Importance of Coccinellid Predators of the Hop Aphid *Phorodon humuli*, in the production of Hops

Bobbi Calentine and Wyatt Cone
Department of Entomology, Washington State University
Pullman, WA 99163

Phorodon humuli are serious pests on hops. The effectiveness of coccinellid predators was examined under field conditions at Prosser, Washington during the summer of 1993. Predator exclusion traps containing well developed side arms were suspended from hop trellises. Treatments consisted of: 1) complete exclusion cages, 2) exclusion 3) cages sewn open at either end, NTN treated vines which also received complete exclusion cages and 4) non-caged control. Four trials per treatment were used. Leaf samples were taken weekly and aphid populations were monitored using standard brushing and counting techniques. Hop cones were harvested after eighth weeks and fresh weights determined. Aphid populations were greatest in the complete exclusion cages, followed by the open ended treatment. Aphid densities were lowest in the NTN treatment, and the untreated control. Hop yields varied with treatment. Yield were significantly reduced in the complete exclusion cages, suggesting a relationship between aphid density, predation and yield in hop cones.