

Deciduous Orchard Diseases—Thresholds, Monitoring and Sampling

A Degree Hour Method for Estimating Growth Rate of *Erwinia amylovora* in Pear and Apple Flowers and Subsequent Relative Risk of Fire Blight

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Fire blight outbreaks are relatively rare in pears and apples grown in northcentral Washington. All common fire blight risk models are over-predictive so tend to be ignored by fruit growers. Temperatures that occurred prior to isolated outbreaks over the past three years were analyzed. A simple degree hour based method for estimating relative growth rate of *Erwinia amylovora* in blossoms was developed. Degree hours over a 15.5°C (60°F) base are totaled for the four days preceding a blossom wetting event. Infection risk and severity increase when degree hour totals exceed 260 C degree hours (400 F degree hours). No blossom infection has been apparent when flowers were wetted when degree hour totals were below 240 C (350 F). The model and experience with its practical use will be presented.