

The predatory mite *Stratiolaelaps scimitus* as a control agent of the dry bulb mite *Aceria tulipae* in garlic crop

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The dry bulb mite [Aceria tulipae (Keifer) (Eriophyidae)] is considered an important pest of garlic crop. This mite lives on stored bulbs as well as in the sheaths of garlic plants, near ground surface, feeding on the white tissues of this area and reaching high population levels. Symptoms of attack by this mite are curled leaves, which result from the death of meristematic cells attacked by the mite. This leads to significant yield loss. Control of this mite is usually done by pesticide applications, but biological control may represent a desirable alternative. Stratiolaelaps scimitus (Womersley) (Laelapidae) is a predatory mite that has been used as biological control agent of soil pests. The objective of this work was to explore the potential of this predator to control A. *tulipae* in potted garlic plants. An experiment was conducted to compare symptoms caused by the pest to potted garlic plants under two conditions: with and without the release of S. scimitus. It had 25 replicates, each consisting of a pot with five germinating garlic bulbs. A total of 40 S. scimitus specimens were released in each of 25 pot. The proportions of symptomatic plants during the experiment ranged between 40-60% and 60-90% for pots with and without predator release, respectively. The results suggest the potential of S. scimitus as a predator of A. tulipae in garlic crop. Further and more detailed studies are warranted, for fine tuning aspects of predator releases, especially in what refers to time for release, methods of release and predator densities.

Keywords: biological control, predatory mites, soil.

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