## POPULATION FLUCTUATION OF YELLOW STEM BORER AND LEAF FOLDER ON BASMATI RICE IN RELATION TO CLIMATIC CONDITIONS OF WESTERN UTTAR PRADESH, INDIA

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**Abstract :** Population fluctuations of yellow stem borer, *Scirpophaga incertulus* (Walker) and leaf folder, *Cnaphalocrocis medinalis* (Guenee) were assessed in basmati rice during *Kharif* 2014 at Crop Research Center of Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut. The first infestation of yellow stem borer was recorded on first week of August and reached its peak during middle of October when average temperature, relative humidity and rainfall ranged from 27.10 to 30.51  $^{\circ}$ C, 69.60 to 84.04 % and 0.30 to 7.56 mm, respectively. The population of leaf folder was first recorded in last week of July and reached at maximum level during end of September to start of October when mean temperature, relative humidity were 28.89  $^{\circ}$ C and 76.95 %, respectively. The population of yellow stem borer and leaf folder showed negative correlation with maximum and minimum temperatures, evening relative humidity and rainfall while morning relative humidity showed the positive correlation.

Keywords: Population fluctuation, Yellow stem borer, Leaf folder, Climatic factors

## REFERENCES

**APEDA,** (2014). Agricultural and Processed Food Products Export Development Authority, Ministry of Commerce & Industry, Govt of India, New Delhi.

Kumar, A.D. and Sudhakar, T.R. (2001). Incidence of the yellow stem borer, *Scirpophaga incertulas* (Walker) on rice in relation to weather parameters. *Pest Management and Economic Zoology*, 9 (2): 161-164.

**Pujari, D., Bora, D. K. and Sharma, S.** (2007). Seasonal incidence of rice stem borers in Assam. *Insect Env.*, 13 (3): 99-101.

**Joshi, G., Ram, L. and Singh, R.** (2009). Population dynamics of paddy stem borers in relation to biotic and abiotic factors. *Ann. Bio.*, 25 (1): 47-51.

Hugar, S. V., Venkatesh, Hosamani, Hanumanthaswamy, B. C. and Singh, P. (2009). Influence of weather factors on the infestation of yellow stem borer, *Scirpophaga incertulas* Walker in aerobic rice. *Asian Journal of Environmental Science*, 4 (2): 151-154.

**Hyslops, J. A.** (1941). Insects and weather; climate and man. United States Department of Agriculture, Washington, D. C.: 503.

Kumar, P., Singh R. and Pandey S. K. (1996). Population dynamics of rice leaf folder, *Cnaphalocrocis medinalis* (Guenee), in relation to stage of the crop, weather factors and predatory spiders. *J. Ent. Res.*, 20 (3):205-210.

**Mange Ram** (2012). Study on efficacy of some chemical insecticides on the incidence of leaf folder, *Cnaphalocrocis medinalis* (Guenee) infesting basmati rice. M. Sc (Ag) Thesis, S.V.P.U.Agric & Tech, Meerut.

Nigam, V. D. (2009). Effect of abiotic factors on the population fluctuation of rice leaf folder, *Cnaphalocrocis medinalis* (Guenee) in Eastern Uttar Pradesh. Young Environment Association, Lucknow, *India. Agricultural & Biological Research*, 25 (2): 128-134.

Rai, A. K., Sinha, R. B. P. and Singh, A. K. (2000). Effect of abiotic factors on the population of rice leaf folder, *Cnaphalocrocis medinalis* (Guenee). *Ann. Pl. Protec. Sci.*,8 (2):154-158.

**Padhi, G. and Sanjoy, Saha.** (2004). Influence of weather parameters on population of rice yellow stem borer, (*Scripophaga incertulas*, Walker) in light trap catches. *Environment. Ecol.*, 22(3): 504-507.

Sarao, P. S. and Kaur, H. (2013). Efficacy of ferterra 0.4% GR (chlorantraniliprole) against stem borers and leaf folder insect-pests of basmati rice, *J. Env. Bio.*, **35** (5): 815-819.

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