



RESEARCH NOTE

Efficacy of newer insecticides against bud fly (*Dasyneura lini* Barnes) in linseed

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ABSTRACT

Experiments on newer insecticides viz., imidacloprid @ 0.0045%, acetamiprid @ 0.004%, thiomethoxam @ 0.005%, abamectin @ 0.0009 %, fipronil @ 0.01%, thiodicarb @ 0.075%, spinosad @ 0.0096 % and indoxacarb @ 0.006 % were carried out to test their efficacy against bud fly on linseed during *Rabi* 2008-09 and 2009-10. Results revealed that spinosad @ 0.0096 % gave significant lowest bud fly infestation i.e. 9.4 per cent with higher per cent reduction (80.2 per cent) over control. The highest yield (1889.6 kg/ ha) was obtained in spinosad @ 0.0096 % treated plot followed by thiomethoxam 0.005 % (1632.00 kg/ ha).

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Linseed (*Linum usitatissimum*) is an important oilseed and fibre crop. This crop has various industrial utilities in paper, pulp and flax. Linseed crop is infested and damaged by more than eight insect pests. Among these insect pests, linseed bud fly (*Dasyneura lini*) has been rated the most destructive pest of the flower bud (Patel and Thakur, 2005). Some of newer formulations are considered safer in pest control programme and may prevent several side effects. Thus, an attempt was made to find out the efficacy of some newer insecticides against the incidence of *Dasyneura lini* under field conditions.

The field trials were conducted during *Rabi* season of 2008-09 and 2009-10 on linseed cv. Neelam at Crop Research Farm, Mauranipur, Jhansi of C.S. Azad University of Agriculture and Technology, Kanpur to find out the most effective newer insecticides against linseed bud fly. The treatment comprised of imidacloprid @ 0.0045 % (T₁), acetamiprid @ 0.004 % (T₂), thiomethoxam @ 0.005% (T₃), abamectin @ 0.0009 % (T₄), fipronil @ 0.01 % (T₅), thiodicarb @ 0.075 % (T₆), spinosad @ 0.0096 % (T₇) indoxacarb @ 0.006 % (T₈) and untreated control (T₉) and the experiment was laid out in Randomized Block Design with three replications. The plot size was 3x4 m with spacing of 25 cm and 5 cm between lines and plants, respectively. The sowing was done in the second fortnight of

November in both the years. All the standard crop production practices were followed except plant protection measures. Two fortnightly sprayings of newer formulations were done by knepshek sprayer starting from bud initiation. Observations on per cent infestation were recorded by counting of buds on five randomly selected plants at dough stage in morning hours. The seed yield of each plot was recorded at threshing and converted in kg/ ha basis.

Desired concentration of insecticides was prepared by using the following formula :

$$\text{Amount of insecticide} = \frac{\text{Concentration required} \times \text{Amount required}}{\text{Concentration of material a.i.(ml)}}$$

The mean data of population were calculated as percentage reduction over control and per cent increase yield over control was calculated by Abbott's formula (1925) :

where,

C= Per cent damage of control

T= Per cent damage of treated plot

$$\text{Per cent increased yield over control} = \frac{T - C}{T}$$

where,

T= Yield in protected plot

C= Yield in unprotected plot