

# Imperial County

# Agricultural Briefs



# **Features from your Advisors**

# January 2017

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## LATE SEASON PEPPER WEEVIL INFESTATION IN THE COACHELLA VALLEY

# Jose Luis Aguiar, Advisor, UCCE Riverside County

Bell peppers are an important crop of the Coachella Valley. The acreage of bell pepper in the valley varies between years (Table 1), but remains a major crop for the desert vegetable growers. Bell peppers grow well in a well-drained sandy soil of the valley. Nurseries provide transplants that soon grow to be deep rooted as well as many shallow fibrous rooted transplants that grow well with drip irrigation. Several diseases and insects affect bell pepper crops at different growth stages. This article is focused on a late season pepper weevil (*Anthonomus eugenii*) that infests bell pepper in the Coachella Valley. The pepper weevil infestation started in the Oasis area of the Coachella Valley and then moved to the east side of the valley to the Mecca production area and then moved north to the fields around the city of Coachella. Management of pepper weevil and preventing it from becoming an established insect pest requires the cooperation of pepper growers in the area.

Table 1. Bell Pepper<sup>1</sup> acreage and gross crop values for the Coachella Valley<sup>2</sup>

YEAR	ACREAGE	GROSS CROP VALUE
2015	4644	67,726,000
2014	4490	75,497,000
2013	4558	79,089,000
2012	5021	73,994,600
2011	5639	85,287,600
2010	5037	89,903,700
2009	4270	68,019,100
2008	4448	68,758,200
2007	4469	48,041,800
2006	4482	62,075,700

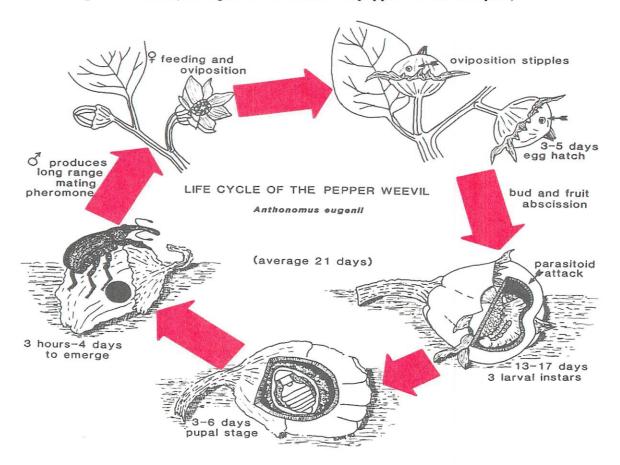
<sup>1</sup>Source: Riverside County Agricultural Commissioner's Crop Reports (also available online). <sup>2</sup>based on 30-pound unit

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The pepper weevil occasionally shows up on bell peppers in the Coachella Valley. Although it is an established pepper pest in other parts of southern California, the southern United States, Mexico, Central America, Hawaii and some Caribbean islands, Pest Control Advisors in the Coachella Valley do not believe that it is an established pest in this valley. Pepper weevil has been reported as a pest of solanaceous plants such as nightshade (a weed), tomato (a spring crop here), and eggplant (a spring and fall crop) in many other areas. However, pepper weevil has not been found or reported on tomato or eggplant fields in the Coachella Valley.

# The Life Cycle of Pepper Weevil

Pepper weevil females lay eggs on flower buds or fruits of a crop. The female can lay up to 340 eggs and can oviposit up to six eggs per day and for more than one month. The pepper weevil grubs develop inside the bud or fruit and undergoes three larval instars and can produce 5-6 generations per year. The time to produce a generation is affected by temperature. In hot weather, it takes two weeks, in mild weather it takes three weeks and in cold weather it can take up to 6 weeks. (See figure 1 for details of a pepper weevil life cycle)



**Figure 1.** Life Cycle of Pepper Weevil (source: David Riley, University of Georgia: 1992).

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# Sampling for Damage and the Weevil

For early infestations, the weevils tend to cluster in certain areas of the field. When scouting a field for weevils begin on the margins (edge) of the field, then scout towards the interior of the field. Sample extensively to get an accurate number of adults as they tend to be found in the same sampled areas. Locate the hot spots in the field but also continue to scout the field regularly. Check fields for premature fruit drop. Most adults will be found in the top third of the plant, where the young buds are present. There is little information on how far the adults can travel. Collect flower buds and fruits and inspect visually for oviposition stippling. (See Figure 2.). Sometimes the stippling may not be obvious on the fruit.



