AJES ASIAN JOURNAL OF ENVIRONMENTAL SCIENCE ■ VOLUME 7 | ISSUE 2 | DECEMBER, 2012 | 160-162

RESEARCH ARTICLE

Monitoring of alate mustard aphid, *Lipaphis erysimi* through yellow sticky trap in relation to ecological parameters

■ ARUN KUMAR SINGH AND M.N. LAL

Article Chronicle :
Received **:**
13.06.2012;
Revised **:**
28.08.2012;
Accepted **:**
15.10.2012

SUMMARY : Field experiment was conducted at the Student's Instructional Farm of Narendra Deva University of Agriculture and Technology, Kumarganj, Faizabad (U.P.) during *Rabi* 2009-10 and 2010-11 to monitor, *Lipaphis erysimi* through yellow sticky trap installed all around mustard growing field. The catches of alate aphid was maximum (186.00 /trap) and (280.00/trap) during the 8th standard week in both the years. The catches of alate, *Lipaphis erysimi* showed non-significant positive correlation with temperature (%), rainfall and sunshine (hrs). However, humidity showed non-significant negative correlation with alate catches.

HOW TO CITE THIS ARTICLE : Singh, Arun Kumar and Lal, M.N. (2012). Monitoring of alate mustard aphid, *Lipaphis erysimi* through yellow sticky trap in relation to ecological parameters. *Asian J. Environ. Sci.,* **7** (2): 160-162.

Key Words : Monitoring, Mustard aphid, Yellow sticky traps, *Lipaphis erysimi*

Author for correspondence :
ARUN KUMAR SINGH
Department of Entomology
N.D. University of Agriculture and Technology,
Kumarganj, FAIZABAD (U.P.) INDIA
Email: singharunent@gmail.com

See end of the article for **Coopted authors'**

Lipaphis erysimi is one of the most destructive insects, which alone is responsible for causing severe reduction in seed yield of *Brassica* crop varying from 15.0 to 73.31% losses (Gupta *et al.*, 2003). This pest survives on wild host during off season and colonizes mustard crop at reproductive stage and fly away when crop attain maturity. The alates are attracted towards yellow colour of the mustard flower (Dilwari and Atwal, 1989). The initiation and cessation of infestation takes place through winged from the aphid. Thus, alate form determines the initiation of infestation and intensity of aphid attack on the crop. In spite of the facts, the very little works has been done pertaining to the use of sticky trap for monitoring alate population of mustard aphid (Roy, 1976).

The efforts were made to monitor alate population by installing yellow sticky traps around mustard crop in relation to weather parameters prevailing at the same time.

EXPERIMENTAL METHODOLOGY

The experiment was conducted at the Students Instructional Farm of Narendra Deva University of Agriculture and Technology, Kumarganj, Faizabad (U.P.) during *Rabi* 2009-10 and 2010-11. The mustard cv. VARUNA, BSH-1, YST-151, T-27, HYOLA-401 and KIRAN were sown on November, 20 during 2009 and 2010. All the recommended agronomic practices were followed for raising the crop of good stand. Yellow sticky traps were made by using empty cylindrical tin of 1 kg capacity. These were installed on a 1.5 meter long bamboo pole after removing the top of the tin. Then coating of petroleum grease was applied on the outer surface of empty box. The petroleum grease were changed daily after recording observation. Grease were applied with a brush on the cleaned outer surface of the traps.

Five such traps were installed at uniform distance around mustard crop. Observations were recorded daily during morning hours. The number of alate trapped in each trap was counted on whole surface of the box. The meteorological parameters, *viz.*, temperature (^{0}C) (maximum, minimum), relative humidity (%), rainfall (mm) and sunshine (hrs) were recorded daily. The mean values of previous seven days data of the above parameters were computed for seven days, the day of observation, correlation co-efficients were determined to find