



## IRAC Approved Susceptibility Test Methods

One of the most important factors governing the management of insecticide/acaricide use is the availability of sound baseline data on the susceptibility of the target pest to the toxicant. Baseline data can then be used to benchmark future changes in susceptibility and guide decisions on whether or not management changes need to be implemented if the susceptibility response changes. Currently a wide range of bioassay and biochemical tests are employed to characterize the susceptibility of target pests to insecticides and acaricides. Unfortunately the results from specific test methods may not be comparable since they measure different parameters and this can lead to difficulties over the interpretation of monitoring data. IRAC in fulfilling its aim of providing expert advice to CropLife International on all technical matters relating to insecticide and acaricide resistance, has addressed this issue through recommending a range of bioassay techniques to monitor insecticide and acaricide susceptibility for selected pest species of economic importance. There are currently 13 approved IRAC methods covering a wide range of pest types and stages including: aphids, whiteflies, thrips, leaf feeding Lepidoptera and Coleoptera and mites. All methods have been thoroughly evaluated in IRAC member laboratories and many have become common standard baseline and resistance monitoring test methods over the years. In 2005 the methods were reviewed and re-formatted and can be found on the IRAC website at <http://www.irc-online.org/resources/methods.asp>

New methods are added periodically and currently the IRAC Methods Team is looking to include additional methods to cover species indicated in the European and Mediterranean Plant Protection Organization (EPPO) Efficacy Evaluation of Plant Protection Products Resistance Risk Analysis document (2003, *OEPP/EPPO Bulletin* **33**, 37-63), for which sensitivity data should be provided for registration or re-registration in the European region.

If you are interested in finding out more about susceptibility testing then the IRAC Methods page is a great place to start. If you have ideas for new methods or comments on the current IRAC methods, then we would be pleased to hear from you. You can contact us via the IRAC website [www.irc-online.org](http://www.irc-online.org) or by email at [enquiries@irc-online.org](mailto:enquiries@irc-online.org).