A handbook of leafhopper and planthopper vectors of plant diseases

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Leafhoppers and planthoppers (Hemiptera: Auchenorrhyncha) are among the most abundant groups of insects. Around 20,000 out of perhaps 100,000 leafhopper (Cicadellidae) species are described, and in addition there may be around 10,000 planthopper species (Fulgoroidea). Over 200 well-known vectors of phytoplasma, viruses and *Xylella* are already known, but many more vectors are expected to be identified because there are more diseases characterized than there are known disease vectors. However, few comprehensive identification keys are available and details of pest species are mostly widely scattered in the specialist literature.

This project, funded by The Leverhulme Trust (a UK-based foundation), will provide a comprehensive and accessible introductory guide to the leafhopper and planthopper vectors of phytoplasma, bacteria and virus diseases. Datasheets will be produced with high quality digital images of adult insects (and nymphs where available), taxonomic drawings of morphological features, and text on the biology and pest status of each species, including details of taxonomy, identification, similar species, biology, host plants, distribution, and diseases and bibliography. These will support both professionals as well as workers in developing countries seeking accurate information on identification.

A database of known plant diseases and their vectors from the various sources available, bringing together knowledge of both phytoplasma and virus diseases with taxonomic and biological vector details, available to both plant pathologists and entomologists. The approach taken of web-based and a published handbook will make dissemination easy, flexible and inexpensive with both introductory material and information on known vector species.