THE ADVISER California Association of October 2024 Pest Control Advisers Volume XXVII, No. 5 Permit No. 271 ดาร เหรหส



Space is the most hostile environment to grow plants.

UBP™ Technology was developed to help plants not only grow, but flourish in space. Now this technology is available for your field, in an amplified formula to maximize plant potential and optimize crop performance.



Contents



FEATURES

28

PCA Profile: Jeannette Rapicavoli, Desert Valleys Chapter Member & Incoming CAPCA Secretary

34

Licensing and Certification Regulatory Update

40

Developing Proactive Control Options for an Invasive Tomato Pest

46

Agricultural Commissioner Profile: Korinne Bell, Leading Ventura County's Agricultural Future

DEPARTMENTS

05	Editor's	Notes
05	Editor's	Note

Leadership 06

08 Conference

26 Membership

52 Continuing Education



MISSION & PURPOSE: California Association of Pest Control Advisers (CAPCA) is a non-profit voluntary mutual benefit association that represents 75% of the 4,000 California EPA licensed pest control advisers. CAPCA's purpose is to serve as the leader in the evolution of the pest management industry through the communication of reliable information. CAPCA is dedicated to the professional development and enhancement of our members' education and stewardship which includes legislative, regulatory, continuing education and public outreach activities.

PUBLISHING INFORMATION: CAPCA Adviser is published bi-monthly by the California Association of Pest Control Advisers (CAPCA), 555 University Ave., Ste. 260, Sacramento, California 95825. Web: www.capca.com, (916) 928-1625. POSTMASTER: send address change to CAPCA. A portion of CAPCA membership dues is used to provide subscription privileges to the Adviser magazine. Non-member subscriptions are \$30/year. Third class bulk postage paid at Tucson, AZ and at additional mailing offices.CAPCA has endeavored to include appropriate and accurate statements, but disclaims any and all warranties and/or responsibility for the statements or articles submitted to CAPCA Adviser that may have additionally been edited for style, content and space prior to publication. Views expressed are those of the authors and do not necessarily represent CAPCA policies, or positions or endorsements. Editorial content of this publication is educational and informational in nature. No part of this publication, including images, may be reproduced without prior written permission from the publisher. Contact CAPCA at (916) 928-1625 for reprint authorization.





Find an AgroLiquid dealer near you

AGROLIQUID.COM

Sure-K® and Kalibrate® are registered trademarks of AgroLiquid. © 2024 AgroLiquid. All Rights Reserved.

Editor's Notes

History Doesn't Repeat Itself, but It Often Rhymes

Mark Twain

While digging deep into CAPCA's archives as we celebrate the 50th Anniversary of the CAPCA Annual Conference and Agri-Expo, I found a startling trail of issues repeating through the eras. That which unified PCAs in the 1970s to form CAPCA – concerns over regulatory structure, desire for a representative voice in Sacramento, need for a network to understand local issues, and access to education to support their evolving careers - still rhymes today. The history of your license and CAPCA's priorities to support its maintenance have simply evolved to meet the modern landscape, now filled with keyboard activists and a "new" vision for pest management.

Themes jumped out as I paged through the last five decades, demonstrating that PCAs have long been struggling to help regulators understand their identity as IPM practitioners and professionals. The regulatory disconnect around IPM has been discussed since the 1990s, when the license was moved from CDFA to a newly created DPR. Across the decades, PCAs have simultaneously worked to shed the old image of a salesman while advancing the scope of their knowledge into alternatives and innovative techniques to meet current demands.

As the industry evolved era by era, CAPCA has been there to advocate for the needs of the PCA license and serve the membership with education and information. CAPCA has been the sole voice to support and represent the PCA in legislative and regulatory issues. Even this year, as pesticide bills dominated the legislative session, CAPCA was on speed dial with legislators working to be educated before they cast their vote.

CAPCA has been, and continues to be, the leader in the evolution of this industry through the dissemination of reliable information. We work tirelessly to support the PCA career path and license, including reinvesting any income from CE events, membership and advertising right back into your license. When you consider which company to support by purchasing registration for your next CE meeting or decide where to cut budgets around sponsorships to get in front of your customers, remember where CAPCA is spending every extra penny – on you, the PCA, to defend and protect your license for years to come.



