IRAC
Insecticide Resistance Action Committee
eConnection

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www.irac-online.org

About This Issue

Welcome to the Issue 23 of the IRAC newsletter, eConnection. Following the launch of the new IRAC website in March, we now have a large number of additional readers of eConnection who have self-subscribed via the website home page. We welcome the new readers and look forward to your feedback.

A major event in the IRAC calendar is the IRAC International Annual Meeting which was held at the CropLife America headquarters in Washington DC at the end of April. A report on the meeting, along with some of the Working Group highlights are the main focus of this issue, but we also give details of some new IRAC publications. These include a MOA Classification mini-brochure, additional IRAC bioassay methods that have been developed and validated and a new poster on *Tuta absoluta*.

Remember if you have any news or resistance topics of interest please let us know so that we can inform others in the IRAC Network. We hope you enjoy the issue.

Mode of Action Poster Translated

This popular poster showing MOA classification by group and chemical structure has now been translated into Chinese, Portuguese and Spanish. Although full size printed copies are only available in English the translated versions can be downloaded from the website for printing locally. Further translations are planned in the future. To view or download the files click on the appropriate link: English, Portuguese, Chinese, Spanish. Full information on the MoA scheme can be found in the IRAC MOA Classification document.

IRAC International holds its 45th Meeting

IRAC International held their 45th meeting in the CropLife America offices in Washington DC on April 26-29th 2010. The meeting was attended by around 40 participants and consisted of a mixture of concurrent IRAC working group meetings and reviews, a meeting of the Executive Committee, IRAC US and an International Session with discussions and presentations from invited guests including EPA, EPPO, CropLife international and the NAICC Consultant Association. There was an excellent exchange of information with around 35 presentations made during the course of the 4 days.

The progress by the various working groups during the last year was reviewed and the goals and smart objectives for the coming year agreed. A few of the highlights described by the Working Groups at the meeting are listed below:

- The merger of the Neonicotinoid and Sucking Pest WGs into one new team was very successful. The new team worked on the development of posters on the mechanisms of resistance in *Myzus persicae* and in *Frankliniella occidentalis*. A questionnaire on the resistance status in *Myzus persicae* was distributed and results of the survey should be available later in the year.
- The relatively new Diamide WG was very active during the year. They developed new bioassay methods in conjunction with the Methods WG and helped established 15 local Diamide Resistance Country Groups in priority pest/crop markets.
- The Pollen Beetle WG continued and expanded its monitoring work into 20 countries in Europe during 2009 with more than 800 populations tested for resistance. They also developed and validated new susceptibility test methods for pollen beetles with other chemistries.
- A regional survey on Codling Moth resistance was completed and initial evaluation of the results carried out by the Codling Moth WG. The team expanded during the year including members from other regions and they complied a collection of relevant literature and details of experts active in the field of Codling Moth resistance.
- The Public Health Team drafted the second edition of the very popular "Vector Manual" which will be published later this year and provided expert input into a large multi-year/multi-country WHO run project.
- A significant White Paper on Biotechnology Resistance Management was published in Pest Management Science by the IRAC Biotech Team and a complimentary educational slide kit was developed.
- The Methods Team continued development and validation of different bioassays in conjunction with the other WGs and expanded the searchable eMethod tool to incorporate around 70 published references describing different methodologies.
- The MOA WG published the latest version of the classification scheme (v6.3), developed a second edition of the MOA Structures poster along with translations in different languages and produced a mini MOA classification brochure (see next page for details).
- The Communication & Education group was successful in establishing the new IRAC website and distributing 4 issues on eConnection.

