SHORT COMMUNICATION

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INFESTATION OF WHITEFLY *ALEUROCANTHUS RUGOSA* SINGH (ALEYRODIDAE : INSECTA) IN BETEL VINE

Among the insect pests of betel crop the whitefly, *Aleurocanthus rugosa* Singh appears to be a serious menace to this premier agricultural crop in some parts of India. The present note describes the infestation of whiteflies and its impact on betel vine industry.

In a survey made since 1971 from over 500 'borojes' in the districts of Midnapore, Howrah, Hooghly, 24-Parganas and Nadia of West Bengal and Balasore district of Orissa it has been observed that *A. rugosa* initiate infesting betel leaves at the offset of winter in February, multiply throughout summer (March-May) and disappear by early monsoon i.e., in the middle of July each year. The flies choose to reside on the under surface of the sprouting tender leaves probably for concealment, protection and photosensitivity and have a peculiar habit of frequently raising their wings at an obtuse angle from the body. The females start ovipositing within 2-3 days following first attack. The eggs are laid irregularly on the underside of the leaf, preferably in depressions of the interveinular portions of lamina (Fig. 1) ; not on the ribs, petioles or stem body. The newly laid eggs are pale white but turn brownish yellow by next day. The length, breadth and stalk of the eggs measure 0.020, 0.07 and 0.032 mm respectively in February when temperature inside the 'boroj' ranges between 9.2°C (absolute minimum) to 27.3°C (absolute maximum) with a relative humidity of about 95% and were 0.218, 0.08 and 0.041 mm respectively in the summer brood (March-May) when temperature ranges between 18.3°C (absolute minimum) to 37°C (absolute maximum) and a relative humidity of 94%. The larvae are pale white which prior to the formation of pupal case become light brown. The pupal case is translucent white with a ting of golden yellow. On emergence the adult move to an unoccupied place of the lamina or, if crowded, to next sprouting leaves or migrate to a fresh plant.

The adults and the larvae freely excrete either on the same surface of the leaves on which they live or shed it on the leaves situated immediately below the one on which they are living. The adhered eggs, pupal cases and the excreta impose blocking up of the stomata to such an extent that may hinder the physiological activity of the host plant, eventually cause discolouration and scarring of leaves. These excrements further offer extremely suitable beds for the growth of fungi that spread over the leaf surface, eventually the growth of the plant becomes stunted. Both the adult and the larval white flies pierce particularly the vein and veinlets with their stylets which also causes considerable damage to leaves.

To make the infested leaves marketable a thorough washing of the leaves with the help of a piece of wet cloth, though removes the

adhered excreta, eggs, pupal cases and fungal hyphae, hardly serves the desired purpose of the growers. A good number of scars and/or overall sign of infestation could easily be noticed on the leaves and these infested betel leaves are highly susceptible to damage and decay during transport. A bad smell is also produced by these leaves even after thorough washing which add apathy towards chewing infested leaves by the betal chewers,

A perusal of literature indicates that Singh (1931) first recorded this pest species from a number of host plants viz. *Syzigium jambolanum*, *Psidium guajava*, *Michelia champaka* including betel (*Piper betel*) from Pusa of Bihar State. While David and Subramanium (1976) listed some new host plants viz. *Anona* sp., *Polyathia longifolia* and *P. pendula* from Tamil Nadu (South India). However, further specific research on this insect pest is urgently needed.

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