Ruthann Anderson, Editor ruthann@capca.com



Ruthann Anderson CAPCA CEO & EDITOR

CAPCA EDITORIAL STAFF

Ruthann Anderson, Editor Crystelle Turlo, Chief Operations Director Patrick Dosier, Innovation & Technology Director Ashley Hinson, Content Curator Carrie Kihlthau, Technical Project Mgmt Specialist Katrina Silver, Office Manager Briana Love, Office Assistant Meghan Carlsen, Sales & Marketing Coordinator Ryan Dana, Events Coordinator

Printing: Sundance Press, Tucson, AZ Graphic Design: Rosemary Norris-Southward

Leadership



CAPCA Supports PCAs Through Big Renewal Changes at DPR



By Paul W. Crout, CAPCA Chairman

Over the last three years, CAPCA has encouraged you to look for the CE Hours Reported logo when selecting CE programs to attend. These sponsors are committed to reporting your hours in a compliant manner, including reporting to DPR within the new 14-day window.

In order to focus our resources and prudently manage costs for our members, CE Hours Reported will be the only method of tracking hours for CAPCA members in 2025. After January 1, 2025: If you choose to attend a meeting that is not reported to CE Hours Reported, pick up your VOA for the meeting or request one from the sponsor, and you will have a little additional work in uploading the VOA for the LIC-141 renewal summary.

What follows on the next page is a reprint of a letter from CAPCA's Executive Committee that was emailed to CAPCA Membership on August 28, 2024.





Dear Members,

Over the past two years, CAPCA has dedicated significant resources to anticipate and address ongoing changes from the DPR, from Licensing and Certification for Pesticide Handlers (C&T) regulations to the Licensing Fee increases rolled out in 2024. We are the only association focused on representing your license in Sacramento and advocating on your behalf. While we didn't achieve a significant fee reduction, we want to acknowledge the impact these changes have on all of us, especially during this renewal season.

The CAPCA Board has invested time and resources to meet our Members' needs and to address unexpected challenges along the way. Over the past nine months, we have tackled the following issues:

- 1. CE Hours Reported launched on time & budget: On January 1, 2024, the DPR required all CE hours to be submitted within 14 days of a meeting. Recognizing that the traditional scantron method would no longer meet these regulations, CAPCA developed and deployed the first version of CE Hours Reported (https://cereported.com) to support Sponsors and ensure our members' hours were tracked according to new DPR regulations.
- 2. CE Hours Reported improved: We took feedback on CE Hours Reported and implemented changes in version 2, which launched in April. To date, 180 sponsors and 2,000 users are utilizing the system. It's working, but we understand that adoption and change take time. We need your help as a CAPCA Member to drive this change. If you're hosting a meeting, use CE Hours Reported. If you're attending a CE course, ask the sponsor to use CE Hours Reported to ensure your hours are compliant with DPR regulations and tracked in your CAPCA.com account. CE Hours Reported is free and easy for everyone to use, irrespective of their CAPCA affiliation.
- 3. LIC-141 pre-filled for your convenience: Despite earlier assurances, in April 2024, DPR announced they would no longer accept the Official Certification previously provided by CECPM as a summary of hours for CAPCA Members. This change was unexpected, but CAPCA responded quickly by adapting our existing data streams, including data from CE Hours Reported, to pre-fill the LIC-141 form as accurately as possible. You can retrieve you DPR Renewal Summary in the CAPCA Portal (https://portal.capca.com). While some information gaps remain, such as missing CE Sponsor names, our solution offers the most complete CE hours record available in the industry. A more comprehensive solution will be rolled out in September. If you plan to renew before then, you can use the simple instructions at CAPCA's DPR Renewal Hub (see below) to complete the form and meet the new DPR requirements.
- 4. CAPCA's DPR Renewal Hub: In response to the numerous changes and new regulations, CAPCA has created a centralized source of accurate and timely information for our Members. Visit it at https://capca.com/dpr-renewal-hub.

The Executive Committee and CAPCA Board are working in the best interest of the Membership, balancing overall development costs with our priorities. All of this comes at a cost—we exceeded our initial budget to serve the Membership, but we still prioritized developments in phases to manage expenses. After spending \$165,000 in 2023 to build CE Hours Reported, we initially budgeted \$250,000 from the 2024 budget for all technology improvements this year and later added an additional \$180,000 to meet feedback and expanding needs.

