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Predation capacity of *Andrallus spinidens* (F.) (Het.: entatomidae) on *Naranga aenescens* Moore (Lep.: Noctuidae) under semi-field and field conditions

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ABATRACT

The predatory bug, *Andrallus spinidens*, is known as a biocontrol agent of rice defoliator caterpillars. Some experiments were carried out in Amol Rice Research Station (The North of Iran) to determine predation capacity of the predator under field and semi-field conditions in 2001-2002. In the field, 5th instar nymphs and adults were released in separate cages containing 20 last instar larvae of *Naranga aenescens* on a rice plant. In glasshouse, second to fifth instar nymphs and adults were separately introduced to individual pots of rice plant on which 20 prey were released. The results revealed that under field conditions each 5th instar and adult killed in average 1.44 ± 0.033 and 1.87 ± 0. larvae per day, respectively. In glasshouse, predation capacities of the 2nd to 5th instars and adults were 0.43 ± 0.006, 0.77 ± 0.01, 1.28 ± 0.03, 1.40 ± 0.05 and 1.92 ± 0.05, and 0.41 ± 0.005, 0.76 ± 0.007, 1.20 ± 0.02, 1.23 ± 0.02 and 2.20 ± 0.06 prey/ predator/ day, for the first and second years, respectively. In general, under glasshouse conditions each 2nd instar predator needed 11 to 13 preys to reach to adulthood within 12 to 15 days. Mean life time predation for greenhouse and field experiments were 4.06 ± 0.05 and 3.55 ± 0.028 prey/ male and female predators/ day, respectively. Sex ratios (M/F) were 1 and 1.08 for the respective greenhouse and field 5th instars. The difference between results of this study with those reported from laboratory trials indicates the necessity of the predator foraging studies under more realistic conditions.

Key word: *Andrallus spinidens*, *Naranga aenescens*, predation capacity, rice, Iran.

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