Evaluation of bug-vacuum efficacy on *Lygus hesperus* in organic and conventional strawberry production

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A multi-season evaluation of TRIC robotics bug-vacuum was conducted. In both years, the vacuum was tested in both organic and conventional fields. In 2025, the experimental design contained five replicates but was not randomized. In 2026, the experimental design was a randomized complete block design, with 5 replicates in the conventional field, and 4 replicates in the organic field. *Lygus hesperus* were sampled weekly with a handheld vacuum before being transported to the lab and counted. The organic and conventional trial area was approximately 43 and 29 acres, respectively in 2025. In 2026, the organic and conventional trial area was approximately 15 and 25 acres, respectively. Data collection in 2026 is not yet completed. Data will be analyzed alongside catfacing and commodity prices to determine the value of bug vacuuming. Data suggests that the bug vacuum provides an additive effect in reducing the *Lygus* field population.

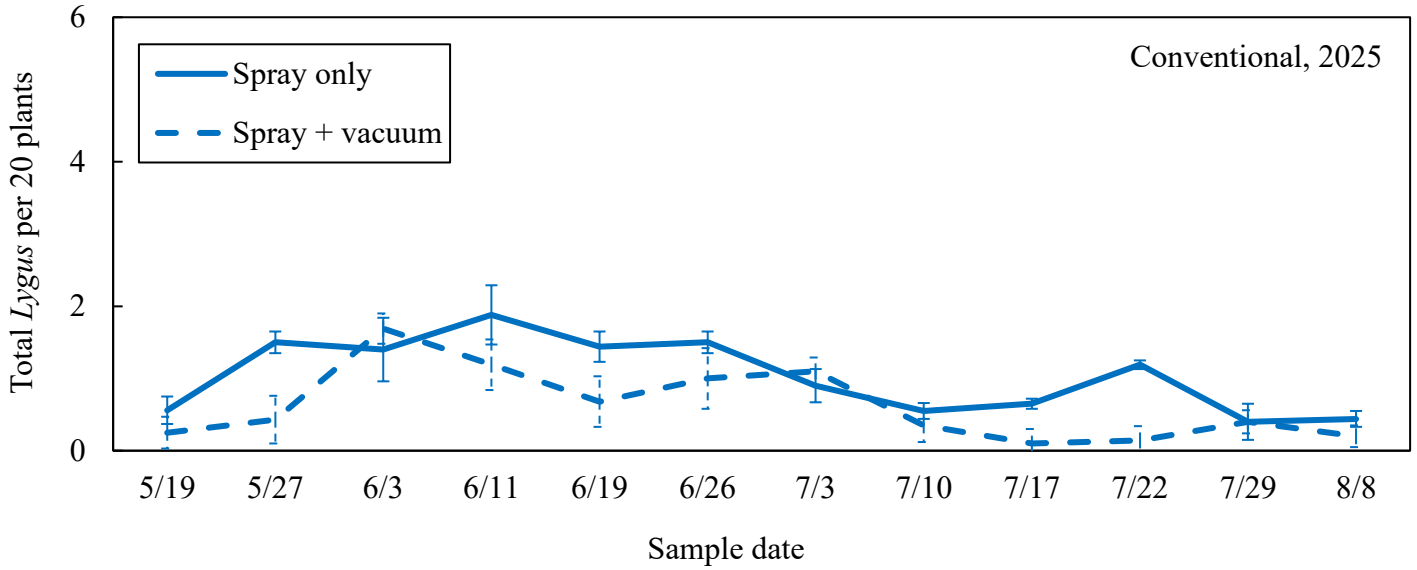


Figure 1. Average combined counts of *Lygus hesperus* (nymphs + adults) in a conventional ranch with standard errors across 12 weeks in 2025. Study was conducted in a conventional strawberry field.

