

CANGC Partners with UCNFA to develop "universal" BMPs for pests and diseases impacting California's ornamental production industry



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http://www.cangc.org/

http://ucanr.org/sites/UCNFA/





CDFA Specialty Crops Block Grant Program grant to CANGC

\$297,000 for 2010-2013

Unified Production Nursery Systems Approach for Integrated Pest Management (IPM) and Best Management Practices (BMPs)



Outbreaks of insects and diseases have:

- disrupted California nursery operations and shipments
- caused significant specialty crop losses
- required costly regulatory responses

Outbreaks result in pest-specific responses BMPs are components of these protocols.



Light Brown Apple Motth

P. ramorum





Glassy-Winged Sharpshooter

Asian Citrus Psyllid



Red Imported Fire Ant





Each implementation of BMPs

- Reduces business impacts
- Limits pest spread

These programs are targeted programs

A generalized approach can

- Address many pests and diseases
- Provide
 - Blanket protection
 - Exclusion
 - Detection strategies





Project objectives

Survey existing BMPs

Selected insects and diseases currently affecting California

Assemble a Science Advisory Panel

To provide expertise

Analyze the matrix of BMPs

Identify BMPs that can be applied to multiple insects and diseases





Project objectives

Identify those gaps in knowledge

BMPs in need of research Fund researchers capable of acquiring data.

Publish a manual of unified and validated BMPs

In English and Spanish
Post at CDFA and UCNFA websites

Conduct training workshops

How to establish a BMP programs
Survey nurseries to quantify the number employing BMP programs



CANGC BMP Accomplishments YTD

- Scientific literature review and survey existing regulatory BMP programs across a number of insects and diseases currently affecting California's nursery and floriculture industry.
- 2. Format created to organize BMP's from review and survey.
- 3. Advisory Committee assembled to analyze the resulting matrix and to identify those BMPs that can be applied to multiple insects and diseases.
- 4. Knowledge gaps identified regarding BMP's that are in need of research.
- 5. Research topics identified for BMP research and fund projects to the extent available.
- 6. Conduct for workshops and conferences in 2011 that align to BMP grant



Sample of BMP Matrix (revised 9/28/2011)

X = verified X? = suspected but citation not yet found M = mandatory 1.0 Sanitation, nursery layout, and cultural practices	Tortricidae Moths LBAM = Light brown apple moth EGVM = European grapevine moth		Stink Bugs BMSB = Brown marmorated stinkbug BB = Bagrada bug		sharpshoote ACP = Asia	Psyllids			RIFA = Red	Water born fungi P.r = Phytophthor a ramorum	Mollusks EBGS = European brown garden snail	
	LBAM	EGVM	BMSB	BB	GWSS	ACP	DRW	RPW	RIFA	P.r	EBGS	
Keep nursery and loading areas clean, litter and weed free, and properly dispose of waste.	М	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Pg. 3
1.2 Avoid heat and moisture stress.	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Pg. 3
Divert soil and water pathways from infected areas away from nursery								X		X		Pg. 3
1.4 Properly disinfect surfaces that come in contact with plants and soil	X?	X?			X?	X?	x		X	х	X	Pg. 3
1.5 Use clean media and sterilize used pots, trays, and flats.	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Pg. 4
1.6 Avoid monocultures by mixing susceptible and hardy plants		Х	Х	Х	Х	Х	Х	Х	Х	Х		Pg. 4
Keep records of incoming and outgoing stock as well as nursery maintenance and field history.	М	X	X	X	X	X	Х	X	Х	X	X	Pg. 4
1.8 Conduct frequent in-house inspections	М	X	X	X	x	x	X	×	X	X	X	Pg. 4
1.9 Encourage natural predators and parasites	Х	×	×	×	×	×	Х	×	×		×	Pg. 4
1.3 Encourage natural productors and parasites	Λ	^	^		^	^	_^_	_^	^			1 9.4
1.10 Rotate insecticides/fungicide chemical families	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Pg. 4
1.11 Prevent plant blow-down by creating wind breaks	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Pg. 4
Deficient or excess fertilizer can make plants weak and create ideal conditions for certain pests and pathogens.	Х	X	X	Х	Х	Х	Х	X	Х	Х	Х	Pg. 4