Figure 2. Oviposition stippling on shoulder of young bell pepper fruit



Figure 3. Cut young fruits for signs of Pepper Weevil feeding.



Figure 4. Adult weevils are very small, even smaller than the pepper seeds



**Figure 5**. Adult weevil picture taken with a phone camera as seen through a dissecting microscope. The adult has a dark body and are about 1/8 inch (3mm) long.

# Control of Pepper Weevil

In the Lower River Valley of Texas, researchers have established a threshold of 5 percent damaged clusters or one adult per 200 plants with two terminal buds inspected per plant for control measured to be applied.

In Texas and Georgia they do preventive treatments at first bloom. There are registered materials for pepper weevil control. Please note that overuse of insecticides can lead to outbreaks of other pests (ie. mites, aphids, leaf miners etc). Immature weevils cannot be controlled even with systemic insecticides when they are inside the bloom or fruit. Adults can only be controlled when they come in contact with insecticidal sprays. Each day that a mature adult is not controlled, six new weevils are produced.

Crop rotations are an effective pest management strategy. Unfortunately, it is not an option for the local bell pepper growers. Also, as the fall bell pepper season overlaps with the spring bell pepper season, there is a risk that pepper weevil will find host plants to overwinter. For this reason, growers and PCA's should cooperate and take fields down as soon as they are done with harvesting. For more treatment options, please see the UCIPM web site.



Figure 6. In Sinaloa, Mexico infested fruit is bagged and destroyed to prevent re-infestation of the field.

# References:

UCIPM: Pepper Weevil

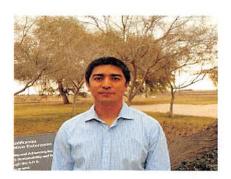
http://ipm.ucanr.edu/PMG/r604301011.html

Riley, D.G., A. N. Sparks. The Pepper Weevil and Its Management. Texas Agricultural Experiment Station.

http://extentopubs.tamu.edu/bulletins/l-5069.html

#### MEET OUR NEW CROSS COUNTY WEED SCIENCE ADVISOR

Pratap Devkota, Ph.D, Weed Science Advisor, UCCE Imperial County



Dr. Pratap Devkota earned his Ph.D in Weed Science at Purdue University. While working on his Ph.D, he worked as a Graduate Research Assistant for dissertation research which evaluated the influence of spray water quality factors on herbicide efficacy. Evaluating the interaction of foliar fertilizers with herbicide and the use of adjuvants for improving herbicide efficacy were also part of his Ph.D research.

Additionally, Devkota received his MS degree in weed science from the University of Arkansas where he worked for weed management in vegetable crops. For his MS thesis, he evaluated the efficacy and economics of soil fumigants and herbicide programs as an alternative to methyl bromide for weed control in plasticulture tomato and bell pepper production. His undergraduate degree is in Agriculture Science from Tribhuvan University, Nepal.

Pratap will serve as the UCCE advisor for Imperial and Riverside Counties specializing in weed science. He is located at the UC Cooperative Extension office at 1050 E. Holton Rd., Holtville in Imperial County. His primary research focuses will include, but will not be not limited to, addressing the weed management challenges on agronomic and vegetable crops (alfalfa, bermudagrass, Sudan grass, wheat, cotton, sugarbeet, lettuce, carrot, onion, spinach, cole crops, and cucurbits) grown in Imperial, Coachella, and Palo Verde valleys.

Below is his contact information.

http://ceimperial.ucanr.edu

Pratap Devkota, Ph.D Weed Science Advisor (Imperial and Riverside Counties) University of California Cooperative Extension 1050 E. Holton Road Holtville, CA 92250 Phone: (760) 352-9474

#### PROTECT SPRING MELONS FROM BULB MITES AND SEED CORN MAGGOT

## Eric T. Natwick, Entomology Advisor, UCCE Imperial County

Growers are aware of the benefits of crop rotation to manage soil productivity and control pest problems such as insects, nematodes, soil-borne pathogens and weeds. However, if the crop rotation from a winter vegetable crop proceeding a spring melon crop is not properly managed, the results may be stand loss due to an infestation of bulb mites or seed corn maggots.

