antibiotic frequency plus 3.7 applications A506, 100% antibiotic frequency, 50% antibiotic frequency (every other spray) plus A506 and 50% antibiotic frequency alone. Due to extremely severe blight risk in 1994, coupled with the large number of holdovers in the block, untreated controls were omitted. A506 #1 and #2 were applied March 27 (20% bloom) and April 3 (90% bloom). In addition, antibiotic applications to the entire block on April 4, April 6 and April 9. On April 14, following full bloom, differential treatments began. From April 15-June 3, 13 additional antibiotic treatments were made in the 100% program plots, while the 50% plots received 7 applications. A506 #3 was applied April 16 and a 2/3 dose on May 8 to cover the rattach period.

Results are given in Tables 1 and 2. In the heaviest fireblight year in Lake County history, A506 enhanced control using antibiotics and also allowed significant reduction in the number of antibiotic treatments. Both frost and russet were also reduced.

Treatment	Infections/Acre
50% Antibiotic Frequency	30.66 a
50% Antibiotic Frequency + A506	10.19 b
100% Antibiotic Frequency	9.75 b
100% Antibiotic Frequency + A506	2.42 b

Treatment	Russet (% of Surface)	Frost Damage (% of fruit)
50% Antibiotics + No A506	2.62 a	26.1 a
100% Antibiotics + No A506	2.39 a	20.0 a
100% Antibiotics + A506	1.37 b	7.3 b
50% Antibiotics + A506	1.22 b	8.0 b