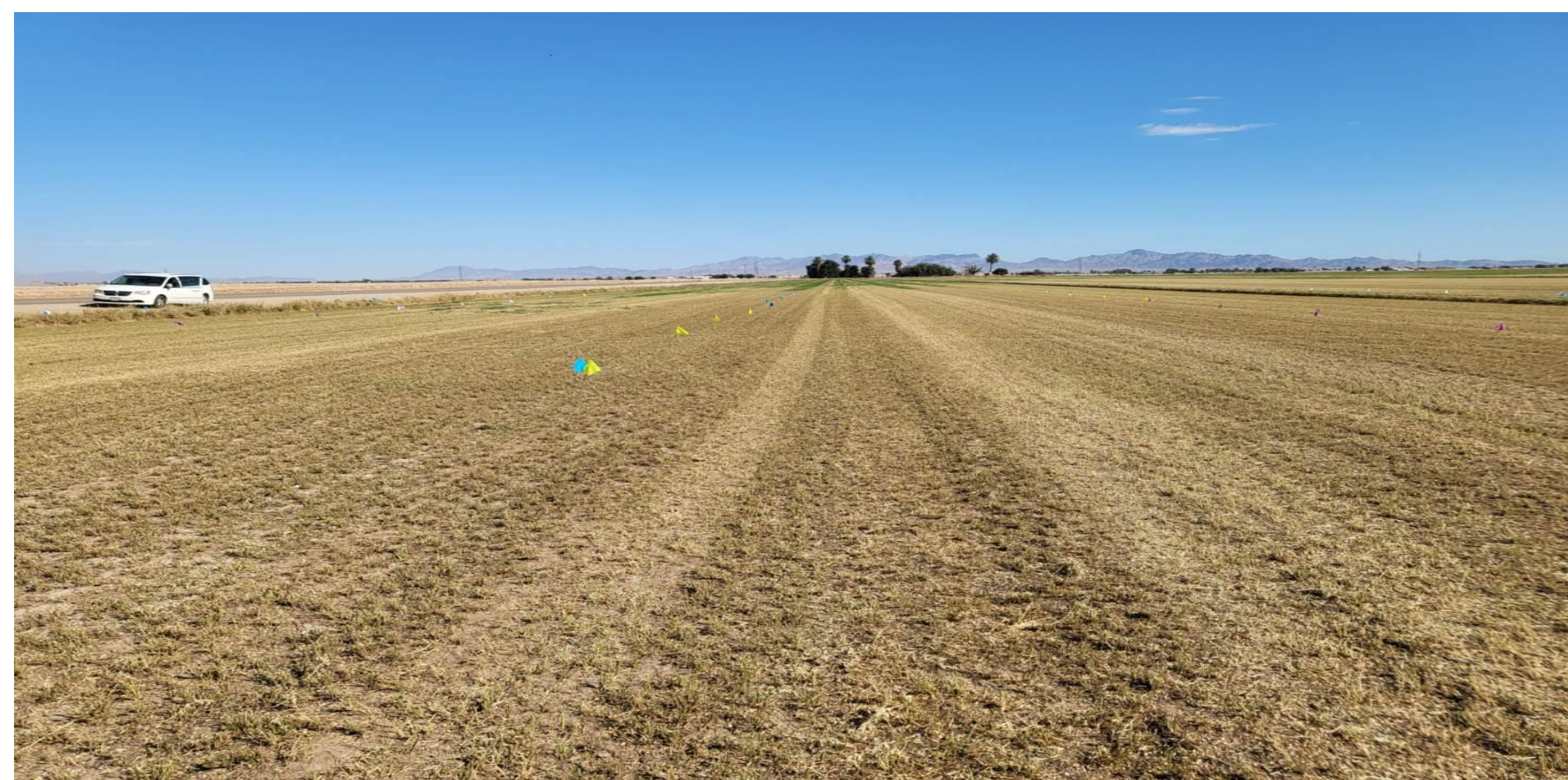


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INTRODUCTION

Granulate cutworms (*Feltia subterranea*) can sometimes be severe pests of alfalfa grown during the summer in the low desert areas of Arizona and California with their feeding keeping alfalfa from re-greening for several weeks after a cutting when cutworm populations are high. This was the situation in late summer 2025 in several alfalfa fields located in the Palo Verde Valley of far eastern California (Figs. 1-2).