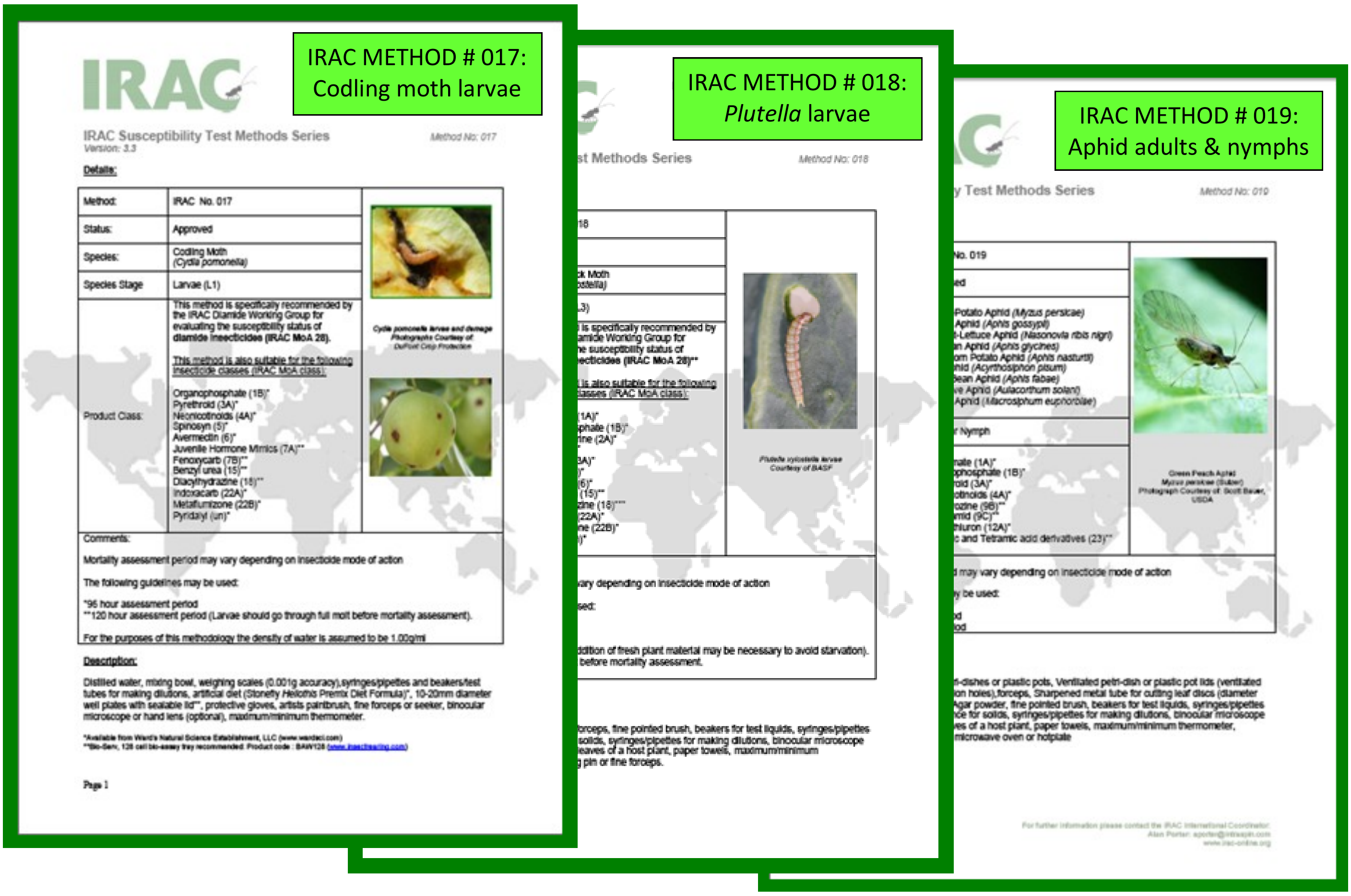
IRAC International Spring Meeting, 2010, Washington DC

New IRAC MOA Classification Brochure

IRAC International has just designed and printed a new pocket-sized guide to MOA classification. It includes an introduction to the importance of MOA for resistance management, a list of MOA groups in numerical order with corresponding active ingredients, pest specific lists of MOA by target site and an alphabetical list of active ingredients along with their MOA classification number. Copies are available from IRAC members and via the website or can be downloaded by clicking IRAC MOA Brochure