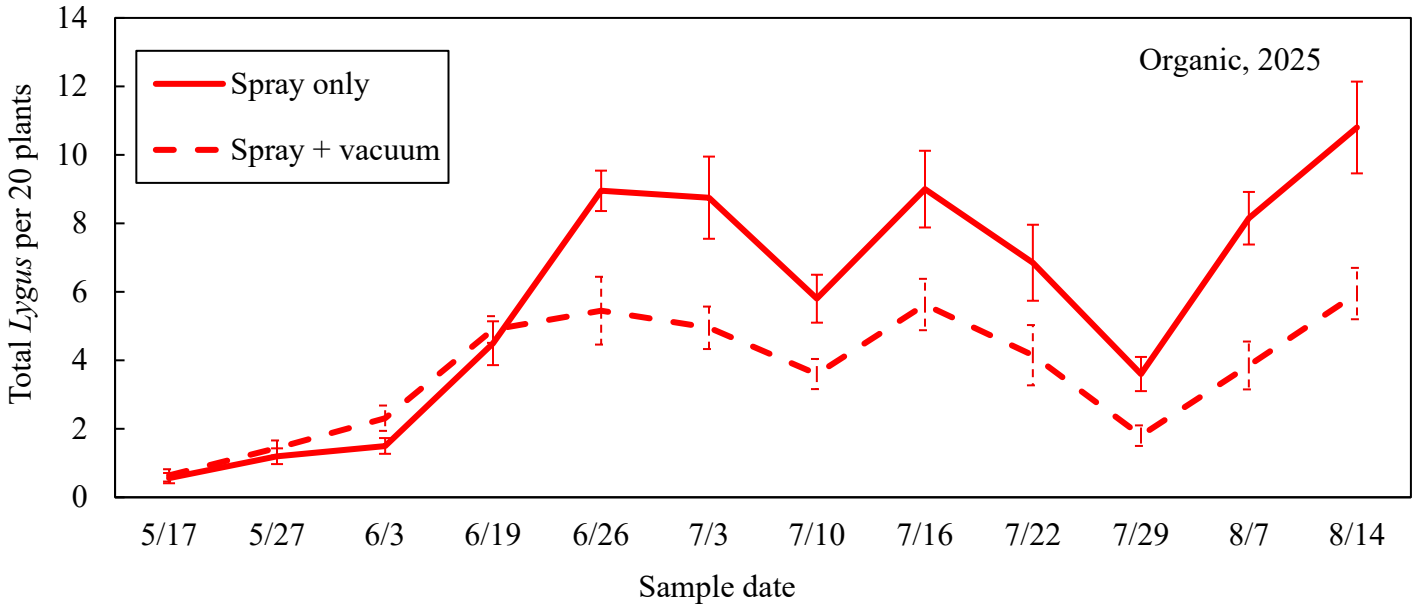


Figure 2. Average combined counts of *Lygus hesperus* (nymphs + adults) in an organic ranch with standard errors across 12 weeks in 2025. Study was conducted in an organic strawberry field.

