

## Interactions among Weeds, Ants and Obscure Mealybug in Central Coast Vineyards

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Obscure mealybug (OMB), *Pseudococcus viburni* (Signoret), is a major insect pest of grapes on the Central Coast. It makes use of weeds as alternate hosts during the growing season as well as in the winter. Mealybug infestations are exacerbated by the presence of ants, which protect the mealybugs from natural enemies and distribute mealybugs among host plants. In 2004 we undertook a two year field study to observe the association of OMB with the Argentine ant, *Linepithema humile*, and the effect of eliminating alternate weed hosts for OMB on grape infestation in Central Coast vineyards. The experimental design was a split plot where the presence or absence of weeds was the main plot factor and the presence or absence of ants was the subplot factor. Ant density was measured weekly. The presence or absence of OMB on common spring and summer weed roots was recorded, and grape cluster infestation by OMB at harvest was analyzed. A greenhouse study confirmed the broad host range of OMB on a variety of weed and cover crop species. Most vineyard weed species were found to be hosts for OMB. Results indicate that weed control had no impact on OMB infestation of grape clusters, but that ant exclusion played a significant role. We conclude that weed management is not a viable cultural control for OMB.