Management of Litchi Fruit Borer

Litchi *(Litchi chinensis* Sonn) is an important subtropical evergreen fruit crop belongs to family Sapindaceae. It is known as queen of the fruit due to its attractive deep pink/red colours and flavoured juicy aril. It has high nutritive value and refreshing taste. Litchi is consumed as fresh fruit, pulp and various processed products like squash, wine *etc*. Litchi appears to be native of the area, near Southern province of China and northern Vietnam from where it was introduced into India during the 18th century in the North East region (Tripura) and over the period of time to eastern states and percolated in the northern states. In India litchi is being grown in an area of 82700 ha with a total production of 580 000 ton annually NHB. The major litchi growing countries are China, India, Brazil, Malaysia, Thailand, Vietnam, Myanmar, Mauritius, South Africa, Australia, New Zealand, Madagascar and Taiwan. It is now an important commercial fruit crop in India due to its export potentiality. Cultivation of litchi is widely spread in eastern India which provides livelihood opportunities to millions of people in the region. It is commercially grown in Bihar, Uttarakhand, West Bengal, Uttarpradesh and Jharkhand.

Due to its high economic returns and ever increasing demand in the domestic markets, the crop is also gaining momentum in Punjab, Himachal Pradesh, Assam, Tripura, and Orissa. Considering the importance of this fruit crop in the region, efforts are made to provide technological support through research and promoting production, post-harvest management and marketing. Among several factors affecting the production and productivity of litchi, insect pests are of major concern. Among them, fruit borer complex mainly comprising *Conopomorpha* spp. specially *C. sinensis* Bradley and *C. cramerella* (Snellen); (Lepidoptera: Cossidae) have become a serious problem in the recent past causing 40–80% yield loss.

Female lays eggs singly on the under surface of the leaf or shoot or near the calyx of litchi fruits. The caterpillars enter the fruit from the pedicel end and feed on the pulp resulting in rotting and premature dropping of fruits. Besides fruits, they also bore tender shoots. Presently, insecticides are being using heavily for the management of litchi fruit borers. The pest has now established itself as one of the major pests of litchi in India particularly in Bihar and Uttarakhand.

Therefore, keeping in view the importance of litchi fruit borer, a field trial was conducted to validate the different novel insecticides and biorationals against this important pest.

Advantages:

1. It is safer and efficient technique for reducing the fruit borer infestation.
2. The technology will help to enhance the fruit yield and in turn fetch higher income on quality marketable fruit.
3. Low doses of flubendiamide 39.35 SC (0.008%) @ 1.0 ml/ 5 l water or spinosad 45 SC (0.014%) @ 1.5 ml/ 5 l water provide promising results as compare to conventional pesticides. Besides, there is no problem of insecticides residue during harvesting stage of fruits.
4. Litchi fruit growers will be benefited after adopting this technology for the management of fruit borer without causing harmful effect on human health and environment.