EFFECT OF ENVIRONMENTAL FACTORS ON THE SUGARCANE LEAF HOPPER PYRILLA PERPUSILLA SINGHALENSIA AT SEVANAGALA

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Experiments were conducted to monitor the monthly variation in the levels of populations of the sugarcane leaf hopper Pyrilla perpusilla singhalensis (Fennah) (Homoptera: Lophopidae), at the Sevanagala sugarcane plantations during the period of Janaury 1986 to December 1987. Monthly percent parasitism by the egg parasite Tetrastichus pyrillae (Crawford) (Hymenoptera : Eulophidae) was recorded, according to the number of parasites that emerged from the individual eggs of the randomly collected egg masses from the field. Results of the experiment were correlated with the climatic factors; rainfall, temperature, relative humidity and wind speed which were recorded manually and daily.

Two peaks of the population of P.perpusilla per year were observed, that is just before the Yala and Maha seasons. The level of population was negatively correlated with the rainfall and positively correlated with the wind speed. However temperature and humidity had no relationship with pest populations. The egg parasite did not seem to affect the population of P. perpusilla as the level of parasitism always stayed below 20%.

The reduction in population during high rainfall period was due to washing away of egg masses found in leaf surfaces. Wind also causes severe spreading of nymphs and adults to all parts of plantations to increase their populations. Hence, this information could be utilized in the field to decide the suitable time to adopt possible control methods.