These stand losses are nearly avoidable if adequate time is allowed for complete decomposition of the winter vegetable crop residue. Complete decomposition of crop residues can occur due to lack of planning or delays in crop destruction due to equipment failure or weather conditions. Regardless of the cause, non-decomposed crop residues in the melon seed bed can lead to a pest problem. Bulb mite populations can quickly build up and help decompose crop residues and then completely disappear when the crop residues are decomposed. Melon seed and seedlings loss occurs when the seed is sown into seed beds that still have non-decomposed plant residues. The bulb mites do not differentiate between the previous crop residues and the germinating melon seed and may feed on both hollowing out seeds and damage seedlings. Similarly, seed corn maggot female flies are attracted to decaying crop residues in cool moist soils during the spring melons germination and deposit their eggs. The seed maggots then attack the germinating seed and seedlings, damaging or killing the germinating seed or emerging seedling melon plants. When there is poor crop stand after the initial irrigation, melon growers often blame the seed company when in fact the problem could be due to bulb mites or seed corn maggots.

Rotation from cole crops such as broccoli, cabbage, cauliflower, or kale to spring melons commonly result in stand establishment problems if the crop residues have not completely decomposed prior to planting the melon seed. However, non-decomposed residues from other vegetable crops and some field crops such as alfalfa, corn or Sudangrass can produce the same effects.

Seed corn maggot is one of the most common insect pests that attacks germinating crop seeds and seedlings. This pest is widely distributed in the temperate and Mediterranean regions of the world. An abundance of decaying vegetation in melon fields at planting attracts seed corn maggot flies. Female flies live approximately six weeks and can produce on an average of 270 eggs. Cool wet fields favor seed corn maggot infestations. Eggs hatch in 1

to 9 days depending on the soil temperature. With warm temperatures (70° to 75° F) and an abundance of decaying crop residues, larvae develop rapidly, maturing in 1 to 3 weeks and pupate to emerge as adults in 9 to 26 days.

Injury to seeds and plants result mainly from the maggots feeding on the sprouting melon seeds or on seedlings. The maggots burrow into seed, feed on the endosperm, and often leave only a hollow shell. Secondarily, by breaking the seed coats, the maggots promote the introduction of pathogens that cause the seed to rot. Seeds that have been attacked by maggots that complete germination often fail to produce true leaves.

To prevent seed corn maggot and bulb mite problems, allow sufficient time for mechanical incorporation of crop residues, irrigation and residue decomposition prior to listing up melon beds. Crop residues usually take 6 to 8 weeks to decompose after incorporation, irrigate and fertilize with adequate nitrogen levels. Under ideal conditions of a warm, wet soil with high nitrogen residues may decompose in as little as 3 weeks, but ideal conditions rarely exist. When there is not enough time for crop residues to decompose prior to listing melon beds, insecticides may help prevent serious melon stand loss from seed corn maggot. Diazinon AG 500 may be broadcasted and incorporated into the soil at 3 to 4 qt/acre before planting. A seed treatment with Farmore FI400 at label rates for melons is another option. At planting treatments may include one of the following: Diazinon AG 500 at 9 to 12 fl oz/acre, Capture LFR at 6 to 8 fl oz/acre, Belay at 9 to 12 fl oz/acre, Coragen at 3.5 to 5 fl oz/acre, or Durivo at 10 to 13 fl oz/acre.

# GLYPHOSATE-RESISTANT HORSEWEED: AWARENESS AND BEST WEED MANAGEMENT PRACTICES FOR GROWERS

Oli Bachie, Agronomy Advisor, Director UCCE Imperial County Pratap Devkota, Weed Science Advisor, UCCE Imperial County

Horseweed (*Conyza canadensis*) is a common annual weed in North America. It has recently become more prevalent in orchards, vineyards, canal banks, roadsides, and fallow areas throughout the Central Valley of California. Horseweed can reduce crop growth and productivity in newly planted orchards and vineyards interfering with irrigation efficiency, pest control and harvest operations. Studies conducted by UC researchers showed that heavy reliance and heavy use of herbicides, such as Glyphosate (Roundup) in perennial tree fruits, tree nuts, and grapes in the Central Valley is the likely reason for the development of glyphosate-resistant (GR) horseweed. In some crops in other parts of the United States, the introduction of Roundup Ready crops such as soybean, corn, cotton, canola, and sugar beet cultivars has also increased selection pressure for resistant weed biotypes because of repeated applications of glyphosate in these crops. Although there can be several mechanisms for development of glyphosate resistance, the main point is that low amount of herbicide product is getting into the leaf and plant system for glyphosate to work effectively into the plant.

