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SAN JOAQUIN VALLEY AREA-WIDE MANAGEMENT Peter B. Goodell Cooperative Extension, Univ Calif Parlier, CA

Abstract

Lygus hesperus is a key pest on cotton and other crops in the San Joaquin Valley of California. Within the San Joaquin Valley (SJV), cultivated and uncultivated plants can act as sources (movement out of a field) or sinks (movement into a field). This complex mosaic of plants creates unique challenges and opportunities for the management of *Lygus*. Because of the SJV's Mediterranean climate and lack of summer rainfall, most weedy plants senesce and do serve as sources for *Lygus* after early June. Thus, most of the migration will occur from neighboring crops, usually as the field is prepared for harvest. Examples of major sources of migration include safflower, sugar beets and alfalfa seed. Alfalfa forage is the key sink in the landscape. This crop is produced for its vegetative product rather than its reproductive parts and never is allowed to senesce. Thus, properly managed, alfalfa fields can act as important sinks for *Lygus* during the critical fruiting period from June until August.

There are no formal area wide management approaches to *Lygus* in cotton. Individual farms have used strip cutting alfalfa to preserve source habitat with great success. Interplanting alfalfa and cotton is utilized by a few farmers who are moving toward a more biological intensive IPM system. Some large farms who have management authority over a large area have modified rotational schemes to consolidate critical sources and minimize the border effect on surrounding cotton. In some areas, farmers have joined together to coordinate management of *Lygus* in safflower by timing area wide applications for maximum effectiveness.