

Session 3

**International Working Group & Country Group Review
46th Meeting of IRAC International, Brussels, Belgium**

Wednesday - March 30th, 2011

Sucking Pest WG

Jonathan Henen





Insecticide Resistance Action Committee

SP WG Team Members

Jonathan Henen	MAI (Chairman)
Ralf Nauen	BCS
Matthias Haas	BCS
Russell Slater	Syngenta
Steve Skillman	Syngenta
Eric Andersen	Cheminova
Tatjana Sikuljak	BASF
Jean Paul Genay	Nufarm
Dan Vincent	DuPont
Luiz Gomez	Dow
James Thomas	Dow
Alan Porter	IRAC Coordinator

Sucking Pest WG	Goals	Objectives	Timeline	
	Follow up on Neonicotinoid resistance in <i>Myzus persicae</i> in peaches in Southern France	<ul style="list-style-type: none"> Carefully monitor resistance status Analyze findings Compile relevant recommendations 	Ongoing	Q3 2010
	Complete Myzus Questionnaire	<ul style="list-style-type: none"> Push for more people from more diverse backgrounds to answer Collate answers and compile recommendations Publish results and recommendations 	Accomplished	Q2-3 2010
	IRAC Posters – Finalize versions of all posters currently been developed	<ul style="list-style-type: none"> Mite poster (Fergus & Ralf) BPH poster (Together with IRAC SE ASIA) Citrus Psylid poster (Together with IRAC Brazil) <i>Frankiniella</i> poster (Steve & Dan) 	Ongoing	End Q2 2010
	Compile a further resistance questionnaire for key pest	<ul style="list-style-type: none"> Identity possible resistance issues for specific key pests Decide which pest/chemistry needs to be addressed Compile relevant questionnaire to help pinpoint the relevant issues and how to deal with them Publish recommendations based upon the questionnaire 	TBD	Q4 2010

Conference calls:

1. 14 September 2010 Myzus questionnaire
2. 12 December 2010 Myzus resistance to neonicotinoids
3. 4 February 2011 Myzus resistance to neonicotinoids

Email exchanges:

Numerous emails covering the newly proven resistance of *Myzus persicae* to neonicotinoids on peaches in Spain and Southern France towards the end of 2010 and into early 2011

The green peach aphid *Myzus persicae* dominated the Sucking Pest WG's agenda

1. *Myzus persicae* questionnaire

- The *Myzus persicae* questionnaire was compiled and distributed
- The initial response was not encouraging
- Following EPPO conference in 2010 Vlasta succeeded in getting some of the EPPO countries to fill in the form
- In all a total of 7 forms were received most of which were only partially filled in
- No really new data came out of the forms received and none of them predicted the neonicotinoid resistant *Myzus* populations subsequently found in Spain, Italy & Southern France

The green peach aphid *Myzus persicae* dominated the Sucking Pest WG's agenda

2. *Myzus persicae* resistance to neonicotinoids

- Very few cases of neonicotinoid resistance since chemistry introduced in 1991
- All cases so far identified based on metabolic resistance (whiteflies, plant hoppers, potato beetles)
- Until 2009 no major cases of resistance in aphids was identified
- Small selectivity shifts reported in populations collected from peaches and tobacco
- Since 2003 there have increased reports of reduced performance of neonicotinoids in French peach crops with one population positively identified in 2009 with high levels of resistance
- Resistance mechanism is both metabolic (over expression of CYP6CY3 monooxygenase gene) & target site (nicotinic acetylcholine receptor mutation).
- Confirmed by Rothamstead Research , Syngenta & BCS

Key Activities in 2011 (4)

•The green peach aphid *Myzus persicae* dominated the Sucking Pest WG's agenda

- An alert was drafted & posted on the IRAC website and also distributed via the IRAC e-Connection newsletter for internal distribution within all IRAC member companies for them to disseminate the findings within companies and to relevant extension services & local experts
- Specific recommendations need to be discussed & compiled at this Spring Meeting based upon continued monitoring, recommending restrictions on product use, educating and communicating this information to local authorities, local resistance action committees and growers

Key Activities in 2011 (5)

- **The green peach aphid *Myzus persicae* dominated the Sucking Pest WG's agenda**
 - Possible collaboration with Rothamstead Research (Ian Denholm)
 - Profiling of known resistance mutations in European populations of *Myzus persicae* using molecular tools
 - Approve and run a pilot study with *Myzus* field samples collected by IRAC member companies and sent to Rothamstead to be characterised by molecular tools for NNI-resistance mutation, MACE, kdr, super-kdr and Esterase
 - Coordinate between companies regarding regions, crops and timing for sampling
 - Funding – a proposal will be circulated to WG and then sent to Executive for final approval (either by the individual companies or by IRAC)

Poster activity

Proposed posters:

- Mite poster – S. Pest WG
- BPH poster - S. Pest WG/IRAC SEA
- Frankliniella poster – S. Pest WG
- Citrus psyllid poster – S.Pest WG/IRAC Brazil

Amendments proposed by Steve

Initial draft proposed by Steve

The above were all proposed but are not completed yet

Activities for 2012

- Continue to monitor the neonicotinoid resistance found in *Myzus persicae* populations on peaches in Southern France, Spain and Italy
- Compile & disseminate specific recommendations to deal with this resistance
- Complete posters in list and add additional poster subject matter
- Relook at the use of questionnaires for additional pests due to very weak response to our Myzus questionnaire last year

Acknowledgements

Thanks are due to all members of the Sucking Pest WG for their active participation and input into the activities during the past year.

A special thanks to Alan Porter for his support and patience with my requests for help and information