Effect of weather parameters on incidence of citrus leaf miner, *Phyllocnistis citrella* Stainton (Lepidoptera: Gracillariidae) and its natural enemies in three commercially grown citrus cultivars

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**ABSTRACT:** Studies on the incidence of citrus leaf miner (CLM), *Phyllocnistis citrella* Stainton, species composition of its bioagents, percentage parasitism and the impact of weather parameters on their incidence on three major citrus cultivars, showed that higher levels of *P. citrella* infestation was found on acid lime and Nagpur mandarin cultivars than on mosambi and higher levels of infestation were observed during August-October and February-April. Different stages of parasitoids and predators were collected from leaf miner infested twigs. Parasitisation rates were high during Hasta season (October-early December) and least during Mrig season (June – July). Acid lime cultivar recorded up to 4.60 parasitized CLM larvae per 10 leaves, while on mosambi it was only 0.65. Maximum temperature was found to have significant negative correlation towards the CLM infestation as well as parasitisation rate on the three cultivars, while relative humidity was found to have significant positive role in favoring the incidence of CLM.

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**Keywords:** Bioagent composition, parasitism levels, population fluctuation, *Phyllocnistis citrella*, weather parameters

**INTRODUCTION**

The citrus leaf miner (CLM), *Phyllocnistis citrella* Stainton (Lepidoptera: Gracillariidae), was first described in Calcutta, India in 1856 (Stainton, 1856). Among 27 major species of insects and mites, *P. citrella* is the most serious pest of citrus, particularly on nursery and young plantations during hot and dry climatic conditions (Sharma *et al*., 2006). The larvae of *P.*