

# Pest Management Research Grant Program 2013-2014 solicitation

Mark Robertson

California Department of Pesticide Regulation  
Pest Management and Licensing Branch





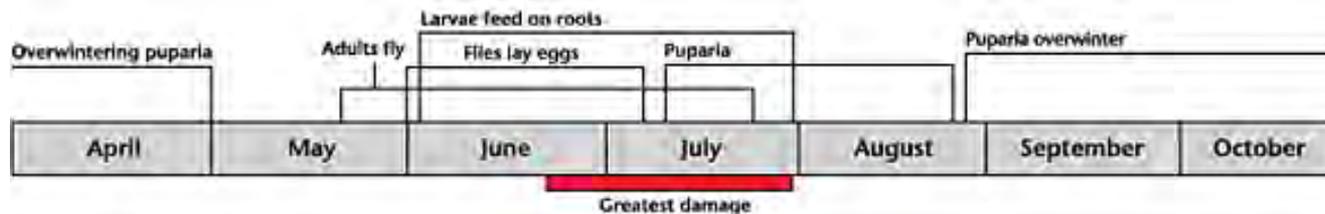
# Outline

- Critical dates
- Research Grant Priorities
- The proposals
- Scoring the proposals



# Critical grant program dates

- All proposals received by December 10, 2012
- Grants to be awarded, March 22, 2013
- Project start date, June 3, 2013
- Final invoices due, April 29, 2016



# Research grant priorities

Grant proposals must contribute to an IPM system by addressing the following:

- decision-making for pest management
- preventing and managing pests
- improving application technologies



## ➤ High Priority:

Investigating options for the following pesticides:

- field agricultural fumigants
- organophosphate insecticides used on cole crops in the Central Coast.

# Response to the solicitation

High priority:

14 proposals submitted

- 9 fumigant
- 5 OP's on cole crops in Central Coast



Lower priority:

22 proposals submitted



# The proposals

## High Priority – Fumigants:

- Efficacy of commercial biofungicides as alternatives to chemical fumigation

### ***(Efficacy of Biofungicides):***

- ✓ M. Bolda, UCCE
- ✓ \$200,010 | 2 years, 2 months



# The proposals

## High Priority – Fumigants:

- Reducing dependence on pre-plant soil fumigation in almond and stone fruit orchards

### ***(Orchard Pre-plant Fumigation):***

- ✓ G. Browne, USDA-ARS
- ✓ \$130,578 | 3 years



# The proposals

## High Priority – Fumigants:

- Build and evaluate a commercial-scale steam applicator for soil disinfestation in California strawberry

### ***(Steam Disinfestation):***

- ✓ S. Fennimore, UC, Davis
- ✓ \$484,966 | 2 years, 9 months



# The proposals

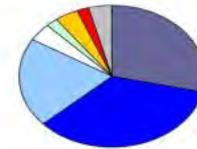
## High Priority – Fumigants:

- Methyl bromide alternatives for strawberry nurseries  
(***Nursery MeBr Alternatives***):
  - ✓ L. Epstein, UC, Davis
  - ✓ \$153,289 | 2 years, 9 months



# The proposals

All Panels (n Opinions with quantitative assessment of risk reduction options = 49)



- scenarios
- modelling
- quantitative scoring
- statistical analysis
- survival analysis
- experiments
- meta-analysis
- other

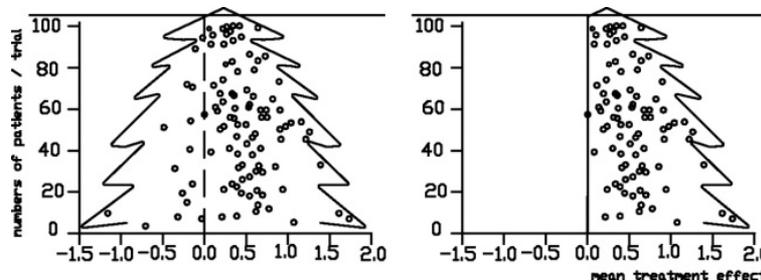
## High Priority – Fumigants:

- Impact of soil fumigant use in California and efficacy of non-chemical alternatives to soil fumigation in key California crops

### ***(Efficacy of Fumigant Alternatives):***

- ✓ M. L. Grieneisen, UC, Davis
- ✓ \$118,022 | 1 year, 2 months

$$(2) \quad SE(\bar{X}_w) = \left[ \frac{\sum_{i=1}^k (w_i)^2 \text{Var}(x_i)}{\left[ \sum_{i=1}^k w_i \right]^2} \right]^{1/2}$$



# The proposals

## High Priority – Fumigants:

- Integrated weed management: precision cultivation and herbicides to supplement methyl bromide alternative fumigants in tree and vine nurseries

### ***(Integrated Weed Management):***

- ✓ B. Hanson, UC, Davis
- ✓ \$120,385 | 2 years



# The proposals

## High Priority – Fumigants:

- Management of root-knot nematode damage in California peppers

### ***(Nematodes in Peppers):***

- ✓ Antoon Ploeg, UC, Riverside
- ✓ \$83,739 | 2 years, 8 months



# The proposals

## High Priority – Fumigants:

- Review and evaluation of IPM alternative to methyl bromide in California strawberry production

### ***(Review of MeBr Alternatives):***

- ✓ W. Quarles, Bio-integral Research Center
- ✓ \$50,000 | 1 year



# The proposals

## High Priority – Fumigants:

- Effect of co-formulation of 1, 3-dichloropropene and chloropicrin on emissions from agricultural fields (***1,3-D and Chloropicrin Co-Formulation***):
  - ✓ S. Yates, UC, Riverside
  - ✓ \$187, 870 | 2 years, 9 months