Resistant horseweed biotype can survive higher dose of glyphosate and continue to interfere the crop growth even after applying herbicide at a labeled rate. The GR horseweed biotypes are widespread and have become economically important weed problem in diverse and high-value cropping regions in California. Growers should be aware that horseweed is a major problem for the following major reasons: 1) horseweed is a prolific seed producer and its seeds are windblown, hence can migrate to larger cropping and natural ecosystem areas, 2) it is an early colonizer of agricultural, field margins, roadsides, industrial areas, and other infrequently disturbed sites, 3) while it is usually sensitive to several herbicides in conventional annual cropping systems, frequent use of single herbicide active, such as glyphosate leads into development of resistant biotype and becomes difficult to manage weed. Although the trend for increased reliance on glyphosate is particularly obvious in glyphosate-tolerant crops, such as orchard, vineyard operations, and irrigation canal systems; GR horseweed were also observed in annual cropping systems in other states wherever there was increased reliance on broad spectrum and relatively inexpensive glyphosate herbicide.

Researchers have pointed out that the distribution of GR horseweed is not restricted to a specific geographic area or associated with any specific primary land use indicating that GR horseweed could be a serious threat in the agriculture (perennial or annual crops) or natural ecosystem, irrigation canals and ditches of the low desert. Therefore, the low abundance of horseweed population in Imperial valley should be kept in the watch list for its possible spread and resistance development. There are some fields in the Imperial valley that are infested with horseweed and some research is needed to determine if there are some GR biotypes in these populations. The objective of this article is to emphasize the importance of understanding the reasons for the development of GR horseweed biotype and to call upon growers to recognize the severity and potential effects of GR horseweed that have been existed in other parts of the state. We also need to develop best management practices that could minimize potential negative effects of horseweed and similar other weeds in highly productive and diverse agricultural fields in the Imperial Valley and the low desert in general.

As part of a grower's weed management system, it is best to address the reduction of the evolution of GR weeds and utilize an integrated weed management system rather than simply rely on a single herbicide tool. Glyphosate-based weed control strategies must be replaced with integrated strategies, use of cultural practices, use of tillage or mowing weeds between crop rows, and rotate herbicides for the control of wide weed spectrum in cropping systems. Growers who use reduced tillage operations may tend to rely solely on herbicides for weed control. However, it is important to understand that such practice increases the chances of herbicide-resistant horseweed biotypes and other related weeds. Any failure to adequately rotate among herbicide modes of action can add even more selection pressure for weeds resistant to the herbicide and make subsequent weed control strategies difficult. As horseweed plant ages, its glyphosate tolerance increases and may require multiple application. Therefore, growers are encouraged to scout their fields and plan for effective weed management strategies at early stages of weed growth. It is also important to watch for other broadleaf and grass weed (ryegrass cultivars) species found in the imperial valley which could develop of resistance to glyphosate.

In summary, continuous herbicide use without rotations could result into herbicide resistant weeds. One of such consequences is the evolution of GR horseweed that has risked the grower in other part of the nation and possess potential risk to growers and natural ecosystem services in the low desert regions. Although, the current warning is for the central valley of California where the study of GR horseweed has taken place, our growers and ecosystem services must be vigilant of their glyphosate based weed management practices within their Roundup Ready and other crops. Growers are encouraged to implement an integrated weed management system, rotate

their herbicide use, use crop rotations, and modify cropping systems depending on the type of crops they grow.

Growers may consult with their Pest Control Advisors (PCA's) and their local farm advisors for any

recommendation or advice on best weed management practices.

