



IRAC Executive Team & Working Group Guide

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1. Introduction

The following guide provides a brief overview and outlines the activities of each of the IRAC Teams and Working Groups and helps to explain their role within the IRAC Executive and how they interact. A pictorial representation of IRAC International including the IRAC Executive is shown at the end of the document

IRAC as an organisation can only be successful with proactive participation and contributions from the member company representatives volunteering their time and energies to achieve the agreed goals and objectives. It is important that the workload of leading and contributing to the work of the various teams and working groups is shared among the member companies and we would encourage all members to consider where they feel they are best able to contribute and to take an active role within IRAC.

2. Core Area Teams

2.1 Crop Protection Team

The crop protection area represents IRAC's most long-standing interests in terms of its remit to promote effective insecticide resistance management (IRM) and it is the area where IRAC's constituent companies and members have most experience. With the more recent formation of specialist core IRAC teams for Public Health and for Plant Biotechnology, it was felt that a team to overview this area was also needed, although it was recognized that most of the work of the team would be conducted in specialist workgroups as detailed below. Given this, the Crop Team has more of a communication role, coordinating the activities of the various Crop WGs.

Codling Moth Working Group

Although IRAC has maintained a codling moth workgroup for a number of years, it was reformed in 2007. The workgroup is responsible for a reassessment of the current resistance situation and the active ingredients available, and is charged with developing IRAC monitoring methods and IRM strategies for this pest.

Pollen Beetle Working Group

The Pollen Beetle Team was formed in 2007 largely in response to increasing and spreading problems of resistance to pyrethroids in Europe as well to requests from EPPO (European and Mediterranean Plant Protection Organisation) as a collaborative body of European regulators, for IRAC to take a proactive approach to IRM work in this area. The team has been responsible for coordinating the collection and analysis of resistance monitoring data from Europe and for developing an agreed European IRM strategy for the chemical control of pollen beetles. Its brief may expand in the future to cover other pests of oilseed rape. The team currently also includes external experts from the European regulator and research community.

Sucking Pest Working Group

Given the need for IRAC to push forward with the development and dissemination of IRM strategies for major pests of global importance, it was agreed that a team dedicated to considering control and IRM of globally important sucking pests was urgently needed. It is recognised that this is a broad remit, but by focusing on specific areas the team is convinced that it can initially deliver strategies for key pests such as whiteflies, aphids and thrips, before moving on to consider other groups. The WG was formed in 2008 and then combined with the Neonicotinoid WG in 2009 as there was significant overlap between the teams.

Diamide Working Group

The Diamide WG was formed in April 2008. Chlorantraniliprole and flubendiamide are the two active ingredients in IRAC Mode of Action Group 28 and both have only recently been registered for first commercial uses in some countries. Because there has not yet been any very significant use of these compounds, the Diamide WG is thus in a unique position to cooperate and develop agreed proactive IRM strategies that should help to prevent or delay resistance to them.

2.2 Plant Biotechnology Team

With the continued global spread of transgenic crops expressing insect-control traits, IRAC agreed that it had a major role to provide education on IRM in this area and to promote the implementation of effective IRM strategies. In particular, in those countries where no collaborative organisation currently existed, it was agreed that IRAC could play an especially useful role in helping to ensure that good IRM practices are understood and followed. The team has an on-going activity to identify and work with appropriate bodies in key countries, and to develop educational and influencing material that can be used to promote its work.

2.3 Public Health Team

The Public Health Team was formed in 2006 to continue the work initiated by a previous IRAC Vector Team and has the extended remit covering hygiene pests as well as vectors. Most of the efforts have focused on forming links with key groups working in the vector control area (WHO, Gates Foundation, Innovative Vector Control Consortium IVCC) and a key publication “Prevention and Management of Insecticide Resistance in Vectors and Pests of Public Health Importance” was published with inputs from these groups in January 2007. Further discussions are ongoing with these groups and others on how IRAC can influence and improve resistance monitoring and management in vectors and hygiene pests.