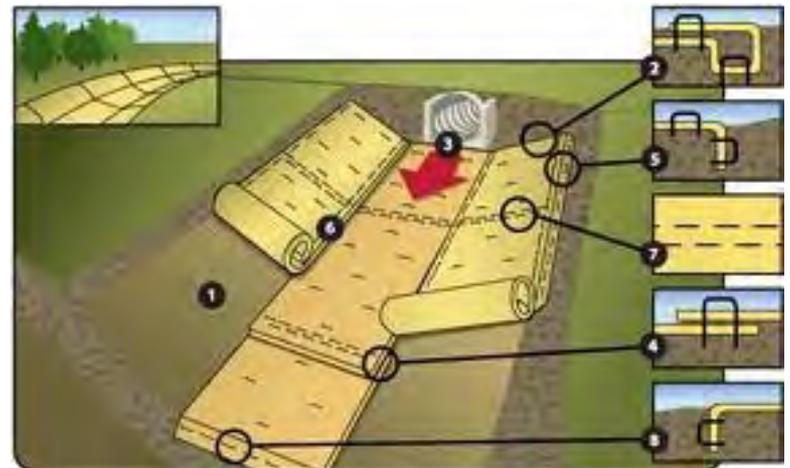
# The proposals

## High Priority – OPs on cole crops:

- Mitigation and IPM strategies for reducing aquatic toxicity from organophosphate pesticides in cole crops

### ***(Organophosphate Mitigation):***

- ✓ M. Cahn, UC, ANR
- ✓ \$234,887 | 3 years



# The proposals

## High Priority – OPs on cole crops:

- Development of IPM tools for managing the invasive Bagrada bug in California

(***Bagrada Bug***):

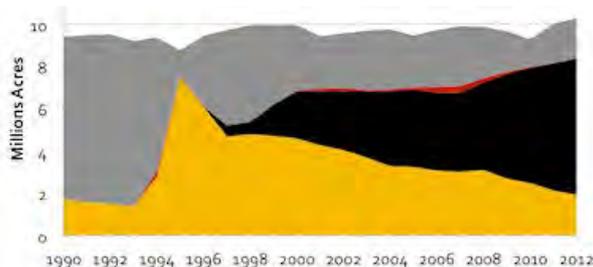
- ✓ S. Dara, UC, ANR
- ✓ \$165,447 | 1 year



# The proposals

## High Priority – OPs on cole crops:

- Insurance for growers who adopt alternative pest management practices: an economic model and application to organophosphate use on Central Coast cole crops (***Insurance for Growers***):
  - ✓ R. Goodhue, UC, Davis
  - ✓ \$63,390 | 1 year, 3 months



# The proposals

## High Priority – OPs on cole crops:

- Reduced risk approaches to manage maggot pests in cole crops in the Central Coast  
**(*Maggot Management*):**
  - ✓ S. Joseph, UC, ANR
  - ✓ \$302,542 | 3 years



# The proposals

## High Priority – OPs on cole crops:

- Integrated pesticide reduction strategies for insect and disease management in cole crops

### ***(Pesticide Reduction Strategies):***

- ✓ C. Shennan, UC, Santa Cruz
- ✓ \$399,304 | 2 years, 10 months





## 2013/2014 Research Grant Review Summary by Reviewer

Project	Reviewer														
	Rank	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	Average	Min	Max
<b>6 Nursery MeBr Alternatives</b>	1	7	1	1	1	2	5	1	4	4	7	4	<b>3.4</b>	7	1
<b>5 Pesticide Reduction Strategies</b>	2	8	1	7	2	5	10	7	8	3	3	1	<b>5.0</b>	10	1
<b>12 Orchard Re-Plant Fumigation</b>	3	4	9	9	6	6	5	1	3	1	8	4	<b>5.1</b>	9	1
<b>3 Maggot Management</b>	4	3	4	4	8	1	9	1	8	9	10	6	<b>5.7</b>	10	1
<b>11 Efficacy of Biofungicides</b>	5	10	10	6	2	3	8	12	12	1	2	1	<b>6.1</b>	12	1
<b>14 Nematodes in Peppers</b>	6	1	14	8	8	7	1	10	8	4	8	1	<b>6.4</b>	14	1
<b>101,3-D and Chloropicrin Co-Formulation</b>	7	2	5	2	13	10	4	5	14	10	1	12	<b>7.1</b>	14	1
<b>7 Steam Disinfestation</b>	8	5	8	14	11	11	2	8	4	6	5	7	<b>7.4</b>	14	2
<b>13 Integrated Weed Management</b>	9	8	11	10	2	7	5	5	1	8	11	14	<b>7.5</b>	11	1
<b>1 Bagrada Bug</b>	10	13	7	3	11	4	3	11	7	7	13	8	<b>7.9</b>	13	3
<b>4 Organophosphate Mitigation</b>	10	12	5	5	6	9	11	9	1	12	4	13	<b>7.9</b>	12	1
<b>2 Insurance for Growers</b>	12	14	3	12	5	12	12	4	6	12	14	9	<b>9.4</b>	14	3
<b>8 Fumigant Alternative Efficacy</b>	13	5	11	11	8	14	12	13	11	14	12	9	<b>10.9</b>	14	8
<b>9 Review of MeBr Alternatives</b>	14	11	13	13	14	13	14	14	13	11	6	9	<b>11.9</b>	14	6