Figures 1-2. Alfalfa field infested with granulate cutworms and lack of regrowth for 2+ weeks after cutting (top) and alfalfa stems in crowns that were mostly brown with feeding damage noted on stems.

Few recent insecticide trials targeting granulate cutworms have been completed by University of California Cooperative Extension personnel in the past 10 years, and the only one completed in the past 10 years involved alfalfa 2/3 through the regrowth cycle rather than regrowth completely being held back by granulate cutworm feeding.

The current recommendation from many states is to use a pyrethroid class insecticide for cutworm control in alfalfa. This replicated field trial was initiated to compare currently registered pyrethroid insecticides for usage in alfalfa with isosycloseram, (Plinazoxlin technology) a potential new active ingredient that may soon be available for usage in U.S. alfalfa.

METHODS AND MATERIALS

Seven (7) insecticides (Table 1) were applied very late afternoon of September 15, 2025, using a battery powered backpack sprayer equipped with a boom with 4 T-Jet 8002VS nozzle tips, and applying a final solution of 20.2 gpa. . The non-ionic surfactant Dyne-Amic® (Helena AgriEnterprises) was applied with most treatments at the rate of 0.53% v/v.

. Plots were 14 x 25 foot, with four replications of treatments using a randomized complete block design.

Table 1. Products, rates and marketing company

INSECTICIDE	RATE/ACRE	ACTIVE INGREDIENT	COMPANY
BAYTHROID XL	2.8 oz.	BETA-CYFLUTHRIN	BAYER
BESIEGE	10 oz.	LAMBDA-CYHALOTHRIN + CHLOROTRANILIPROLE	SYNGENTA
FASTAC CS	3.8 oz.	ALPHA CYPERMETHRIN	BASF
FASTAC EC	3.8 oz.	ALPHA CYPERMETHRIN	BASF
MUSTANG MAXX	4.0 oz.	ZETA CYPERMETHRIN	FMC
VERTENTO	2.0 oz.	ISOCYCLOSERAM	SYNGENTA
WARRIOR II	1.92 oz.	LAMBDA-CYHALOTHRIN	SYNGENTA

Plots were sampled the early morning of September 17, approximately 36 hours after treatments were applied. Sampling consisted of locating the row of shed leaves from previous raking/ baling operation that ran across each replicate, and removing this debris from a 1 foot wide x 1 meter long area (Fig. 3) by scratching the leaves away from the soil and from within crowns and soil cracks to uncover granulate cutworm caterpillars (Fig. 4). Numbers of caterpillars in plots (1 such sample/plot) were counted and recorded.



Figures 3-4. Plots were sampled by removing duff (left) and scratching alfalfa crowns to find granulate cutworm caterpillars (right).

Means for each treatment were statistically separated and analyzed using Tukey's Honestly Significant Difference (HSD) test (JMP Student Edition 19.0.3).

RESULTS

Fewest granulate caterpillars were collected from alfalfa treated with Vertento, a 64.9% reduction compared with untreated alfalfa plots (Fig. 5). This was the only treatment that was statistically different than untreated alfalfa on this sample date.

Of insecticides containing pyrethroid active ingredients lambda cyhalothrin (Warrior II, Besiege) and beta-cyfluthrin (Baythroid XL) resulted in fewest granulate cutworms, with these providing 37-40% fewer than collected from the untreated alfalfa plot samples. The alpha-cypermethrin products (Fastac CS, Fastac EC) resulted in a slight reduction on granulate cutworm (5-10%), while zeta-cypermethrin (Mustang Maxx) resulted in more granulate cutworms than untreated alfalfa.