3. General Working Groups

3.1 Steering Group

As IRAC has become a larger and more complex structure with many more active teams (14 at present), the need for a group dedicated to maintaining its organisational and operational excellence was considered essential. Thus, the Steering Group has a responsibility to the Executive to ensure that the IRAC structure, constitution, organisation and financing serves the needs of the Committee and that IRAC can meet its responsibilities, commitments and wider strategic objectives. The team works to facilitate and encourage interactions within IRAC International including the IRAC Executive and IRAC Country or Regional Groups as well as with CropLife International and other

external organisations. The team also has a responsibility to propose new strategic initiatives and to seek out novel and creative funding opportunities. Members of the team include the Elected Officers (Chairman, Vice Chairmen and Treasurer), Core Team leaders, a Country Group representative and the IRAC International coordinator, together with as many company members as wish to be involved.

3.2 Communication and Education

A decision was taken some years ago that IRAC should focus on the development of a comprehensive communication plan to promote awareness of resistance problems, the development of education materials to help foster and promote good insecticide resistance management (IRM), and on widely-disseminated communications about topical resistance issues. A key element of this plan has been the development of the IRAC website which is pivotal to IRAC's external face and all of its communication work. The C&E team has a responsibility to ensure that the website serves the IRAC communication plan and for populating the site with technical and educational material that will serve IRAC's remit to promote effective IRM. As leader of the team Alan Porter represents both APA (Alan Porter Associates) responsible for website management and Intraspin who handle technical aspects of the development, maintenance and updates of the website. The team is responsible for the development, promotion, production and future expansion of the suite of eTools that IRAC has developed. Using material provided by other IRAC teams, the team is also responsible for coordinating the development and production of materials for meetings and conferences including posters, information packs and presentations. In addition the team prepares articles and papers about IRAC and its work, handbooks, monographs and educational modules. Given this broad remit the team can only operate effectively with considerable amounts of help from members, especially in terms of the submission of copy.

3.3 EU Liaison

Derived from the former Regulatory, Regulatory Liaison and Advocacy teams, the EU Liaison group was formed in recognition of the need for IRAC to have a greater role as an expert body liaising and lobbying within the EU on matters relevant to insecticide resistance particularly although not limited to regulatory issues such as the revision of EU Directive 91/414. The team has a broad remit to help ensure that effective IRM is recognized and promoted widely, and that IRM components of regulatory frameworks are realistic, workable and sustainable. The team works to develop messages that target key influencers and regulatory bodies. Members of the team work with regionally important bodies such as the European and Mediterranean Plant Protection Organization (EPPO), European Crop Protection Association (ECPA), Food and Agriculture Organization (FAO) to ensure that the agrochemical industry's approach to IRM as endorsed by IRAC is accepted and promoted in order to guarantee sustainable agriculture.

3.4 Mode of Action

The IRAC mode of action classification is considered as *the* definitive global authority on the target site of insecticides and crucial to this is the scientific integrity of the scheme. It is used globally to classify insecticides, as the basis for mode of action labelling, and is an essential tool for the development of IRM strategies involving multiple modes of action in a window-based approach. The MoA team, which is largely composed of technical experts, is charged with maintaining the scheme and its status, carrying out updates as required as well as developing educational resources such as posters to promote the

correct use of the scheme. The team considers data to support new submissions for entries to the scheme and acts as an arbiter on questions of MOA.

3.5 Methods

The ready availability of standard, validated and easy-to-run, ‘IRAC-approved’ methods for resistance detection in the world’s major pests is crucial for successful monitoring of resistance problems, and IRAC has agreed that these will be made generally available via its website and the online eMethods tool . The methods team is therefore responsible for ensuring that IRAC has available a suite of up-to-date methods to meet this need. The team is also responsible for coordinating the development and validation of new methods and for preparing them for inclusion on the website and eMethods. This may involve interaction and cooperation with external experts in academia or institutes. The methods team has also agreed that it should include biochemical and molecular methodologies as well as references to other methods not yet validated by IRAC. The team will interact with the various IRAC Core Activity Teams and pest-specific IRAC working Groups as required.

3.6 Resistance Database

One of the original goals of IRAC was to provide expert opinions and survey reports on the status of resistance in arthropods to pesticides. This was conducted as an independent effort in the early and mid 90’s but for the past several years these efforts have been combined with Michigan State University to provide a more available database. The Arthropod Pesticide Resistance Database (APRD) is a web-based resistance case entry system that serves as a tool to access arthropod resistance information and assess the current status of arthropod resistance across the globe. The application is maintained by Michigan State University and supported by a number of organisations including IRAC. As well as funding, IRAC provides expert advice on the database inputs and outputs and is currently working on efforts to make sections of the database more relevant to near real time observations.

IRAC Structure

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