

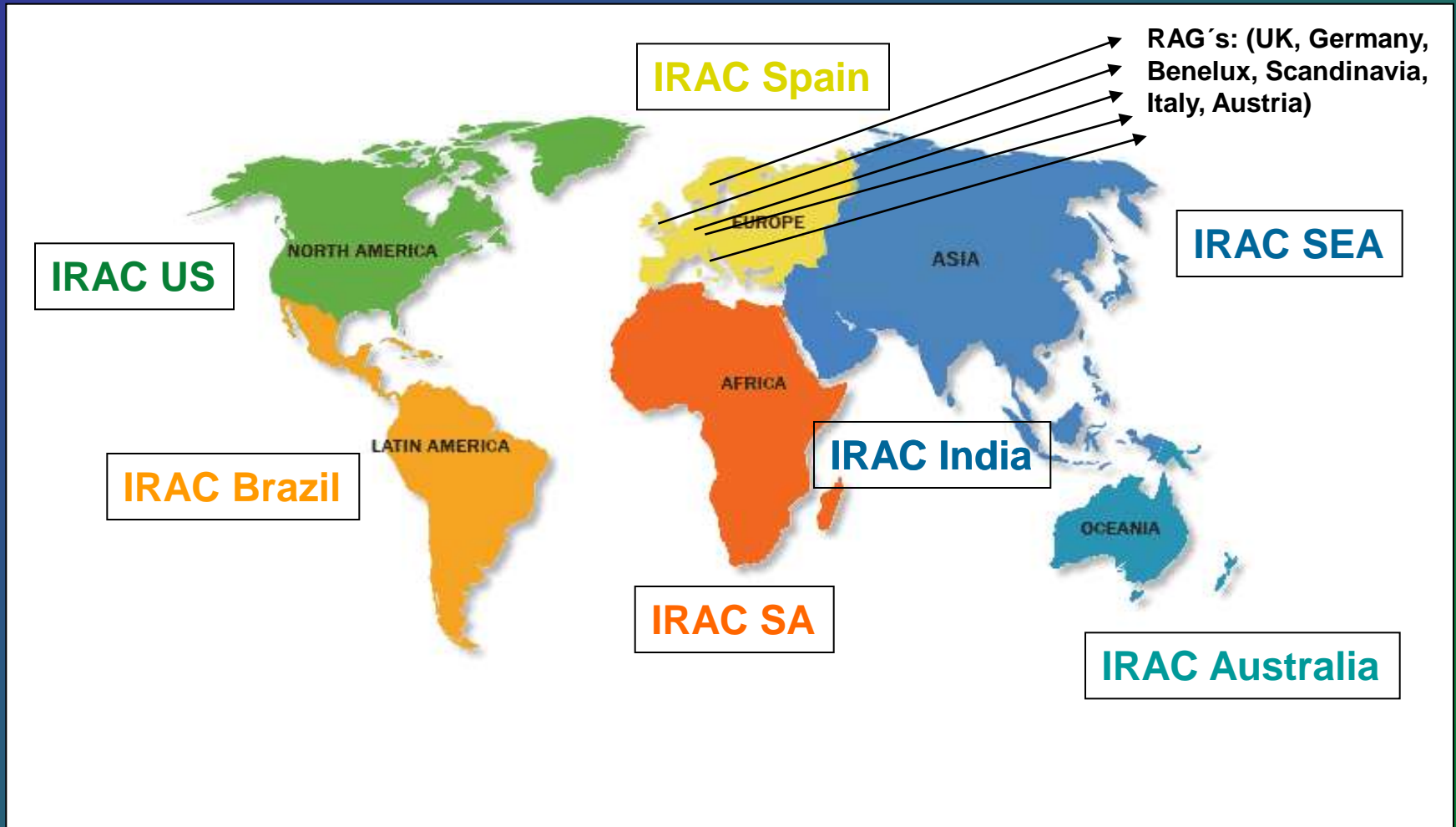
Insecticide Resistance Action Committee

**47th Meeting of IRAC International, Indianapolis, USA
March 29th, 2012**

IRAC Country Group Overview
Liaison Officers



IRAC Country Groups



Insecticide Resistance Action Committee

CG Liaison Officers

Australia

Ralf Nauen

Brazil

Paula Marcon

India

Nigel Armes

South Africa

Russell Slater

SE Asia

Nick Storer

Spain

Andrea Bassi

US

Gary Thompson (presented by Graham Head earlier)



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IRAC Australia

Ralf Nauen



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IRAC Brazil



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IRAC India
Nigel Armes



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IRAC South Africa

Russell Slater



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IRAC Spain





I.R.A.C. Annual Meeting April 2012

Indianapolis



➤ 14 companies:

2012: 14 Members (same companies, 2 changes of members)

Agrodan (V. Gil-Albert)

Afrasa (A. Pla)

Aragro (R. García)

BASF (A. Zarco)

Bayer CropScience (J. Izquierdo)

