Avocado Thrips *(Sdrtothripsperseae* Nakahara [Thysanoptera: Thripidae]) Biology and Management:

Overview of Subprojects.

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Avocado thrips is a pest of major economic significance in Californian avocado orchards. This insect was first discovered in June 1996 damaging fruit and foliage in orchards in Saticoy and Oxnard, Ventura County California. By July 1997, infestations of avocado thrips were north of the initial discovery area in San Luis Obispo County and south in San Diego County.

This insect was previously an undescribed species new to science and its country of origin unknown. Considerable effort over the last year has resulted in significant movement towards a better understanding of this pest. First, taxonomic work by Dr. S. Nakahara with the USDA-ARS Systematics Laboratory in Beltsville Maryland has produced a name (the official scientific name is *Scirtothrips perseae* and the recommended common name is avocado thrips) and morphological description of this pest. Dr. Nakahara has determined that avocado thrips is more closely related to *Scirtothrips* species in Latin America than *Scirtothrips* species (e.g., citrus thrips, *Scirtothrips citri)* in North America and foreign exploration efforts for this thrips and its natural enemies will be concentrated here.

Second, funding received from the Hansen Trust enabled pesticide evaluation work to begin in the field in Ventura and the laboratory at UC Riverside in 1997. Hansen funding also funded work on reproductive and developmental biology of avocado thrips at UC Riverside. Additional funding from the California Avocado Commission has also been received and will supplement Hansen Trust funds enabling a high research effort to continue in 1998.

Third, coordinated research has been divided amongst four cooperators, Hoddle and Morse at UC Riverside, and Faber and Phillips in Ventura. Three subprojects which address different research areas have been identified and collectively form the avocado

thrips biology and management program as proposed to the California Avocado Commission and the Hansen Trust. Hoddle is managing Subproject 1 (avocado thrips developmental and reproductive biology, foreign exploration, and biological control); Faber and Philips are in charge of subproject 2 (field evaluations of pesticides, thrips phenology and feeding damage, and biological control); and Morse is leading subproject 3 (laboratory pesticide assays, resistance monitoring, and biological control).

Summaries of completed and planned research on avocado thrips have been prepared by each subproject leader and are presented below.