For more information or if you have any question, please feel free to contact me at (760) 352-9474 or e-mail me

at obachie@ucanr.edu

**Reference:** This newsletter article is extracted from;

Hanson B. D., Shrestha S., and D. L. Shaner (2009). Distribution of Glyphosate-Resistant Horseweed (Conyza

canadensis) and Relationship to Cropping Systems in the Central Valley of California. Weed Science 57: 48-53

#### CIMIS REPORT AND UC DROUGHT RESOURCES

# Khaled M. Bali, Irrigation Water Mgmt Specialist, Kearney Ag Research & Extension Sharon Sparks\*, Imperial Irrigation District

California Irrigation Management Information System (CIMIS) is a statewide network operated by California Department of Water Resources. Estimates of the daily reference evapotranspiration (ET<sub>o</sub>) for the period of January 1 to March 31 for three locations in the Imperial County are presented in Table 1. ET of a particular crop can be estimated by multiplying ET<sub>o</sub> by crop coefficients. For more information about ET and crop coefficients, contact the UC Imperial County Cooperative Extension Office (352-9474) or the IID, Ag Water Science Unit (339-9082). Please feel free to call us if you need additional weather information, or check the latest weather data on the worldwide web (Google CIMIS for the current link to CIMIS site).

Table 1. Estimates of daily Evapotranspiration (ET<sub>0</sub>) in inches per day

	January		February		March	
Station	1-15	16-31	1-15	15-28	1-15	16-31
Calipatria	0.08	0.09	0.12	0.14	0.18	0.22
El Centro (Seeley)	0.08	0.09	0.12	0.14	0.16	0.20
Holtville (Meloland)	0.08	0.09	0.12	0.14	0.17	0.21

<sup>\*</sup> Ag Water Science Unit, Imperial Irrigation District.

# Water and Drought Online Seminar Series

The latest research-based advice on weathering a drought is now available free online. The UC Division of Agriculture and Natural Resources is working to help farmers cope with the unwelcome outcome of historically low rainfall the last three years. UC scientists, with support from the California Department of Water Resources, have recorded video presentations on high-priority drought webpages.

Each presentation is about one half hour in length and is available at the link below:

# http://ciwr.ucanr.edu/

Then click on the drought resources link.

# Save the Date!!!

When: TUESDAY, FEBRUARY 28, 2017

Time: 10:00 am—12:00 pm

Where: DESERT RESEARCH EDUCATION CENTER

1004 E. Holton Road, Holtville

# **Carrot Variety Trial Over 200 Varieties**

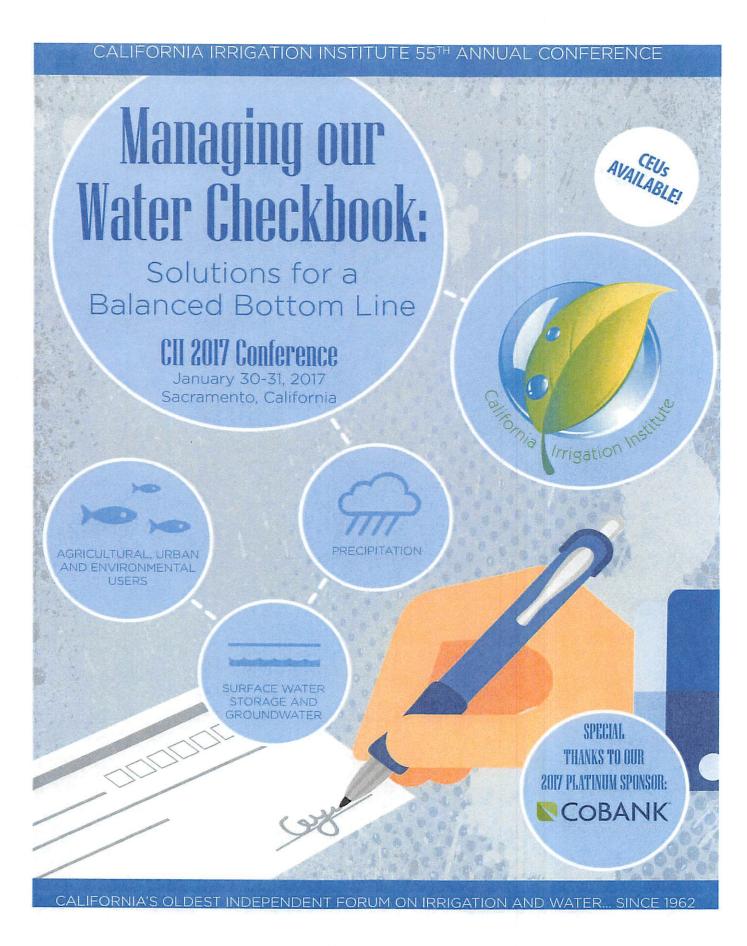
**Event includes Carrot testing and judging** 

