Study 25f

Laboratory Summary

Three strains of the common bed bug were used to explore sublethal (LT10) effects resulting from exposure to Temprid® SC Insecticide. All the bed bug strains had some level of resistance to pyrethroids. Two fecundity experiments were conducted to determine if the test insecticide exposure prior to or after mating had an influence on egg hatch. A third experiment was conducted to determine if exposure to the test insecticide had an influence on the development of 5th instar nymphs to adults.

The LT10 values determined for the three bed bug strains were: 0.95, 1.0, and 5.0 hours for the CIN-1, NY-1, and LEX-8 strains.

Insecticide exposure prior to mating resulted in a significant reduction in egg hatch for bed bugs from the CIN-1 and LEX-8 strains. The trend for reduced egg hatch was present for the NY-1 strain but it was not significant. When both males and females were exposed to the test insecticide, there was a significant reduction in egg hatch for all three strains.

When the bed bugs were exposed to the test insecticide after mating, there was a significant reduction in eggs laid for the CIN-1 and NY-1 strains but not for the most resistant LEX-8 strain.

No significant differences were noted in development of nymphs exposed to the test insecticide.