

47th Meeting of IRAC International, Indianapolis

March 27-30th 2012

Methods WG

Tatjana Sikuljak, Lixin Mao





Team Members

Insecticide Resistance Action Committee

- **Tatjana Sikuljak, BASF (Interim Chair)**
- **Harald Köhler, Bayer Crop Science (Vice Chair)**
- **Jean-Luc Rison, DuPont**
- **Lixin Mao, BASF**
- **Verity-Laura Paul, Syngenta**
- **Alan Porter**

Team Goals

Team Goals:

- To develop a single point of contact for researchers to gain information on how to conduct insecticide resistance bioassays.
- To provide IRAC approved methods in order to steer researchers to use these validated methods, so that data generated by independent researchers can be compared directly.

What are we doing to meet these goals:

- Development of a searchable database for finding both IRAC approved methods and those which are used by researchers but have not been approved by IRAC.
- Increasing diversity and rate of validation of IRAC approved methods, including public health pests, biotechnology methods, biochemical methods and molecular techniques.
- Aid in better understanding of confirmed methods by providing additional visual tools e.g. methods videos

- Total number of approved methods: 26 (19 in 2011)
- Methods posted as “under review”:
 - *Myzus persicae* (nymphs/cyantraniliprole)
 - *Aphis gossypii* (apterous adults, 4 instar nymphs/cyantraniliprole)
- Methods being reviewed:
 - Pollen beetle - indoxacarb
 - Rice leaffolder, rice stemborer, whiteflies - diamides
 - Bed bugs – deltamethrin
 - Stinkbugs – pyrethroids and neonicotinoids
- 155 posted references cover:
 - Broad range of crop pests (aphids, thrips, cutworms, stinkbugs, leafminers, scales, mealybugs, weevils, flea beetles, wireworms and planthoppers), also
 - A number of public health pests (house fly and mosquitoes)

■ Method videos completed in 2011:

- *Tuta absoluta* (method no. 022)
- *Myzus persicae* (method no. 019)

* Some video facts (March 21, 2012):

- Number of viewings in the last 3 months: 215 for *Tuta* and 179 *Myzus*
- Top geographies: UK, US, Germany, Turkey and Spain

■ Method videos suggested for 2012/2013:

1. *Nilaparvata lugens* (method no. 005)
2. *Tetranychus* sp. or *Panonychus* sp. (MoA to be decided)
3. *Meligethes* sp. (highlighting differences between methods e.g. pyrethroids, neonicotinoids, organophosphates and indoxacarb)



Goals & SMART Objectives 2012/2013

Insecticide Resistance Action Committee

Goals	Objectives	Timeline
Develop single point of contact for insecticide and acaricide resistance monitoring methods (core activities)	<ul style="list-style-type: none"> • Populate e-methods tool with a range of methods used to measure insecticide susceptibility against key agricultural, horticultural and public health pests. Methods sourced from literature, companies and external contacts • Continue to maintain and improve confirm methods e.g. indicate suitability of each confirmed method for base line determination in the method description, review older IRAC approved methods • Populate e-methods with additional references 	Q4 2012/ Q1, 2013
Develop single point of contact for insecticide and acaricide resistance monitoring methods (promotional activities)	<ul style="list-style-type: none"> • Promote eMethods tool through e-connection, posters and method videos to be used at industry and academia events • Initiate minimum 1 new procedural videos e.g. brown planthopper, mites or pollen beetle 	Q4, 2012 Q4 2012/ Q1 2013
To provide IRAC approved methods in order to steer researchers to use these validated methods, so that data generated by independent researchers can be compared directly	<ul style="list-style-type: none"> • Deliver minimum 6 new crop IRAC approved methods • Commission appropriate internal or external studies and validate as required to finalise public health methods for inclusion in the IRAC methods series • Liaise with Biotech Team to deliver Biotech SOPs 	Q4 2012/ Q4 2013 Q4 2012

Myzus persicae bioassay eVideo

