

Research Paper :

Study on effect of different botanicals against rice leaf folders (*Cnaphalocrocis medinalis* Guen. and *Pelopidas mathias* Fb.)



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SUMMARY

The botanicals remained next in order of their effectiveness against rice leaf folders, *C. medinalis* and *P. mathias*. The treatment chlorpyrifos 0.05 per cent found significantly superior and most effective treatment than rest of the treatments with lowest per cent damaged leaves (0.52 for rice leaf roller and 0.62 for rice skipper) and larvae per plant (1.05 for rice leaf roller and 1.25 for rice skipper). In botanicals, nimbecidine was found more effective followed by neemrus.

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Cnaphalocrocis medinalis,
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Rice (*Oryza sativa* L.) is the staple food 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. Adult of rice leaf roller, *Cnaphalocrocis medinalis* Guenee (Pyraustidae : Lepidoptera) is small with yellowish brown wings and dark wavy lines on fore and hind wings. Eggs are laid singly on the under surface of tender leaf blade. Larvae are active, yellowish green and remain inside the leaf rolls. It folds the leaf longitudinally by fastening the two edges of

the leaf and feeds inside by scrapping the green matter and makes white stripes on it. Scrapped leaf, initially green, later on turns to white. The full-fed caterpillar pupates inside the folded leaf while adult of rice skipper, *Pelopidas mathias* Fabricious, (Hesperidae : Lepidoptera) is dark brown with white spots on the forewings while caterpillar is greenish yellow, smooth, elongates with constricted neck and 'v' shaped mark on head has a tendency to remain inside the leaf by rolling it and making it like a tube. The larva sticks together the two edges of the leaf by a sticky white substances and feeds outside leaving behind midrib.

Among the leaf defoliators, leaf folders viz., *C. medinalis* Guen. and *P. mathias* Fb. are found to be occupying a major status in South Gujarat. So, it became necessary to explore the economical and eco-friendly management strategy to manage rice leaf folders *i.e.*, *C. medinalis* and *P. mathias*. Therefore, keeping this view, it was decided to investigate botanical control of rice leaf folders *C. medinalis* Guenee and *P. Mathias* Fabricious in rice growing area of South Gujarat.

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