Pest Management Research Grant Priorities

Marshall Lee
Pest Management and Licensing Branch
August 8, 2013

Pest Management Research Grants 2012/13 and 2013/14

Reducing dependence on pre-plant soil fumigation in almond and stone fruit orchards
Greg Browne, USDA – ARS $130,578

Methyl bromide alternatives for strawberry nurseries
Lynn Epstein, UC Davis $153,289

Integrated pesticide reduction strategies for insect and disease management in cole crops
Carol Shennan, UC Santa Cruz $399,304

Reduced risk approaches to manage maggot pests in cole crops in the Central Coast
Shimat Villanassery Joseph, UC – ANR $302,542

How Research Grant Priorities Are Set

- DPR's budget change proposal: Research grants will fund research projects that develop effective alternatives to fumigants and other pesticides that pose undue risks . . .

- Product of DPR's continuous evaluation process

DPR’s Continuous Evaluation Process

- The director is required by law (FAC 12824) to develop an orderly program for the continuous evaluation of all pesticides actually registered with the goal of eliminating from use any pesticide that endangers the agricultural or nonagricultural environment . . .
- DPR’s surveillance of pesticide products and their effects on public health and the environment.

Sources of Information on the Performance of Pesticides after They are Registered

- Pesticide registrants: They must report adverse effects and respond to reevaluations
- Other agencies (e.g., State Water Board CWA section 303[d] list)
- The public and advocacy groups
- DPR's own surveillance programs

Worker Health and Safety Branch

Exposure Monitoring and Industrial Hygiene Program

- Studies to characterize human exposure and effects of exposure mitigation measures
- Ensure workplace safety

Human Health Assessment Program

- Exposure assessments

Pesticide Illness Surveillance Program

- Physician's reports => CAC investigations => Illness database (CalPIQ)

Human Health Mitigation Program

Food Safety Program

DPR's program focuses on pesticide residues on produce

- Domestic
- Imported
- Provides data to enforce U.S. EPA tolerances

Environmental Monitoring Branch

Monitors the environment to characterize the occurrence of pesticides

- air
- ground water
- surface water

Identifies the sources of the contamination

Determines the mechanisms of off-site movement

Develops site-specific mitigation strategies

Medical Toxicology Branch

- Responsible for comprehensive human health risk assessment (dietary [food and drinking water], workplace, residential, and ambient air exposures)
- Tries to answer the question “What is the probability that an adverse health effect will result from an exposure (or exposures) to a particular amount (dose) of a chemical”?
- Integrates exposure data from WH&S Branch and environmental fate reviews from EM Branch

Possible Actions Following Continuous Evaluation

Significant adverse effects likely => Reevaluation

Under reevaluation, DPR may require registrants to submit additional information to help better define possible adverse effects and prospective mitigation strategies.

Possible actions following continuous evaluation

No significant adverse effects

- No action

New restrictions necessary

- Negotiate label changes
- Restricted material and supplemental use requirements

Uncontrollable significant adverse effects

- Refuse to register or cancel

Immediate substantial danger

- Suspension

Conclusion

Pest Management Research Grants Program priorities:

- Take advantage of our continuing evaluation process to identify our highest-risk pesticides
- Support research that can affect pest management decision making, rather than mitigation
- Target pesticide use scenarios where there are few pest management options

The program's goal is to reduce the need to use high-risk pesticides by providing pest management options.