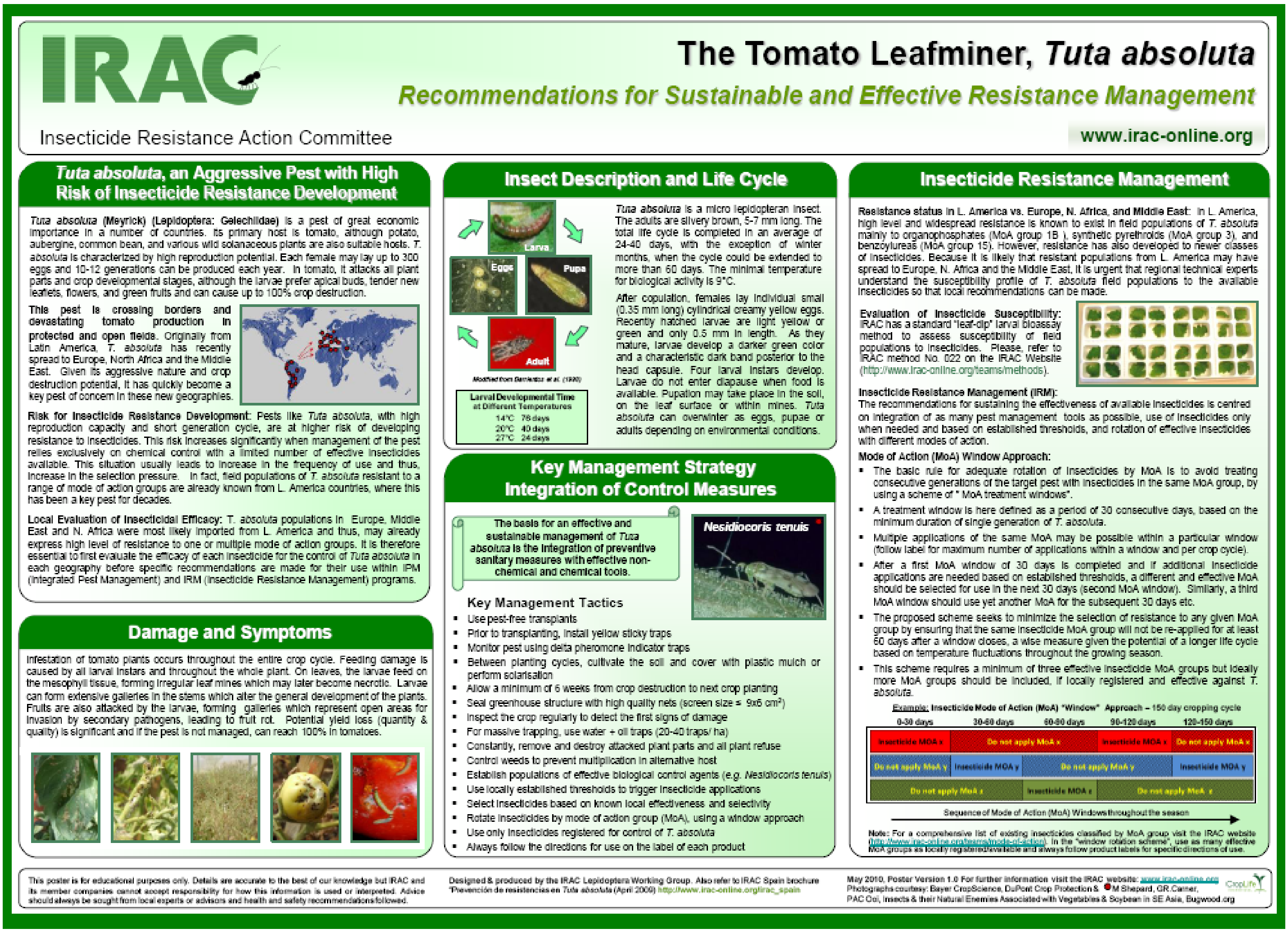
New IRAC Susceptibility Test Methods

The IRAC Methods WG in conjunction with the other IRAC teams have published on the website 3 new methods for Codling Moth larvae, Diamondback Moth larvae and aphid adults and nymphs. Further new methods for *Spodoptera, Helicoverpa* and *Heliothis* larvae, *Meligethis aeneus* adults and *Tuta absoluta* larvae are under review. Details can be found on the IRAC website using the links within the text.



New Tuta absoluta poster from the IRAC Lepidoptera WG

As described in the poster, *Tuta absoluta* is a pest of great economic importance in a number of countries. Its primary host is tomato, although potato, aubergine, common bean, and various wild solanaceous plants are also suitable hosts. Pests like *Tuta absoluta*, with high reproduction capacity and short generation cycle, are at higher risk of developing resistance to insecticides. This risk increases significantly when management of the pest relies exclusively on chemical control with a limited number of effective insecticides available. The new *Tuta absoluta* poster gives some background to the development of this pest as a major problem and outlines recommendations for integrated control measures and the management of resistance.



Proposed Integration of IRAC and the other RACs into CropLife International

IRAC is an inter-company organisation operating as a Specialist Technical Group under the umbrella of CropLife International. It was formed in 1984 to provide a coordinated crop protection industry response to prevent or delay the development of resistance in insect and mite pests. As resistance management has become increasingly important as an integral part of IPM and good Product Stewardship, IRAC has grown in terms of numbers of member companies and scope of activities and projects undertaken. It has now been proposed that IRAC along with the other RACs should be fully integrated with CropLife International under the Product Stewardship Committee to ensure that there is a proper legal and financial structure for operation and full compliance to processes and procedures such as rules on anti-trust. Discussions are ongoing but the IRAC Executive Committee have voted in favour of the change which will most likely come into force in 2011.

Conferences & Symposia

- IUPAC Pesticide Chemistry, Melbourne, Australia, July 4-8, 2010
- 55th Am. Assoc. Veterinary Parasitologists, Atlanta, GA, August 8-13th, 2010
- IXth European Congress of Entomology (ECE2010), Budapest, Hungary, August 22-27, 2010
- XIII International Congress of Acarology, Recife, Brazil, August 23 - 27, 2010
- Entomological Society of Israel, Israel, October 7th, 2010
- Entomological Society of Canada & British Colombia, Vancouver, October 11-14, 2010
- British Crop Protection Council "CropWorld" Congress, London, UK, November 1-3, 2010
- Entomological Society of America, San Diego, CA, December 12-16, 2010

Feedback

The eConnection is prepared by the IRAC Communication & Education WG and supported by the 15 member companies of the IRAC Executive. If you have information for inclusion in the next issue of eConnection or feedback on this issue please email aporter@intraspin.com.

IRAC Executive Member Companies

Bayer CropScience · Nihon Nohyaku Co.,Ltd. · Chemtura · Nufarm · DuPont · Syngenta · BASF The Chemical Company · Makhteshim Agan · Monsanto imagine · Belchim Crop Protection · Vestergaard Frandsen Disease Control Textiles · FMC · Cheminova · Dow AgroSciences · Sumitomo Chemical