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Abundance of major insect-pests of Indian bean in relation to major weather factors

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Abstract

Abundance of major insect-pests of Indian bean cv. Gujarat papdi was studied at standard week wise interval during 2011-12 at Navsari Agricultural University, Navsari, India. Whitefly, *Bemisia tabaci* (Gennadius) population commenced from 41 standard meteorological week (SMW) attaining peak (8.28/leaf) during 4 SMW. The population indicated significant and negative correlation with temperature (maximum, minimum and average)('r' = -0.6463, -0.5697 and -0.6162). Total contribution of all the weather factors was 31.62 per cent indicating significant correlation coefficient (R = 0.5623). Leaf miner, *Liriomyza trifoli* (Burgess) damage commenced from 41 SMW attaining peak status (34.86 %) at 5 SMW. It indicated significant positive correlation with wind velocity ('r'= 0.6270) and negative correlation with temperature (maximum, minimum and average) ('r'= - 06157, -0.4958 and -0.5562). Total impact of all the weather factors was 41.54 per cent indicating significant correlation coefficient (R= 0.6445). Aphid, *Aphis craccivora* (Koch) oriented damage initiated from 48 SMW which attained peak (3.65) at 3 SMW exhibiting significant and positive correlation with wind velocity ('r'= 0.5160) but significant and negative correlation with temperature (maximum, minimum and average) ('r' = -0.7219, -0.5619 and -0.6398). The multiple correlation coefficient (R= 0.7011) was significant explaining 49.16 per cent variation due to all the weather factors. Pod borer, *Helicoverpa armigera* (Hubner) population commenced on 49 SMW attaining peak (6.21 larvae/plant) at 18th WAS. It indicated significant positive correlation with wind velocity ('r'= 0.4590) and significant negative correlation with temperature (maximum, minimum and average) ('r' = -0.6992, -0.5701 and -0.6376).

Biography

Sushil Saxena completed his Ph.D degrees in Forest Entomology as well as in Agricultural Entomology at the age of 45 and 48 years from Forest Research Institute, Dehradun, and Navsari Agricultural University, Navsari, respectively. He is the Principal Investigator of ICAR funded IPM and NICRA Projects. He has published more than 50 research papers in various International journal and National journals and is on the advisory panel of **"Fruits"** (International journal) and **Journal of Applied Zoological Researches**. He has more than 29 years of research experience in Horticultural Entomology and has won two national awards.