CANGC BMP Grant Advisory CommitteeStakeholders

Fred	Ceballos	EuroAmerican Propagators
Emory	Chow	Valley Crest Tree Co.
David	Cox	L. E. Cooke Company
Haydi	Danielson	Boething Treeland Farms
Dana	Groot	Florabunda Nursery
John	Keller	Monrovia Nursery
Mark	Marriott	Village Nurseries
Manuel	Morales	Monterey Bay Nursery
Betsy	Peterson	CANGC
John	Seeger	Four Winds Growers
Mary Helen	Seeger	Four Winds Growers
Karen	Suslow	Hines Growers LLC
Roger	van Klaveren	Generation Growers





CANGC BMP Grant Advisory Committee Grant Reps and Regulators

Andrea	Wagner	Entomology Dept., UC Davis	BMP researcher
Dave	Fujino	CCUH	Grant principal investigator
Linda	Dodge	Plant Sciences Dept., UC Davis	Grant project manager
Mike	Colvin	CDFA/SANC	Regulatory representative
Kathy	Kosta	CDFA/P. ramorum	Regulatory representative
Aurelio	Posadas	National Plant Board	Regulatory representative





CANGC BMP Grant Advisory CommitteeResearchers

Jim	Bethke	UCCE San Diego/Riverside Cos.
Ann	Chase	Chase Horticultural Research Inc.
John	Kabashima	UCCE Orange Co.
Julie	Newman	UCCE Ventura/Santa Barbara Cos.
Loren	Oki	Plant Sciences Dept., UC Davis
Karrie	Reid	UCCE San Joaquin Co.
Steve	Tjosvold	UCCE Santa Cruz/Monterey Cos.
Edwin	Lewis	Entomology/Nematology Depts., UC Davis
Michael	Parrella	Entomology Dept., UC Davis
Cheryl	Wilen	UCCE Statewide IPM Program



2011 UCNFA programs supported with CANGC BMP grant funds

Pest Monitoring in Ornamental Plant Production

San Marcos, July 5, 2011

Morning session in English

James A. Bethke

UCCE San Diego/Riverside Cos.

Afternoon session in Spanish
Lucia Villavicencio
Center for Applied Horticultural
Research
Irma DeBonis
UCCE San Diego Co.

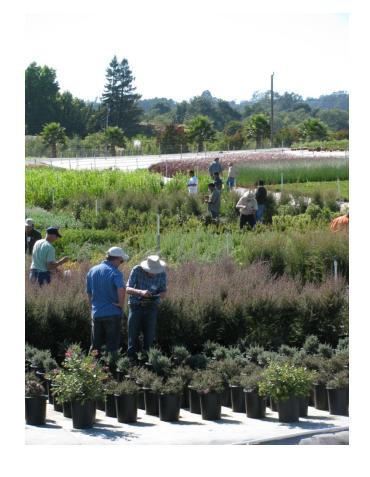
Attendance 27







2011 UCNFA programs supported with CANGC BMP grant funds



Scouting and Spray Evaluation

Watsonville, August 23, 2011

Steve Tjosvold UCCE Santa Cruz/Monterey Cos.

Ken Giles
Biological and Agricultural
Engineering, UC Davis

Field Demonstration at Sunspot Nursery, facilitated by Stan Iverson Attendance 40



2011 UCNFA programs supported with CANGC BMP grant funds

California Nursery Conference 2011

Etiwanda, October 6, 2011

John Kabashima and Loren Oki

Vendor Trade Show organized by SoCal Chapter of CAPCA





89 attendees 20 vendors



2011 UCNFA programs supported with CANGC BMP grant funds

Effective Use of Pesticides in Ornamental Plant Production

San Marcos, October 18, 2011

Morning session in English

James A. Bethke

UCCE San Diego/Riverside Cos.

Cheryl Wilen

UC Statewide IPM Program

Afternoon session in Spanish

Maria de la Fuente

UCCE Monterey/San Benito Cos.

Lucia Villavicencio

Center for Applied Horticultural Research

Cheryl Wilen

Attendance 26







Plans for 2012

- 1. Finalize Advisory Committee minutes
- 2. Propose and finalize outcomes for the balance of the grant:
 - Research
 - Workshops and conferences
 - BMP manual
 - BMP training program
 - Communication process with nursery industry
- 3. Draft and submit companion BMP research proposal for the nursery industry to granting agencies



UCNFA Sponsors



















San Diego and SoCal Chapters

