

Theme 4: Plant Protection

Technical Session 2: Detection, Diagnostics, Epidemiology and Forecasting Advances in Protection Sciences

Delphacid Plant Hopper Complex in Rice: Ambiguity in Identification



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Planthoppers are the group of phloem-feeding insects belonging to 14 different families of Fulgoroidea superfamily. Delphacidae is the largest family of this superfamily and most economically important group the members of which feeds on graminaceous plants. The Delphacids can easily be distinguished by the presence of a large, movable spur (the 'calcar') on the apex of the hind tibiae. Rice is the staple food crop which is also infested by many insect pests and diseases. The Delphacid planthoppers constitute the major pests as well as vectors of rice plant diseases. In rice the major pests viz., Brown planthopper *Nilaparvata lugens* (vector of grassy stunt and ragged stunt viral diseases); Small brown planthopper, *Laodelphax striatellus* (Fallen) (vector of rice stripe and black streaked dwarf); White-backed planthopper like *Sogatella furcifera*, *S. kolophon*, *S. vibix*, and minor pests *Toya propinqua*, *Tagosodes pusanus*, *Coronacella sinhalana*, *Sardia rostrata*, *Peregrinus maidis*, *Nycheuma cognatum*, *cemus sauteri* etc. These species are known for their complexity like cryptic species, sexual dimorphism, wing polymorphism etc. These complexities lead to miss-identification of these planthoppers many times. Although these are different species causing the different state of damage and transmission of diseases there is a lack of field level identification key guide. To confront this we have developed an identification guide for all these species with detailed description comprising the ratios and photographic illustration of characters for each species male, female, brachypterous forms. This will serve the purpose of identification and easy information retrieval.

self attested
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