Studies on Olfactory Response of Egg Parasitoids' to info Chemicals of Infested Rice Plant

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Rice (*Oryza sativa*, L.) which is cultivated in 112 countries all over the globe and being consumed by 2500 million people in the developing countries faces many constraints in production. The two important lepidopteran pests in the rice ecosystem are rice leaf folder (RLF) *Cnaphalocrocis medinalis* Guenee and yellow stem borer (YSB) Scirpophaga incertulas (Walker) that cause severe damage to the crop. The volatiles released by the plants play a vital role as signals in tritrophic interactions. The induced plant volatiles play a major role in alteration of plant interaction with the environment. With this aim the present study is undertaken to study the orientation of Trichogramma chilonis (Ishii) and T. japonicum (Ashmead) adults towards the crude volatiles of healthy and rice leaf folder and yellow stem borer damaged plants. The responses of parasitoid to the Herbivour Induced Plant Volatiles were analysed using a four way olfactometer. Each run was carried out with 70 adult parasitoids of T. chilonis and T. japonicum, exposed to RLF and YSB induced plant volatiles. The data were recorded based on the number of adult preferences to volatiles at 2 hours and 4 hours from the start of the experiment. The number of T. chilonis adults oriented towards volatiles from RLF damaged plants were 36.21 and only 10.21 adults oriented in the vicinity of volatiles from healthy plants. The orientation of T. japonicum (34.79 nos.) towards YSB induced volatiles was almost 3.5 times higher compared to volatiles derived from healthy or undamaged plants. It was found that higher orientation towards infested plant in comparison to healthy plants' volatile.

Keywords: Plant volatiles, Rice leaf folder, Rice stem borer and Tritrophic interaction.