

Visual article on damage caused by Epilachna beetle (*Epilachna varivestis*) - A serious pest of home grown Brinjal in Kollam, Kerala, India

Sadhika J., Srinandan S., Sanjana S., Sanjiya S., Saroj K.V., Sajeev C.R., Athira K., Sooraj N.P., & R. Jaishanker.

Introduction

Brinjal or eggplant (*Solanum melongena L.*) is an important and most popular vegetable crop of sub-tropics and tropics of India. Brinjal fruit contains essential amino acids, minerals vitamins (Chen NC, 1990) and high levels of potassium (Prabhu, 2009). It displays a wide range of colour and shapes. Brinjal faces severe threats from several pest and diseases during the crop cycle. The present article illustrates the nature of damage caused by a major pest on brinjal. We have captured the information from home grown Brinjal plants during the month of October to November, 2017 at chathanoor, kollam, Kerala, India. The visual were recorded using D3200 Nikon camera.

Biology of pest

There are number of insect pest known to infest brinjal during the various stages of crop growth. Among the insect pest, Epilachna beetle (*Epilachna varivestis*) causes severe loss to the crop throughout the year (Dhamdhare et al., 1995). Under favorable conditions it may cause damage up to 80% (Rajgopal D, 1989). The Epilachna adult beetle can be easily identify by its smoky orange color with 28 black spots on the elytra. (Mary et. al 2016 and Asif Ali, 2017). The eggs are laid under the lower surface of young leaves in clusters. The freshly laid eggs were bright yellowish in colour. The grubs are almost 6 mm long, yellowish in colour and have six rows of long branched spines.

Nature of damage or loses by Epilachna beetle.

The adults and grubs feed on leaves and flowers. Initial symptoms appear as semi circular shaped scratches over the leaves. Later, feeding progress between the veins, sometimes being completely stripped to mid-rib thus reducing the photosynthetic area and cause serious defoliation (Imura O, 1998). Severe infestation during fruiting stage may generate shallow holes on the fruit surface.

Measure to control Epilachna beetle.

The beetle can be controlled by removing the egg laid under the leaves if, infestation is only in few plants. This insect can be prophylactly controlled by spraying crop with botanical pesticides like 2 % neem oil application (Karmakar and Bhole 2001).

Reference

- Chen NC, Li MH (1990) Vegetable production training manual, Asian Vegetable research and development Center, Shanhua, Taiwan, 447.
- Prabhu M, Natarajan S, Veeraragavathatham D, Pugalendhi L (2009). The biochemical basis of shoot and fruit borer resistance in interspecific progenies of brinjal (*Solanum melongena*). Eur Asian J Bio Sci., 3:50-57.
- Dhamdhare, S., Dhamdhare, S.V. and Matur, R., 1995. Occurrence and succession of pests of brinjal, *Solanum melongena* L. at Gwalior (M.P.), Indian J Ent. Res., 19: 71-77.
- Rajgopal D, Trivedi TP (1989) Status biology and management of Epilachna beetle, *Epilachna vigintioctopunctata* Fab. (Coleoptera: Coccinellidae) on potato in India. Trop. Pest Manag. 1989; 35(4):410-413
- Mary Nirmala Borgia and Mary Teresa P. Miranda (2016) Bionomics, damage caused biology and morphometrics of 28 spotted lady beetle *Epilachna vigintioctopunctata* (Fab) (Coleoptera)- A serious pest of bitter melon, *Momordica charantia* in Kerala. International journal of applied and pure science and agriculture (IJAPSA) 02(06), 2016.
- Asif Ali, Khadija Javed, Humayun Javed, Ajmal Khan Kassi, Muhammad Rehan Aslam, Kashif Hussain and Tayyib Ahmad (2017) Screening of different brinjal (*Solanum melongena* L.) cultivars against hadda beetle (*Epilachna vigintioctopunctata* F.) in Pothwar region. Journal of Entomology and Zoology Studies 2017; 5(1): 786-791.
- Imura O, Ninomiya S (1998) Quantitative measurement of leaf area consumption by *Epilachna vigintioctopunctata* (Fab.) (Coleoptera: Coccinellidae) using image processing. Appl. Entomol. And Zool. 1998; 33(4):491-495