We understand that DPR's regulations have created a headache for you, but please remember that CAPCA's staff has dedicated countless hours to ensure your license renewal process is as smooth as possible. They are still hard at work, and your patience and kindness will go a long way in helping them continue to support you effectively. Your understanding and encouragement make a difference.

Thank you for your CAPCA Membership and for recognizing that we have your license and your best interests at the core of all our decisions. As regulations and our industry continue to evolve, we look forward to continuing to serve you.

Paul Crout - CAPCA Chairman

Matt Bristow - CAPCA Vice Chairman

Adam Tavares – CAPCA Secretary

Jennifer De Jong - CAPCA Treasurer

Rick Harrison – Ex-Officio



CELEBRATING THE PAST LOOKING TOWARD THE FUTURE











2024 ANNUAL CAPCA CONFERENCE & AGRI-EXPO OCTOBER 13-15, 2024 | THE DISNEYLAND® HOTEL

AS TO DISNEY PROPERTIES/ARTWORK: © DISNEY.



Annual CAPCA Conference & Agri-Expo



Debug® Turbo Provides Proven Performance Against Twospotted Spider Mites in Strawberries

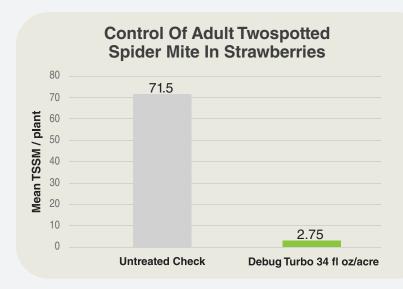
Strawberries are not just a favorite among humans but also attract a variety of pests, one of the most challenging being the twospotted spider mite, *Tetranychus urticae*. These tiny arachnids are barely visible, but their effects on strawberry plants are anything but small.

Adding an OMRI Listed insecticide to your Integrated Pest Management program is a good way of preventing pests like twospotted spider mites from overtaking your crops. There are many miticides available but one that stands out from the others is MGK's Debug Turbo.

This efficacious product combines the power of Azadirachtin, an active ingredient known for its insect growth regulator and anti-feedant properties, with Neem Oil, which acts as a suffocant and discourages feeding on plants.

Given the varying modes of action, these active ingredients have also demonstrated activity against various insect species, plant disease and nematodes.

Data shown here represents greater than 95% control of adult twospotted spider mite on strawberries, after five applications of Debug Turbo. Commercially acceptable control, greater than 80%, was achieved after the first application.



Trials were conducted on garden strawberries *Fragaria x ananassa var, Santa Maria*, in Zamora, Mexico. The target pest was twospotted spider mite, *Tetranychus urticae*. The spray rate was 34 fl oz/acre with a dilution of 32-53 gal/acre. During the trial, a total of five applications were made with 3-4 days between each application. Treatments were initiated in the early colonization of *T. urticae* populations.

For managing pests such as twospotted spider mites in specialty crops, choose MGK's Debug portfolio of unique, tank-mixable azadirachtin/neem oil formulations for superior performance.

STOP BY BOOTH #400 AT THE CAPCA ANNUAL CONFERENCE TO LEARN MORE



CELEBRATING 50 YEARS OF THE CAPCA CONFERENCE



Latest Technology & Innovations



Networking with the Industry



Quality Continuing Education

se Happy 50th Anniversal













Advertorial



Iodine In Agriculture

Are we missing a key nutrient?
Content provided by SQM North America

"lodine should be considered a nutrient for plants."

This is the key takeaway from a scientific article published in February 2021 by a team of Italian scientists¹. While iodine has long been recognized as essential for human and animal health, it has now been discovered that plants also require this element in trace amounts in their nutrient solutions.

Iodine is present everywhere, but in small amounts. It's most concentrated in the oceans, where there's about 0.5 micromoles of iodine per liter of seawater. On the flip side, rain, soil, and irrigation water have much lower concentrations: less than 0.2 micromoles per liter.