# WE WELCOME ANYONE INTERESTED

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# The California Irrigation Institute 55th Annual Conference

January 30-31, 2017 Sacramento, California

www.caii.org



# Keynote Speaker, Jay Famiglietti

Jay Famiglietti, a hydrologist, a professor of Earth System Science and of Civil and Environmental Engineering at the University of California, Irvine. He is also the Senior Water Scientist at the NASA Jet Propulsion Laboratory at the California Institute of Technology. He appeared as the feature expert in the water documentary *The Last Call at the Oasis*. In addition to CBS News 60 Minutes, Rachel Maddow and Bill Maher talk show programs, he has appeared in several television

documentary series, such as Years of Living Dangerously and HBO VICE.



# Luncheon Speaker Chris Austin, founder of *Maven's Notebook*

The featured luncheon speaker will be Chris Austin, founder of the water news blog, Maven's Notebook, that is considered by many to be a "must read" for those involved in water policy. Chris Austin has been writing about California water since 2007 and has developed a reputation for presenting all sides of California's complex water issues without having a personal agenda. Chris Austin will share her vision for

a different sort of water news journalism as she strives to present all sides of California's complex water issues

REGISTER TODAY AT www.caii.org

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# Managing our Water Che Solutions for a Balanced Bo

# MONDAY, JANUARY 30, 2017

# MONDAY GENERAL SESSION:

9:30—10:00 AM ...... WELCOME AND INTRODUCTIONS

William Granger

#### **KEYNOTE SPEAKER**

Dr. Jay Famiglietti

UC Irvine & NASA Jet Propulsion Laboratory

#### 10:00 AM-11:45 AM... OPENING PANEL

Moderator: Inge Bisconer

- · Mark Cowin, CA Department of Water Resources
- Michael George, State Water Resources Control Board
- · Michael Cohen, Pacific Institute
- · Jason Phillips, Friant Water Users Authority

### 12:00-1:30 PM...... LUNCH AND AWARDS PRESENTATION

· Irrigation Person of the Year

# MONDAY CONCILBRENT SESSIONS I.

1:30-3:00 PM ...... AGRICULTURE: IMPLEMENTING SGMA-**HOW ARE WE GETTING THERE?** 

Moderators: Tim O'Halloran and Dean Currie

- · SGMA Implementation in the Sacramento Valley Area Kristin Sicke, Yolo County Flood Control & Water Conservation District
- · The RED TOP Agreement: A Local Project to Combat Subsidence Related Issues in Western Madera County Chris White, Central California Irrigation District
- · SGMA GSA Formation: Completion **Requires Commitment** Robert Johnson, Monterey County Water Resources Agency
- · SGMA Implementation Flexibility and Adaptability - Examples from Ventura County

Tony Morgan, United Water Conservation District

1:30-3:00 PM

URBAN: CURRENT REGULATORY CLIMATE

Moderator: Carrie Pollard

· Long Term Conservation Regulations - the State is the Conductor Max Gombera, State Water Resources

Control Board

- · Leading the Way Perspective from a **Utility Already on Board** Richard Harris, East Bay Municipal Water District
- · Jumping on Board: Perspective from **Utilities Planning a Path Forward** Sue Mosburg, Sweetwater Authority

3:00-3:20 PM ..... BREAK

# MONDAY CONCURRENT SESSIONS II:

3:20—5:00 PM ...... AGRICULTURE: IMPLICATIONS OF DECREASED AGRICULTURAL IRRIGATED ACRES

Moderator: David Miller

- · Does High Evapotranspiration Lead to Highest Yields in Pistachios and Almonds? Dan Howes, Cal Poly Irrigation Training and
  - Research Center
- · SGMA Implications A Grower's Perspective Jason Pucheu, Maricopa Orchards
- · SGMA Implications a Dairyman's Perspective Bob Kelley, Stevinson Corporationn
- · Tulare Lake Subbasin Experiment in Cooperation Jeof Wyrick, J.G. Boswell Company

3:20-5:00 PM ...... URBAN: CREATIVE CHECKBOOK BALANCING -PAYING ATTENTION TO PEAK AND BASELINE WATER AND ENERGY USE

Moderator: Stefaniya Becking

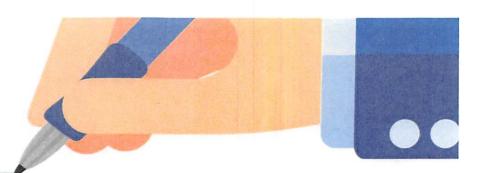
· Results from Pilot Study on Water Peak **Demand Reduction** 

Peter Mayer, Alliance for Water Efficiency and WaterDM

Continued next column...

