

POPULATION DYNAMICS OF *Lygus hesperus* IN PEAR: THE ROLE OF ORCHARD GROUNDCOVER VEGETATION AND MANAGEMENT

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Lygus hesperus is a frequent pest in southern Oregon pear orchards, occasionally causing significant fruit injury. *L. hesperus* is more frequently encountered in the groundcover than in the orchard canopy. Groundcover management practices, such as disking and mowing, may encourage the movement of *L. hesperus* from the groundcover into the tree canopy. Relay, or alternate row, mowing is commonly recommended as a means of reducing the movement of *L. hesperus* into the canopy. A replicated trial conducted in a commercial orchard with a history of fruit injury from *L. hesperus* compared relay mowing with the standard regime of mowing the groundcover entirely. No significant differences in the numbers of *L. hesperus* in the tree canopy were observed in beating tray samples, although significantly higher levels of *L. hesperus* were observed in the groundcover of the relay mowed plots in sweep net samples. A subsequent study at the Research Center compared relay mowing with both mowing of the entire groundcover and not mowing the groundcover at all. Mowing appeared to be an effective way to reduce the total number of *L. hesperus* developing in the groundcover. A comparison of four groundcover mixes was conducted at the Research Center adjacent to an orchard, the plots were ca. 0.1 acre in size and a Latin square design was employed. Plots planted to a sod (a mixture of two grasses) had the lowest levels of *L. hesperus* while the plots planted with sod and birdsfoot trefoil (*Lotus corniculatus*) had significantly higher numbers of *L. hesperus* over two years of sweep net sampling.