

Research note :

The feeding efficiency of natural enemies on brown wheat mite, *Petrobia latens* (Muller) infesting coriander under laboratory conditions

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Coriander is cultivated for its fruits as well as for the tender leaves. The fragrant odour and pleasant aromatic taste of fruits is due to the presence of essential oil content. Insect pests and mites are one of the major limiting factors for higher production of good quality coriander leaves as well as seeds. Among the insect-pests aphid, *Hyadaphis corianderi* (Das.) was reported to be of regular occurrence infesting coriander in Rajasthan as well as in the country (Jain, 1984). Other insect and non insect-pests viz., *Bemisia tabaci* (Genn.), *Agroscalis nubila* (Fab.), *Spodoptera exigua* (Hub.), *Myzus persicas* (Sulzer), *Chrotogonus trachypterus* (Blanch.), *Thrips tabaci* (Linn.) and mite, *Petrobia latens* (Muller)

have also been reported to infest coriander crop grown under semi-arid agro ecosystem of Rajasthan (Jain and Yadav, 1988). The mites feed and breed on the upper as well as lower surface of leaves and suck the cell sap, in turn, the damaged leaves are covered by a thick webs resulting in the retarded growth (Banu and Channa Basavana, 1972). An investigation was carried out at laboratory in the Department of Entomology. The efficiency of natural enemies was studied in laboratory by releasing an adult each of predatory mite, *Amblyseius alstoniae* and lady bird beetle, *Coccinella septempunctata*, separately with 50 adults of phytophagous mite, in a cavity block

Table 1 : Feeding efficiency of *Coccinella septempunctata* and *Amblyseius alstoniae* on *P. latens* under laboratory conditions.

Number of set	Number of mites devoured after release by <i>C. septempunctata</i>			Total consumed
	1 hrs	2 hrs	3 hrs	
1.	7	5	3	15
2.	6	4	2	12
3.	7	6	4	17
4.	5	4	3	12
5.	6	5	4	15
6.	5	4	4	13
7.	5	3	2	10
8.	4	3	3	10
9.	6	5	3	14
10.	7	5	4	16
Average	5.8	4.4	3.2	13.4

Number of set	Number of mites devoured after release by <i>A. alstoniae</i>	Total consumed
		Contd....

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Contd.....

Number of set	Number of mites devoured after release by <i>A. alstoniae</i>			Total consumed
	1 hrs	2 hrs	3 hrs	
1.	2	1	0	3
2.	2	1	1	4
3.	3	2	1	6
4.	2	2	0	4
5.	3	1	1	5
6.	2	1	0	3
7.	2	2	1	5
8.	2	1	1	4
9.	2	2	0	4
10.	2	1	1	4
Average	2.2	1.4	0.6	4.2

The interaction between prey and predator was observed for 3 hrs for finding out their efficiency. The feeding efficiency of coccinellid beetle, *C. septempunctata* on *P. latens* revealed that single adult consumed on an average 13.4 mites during (Table 1) three hours under prevailing conditions. Similar, observations on feeding proficiency were made by Jat and Sharma (1999) and Nogia (2000) consuming on an average 14.5 and 13.6 mite (*P. latens*) respectively during three hours intervals while, carrying out their studies conforms the present findings. The laboratory studies indicated that a predatory mite, *A. alstoniae* consumed on an average 4.2 prey mites (*P. latens*) during three hours (Table 1) in present investigation. However, Jat and Sharma (1999) and Nogia (2000) reported predatory efficiency as 4.1 and 4.4 prey mites (*P. latens*) respectively, in three hours during their course of investigations also support the preset studies.

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