Research Paper :

Study on seasional incidence of rice leaf folders (*Cnaphalocrocis medinalis* Guen. and *Pelopidas mathias* Fb.) of paddy and its correlation with weather parameters

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SUMMARY

In the study of seasional incidence larval population (0.50 larva/plant) and per cent damaged leaves (0.55) of rice leaf roller, *C. medinalis* initiated from 36th standard week and reached its peak level (3.12 larvae/plant and 3.20 per cent damaged leaves) during 43rd standard week in *Kharif*-2005 while the larval population (0.53 larva/plant) and per cent damaged leaves (0.72) of rice leaf roller initiated from 13th standard week and reached to its peak level (1.51 larvae/plant and 1.75 per cent damaged leaves) during 15th standard week in summer-2006. Similarly, the larval population (0.45 larva/plant) and per cent damaged leaves (0.75) of rice skipper, *P. mathias* initiated from 39th standard week in *Kharif*-2005 and reached to its peak level (2.03 larvae/plant and 2.10 per cent damaged leaves) during 41st standard week while the larval population (0.20 larva/plant) and per cent damaged leaves (0.28) of rice skipper initiated from 13th standard week and reached to its peak level (0.57 larvae/plant and 0.60 per cent damaged leaves) during 16th standard week in summer-2006. In *Kharif*-2005, maximum temperature (r = 0.726) and sunshine hours (r = 0.614) had significant positive correlation with larval population of rice leaf roller while wind velocity (r = -0.539) and rainy days (r = -0.518) had significant negative correlation with the larval population of rice leaf roller while the larval population of rice leaf roller in summer-2006 had significant negative correlation with average temperature (r = -0.705). The larval population of rice skipper in *Kharif*-2005 had significant positive correlation with maximum temperature (r = 0.589) and average temperature (r = 0.497) while the rice skipper larval population in summer-2006 exhibited significant negative correlation with average temperature (r = -0.658).

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Rice (*Oryza sativa* L.) is one of the staple foods of more than sixty per cent of the world's population and known as a king of cereals. The total area of the world under rice cultivation is 153.33 million hectares producing 588.56 million tonnes of grain with an average productivity of 3.37 MT/ha (Anonymous, 2004). The total area under rice cultivation in India was 44.6 million hectares with a production of 90 million tonnes (Sharma, 2005). India has the largest growing area (42.7 million hectares) with production of 86.30 metric tonnes in 2000-2001 and 78.64 MT in 2002-2003 (Anonymous, 2004). In Gujarat, rice occupied about 5 to 7 lakh ha area with a total production of 9 to 10.5 lakh tonnes (Vashi *et al.*, 2005).

Rice crop is attacked by a several hundred species of insect pests during its different stages of crop period.Among the leaf defoliators, leaf folders *viz.*,*C. medinalis* Guen. and *P. methias* Fb. are found to be occupying a major status in South Gujarat. Therefore, it is necessary to explore the economical and eco-friendly management strategy to manage the rice leaf folders *i.e.*,*C. medinalis* and *P. mathias*. Keeping this view in mind, it has been decided to investigate the seasonal incidence of rice leaf folders *C. medinalis* Guenee and *P. mathias* Fabricious in rice growing area of South Gujarat.