

Research Paper :

## Seasonal incidence of *Phyllocnistis citrella* stainton on Nagpur mandarin

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International Journal of Plant Protection (April, 2010), Vol. 3 No. 1 : 77-79

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### SUMMARY

Citrus is a globally cultivated fruit crop. Among the citrus group, Nagpur mandarin (*Citrus reticulata* Blanco), the world fame glorious fruit crop. Citrus leaf miner *Phyllocnistis citrella* Stainton is one of the serious sucking pest of all the citrus crops in Maharashtra. Information regarding the seasonal incidence and population dynamics is an important tool for developing pest management strategies against this pest. Two peaks of the incidence were recorded during the year (second week of October 05 and fifth week of March 06) (Table 1). The larval incidence was minimum during fourth week of April 05 (1.50%), and maximum during fifth week of March 06 (19.46%) with peaks during second week of October 05 (19.00%) and fifth week of March 06 (19.46%).

Citrus is a globally cultivated fruit crop, which includes orange, sweet orange, acid lime and other related species of citrus. In India amongst the fruit crop citrus occupies third position with respect to area and production. Among the citrus group, Nagpur mandarin (*Citrus reticulata*) is the world fame glorious fruit crop.

In Maharashtra state, 14 species are reported of which 8 species are of significant importance (Anonymous, 1994). Among these serious pests reported, citrus leaf miner (*Phyllocnistis citrella* Stainton) is one of the important pests of citrus all over the country (Batra, 1990).

The leaf miner creates its incidence on the young developing leaves and forms zig zag mines by the larvae by feeding on the inner green matter of the leaves, particularly during night time. This damage adversely affects the photosynthetic activities of the plant. As a result, plant health, fruit quality and yields are affected. The pest completes its life cycle in 2 to 3 weeks and 9 to 13 generations in a year. Information regarding the seasonal incidence and population dynamics is an important tool for developing pest management strategies against this pest. Periods of no incidence, initiation of incidence, low incidence, peak incidence etc. carry important meaning for deciding the time for adoption of management tactics. Therefore, observations on the seasonal incidence of citrus leaf miner around the year was recorded to assess the critical time of the

pest incidence to adopt management practices. Although the abundance of citrus leaf miner is influenced mainly by temperature and short periods of rains (Katole *et al.*, 1997). This has indicated that the incidence of leaf miner is influenced by the ecological factors. If so, information would be of significant importance in predicting the period of expected incidence which would also serve as prediction model. With this view, correlations between pest incidence and the weather parameters *i.e.* temperature, humidity, rainfall and rainy days, have been worked out. This information would also be useful to inform the citrus growers for the expected incidence based on the ecological conditions and to adopt the management practices in time.

### MATERIALS AND METHODS

Grown up trees of Nagpur mandarin were made available in the orchard of All India Co-ordinated Research Project on Tropical Fruits, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola. Manures, fertilizers, agricultural equipments, bullock pairs, labourers etc. required for performing horticultural practices were supplied by the said project.

Meteorological data on the minimum and maximum temperature, morning and evening humidity, rainfall, rainy days etc. were obtained from the Department of Meteorology, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, for the period under study. For recording seasonal incidence, weekly observations were

### Key words :

Citrus leaf miner,  
Incidence,  
Correlation

Accepted :  
February, 2010