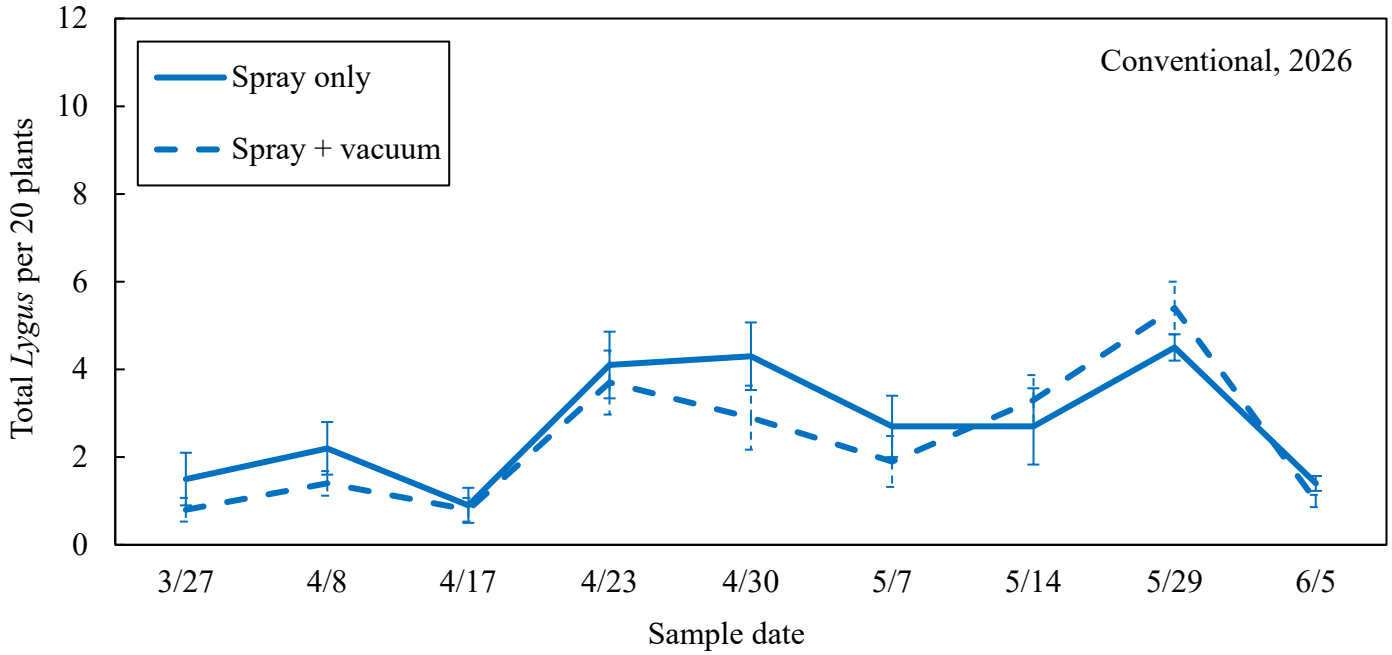


Figure 3. Average combined counts of *Lygus hesperus* (nymphs + adults) in a conventional ranch with standard errors across 9 weeks in 2026. Further data collection remains. Study was conducted in a conventional strawberry field.

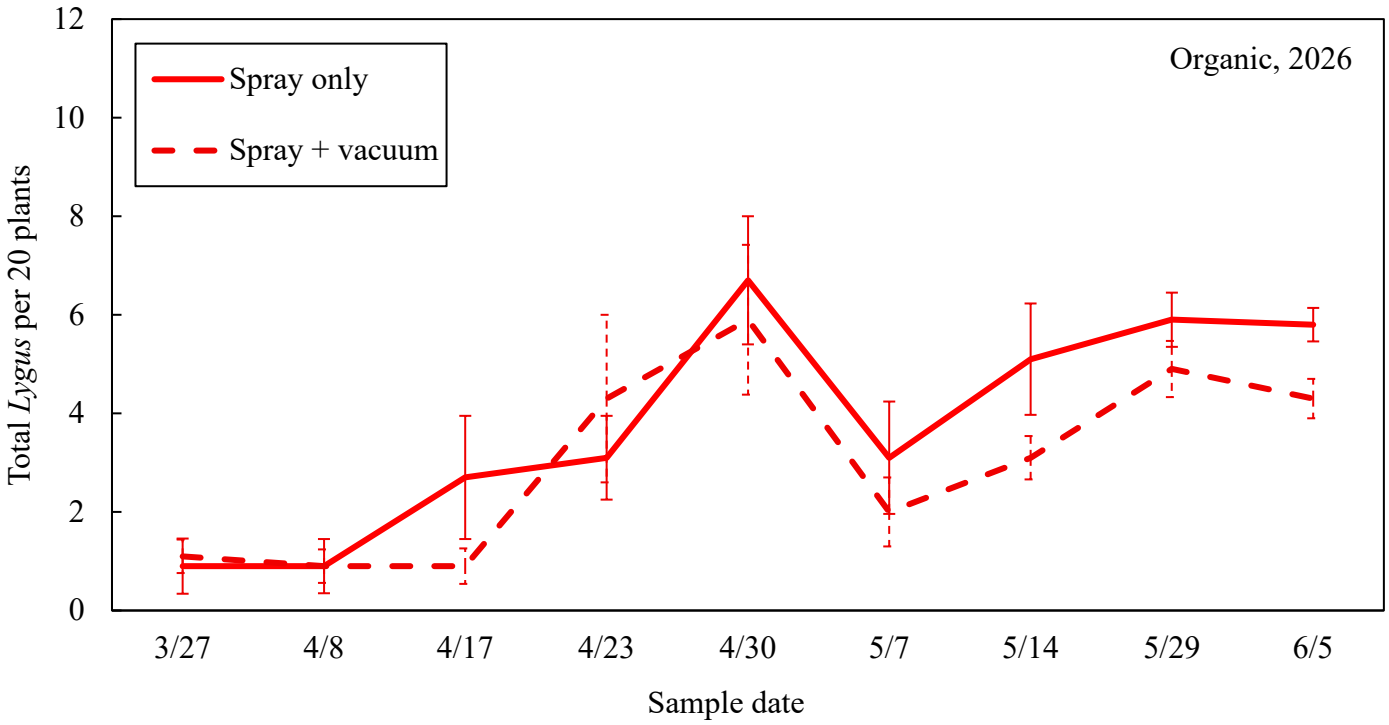


Figure 4. Average combined counts of *Lygus hesperus* (nymphs + adults) in an organic ranch with standard errors across 9 weeks in 2026. Further data collection remains. Study was conducted in an organic strawberry field.