Moreover, only a small fraction - less than 10%- of the iodine in the soil is available for plants to take up. In humans and farm animals, a lack of iodine can lead to disorders like goiter and hypothyroidism, which disrupt thyroid function. As iodine from soil filtrate flows into streams and rivers, it eventually makes its way back to the ocean.

For the first time, the natural occurrence of iodinated proteins in higher plants has been documented, with 82 such proteins identified.

Research involving phenotypic, genomic, and proteomic studies has shown that iodine is crucial for leaf and root development, efficient photosynthesis, timely flowering, enhanced seed production, and activating a defense system against both abiotic and biotic stress.

In regions where soil and water are naturally low in iodine, crops can suffer from reduced yields and lower fruit quality. Adequate iodine supply directly benefits growers by boosting crop yields and minimizing losses.

lodine is crucial for leaf and root develop, efficient photosynthesis and timely flowering

The need for iodine aligns well with potassium nitrate applications, which provide essential nitrate and potassium in nutrient solutions.

Kevin Gomes Coastal California Sales Rep kevin.gomes@sqm.com (805) 975 3504 Nitrate nitrogen absorption promotes the uptake of important soil cations like potassium, calcium, and magnesium. Iodine naturally complements nitrate in calcium transport within plants; without sufficient iodine, this process can be impaired.

Iodine helps nitrate move calcium in plants; without enough iodine, this process can slow down.

lodinated proteins in the roots play a role in energy metabolism and stress response. Without adequate iodine, calcium transport to the fruits can be reduced. Tests have shown that when iodine is supplied properly alongside potassium nitrate, it results in an optimal redox balance and energy metabolism, enhancing calcium transport from roots to fruits¹.

This leads to higher calcium concentrations in the fruits, reducing the likelihood of quality issues such as blossom-end rot and extending shelf life during transport.

Therefore, maintaining an adequate level of iodine in nutrient solutions helps producers achieve optimal crop yields and high-quality products, even under challenging climatic conditions.

ource:

¹Evidences for a nutritional role of iodine in plants. Kiferle, C., Martinelli, M., Salzano, A.M., Gonzali, S., Beltrami, S., Salvadori, P.A., Hora, K., Holwerda, H.T., Scaloni, A., Perata, P. (2021) - **Frontiers.**

https://www.frontiersin.org/journals/plant-science/articles/10.3389/fpls.2021.616868/full

SUNDAY OCTOBER, 13 - GENERAL SESSION CE - GRAND BALLROOM

DPR 5.0 (5.0 OTHER)

8:00 - 8:30 am	Managing Aloe and Agave Mites Dr. Eric Middleton				
8:30 - 9:00 am	Integrated Weed Manaement in Urban and Suburban Landscapes Dr. Chris McDonald				
9:00 - 9:30 am	Identification and Control of Emerging Pests in Urban Landscapes Dr. Chris Shogren				
9:30 - 10:00 am	Climate-Resilient Tree Species for California Landscapes Janet Hartin				
10:00 - 11:00 am	BREAK				
11:00 - 11:30 am	A Sustainable Future for Pest Management DPR Executive Staff TBA				
11:30 - 12:00 pm	CACASA Update Jose Arriaga				
12:00 - 1:00 pm	BREAK				
1:00 - 1:10 pm	Platform10 Technology and Biological Solutions Dennis Donohue				
1:10 - 1:40 pm	Biologicals 101: A Brief Introduction to Agriculture Biological Products Dr. Marie Turner				
1:40 - 1:50 pm	Farm-ng Applications Nathan Dorn				
1:50 - 2:00 pm	Most Trap Networks Are Broken - Let Us Share Why Donat Posta				
2:00 - 2:10 pm	In-season Measurement of Crop Repsonses Using High Resolution Ariel Imagery Dr. Jeremiah Roeth				
2:10 - 2:20 pm	Gaining Solid Assessments of the Value of Production of New Biologicals of Technologies Charles McGregor				
2:20 - 2:30 pm	Managing Plant Cuticle Health to Improve Marketable Yields Dr. Thiago Moraes				
2:30 - 2:40 pm	Redesigning the Role of Microorganisms in Agriculture Alfredo Suarez				
2:40 - 2:50 pm	Ecorobotix ARA: Ultra-High-Precision Spraying Benefits José Marchetti				
2:40 - 2:50 pm	PCAs Who Develop and Adopt New Technologies Will Benefit Their Growers Patrick Dosier				
3:30 - 4:00 pm	Research on Effective Agri-Selling. Promoting Ideas, Not Just Products Dr. Scott Downey				



