The IPM Coordinator and staff participated in several training sessions for Master Gardeners and provided hands-on displays at community events to bring awareness to IPM in urban environments:

“Alien Invaders of the Worst Kind”, Master Gardener Training (Mar 2014, Hilo, HI)

“Alien Invaders of the Worst Kind – A Systems Approach to Pest Management” (Mar 2014, Kamuela, HI)

“Pest Alerts: Little Fire Ants, Coconut Rhinoceros Beetle, Coqui Frogs” and “Sending Pest-free Flowers to the Mainland”, Big Island Association of Nurserymen Annual Plant Sale & Show (Apr 2014, Hilo, HI)

“Hawaii’s Little Fire Ant Crisis”, community presentation (Apr 2014; Hilo, HI).

The community discussed means of cooperating to monitor, purchase product, and treat for little fire ants.

IPM for Consumers & Urban Environments

Workshop evaluations of “Alien Invaders of the Worst Kind” presentations conducted for program development and improvement were summarized (response scale: 1= Poor, 2= Fair, 3= Good, and 4= Excellent), with mean response of “Excellent”. All attendees (100%) perceived increased knowledge and understanding of the topics presented. Participants felt the methods conveyed in this presentation would assist them to better manage risk from insect and other pests. Evaluations indicated that participants were exposed to at least 3 to 4 new concepts, with the majority (80%) learning 5 or more IPM strategies that were applicable to their operations (see graph). Future workshops were requested on more pest and disease control, crop insurance, new varieties, crops and products, record keeping, fertilization, and marketing and adding value. The presentation “Hawaii’s Little Fire Ant Crisis” resulted in 12 confirmation samples (7 at the event, 5 during follow-up telephone and walk-in visits).

The community expressed a desire to develop new pest management strategies to deal with pest infestations in their gardens.

IPM for Specialty Crops

Hawaii nurseries shipping ornamental potted plants out-of-state continued to be encouraged to use hot water on plants for disinfection of coqui frogs (Eleutherodactylus coqui), nettle caterpillar (Darna pallivitta), and little fire ants (Wasmannia auropunctata) as part of a systems approach to quarantine pest management. Hawaii Department of Agriculture inspectors and staff monitor hot water treatments by nurseries in Hawaii County.

In the past year, 96,000 potted plants (estimated $4.7 million) were hot water-showered prior to shipment. Nearly all 49 species and cultivars tolerated the heat well; 2,968 coqui frogs, and numerous arthropods, slugs, snails, and lizards were killed and removed by the treatment.

IMPACT Hot water on potted ornamental plants continues to be validated as a practical, cost-effective IPM strategy available to large-scale commercial growers, to prevent potential pest interceptions by receiving ports in the US and Guam.

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A new powdery mildew disease of rhododendrons on Hawaii island reported by a home gardener (R Hamasaki)

A presentation on "Pest Alerts: Little Fire Ants, Coconut Rhinoceros Beetle, Coqui Frogs" and "Sending Pest-free Flowers to the Mainland", Big Island Association of Nurserymen Annual Plant Sale & Show (Apr 2014, Hilo, HI)

"Hawaii's Little Fire Ant Crisis", community presentation (Apr 2014; Hilo, HI).

The presentation "Hawaii's Little Fire Ant Crisis" resulted in 12 confirmation samples (7 at the event, 5 during follow-up telephone and walk-in visits).

Farmers workshop, Kamuela, HI.

The community expressed a desire to develop new pest management strategies to deal with pest infestations in their gardens.

In the past year, 96,000 potted plants (estimated $4.7 million) were hot water-showered prior to shipment. Nearly all 49 species and cultivars tolerated the heat well; 2,968 coqui frogs, and numerous arthropods, slugs, snails, and lizards were killed and removed by the treatment.

IMPACT Hot water on potted ornamental plants continues to be validated as a practical, cost-effective IPM strategy available to large-scale commercial growers, to prevent potential pest interceptions by receiving ports in the US and Guam.

The IPM Coordinator and staff participated in several seminars for growers with insect pest management presentations: (~400 attendees).

