

**STUDY ON BIOLOGICAL CHARACTERISTICS OF
PREDATORY MITE *Euseius aizawai* AND *Amblyseius swirskii*
(Acari: Phytoseiidae) TO CONTROL BROAD MITE
*Polyphagotarsonemus latus***

Nguyen Duc Tung

Summary

Broad mite *Polyphagotarsonemus latus* is a key pest in many agricultural crops. Through investigation of predatory mites on vegetables in the Red River delta, *Euseius aizawai* was found to be able to eat broad mites. For evaluation of the potential of *E. aizawai* to control broad mite, in current research the developmental time, reproduction, population growth and predation capacity of the predatory mite fed on broad mite were assessed and compared with *Amblyseius swirskii*, a commercial predatory mite that is widely used to control broad mite in many countries. The results showed that the immature developmental time of both female (5.04 days) and male (4.96 days) of *E. aizawai* were longer than that of *A. swirskii* (3.97 and 3.87 days, respectively). The daily reproduction and total number of deposited eggs of *A. swirskii* (1.3 eggs/female/day and 16.96 eggs/female, respectively) were significantly higher than that of *E. aizawai* (0.95 eggs/female/day and 8.16 eggs/female, respectively). The intrinsic rate of increase (r_m) of *E. aizawai* (0.125) was significantly lower than that of *A. swirskii* (0.191). Predation capacity of adult female *A. swirskii* on broad mite egg (14.93 eggs/day) and adult (11.00 mites/day) were higher than that of *E. aizawai* (11.73 eggs/day and 9.13 mite/day, respectively). Thus, the predatory mite *E. aizawai* was not as good as *A. swirskii* in controlling broad mite, however, *E. aizawai* is one of few native predatory mites that has a positive intrinsic rate of increase when fed on broad mite. Our findings indicate the potential of the predatory mite *E. aizawai* to control broad mite in Vietnam.

Keywords: *Biology, predatory mite, broad mite, intrinsic rate of increase.*