

SEASONAL INCIDENCE OF RED COTTON BUG (*DISDERCUS CINGULATUS*) AND FRUIT & SHOOT BORER (*EARIAS VITELLA*) OF OKRA AND THEIR CORRELATION WITH ABIOTIC FACTORS

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Abstract: The field experiment was conducted at the Horticulture farm, Rathindra Krishi Vigyan Kendra, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, at Sriniketan during the period of March 2010 to June 2010 and Okra variety "Parbhani Kranti" were sown in experimental site. The basic objective of the experiment was to find out the seasonal incidence of Red cotton bug (*Disdercus cingulatus*) and Fruit & shoot borer (*Earias vitella*) of okra and their correlation with abiotic factors. Experimental findings revealed that the Red cotton bug and Fruit & shoot borer observed to infest the crop at different growth stages and ecological factors played an important role in their fluctuation during the crop growing season as many weather parameters showed their significant effects on population abundances. The incidence of red cotton bug started from 18th standard week i.e. 1st week of May and the maximum population was recorded to the tune of 2.41/plant on 21st standard week during peak fruiting (4th week of May). The peak populations of fruit & shoot borer (6.97%/plant) were recorded on 1st week of June. Multiple regression analyses depicted that contribution of all the abiotic factors to the variations of red cotton bug population was 8.5% and for fruit & shoot borer it was 98.4%.

Keywords: Okra, Seasonal incidence, *Disdercus cingulatus*, *Earias vitella*, Abiotic factors

REFERENCES

- Adams, C.F. (1975). Nutritive value of American foods in common units, U.S. Department of Agriculture, Agric Handbook, 425, pp 29.
- Arapitsas, P. (2008). Identification and quantification of polyphenolic compounds from okra seeds and skins. *Food Chemistry* 2008; **110**: 1041–1045.
- Boswell, V.R. and Reed, L.B. (1962). *Production Technology of Vegetable Crops*. Oxford and IBH Publishing Co. Pvt. Ltd. New Delhi, pp: 661-663.
- Chauhan, D.V.S. (1972). *Vegetable Production in India*, (1972), 3rd ed., Ram Prasad and Sons (Agra).
- FAOSTAT. (2008). (<http://www.fao.org>)
- Gomez, K.A. and Gomez, A. A. (1984). *Statistical Procedures for Agricultural Research*, 2nd ed. John Wiley and Sons, New Year. 650p.
- Gopalan, C.; Sastri S.B.V. and Balasubramanian, S. (2007). *Nutritive value of Indian foods*, National Institute of Nutrition (NIN), ICMR, India. 2007.
- Indian Horticulture Database, National Horticulture Board, 2012
- International Board for Plant Genetic Resources IBPGR (1990)., Report on International Workshop on Okra Genetic resources held at the National bureau for Plant Genetic Resources, New Delhi, India.
- Kahlon, T. S.; Chapman, M .H. and Smith, G. E. (2007). In vitro binding of bile acids by okra beets asparagus eggplant turnips green beans carrots and cauliflower. *Food Chemistry* 2007; **103**: 676-680.
- Lamont , W. (1999). Okra a versatile vegetable crop. *Horticultural Technology* 1999; **9**: 179-184.
- Meena, N.B.; Meena, A.K. and Naqvi, A.R. (2009). Seasonal incidence of major insect pests of okra and correlation with abiotic factors. *Journal of Plant Development Sciences*, Meerut, India, vol **75**: 393-399.
- Nandkarni, K.M. (1927). *Indian Meteria Medica*. Nadkarni and Co Bombay
- Owolarafe, O.K. and Shotonde, H.O. (2004). Some physical properties of fresh okra fruit. *Journal of Food Engineering*; **63**: 299-302.
- Saifullah, M. and Rabbani, M. G. (2009). Evaluation and characterization of okra (*Abelmoschus esculentus* L. Moench.) genotypes. *SAARC Journal of Agriculture*; **7**: 92-99.
- Srivastava, K.P. (1993). *A text book of Entomology*, Vol-II, Kayani Publishers, New Delhi 365p.
- Tindall, H. D. (1983). *Vegetables in the tropics*. Macmillan Press Ltd., London and Basingstoke. pp: 25-328.
- Zala, S.P.; Patel, J.R. and Patel, N.C. (1999). Impact of weather on magnitude of *Earias vittella* infesting okra. *Indian-Journal-of-Entomology*; **61**(4): 351-355.

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