Section V Biological and Cultural Controls

> PHYTOSEIID MITE RELEASES TO CONTROL TWOSPOTTED SPIDER MITE (TSSM) ON AZUKI BEAN Hugo Aguilar and Lynell K. Tanigoshi Washington State University, Pullman, WA 99164

Five phytoseiid predatory mite species were released on spider mite infested azuki beans at IAREC, Prosser, WA. The species were: <u>Mesoseiulus longipes, Galendromus occidentalis, Iphiseius</u> <u>degenerans, Neoseiulus californicus</u>, and <u>Neoseiulus cucumeris</u>. They were preselected because of their strong preference for spider mite prey, tolerance to arid habitats and ability to colonize bushlike plants.

TSSM populations were very low until August 7, 1992 when they exhibited a dramatic increase. <u>N. californicus</u>, <u>M. longipes</u>, <u>G. occidentalis</u>, and <u>I. degenerans</u> were released on August 22 at a rate of 1000 per 13.32-square-meter plots, which is approximately 2 predators per plant. <u>N. cucumeris</u> was released one week later.

After these releases, plots were sampled weekly for four weeks and at least three species were recovered. M. <u>longipes</u> and <u>I</u>. <u>degenerans</u> were already identified; the other species are being processed.

Those species which showed tolerance to field and climatic conditions in Prosser will be released and evaluated again next season. They will be released when the TSSM population have attained 5 females per plant.