
Occurrence of pest infestation on citrus orchard during *Ambia bahar* (January –February) in tiosa taluka of District Amravati, Maharashtra

***Dr Gajendrasingh Pachlore:** Assistant professor, Vinayak Vidnyan Mahavidyalaya, Nandgaon (kh)
Email: gajendraphd@gmail.com

Dr Mamta Chandrakar: Professor Department of Zoology, Bajaj College of Science, Wardha
Email: mamatachandra@rediffmail.com

*Corresponding Author

Abstract:

Nagpur and adjoining district like Amravati are predominantly known for their citrus orchards. Nagpur orange has a special place among other citrus producing states of India with respect to size colour and taste. Orange orchard owners take utmost care throughout the year to get the good yield however seasonal uncertainty, pest infestation and water scarcity makes the yield fall drastically. Among all these factor mentioned pest infestation affects the production as well as the quality of the fruit too. Among the common insect pest occurrence in orange plants which includes mites, white fly and aphids. The less known pest infestation is gastropods infestation too observed in few farms. In this study a survey was carried out in the citrus orchards to identify the occurrence of common pest that infects the early flush in the month of January and February.

Introduction:

Orange is an important fruit crop of Maharashtra and it is ranked second among the fruit crops grown in the state of Maharashtra¹. Sweet orange data of Maharashtra was reported at 944.033 Ton in 2025. This records a decrease from the previous number of 973.330 Ton for 2024². The reason for this decline could be because of many factors including temperature unevenness, water stress and most importantly pest infestation and disease caused due to virus¹. Also Mollusca's like gastropod also found to be a pest on orange plant³. The growers from Maharashtra is found to prefer two main harvest of the orange one which is called as a natural flowering which occurs in the month of January and February with flush of leaves followed by flowering. The oranges of this season could be harvested in the month October. The other harvest that could be induced in the month of June is less preferred however it fetches a good price because of low production. The major threats to the orange plant is pest infestation during the flush and flowering which is major reason behind flower and fruit dropping. Apart from pest, virus infection is also a common reason behind the low productivity. To understand the type of pest infestation in orange plant in

the tehsil of Amravati district, visit were carried out at various orange growers orchard and pest were identified.

Material Method:

Random visits were organised to mark the orange orchards around villages of teosa taluka. Framers were consulted and 10 different plots of orange orchards were selected to identify the pest infestation during the month of December – February (Ambia Bahar) a peak period of new flush. Orchards of more than 8 -12 years were selected. Weekly visits were organised at each orchards and infected leaves, stem and fruits (Mrig Bahar) were collected.

Identification:

Pest infected leaf samples collected from the orchards were photographed using digital microscope with 500× magnification. The images of different stages of infestation and responsible pest were later identified using Google Lens, and from the data base available on the website of citrus research institute of India, Nagpur⁴. Stem, leaves, bark of infected plants were also photographed.

Observation:

It was preliminary observed that citrus psyllid infestation was very prominent with early stages of larvae in the month of January to march⁵. Infestation of mites was also seen however less common and only found in few orchards. It was observed that the conical snail (*Prietocella barbara*) and helical snail (*Helix aspersa*) and were seen on some injured bark and soft stem too⁶.



Result and Analysis:

Occurrence of Psyllid and black mites are more common in this area while infestation with gastropod was not found very common and only one or two orchard were found to have encounter the gastropod infestation. The poorly managed orchards with more weeds were found to be more prone to infestation also flood irrigated orchards were showing more infestation⁷. Following the timely suggestion made by national horticulture mission and citrus research institutes could help farmers to manage the pest effectively also overuse of pesticides could be avoided which could add up in the total profit earned during harvest season.

Reference

1. Chavan, V. M. "Investigations on citrus psylla, *Diaphorina citri* Ku.a vector of citrus greening disease in Maharashtra." *Journal-Maharashtra Agricultural Universities* 29.3 (2004): 290-293.
2. WWW.CEICDATA.COM department of agriculture and farmer welfare
3. Assurance, ICA Interstate Certification. "Citrus Imports from the Arab Republic of Egypt."
4. <https://ccri.icar.gov.in>
5. Lad, Anant & Matre, Y B & Y, Khandare. (2022). Infestation of major insect pests and diseases on sweet orange in Marathwada region during 2021-2022. 11. 414-419.
6. (Pradeep Kumar. (2020) A Review—On Molluscs as an Agricultural Pest and Their Control. *International Journal of the Science of Food and Agriculture*, 4(4), 383-389. DOI: 10.26855/ijfsa.2020.12.004)
7. Extension bulletin no.4Ipm schedule for citrus pests dr. om prakash chief consultant (nhm) Horticulture Year, 2012 National Horticulture Mission Ministry of Agriculture Department of Agriculture & Cooperation Krishi Bhawan, New Delhi-110001