

Chemical control of the broadmite (*Polyphagotarsonemus latus* Banks) on Hot Pepper

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[Abstract]

The production of hot pepper, one of Jamaica's most important non-traditional export crops is constrained by the presence of a number of pests, one of the most serious being the broad mite (*Polyphagotarsonemus latus*). Plants infested with broad mites become unthrifty with bronze, curling leaves, aborted buds and misshapen fruits. Suggested control measures for these mites have included biological as well as chemical methods. This study assesses the efficacy of three chemicals against the broad mite: abamectin (Agri-Mek ® 0.5 ml/l, diafenthiuron (Pegasus ® 0.5 ml/l and Nissorun ® 0.5g/l. twelve hot pepper plots, each having 42 plants were established at Bodles Research Station in March, 2000. Treatments were replicated three times in a completely randomized design and included three unsprayed (control) plots. Leaf samples were collected weekly from five plants randomly chosen from among 20 experimental plants per plot. Broad mites were collected off the leaves by washing in hot water and passing the washings through sieve of 53µm aperture. The mites were concentrated in 10ml of 70% alcohol of which 2ml were removed and the number of broad mites in this volume counted under a dissecting microscope. The degree of infestation was estimated using a 0-4 scale. Results revealed that abamectin and diafenthiuron gave satisfactory control while nissorun was ineffective.