Thresholds/Monitoring Sampling

SAMPLING AND CONTROL OF GRAPE MEALYBUG IN TABLE GRAPES

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In conjunction with insecticide trials aimed at managing grape mealybug in table grapes, a sampling procedure is being developed to determine both how effective dormant treatments are at controlling mealybug and predicting the severity of damage at harvest. The procedure involves searching the basal area of two spurs on each of two vines. Each spur is searched for two minutes during late May or June. The number of mealybugs or egg sacs are counted and this figure is then related to cluster infestation at harvest. Harvest evaluation of clusters is based on sampling 5 to 10 clusters per vine which are in contact with the wood. This procedure was followed in 1997 and 1998. The insecticide trial allowed for a range of mealybug populations on the vines. In 1997 six insecticide treatments were replicated four times in five vine plots. In May two spurs on each of the two end vines were counted for mealybugs. In August five bunches touching the wood on each of three vines were evaluated for infestation. Any sign of mealybugs present classed the bunch as being infested. In 1998 seven insecticide treatments were replicated five times in five vine plots. In June two spurs from each of two vines were examined for mealybugs. At harvest ten bunches from each of three vines were evaluated for infestation using the criteria established in 1997.

A simple regression analysis was performed (Statview 5) using mealybugs per spur as the independent variable and number of infested bunches as the dependent variable. The 1997 analysis resulted in an r value of .967 ($P<0.01$). The 1998 analysis resulted in and r value of .869 ($P<0.01$). This technique appears to be one that pest control advisors may use to predict the severity of mealybug infestation and to determine if further chemical control may be needed.