

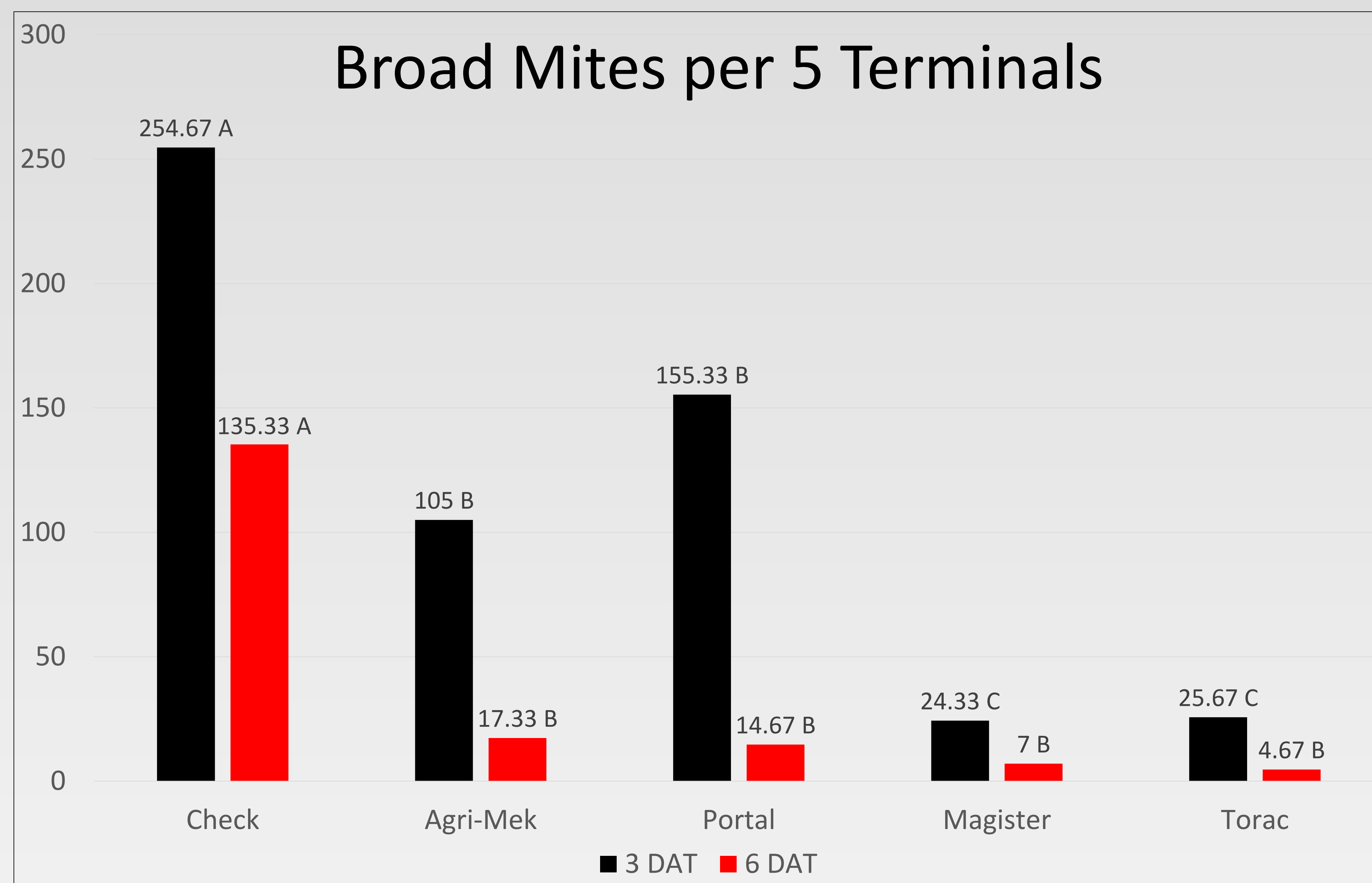
Efficacy of Selected Acaricides Against Broad Mite in Bell Pepper, Georgia 2021

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INTRODUCTION:

Bell pepper, *Capsicum annuum*, is a high value crop in Georgia. In the tri-county area of Tift, Colquitt, and Worth Counties, there are over 1,200 acres of bell pepper representing nearly \$27,800,000 in economic value. Broad mite, *Polyphagotarsonemus latus*, is an economic pest of vegetable production in the area. Specifically, broad mites have been problematic in fall pepper and eggplant production. Broad mite populations can build rapidly in a field and their damage can affect plant growth weeks after control measures are taken. Damage from broad mite appears as malformed terminals and fruit caused by the mite's toxic saliva. The distorted growth of the terminal leaves is often mistaken for herbicide injury, nutrient deficiency, or physiological disorder. Scouting and early detection is critical to successful control of broad mite but can be extremely difficult due to the small size of the pest and the fact that mites could be present for at least two weeks before plant damage becomes apparent. A hand lens or microscope is necessary to view adults, as the females are .2 mm long and males are .11 mm. The purpose of this study was to evaluate selected products labeled for control of broad mite in pepper.



METHODS:

The experiment was conducted in a commercial pepper field in Omega, GA. Peppers were grown with double rows on white plastic mulch. Beds were on 6-ft. centers with 12-in. plant spacing within rows and 15-in. spacing between rows. The trial was arranged in a randomized complete block design with three replications. Treated beds were separated by one untreated bed. Plots were 25-ft long. Chemical treatments were applied using a CO₂ pressurized backpack sprayer calibrated to deliver 40 gpa through 3 hollow cone nozzles on 18 inch spacing. Treatments were applied 21 Sept.

Acaricides tested were **Torac 21oz**, **Agri-Mek 3.5 oz**, **Portal 2 pts**, and **Magister 36 oz**.

All treatments were tank mixed with Dyne-Amic at .25% v/v. Five terminals were collected per plot and all live mites counted on 24 Sept and 27 Sept, 3 and 6 days after treatment (DAT), respectfully. Mite counts were summed for the 5 terminals for analyses (PROC ANOVA P < 0.05; LSD P=0.05).

RESULTS:

All treatments were significantly different from the check 3 DAT. Magister and Torac provided significantly better control at 3 DAT when compared to Agri-Mek and Portal. Broad mite counts 6 DAT showed all treatments provided significantly similar control when compared to the check. There were no differences between treatments 6 DAT. These data suggest all treatments provided significant control of broad mite. No phytotoxicity was observed with any of the treatments.



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