

Research Paper :

Integrated pest management for aphid in lucerne

G.R. GOLAGE, S.R. GOSAVI AND S.M. WANKHEDE



International Journal of Plant Protection, Vol. 4 No. 1 (April, 2011) : 196-198

See end of the article for authors' affiliations

Correspondence to :
S.R. GOSAVI

Department of
Entomology, Mahatma
Phule Krishi
Vidyapeeth, Rahuri,
AHMEDNAGAR
(M.S.) INDIA

SUMMARY

Studies on bioefficacy of different IPM treatments against aphids revealed that thiamethoxam (0.005 %) as a component of IPM III showed nil aphid population at 7 days after application with maximum green forage yield of lucerne. *Verticillium lecanii* 4×10^5 cfu ml⁻¹ (IPM II) recorded 10.63 aphids/tiller at 7 days after application with maximum green forage yield (122.38 q ha⁻¹) of lucerne.

Golage, G.R., Gosavi, S.R. and Wankhede, S.M. (2011). Integrated pest management for aphid in lucerne. *Internat. J. Pl. Protec.*, 4(1): 196-198.

Key words :
IPM, *Verticillium lecanii*, Lucerne, Aphid

Lucerne (*Medicago sativa* L.) some times called 'queen of forage crops', is one of the oldest cultivated fodder crops and in India Lucerne is the highest in feeding value of all commonly grown hay crops. Lucerne mainly suffers damage both qualitatively and quantitatively by aphids, *Acyrtosiphon pisum* Harris, *Acyrtosiphon kondoi* Shinjii and *Therioaphids trifolii f. maculata*. The green fodder yield losses was reported to be 33 per cent in lucerne due to aphid in new Mexico (Melton and Wilson, 1989). In Maharashtra, spotted aphid, pea aphid and cowpea aphid are found major pest on lucerne (Anonymous, 2004).

No work seems to have been done on any aspect of pests infesting lucerne in Maharashtra. It is fodder with frequent cutting system, highly persisted insecticides are undesirable. Considering the importance of the crop and losses caused by the pest, the present investigation was undertaken.

MATERIALS AND METHODS

The research work was carried out on the farm of AICRP on Forage Crops, MPKV, Rahuri, Dist. Ahmednagar (M.S.) from November, 2007 to May, 2008. Four

treatments and fifteen replications were used in Randomized Block Design. Details of treatment applications are mentioned below:

Treatment details:

T₁ : IPM module I :

- Seed treatment of *Trichoderma viride* (5 g/kg seed)
- Transplanting of marigold seedling 0.5 m apart around and inner border in lucerne field 1 month after sowing.
- Seedling of castor seed 3 m part around and inner border area of lucerne field at the time of sowing.
- Spraying of *HaNPV* or *S/NPV* @ 250 LE/ha at the appearance of 2 larvae/sq.mt. of respective pest.
- Spraying of NSE 5 % for sucking and lepidopteran pests.
- Placement of 'T' shaped bird perches (15/ha).

T₂ : IPM module II :

- Seed treatment of *Trichoderma viride* (5 g/kg seed).
- Spraying of *Verticillium lecanii* (4 x 10⁵ c.f.u./ml) for the management of aphids.
- Spraying of *B.t.* @ 1 kg/ha at the

Received :
December, 2010
Accepted :
February, 2011