

Assessment of Susceptibility of the Poultry Red Mite, *Dermanyssus gallinae* (Acari: Dermanyssidae) to Some Plant Preparations with Focus on Exposure Time

Authors : Shahrokh Ranjbar-Bahadori, Nima Farhadifar, Leila Mohammadyar

Abstract : Plant preparations from thyme and garlic have been shown to be effective acaricides against the poultry red mite, *Dermanyssus gallinae*. In a layer house with a history of *D. gallinae* problem, mites were detected in the monitoring traps for the first time and number of them was counted. Then, some rows of layer house was sprayed twice using a concentration of 0.21 mg/cm² thyme essential oil and 0.07 mg/cm² garlic juice and a similar row was used as an untreated control group. Red mite traps made of cardboard were used to assess the mite density during days 1 and 7 after treatment and always removed after 24 h. the collected mites were counted and the efficacy against all mite stages (larvae, nymphs and adults) was calculated. Results showed that on day 1 and 7 after the administration of garlic extract efficacy rate was 92.05% and 74.62%, respectively. Moreover, efficacy rate on day 1 and 7 was 89.4% and 95.37% when treatment was done with thyme essential oil. It is concluded that using garlic juice to control of *D. gallinae* is more effective on short time. But thyme essential oil has a long time effect in compare to garlic preparation.

Keywords : *Dermanyssus gallinae*, essential oil, garlic, thyme, efficacy

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