Belchim (B. García)

Dow AgroSciences (M. Torné – Chair)

DuPont (D. de Scals)

Gowan (L. Cornette)

IQV (T. ISánchez)

Kenogard (P. Fuchs – Vice-Chair))

Nufarm (A. Salamero)

Sipcam Inagra (J. R. Soler)

Syngenta (L. Martín)

2012: 4 consultants

AEPLA: Economics (M. Domené), Technical (V. Haza), Communication (N. Castejón)

Scientific consultant: Dr. Pablo Bielza Lino. Universidad Politécnica de Cartagena

External collaborator: Maria Ortíz (started to give support to IRAC Spain by mid 2011)



➤ Seven active Working Groups & Coordinators:

1. Communication (Belchim)
2. Mode of Action (Sipcam)
3. Aphids & Whitefly (Bayer)
4. Thrips (DowAgrosciences)
5. Mites (Kenogard)
6. Lepidoptera (inactive)
7. Tuta absoluta (DowAgrosciences)
8. Diamides (Bayer)





➤ Communication WG:

1. Educative modules (part II): Video finalized by Dr. P. Bielza in Spanish.
2. Actions to support “ECPA view on Individual private retailer standards banning or restricting the use of pesticides” as growing concern in Europe.

➤ Mode of Action WG:

1. Updated MoA leaflet finalized and distributes among companies and Officials by post and by emailing,
2. Spanish version of MoA Poster translated in March 2012



➤ Aphids & Whitefly WG:

1. *Myzus persicae*: IRAC International meeting in Barcelona (Jan12) Officials from main affected areas (Cataluña and Aragón), invited.
2. *Bemisia tabaci*: Research work done by Dr. Pablo Bielza already finished and published.

➤ Thrips, Mites and Lepidoptera WG's:

1. These 3 WG's working to update MoA posters and product cards

➤ Diamides WG:

1. Diamide Poster updated and distributed in 2 Symposia in 2011.



➤ Tuta absoluta WG:

1. *Tuta absoluta* is much under control, as more tools available and more technical knowledge on the pest have helped to decrease pressure in Spain.
2. New research work will be funded by IRAC Spain and by the Government to anticipate possible type of resistances and cross resistances, to be initiated by Dr. Pablo Bielza in 2011.
 - 4 different populations from representative areas of Spain (Cataluña, Valencia, Murcia, Almería, Canarias)
 - Molecules: Spinosad, Flubendiamide, Rynaxypyr, Indoxacarb, Emamectine, Metaflumizone, piretroide, Clorpirifos-metil, Lufenuron, & Azadiractine (still to be fine tuned).



➤ **Participation in Symposiums:**

1. Institut Químic Sarrià: Oct 2011
2. Sociedad Española de Entomología Aplicada Nov 2011.
3. Phytoma April 2012

➤ **Possible future studies:**

1. *Myzus persicae* (CSIC, Pr. Alberto Fereres)

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IRAC SE Asia



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EU Resistance Action Groups Overview

Resistance Action Group reports

- **Germany:** Ralf (for Udo Heimbach)
- **UK:** Ralf (on behalf of Bill Parker)
- **Benelux:** Guy Smagghe (No report)
- **Italy:** Emanuele Mazzoni (No report)
- **NORBARAG:** Ralf (on behalf of Nina Johansen)
- **Austria:** Ralf (for Gabriele Kovacs)

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Update on ECPR-I Germany

Udo Heimbach (Chair)



Expert Committee on Pesticide Resistance - Working Group Insecticides, Acaricides ECPR - I

www.jki.bund.de/resistenz-insekt.html

ECPR – I (founded in 2005)

Aim: sustainable use of insecticides and acaricides

Create a platform for discussion of resistance issues of insecticides and acaricides in Germany

Raise awareness for resistance topics for all parties; advisors, farmers, retailers, regulators, companies

Transfer knowledge and initiate discussions on resistance issues

Early detection of resistance development and support decisions when to name reduced sensitivity “resistance”

Harmonisation of resistance test methods

Develop and harmonise resistance avoidance strategies

Supporting for regulatory decisions

Practical support for resistance monitoring projects

Participation

from German language areas (mainly DE, some participation from CH, AU and LUX)

Participation limited as far as practical for scientists of:

Industry: focus on those carrying out research or advising farmers, preferable no “marketing persons”

Advisory services of the federal countries in Germany and private advisors e.g. from large retailers

Regulatory authorities

University and other resistance research

Products

Protocols and Agenda are published on the web page

Most presentations are exchanged between participants

Resistance strategies are discussed and published on the web page

Method discussions are protocolled

Joint working program started e.g. on pollen beetle and other OSR pest monitoring programs

joint *Trialeurodes* test program started

program to make aware and improve hygiene measurement for glasshouse crops was developed

Main topics of discussions and presentations 2005 - 2011

Pollen beetle and other pest insects in OSR; resistance situation and resistance strategies in OSR

