Insecticide Resistance Management
Philippine Update

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IRAC Philippines
IRAC PHILIPPINES ACTIVITIES
Since 2011 IRAC Philippines Activities were coordinated with Croplife Philippines and other Stakeholders

- 2011 Train the Trainers
- Development of Training Materials
- 2012 Hands on Training on IPM/IRM
- 2012 IRM Farmers Training
- 2013 Training Programs
IRAC Philippines Goals*

- Push for the inclusion of the MoA number on the labels (still with FPA)
- Continue IRM Farmers Training in Vegetables and Rice - ongoing
- Train non-CLP members on IRM - done last March 22, 2013
- Initiate IRM Farmers Training in Mango (done last Jan 23-24 2014)

*Presented at the 2013 IRAC Meeting at UK
TRAIN THE FARMERS PROGRAM
2013 Train the Farmers Program

Target: 10,000 vegetables and rice farmers in selected areas

130% achievement in 2013

Participating companies: All CLP members except Monsanto

Insecticide Resistance Management
Training for Farmers

Learn about:
- How resistance (immunity) to insecticides develops
- The Mode of Action Concept
- How to prevent insecticide resistance using Integrated Pest Management (IPM), Good Agricultural Practices (GAP) and rotation through the Mode of Action concept.

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CropLife Philippines
Croplife Phils IRM 2013 Award

To motivate companies to promote IRM program in rice and vegetables, IRM award was given to 3 top companies following the criteria set by Croplife Phils

In 2013 the IRM awardees are:

1\textsuperscript{st} place: Bayer CropScience
2\textsuperscript{nd} place: Sinochem
3\textsuperscript{rd} place: Dupont
IRM TRAINING OF NON-CROPLIFE MEMBERS
Objective:

To create awareness of IRM to other non Croplife member association
Program of Activity

FINAL DRAFT OF SEMINAR-TRAINING WORKSHOP
ON IRM FOR CPAP AND PICMA
Date: March 22, 2013
Venue: FPA Conference Hall, Diliman, Quezon City

8:00- 9:00 Registration
9:00- 9:05 Invocation \[Rosalino B. Rondon / CPAP\]
9:05- 9:10 National anthem \[Krustle A. Hawod / CPAP\]
9:10- 9:20 Welcome \[Ignacio Gabriel/CPAP\]
9:20- 9:50 IPM Principles and Practice \[Dr. Candida B. Adalla /DA, Biotech PIU\]
9:50- 10:20 IRM Principles and Practice, with focus on mechanism of plant resistance \[Dr. Emiliana N Bernardo, Prof Emeritus/UP LB\]
10:20- 11:30 Breakout sessions/ Coffee break \[Ronald B. Arabit / IRAC Phil\]
11:30- 12:00 Resistance Issues in eggplant : Philippine Experience \[Mario N. Navasero /UPLB\]
12:00 – 1:00 Lunch/ IRM video presentation
1:00- 1:45 Maintaining Susceptibility to Vegetable Insecticides \[Oscar D. Edralin / IRAC Phil\]
1:45- 3:00 Breakout sessions/ coffee break \[Ronald B. Arabit / IRAC Phil\]
3:00- 3:30 Workshop \[Mario N. Navasero /Oscar Edralin\]
3:30:4:30 Integration/ synthesis \[Rizza Mae S. Mendoza /Krustle A. Hawod\]
4:30 Open Forum
5:00 Closing \[Aida V. Ordas /FPA\]
IRM IN MANGO
IRAC Philippines decided to expand its IRM program in mango due to several reasons as follows:

- Presence of high resistance risk pests (mango leafhopper, thrips, cecid fly)
- Since mango is a high value/export crop, farmers tend to ensure the quality of mango produce especially those for export hence use of insecticide in mango is abused
- Once an insecticide is newly registered, continuous use of the same product is practiced resulting in insecticide resistance
IRM TOT in Mango Program of Activities
January 23-24, Pangasinan*, Philippines

- 2 days training (Dr Celia Medina/ UPLB, PHD Entomology, Mango expert and an advocate of resistance management)

- Lecture/classroom (1st day)
  - Development of insecticide resistance
  - Managing resistance and mode of action
  - Major pests of mango
  - Workshop

- Field work (2nd day)
- Workshop (to support IRAC Philippines aspirations)

* One of the mango areas in the Philippines
IRAC Philippines Aspirations on Mango IRM

- Develop mango IRM Strategy following MoA rotation
- Train mango growers effectively
- Promote IRM to as many growers as possible
IRM STRATEGY IN MANGO
IRM for Mango Leafhopper

Note: MLH is critical from early flowering stage.
MLH completes 1 generation during the flowering stage.
Do not apply from 28-32 DAFI (full bloom)

DAFI - days after flower induction
No pesticide application at full bloom

1 generation = 12-18 days
Note: Cecid fly is critical from 32 – 75 DAFI, Apply at 32, 39 and 46 DAFI for best results

1 generation is 10-12 days
There are 4 generations in a mango season
IRM for Thrips Luzon

10 DAFI
Option 1
MOA A
MOA B

12 DAFI
MOA B

17- DAFI
MOA A
MOA B

24 DAFI
MOA A

28 DAFI
(Full-bloom)

32 DAFI
MOA B

Option 2

Note: Thrips is critical from early flowering stage.
Thrips complete 1 generation during the flowering stage.
Do not apply from 28-32 DAFI (full bloom)
IRM for Mango Thrips Mindanao

Note: Thrips in Mindanao is critical from 20 – 60 DAFI
Thrips complete 2 generations from flowering to early fruit development
Do not apply insecticides at full bloom (28-32 DAFI)
COMMUNICATION
Visit CropLife Philippines at Facebook to be updated on our local IRM activities
Thank you