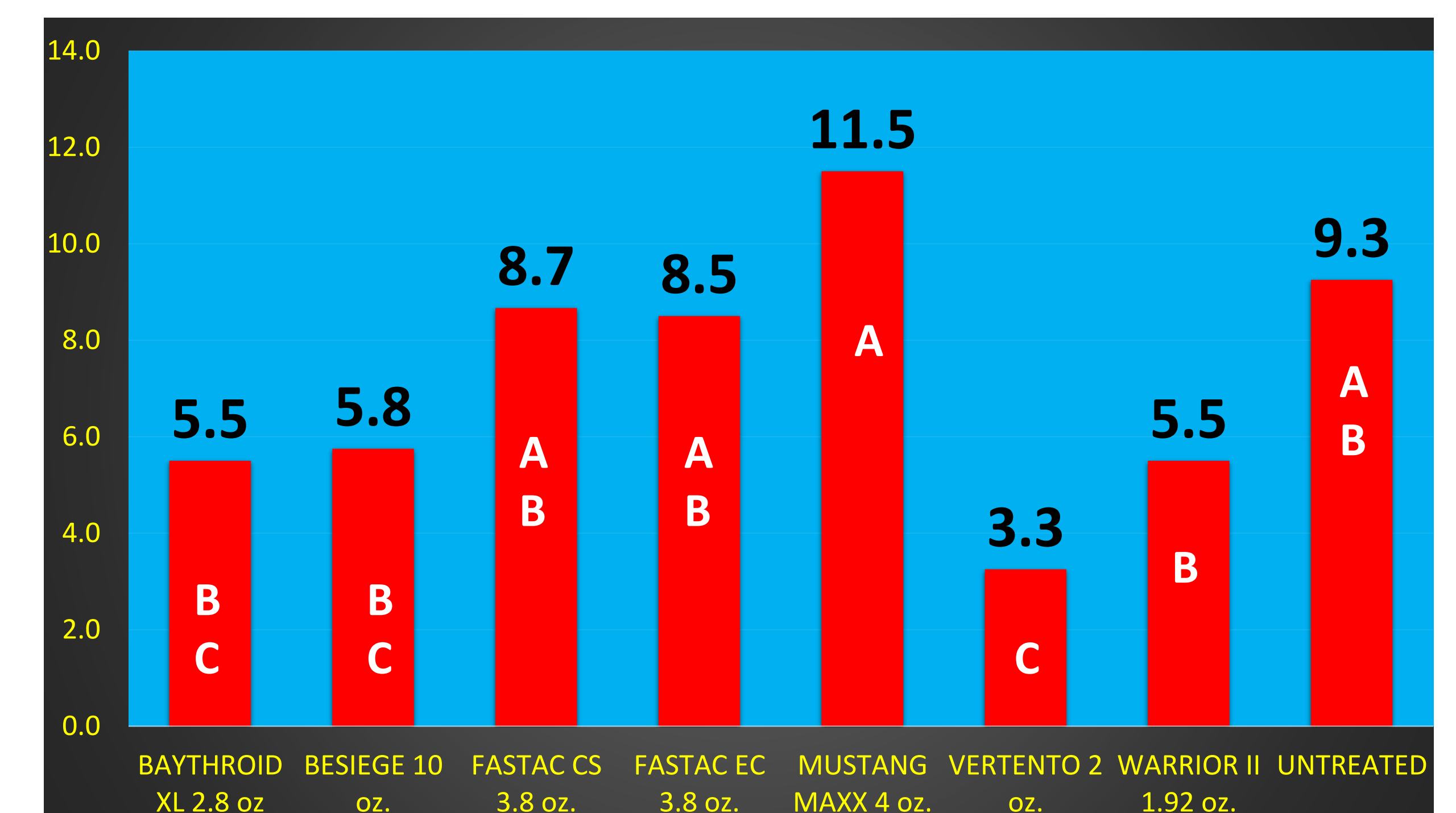


Figure 5. Mean number of granulate cutworms per 1 meter x 1 foot sample under alfalfa duff.

Insect control did not correlate with subsequent alfalfa regrowth however as only Besiege® treated plots had green regrowth at 7 days post treatment (Fig. 6).



Figure 6. Green alfalfa at 7 days post treatment was only noted in Besiege treated plots.

CONCLUSION

Only alfalfa treated with Besiege had green alfalfa at 7 days post treatment, indicating that the chlorantraniliprole active ingredient provided effective control necessary for alfalfa regrowth in this field trial. This active ingredient should be used rather than pyrethroid insecticides for granulate cutworm control.