



State Award – Himachal Pradesh

Herbal preparation for the control of insect pests in crops

Roshan Lal
Kullu, Himachal Pradesh
Scout: Joginder Singh

Insect pests damage various crops and vegetables either by directly feeding or destroying post-harvest produce causing severe losses to the farmers. Roshan Lal (54), a progressive farmer, has developed a preparation using locally available plants for the control of different insect pests in cereals like wheat, barley and vegetables. He studied up to primary and has been involved in farming for many decades.

In order to overcome losses caused by various insect pests in crops, Roshan Lal developed a decoction prepared from bark & leaves, and leaves & fruits of two locally available plants (names withheld due to IP reasons). The decoction, at low doses, was found to be very effective in management of sucking and borer insects' in wheat and vegetables like okra, cauliflower, Brinjal, wheat and barley in the various experiments he undertook at his farms during the last decade. The preparation once prepared can be used for 5-6 months without any loss of efficacy.

Facilitated by NIF- India, the validation was conducted at Department of Entomology and Agricultural Zoology, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi against insect pests of Okra. The formulation was found to be very effective against both borer and sucking pests of Okra at all the three doses tested during two sprays spread across the season. As compared to control, there was significant decrease in populations of all the pests of okra namely- leaf hoppers (*Amrasca biguttula*) (67-75%), whiteflies (*Bemisia tabaci*) (64- 71%), mites (*Tetranychus urticae*) (45%) and fruit borer (*Earias vitella*) (47%) during the study. The formulation also reported an increase of production as compared to control by 53.9%, 59.12% and 66.54% at farmer's dose, half dose and double the farmer's dose respectively. The formulation was also found to be safe to non-target and beneficial insects like honeybees, ladybird beetles and spiders apart from being safe to the crop without causing any phyto-toxicity at all the doses tested.