

Report on AIRAC workshop in Thailand – November 2018

Purpose: The purpose of the workshop was to ensure that Thailand RM WG has the required support to address key insecticide resistance management issues in important crops

Objectives: To sensitize stakeholders in Thailand on resistance management and its concepts, establish priorities, and provide training to the trainers on prioritised insecticide resistance development risks and management.

Location: Bangkok, Thailand

Dates: November 22-23rd 2018

Venue: Hotel Rama Gardens

Report: The AIRAC workshop was attended by participants (Speakers/experts – 5; Government Agencies – 19; TAITA & CLA – 22; CP Local Companies – 9). The agenda of the workshop included topics on IRAC Role and Purpose, IRM-its concepts (Srinivas Parimi, AIRAC Chair-Bayer), emerging trends in pest management in Thailand (Lakshmi pathi S – Corteva and Uwe Pluschkell – Bayer), Insecticide resistance issues in Thailand (Dr. Suprada – PPD), decision making to manage resistance (David Penna – FMC) and two focused group discussions (break-out sessions) on setting priorities and communication tools and processes for field level stakeholders. There were discussions after each topic and participants were given opportunity to ask questions. Mr. Jaruek (Adama Thailand) was kind enough to translate the presentations into local language and it was very valuable for the workshop.

One of the influential member of the Hazardous Substance Board under the Ministry of Industry, Mr. Wicha Thitiprasert, asked several questions on technical aspects of IRM, resistance management in general and how IRAC could provide the support and guidance to resistance management in Thailand. He has requested the forum also if the best practices in other countries can be shared and applied in Thailand.



A summary of the break-out discussions is as below:

First Break-out session: The participants were divided into four groups with 8-10 participants and following questions for provided for the discussion. The answers to the questions are below.

- a. What are the priorities for Thailand in terms of insecticide resistance management (crops/pests – three priorities)?
 1. Rice Brown planthopper
 2. Mango Thrips
 3. Diamondback moth
 4. Flea beetles
 5. Beet armyworm (Asparagus and Grapes)
- b. How can we do a better job to increase awareness about IRM/IPM? The groups had excellent thoughts on how to increase awareness. Some of the key measures included – Demo plots, MoA labeling, Use of modern tools for education and awareness (app based), IRM/IPM material, Young SMART farmer concept, Training dealers and retailers, Use of Internet of things etc.

Second Break-out session: The second session was organized to answer the following questions.

- A. How can we collaborate to increase awareness on Insecticide resistance management among farmers/retailers and encourage them to implement appropriate practices?
 - The groups expressed the need of educating Industry (internal staff) and retailers/dealers as key points for dissemination of information on resistance management and IPM.
 - There should be education in farmer groups through identification of leader farmers who would be helping other farmers with the help of government and retailers.
 - Use of media (social, print and electronic)
 - Use of Retailers as ambassadors for education/ awareness on IRM – Retailer award
 - Certified retailer concept
- B. How can Government regulations help resistance management – MoA labeling, Bring-in innovative safer sustainable products in Thailand, Registration timelines, education, resistance monitoring?????
 - Faster process for ne AI registrations
 - 5 year registration process and extension of registration
 - Control of illegal products
 - Faster new compound sample import
 - Research/studies to be basis of new product registration
 - Punitive damages to the illegal product sellers

On the Thailand regulations, the groups identified the need to work with regulators on key issues such timeframe for registration, sample import, label recommendations, illegal pesticides.



Field visits: Field visit was organized on the second day of the workshop and it was joined by Dr. Suprada, PPD, DoA, Thailand and his team members with CLA/TAITA. We visited two orchid farms and one vegetable farm (Crucifers). The orchid farms and the vegetable farm have thrips and diamond-back moth resistance issues, respectively.

Orchid farms: The inputs/feedback from the visits to orchid farms is as below.

- Dr. Suprada is the key information source for the orchid farmer
- Thrips are the major issue in orchid farms, as known. Other pests include midges, mites and cutworms. We observed midge damage in one of the farms. The identification of midge damage and further differentiation from other damage needs to be made aware among orchid farmers
- Applications of chemicals from different groups (Emamectin, Fipronil, Chlorpyrifos, pyrethroids, Imidacloprid etc.) done every five days but may be done every 3 days in times of high infestations
- Cost-effective (cheaper) insecticides are key to farmers than expensive new chemistries. Generic brands used widely.
- One important note – multinational companies do not have products registered for orchid farms although chemicals are effective
- No efficacy complaints as farmers increase the doses once they find ineffective control.
- Tank mixes are done routinely in big tanks within orchid farms and included mixes of two or more pesticides.



Vegetable farm: The vegetables grown mostly are Crucifers (Kale, Chinese cabbage, lettuce). Our learnings are,

- Diamonback moth (DBM) infestations are very high and the farmer (lady farmer) sprays one or two types of insecticides, in a year. She applies them until they work and then shifts to another product when she observes lack of activity.
- She does not have any idea on resistance management or any approached government agencies for suggestions on sprays
- Insecticides are applied at 3-4 day intervals for DBM and beet armyworm
- Flubendiamide was used for one year, once per week at the beginning which was considered much better than other products which are used every 3 or 4 days
- Currently she is using tolfenpyrad for DBM and chlorfenapyr for beet armyworm.
- There is heavy infestation of DBM in this farm and all stages of DBM were observed on a single plant
- Rotates Cabbage/Kale with lettuce as it is apparently less susceptible to DBM



AIRAC Workshop Group Photo

Key Learnings and Path Forward

- A. The Government of Thailand and DoA are very keen on creating awareness on resistance management among different stakeholders.
- B. The workshop identified four priorities for insecticide resistance management - Mango thrips, Rice Brown Plant hopper, Diamond-back moth and flea beetles.
- C. The group discussions (break-out sessions) identified key stakeholders for resistance management. The three important stakeholders are Government agencies (DoA, PPD, registration authority), Retailers/Dealers and Farmers.
- D. The Industry felt that there are specific key issues for new product registrations/re-registrations and elaborate discussions with DoA are to be done. Industry and TAITA will work with regulators to shorten registration process, prolong label recommendations, allow importation of new AI samples and bring-in strict government control on illegal pesticides.
- E. IRAC and CLA gave their commitment for better resistance management in Thailand going forward.