

Weeds as Hosts for Lygus Bug. Shimat V. Joseph, University of California Cooperative Extension, 1432 Abbott Street, Salinas, CA 93901

Western tarnished plant bug, commonly referred as lygus bug (*Lygus hesperus*) is an important insect pest of strawberry (*Fragaria ananassa* Duchesne) in the Central Coast of California. The adult lygus bug migrate into the managed strawberry fields and oviposit eggs and eggs hatch, and molt through five nymphal stages before molting into adults. The nymphs and adults of lygus bug feed on the embryos within the achenes which affects the normal development of tissues surrounding the embryo. The young fruits up to ~10 days after petal fall are considered vulnerable to economic injury from lygus bug feeding. The affected misshapen fruits are often referred as “catfaced” and are deemed unmarketable.

Lygus bug populations typically develop on several weed hosts surrounding the strawberry fields such as wild radish (*Raphanus raphanistrum* L.), common groundsel (*Senecio vulgaris* L.), lupines (*Lupinus* spp.), and mustards (*Brassica* spp.) and several other weed species. The previously infested second year strawberry fields are also considered as a source for lygus bug populations. Lygus bug remains on weed hosts as long as they could provide nutrients and water. When the weeds get stressed or their quality decline, the lygus bug feeding on them could disperse seeking food and water source. A laboratory study was conducted to determine walking ability of lygus bug stages and adults (female and male). Results show that adults (both females and males) walked farther at faster speed than nymphs (both young and later nymphs). Similarly, field study was conducted to determine the walking capability of 5th instar of lygus bug. The data show that the total distances moved by 5th instar of lygus bug were positively correlated with increase in surface and air temperatures. At high temperatures, 5th instar of lygus bug can move up to 10 meters and this demonstrates a strong dispersal capability of the 5th instar. The implications of these findings will be discussed.