Presentations can be viewed at http://www.ctahr.hawaii.edu/haraa/grower.asp

"Maintaining our Ornamental Export Markets", Sustainable and Organic Agriculture Program’s Extension and Research Update (Sep 2013, Honolulu, Oahu)


"Coconut Rhinoceros Beetle, A Major Threat to Hawaii’s Coconut and Palm Trees", (Mar 2014, Kahului, Maui)

"Old, New, and Expected Landscape Pests in Hawaii’s", Maui Association of Landscape Professionals (Mar 2014, Kahului, Maui)
Educational sessions for basil growers in Hawaii covered common pests, the safe use of pesticides registered for basil, Hawaii Department of Agriculture’s pesticide inspection process, and the Hawaii Department of Health’s commodity sampling program. Farm visits were coordinated with Chinese language translators to work one-on-one with growers on crop production, pesticide use and safety. J. Sugano’s team effectively communicated management of new and existing pathogens with vegetable growers. See ‘Local Immigrant Farmers Education’ translated training materials.

IMPACT: Workshop participants developed the “2013 Insecticide Rotation Calendar” for O’ahu and Hawai’i counties. Crucifer crop growers rotated insecticides from 6 modes of action groups in a coordinated area-wide basis to reduce the risk of resistance in DBM populations. Bioassays in October 2013 in Hawaii county indicated preserved effectiveness of the insecticides, enabling growers to achieve their yield goals. Approximately 50% of acres in brassica production (7 farms) are participating in this area-wide program on O’ahu, and approximately 457 acres in Hawaii county (7 farms).

IMPACT: In collaboration with the University of Hawai’i, John A. Burns School of Medicine (JABSOM), extension agent Glenn Teves, Hawaii Department of Agriculture pesticide educators, agricultural chemical representatives, and the Local Immigrant Farmer Education (LIFE) program, Jari Sugano and her team worked with a group of Wai’anae basil farmers to address priority crop production and human safety issues. As a result of intensive training and recognition of government and private sector resources, these farmers were able to control armyworm damage to their crops safely by selecting appropriate products, learning to decipher pesticide labels, and applying according to label with proper personal protection equipment.

IMPACT: Vegetable growers use IPM strategies for weed control, such as placing a portable piece of clear plastic on a plowed, irrigated field to increase the depth of solar heat penetration causing weed rhizomes smooth and be more easily accessed with herbicides. By implementing this strategy and also properly calibrating their spray equipment, growers have decreased frequency of herbicide applications and volume of herbicides applied.

IMPACT: Thirty cooperators representing 172 acres practiced the “Easy as 1-2-3” Fruit fly Suppression in Hawaii program during the past year. As a result of training, the participants were able to make informed decisions for managing fruit flies in their farm or garden. Farmers who have been following these practices for several years attest to decreased pest infestation and crop damage levels.

IMPACT: Diamondback made to the insecticide rotation. Moth (DBM, Plutella xylostella) Insecticide Resistance Management Program was developed by UH CTAAH for growers to effectively manage DBM by rotating insecticide chemistries on an area-wide basis. Extension faculty Robin Shimabuku, Dr. Ronald Mau (emeritus), Ming Yi Chou, Randy Hamasaki, Jari Sugano, Steve Fukuda (emeritus), Jensen Uyeda and Sharon Motomura worked with the crucifer growers in their counties to provide grower education and conduct periodic field sampling for laboratory resistance screening. At workshops, growers learned how to identify stages of the DBM life cycle and damage symptoms (pictured, right). Growers also learned about host plant resistance, insecticide resistance, spray concentration and coverage, and effective pesticides available. Based on resistance screening in October 2013, adjustments were made to the rotation calendar.

IMPACT: Workshop participants developed the “2013 Insecticide Rotation Calendar” for O’ahu and Hawai’i counties. Crucifer crop growers rotated insecticides from 6 modes of action groups in a coordinated area-wide basis to reduce the risk of resistance in DBM populations. Bioassays in October 2013 in Hawaii county indicated preserved effectiveness of the insecticides, enabling growers to achieve their yield goals. Approximately 50% of acres in brassica production (7 farms) are participating in this area-wide program on O’ahu, and approximately 457 acres in Hawaii county (7 farms).

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