BROWN MARMORATED STINK BUG IN EASTERN OREGON

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Brown marmorated stink bug (BMSB), *Halyomorpha halys* (Stål) (Hemiptera: Pentatomidae), is a severe invasive pest of Asian origin with wide range of host in the U.S. including small and tree fruits, nuts, vegetables such as corn, pepper, tomatoes and soybean. In response to the devastating economic impacts of BMSB insecticide use has increased dramatically. Spray programs for BMSB rely on prophylactic use broad-spectrum materials. In September 2013, BMSB was found in eastern Oregon solely in Catalpa trees. This is a tree native to warm temperate regions that thrives in dry areas. After a wide press release by local newspapers, numerous phone calls were received alerting us of the presence of this pest. Twenty six of these reports were positive for BMSB. The remaining ones were boxelder bugs or seed bugs. In 2014, BMSB was found in the same hosts but more widely distributed in the area. By the end of November, few were found inside buildings.

In an effort to determine the efficacy of chemicals in our area, pesticides were tested for controlling BMSB. The following chemicals were tested: Beleaf (T1), Transform WG (T2), and Asana XL (T3). The experiment was set up as a Randomized Complete Block Design with four replicates per treatment. Pinto Beans were used as host plant. Plots were 3-rows wide X 22 inch row spacing X 30 feet long. Normal agricultural practices were followed. Insecticides were applied using a CO^2 propelled backpack sprayer. BMSB were artificially infested onto bean plants using fine mesh bags to contain the insects. Each plot received three bags placed on bean plants in the center row.

Efficacy data was taken a 1, 3, and 7 days after treatment (DAT). At each sampling date, one bag per plot was removed and taken back to the lab for counting. 4th or 5th instar nymphs were used per bag. All treatments showed relatively low activity 1 DAT probably due to "older" stink bugs tolerance to chemicals. Three and 7 DAT, mortality increased (Fig. 1). Some mortality was observed in the Untreated Control (UTC).

Residual data collected was conducted by reinfesting the plants and the next week and sampling 1, 2, and 3 weeks later. We used 2nd instar nymphs at an infestation rate of 1 nymph per bag. Results showed good residual efficacy of Asana and Transform. Again the control showed high amount of mortality (Fig. 2).

Although high mortality in the control skewed the evaluations of our chemical treatments, the trial helped us to determine a protocol for future research involving this pest.

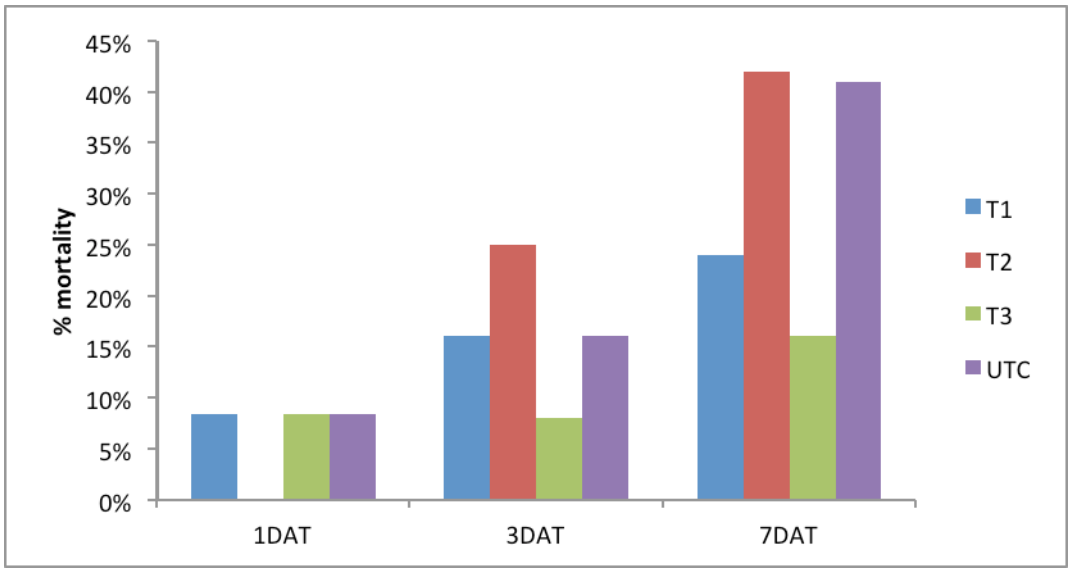

Fig. 1. Efficacy of pesticides in controlling BMSB, Hermiston, OR.

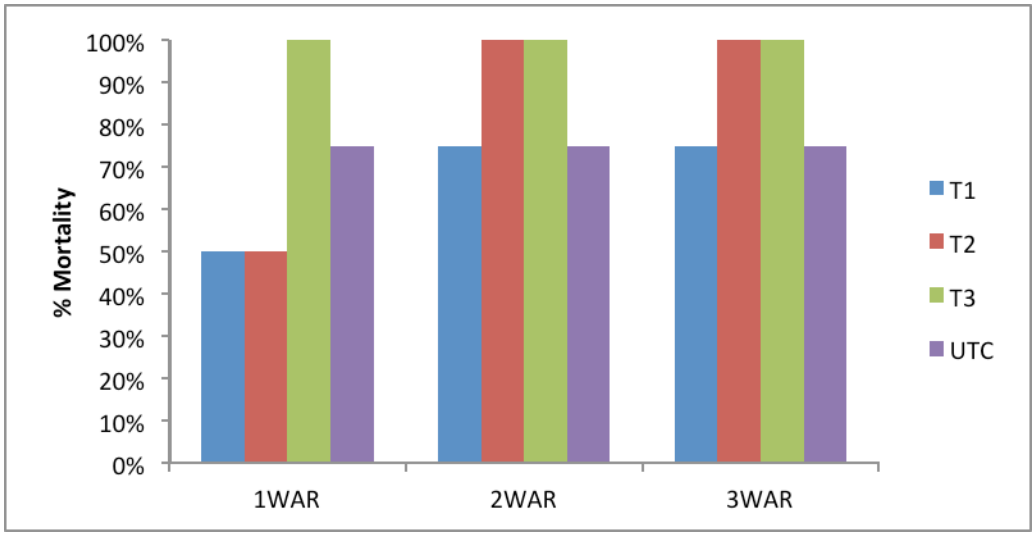

Figure 2. Residual Efficacy of selected pesticides on BMSB, Hermiston, OR.