CPB Resistance situation and resistance strategies in potato

***Trialeurodes vaporariorum* resistance situation**

Resistance problems in greenhouses and other horticultural crops

Codling moth resistance situation and strategies

RAG in Austria



Chaired and invited by AGES

Participants:

advisors of federal countries in Austria, companies, grower organisations, organisation for integrated crop protection, consultants of field trials

Topics are wide and include any resistance issue of weeds, pathogens and pest insects

Aims: exchange knowledge and data on resistance, establish and support resistance monitoring, provide information for the regulatory authority AGES, discuss resistance strategies

Protocols are confidential for members only, but some publications are planed (e.g. folder on herbicide resistance)

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Update on IRAG-UK Activities



Bill Parker (Chair)





IRAG-UK

Chairman: Dr Bill Parker
AHDB, UK



IRAG-UK

Insecticide Resistance Action Group - UK

Part of a family of independent UK 'RAG's

Fungicide Resistance Action Group (FRAG)

Herbicide Resistance Action Committee (HRAC)

Insecticide Resistance Action Group (IRAG)

Rodenticide Resistance Action Group (RRAG)



Aims

To provide information on resistance avoidance and management strategies for use by UK farmers and growers, advisers and regulatory authorities by:-

- Providing an independent forum for the exchange and interpretation of information on insecticide resistance.
- Producing guidelines on insecticide resistance and agreed statements to the media.
- Identifying knowledge gaps and suggesting research needs to appropriate funding agencies.
- Establishing links to exchange information and ideas with similar groups in other countries and with the Insecticide Resistance Action Committee.



Membership

- **Agrochemical Companies**
- **IRAC representation**
- **UK Levy Boards (e.g. AHDB)**
 - **Funders of applied research**
- **Research organisations (e.g. Rothamsted)**
- **Consultants/advisors**
- **Regulatory authorities (CRD in the UK)**



Recent activities

- *Myzus persicae* resistance management guidelines
 - Primarily control on potato, regularly updated
 - Neonicotinoid resistance alert (March 2011)
- Brassica aphid complex control guidelines
- Pollen beetle resistance advice
 - In conjunction with IRAC
 - Fast-changing situation in the UK
 - Regularly updated and communicated to industry
- Watching brief on whitefly resistance to neonicotinoids



New UK issues

- **Kdr resistance to pyrethroids in grain aphid (*Sitobion avenae*)**
 - Limited suspect control failures in 2011
 - Some aphids shown to carry kdr mutation
- **Management of *Tuta absoluta***
 - Not established in the UK but has the potential to be serious
- **Cabbage whitefly (*Aleyrodes proletella*)**
 - Becoming more important, some published evidence of pyrethroid resistance in UK populations
- **Cabbage leaf miner (*Scaptomyza flava*)**
 - Some initial indications of possible problems

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Update on IRAG BeNeLux



Too busy

Email, March 22nd, 2012

Ralf, well received;
very busy now;
I will also our secretary on the slides
for IRAG_BNL;
The cells, I need to check with the
people in the lab;
I am making 80-90 hours per week;
(from the desk;)
Guy

Members and some facts

- Started November 2007
- **Chair:**
 - Prof. Dr. Guy Smagghe, Ghent University, B
- **Secretary:**
 - Ing. Claudia Jilesen, Ministry of Agriculture, Nature and Food Quality, NL
- **Members are representatives of:**
 - Government/registration/extension B+NL
 - Industry (incl. chemical and biological) B+NL
 - Research institutes/university B+NL+L
 - **Total#: 44 members**
- Website: <http://www.iraq-benelux.ugent.be>
- Meetings: 2 times/yr (Spring/Fall); alternating B/NL

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Update on NORBARAG



Minutes of the fourth NORBARAG meeting Malmö, Sweden 14 december 2011

Agenda

1. Welcome Olof Johansson, Swedish Board of Agriculture, Håkan Schroeder, Swedish University of Agricultural Science and Henrik Hallqvist, Swedish Board of Agriculture.
2. Minutes of third NORBARAG meeting in Ski, Norway and follow up on decisions (Henrik Hallqvist).
3. Acceptance of agenda. Henrik Hallqvist
4. Reports from subgroups (Solvejg K. Mathiassen, Gumilla Berg and Nina Svae Johansen).
5. Resistance information on the label – discussion on a draft (Henrik Hallqvist).

55 participants

Harmonization of resistance information on label - comments



- How specific should the information be?
- Legal text vs. recommendations?
- Too general information is not useful to the growers/general information is enough
- Should be a clear message, and easy to find on the label
- Structure and content of resistance information should be as similar as possible for insecticides, fungicides, and herbicides
- IRAC MoA classification system should be used for insecticides. Important information. Need to be translated to native languages.
- Need for education of insecticide users (growers, advisors) in resistance theory and IRM to understand the resistance information on the label
- Are we heading for a guidance document on resistance warnings and restrictions for the pesticide labels in all Nordic-Baltic countries?