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# MONDAY, JANUARY 30, 2017 CONTINUED

- Energy Peak and Utilities' Incentives for Water Districts
   Katherine Wang, Energy Solutions
- In Conduit and In Stream Technology Assessment in SMUD Service Area: Water-Energy Connection Lorraine White, GEI Consultants, Inc.
- Energy Savings from Water Conservation Programs in Santa Clara Valley WD Service Area Zachary Helsley, Santa Clara Valley Water District

5:00-7:00 PM ..... EXHIBITOR RECEPTION

# WINE AND HORS D'OEUVRES RECEPTION

Be sure to join us for a wine and hors d'oeuvres reception following the conference sessions on Monday, January 30, 2017 beginning at 5 pm.

# TUESDAY, JANUARY 31, 2017

THESDAY JOINT SESSION III:

8:00 AM-9:50 AM ..... SOLUTIONS FOR DEALING WITH CHANGES

Moderators: Jim Anshutz, Tom Hawes and Blake Sanden

- Incentivizing Customers to Connect Alternative Supplies
   Kira Alonzo, Metropolitan Water District
- Sonoma County Water Agency Approach to Managing Limited Water Supply Pam Jeane, Sonoma County Water Agency
- Technological Solutions Total Farm System Management Chris Gallo, Simplot "SmartFarm"
- Greater Utilization of Alternative Water

Mark Tettemer, Irvine Ranch Water District

9:50 -10:10 AM ...... BREAK

# TUESDAY CONCURRENT SESSIONS IV:

# 10:10 AM—12:00 PM... AGRICULTURE: CURRENT INNOVATIONS TO HELP BALANCE OUR PORTFOLIO

Moderator: Chase Hurley

 North Valley Regional Recycled Water Program: A District's Alternative Water Supply

Anthea Hansen, Del Puerto Water District

- Down on the Ranch: Implementation of New Techniques and Technology
   Dan Royer, Bowles Farming, Los Banos, CA
- Water Recycling for the Agricultural Community: Where We Are Headed? Bob Holden, Monterey Regional Water Pollution Control Agency
- The Irrigation District: Moving Forward and Keeping Up with the Modernized Farmer

Merlon Kidwel, Imperial Irrigation District

10:10 AM-12:00 PM

URBAN: SAVING WATER BEYOND THE GOLDEN STATE

Moderator: Bill McDonnell

- The Other 49
   Mary Ann Dickinson, Alliance for Water Efficiency
- The Western 16
   Tom Hawes, United States Bureau of Reclamation
- International Outlook
   Lisa Maddaus, Maddaus Water Management

12:00-1:30 PM ..... LUNCH SPEAKER:

Presenting All Sides of California's Complex Water Issues

Chris Austin, Founder, Maven's Notebook

- · CII Business: New Officers
- Adjourn

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### Tim O'Halloran

Yolo County Flood Control & Water Conservation District

#### Carrie Pollard

Sonoma County Water Agency

#### Blake Sanden

UC Cooperative Extension

# 2017 CII CONFERENCE REGISTRATION FORM

One day registration received on or before				
One Day Registration on site/at the door				
Registration received on or before January				
Registration received after January 6, 2013	7	\$ 200		
Registration on site/at the door				
Full time students (With valid student ID)	received on or before Jan	uary 6, 2017\$ 50		
Full time students (With valid student ID)				
Exhibitor Registration (Includes one attenual Attendee registration includes admission to all sessions,	•			
Name				
Organization				
Organization	State	ZIP		

Make room reservations at caii.org or by calling 1-800-445-8667
Register before January 6, 2017 and be sure to mention that you are with CII to
receive discounted room rates at the Hilton Sacramento Arden West Hotel.



To register by mail, please send completed form and payment to CALIFORNIA IRRIGATION INSTITUTE
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San Luis Canal Company Yosemite Farm Credit

Metropolitan Water District of Southern California

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