Predators use chemical cues from plants infested by herbivores to discriminate and find food. The predatory mite *Phytoseiulus macropilis* feeds on Tetranychidae spider mites such as *Tetranychus urticae*, however it cannot complete its cycle life feeding on *Tetranychus evansi*. Here, we investigate whether *P. macropilis*, through perception of cues from infested plants, shows preference for prey with different nutritional quality. Six tomato plants containing the treatments were placed alternatively in a hexagon. Females of *P. macropilis* were released in the center of the hexagon consisting of (a) 3 plants infested by *T. evansi* vs 3 clean plants, (b) 3 plants infested by *T. urticae* vs 3 clean plants or (c) 3 plants infested by *T. evansi* vs 3 plants infested by *T. urticae*. The females that arrived on the plants were counted every hour for six hours and after 24 and 30 hours. Females of *P. macropilis* were recaptured significantly more often on plants infested by either of the two species than on clean plants. There was no difference in the number of mites arriving on plants infested by *T. evansi* or *T. urticae*. The predator can recognize cues from infested plants, however shows no preference for prey with high or low nutritional quality. Possibly, there is no difference in the cues from plants infested by *T. evansi* or *T. urticae*, or the predator is not able to identify them.

**Key-Word:** *Phytoseiulus macropilis*, *T. urticae*, induced defense.

Financier: FAPEMIG, CNPq, Capes