SUNDAY OCTOBER, 13 - BREAKOUT SESSION CE - MAGIC KINGDOM BALLROOM

DPR 2.0 (2.0 OTHER)

9:00 - 9:30 am	Irrigation and N Management for Pistachios Dr. Phoebe Gordon			
9:30 - 10:00 am	Iodine as a Plant Nutrient Dr. Katja Hora			
10:00 - 10:30 am	N Removal Coeffient for Vegetable and Berries Andre Biscaro			
10:30 - 11:00 am	Continuous Fertigation: Fundamentals and Agronomic Insights Devin Clarke			
11:00 - 12:30 pm	BREAK			
12:30 - 1:00 pm	Practical Application of SPM in the Citrus Industry Casey Creamer			
1:00 - 1:30 pm	Reviving California's Citrus IPM Initiatives Dr. Ivan Milosavljevic			
1:30 - 2:00 pm	Citrus Quarantine Pest Update Mel Graham			
2:00 - 3:00 pm	BREAK			
3:00 -4:30 pm	How Did We Get Here? A History and Future Perspective on Pesticides in California Anthony LaFauce			









Full Attendee (Member) - \$495

Full Attended registration for members only (Continuing Education Eligible).

Full Attendee (Non-Member) - \$595

Full Attendee registration for non-members (Continuing Education Eligible).

Professional Attendee (Member) - \$550

Member industry professionals, including exhibitors without a license and those needing an additional room in the room block (not Continuing Education Eligible).

Professional Attendee (Non-member) - \$550

Non-member industry professionals, including exhibitors without a license and those needing an additional room in the room block (not Continuing Education Eligible).

REGISTER AT EVENTS CAPCA COM





Pre-registration closes October 9, 2024

Onsite registration starts (online and in person) on Saturday, October 12th at 10 am.

MONDAY OCTOBER, 14 - GENERAL SESSION CE - GRAND BALLROOM

DPR 3.5 (0.5 LAWS, 3.0 OTHER)

7:30 - 7:40 am	Welcome and Annual Business Meeting CAPCA Executive Board			
7:40 - 8:00 am	Welcome, Licensing & Hours Housekeeping Jim McClenahan			
8:00 - 8:30 am	Invasive Fruit Fly Update Dr. Jason Leathers			
8:30 - 9:00 am	The Future of Ag Sustainability - The Customer Driver Darrin Monteiro			
9:00 - 9:30 am	CEQA - Yesterday, Today, and Tomorrow. Why Your Job Depends On It Dan Wickham			
9:30 - 9:45 am	BREAK			
9:45 - 10:15 am	Management of Invasive Pests Originating in Southern California John Kabashima			
10:15 - 10:45 am	Mixing & Loading in the 21st Century: How New Formulations, Adjuvants and Bioscience Products Can Affect Applications Dr. Kevin Caffrey			
10:45 - 11:15 am	Chasing Water & Wind in California Matt Reardon			
11:15 -11:45 am	Principles and Practices in Disease Management in California Strawberries and Beyond Dr. Gerald Holmes			

Celebrating 50 Years of PCA Excellence!

PROGRAM PROGRAM

MONDAY OCTOBER, 14 - CE HOURS REPORTED & CCA ONLY LABEL UPDATES - EXHIBIT HALL

DPR 0.5 (0.25 LAWS, 0.25 OTHER)

1:30 - 2:00 pm	CE Hours Reported Premium Features Will Help CE Sponsors Patrick Dosier
2:00 - 2:30 pm	CCA ONLY Label Update Presentations from SQM, EarthSol, and True Organic Products

MONDAY OCTOBER, 14 - GENERAL SESSION CE - GRAND BALLROOM

DPR 2.0 (2.0 OTHER)

3:15 - 3:45 pm	Invasion of Coprophilous Beetle in California's Nut Crops: Biology, Pest Status, and Management Tools Dr. Jhalendra Rijal			
3:45 - 4:15 pm	Mosquito Control Update Laura Krueger			
4:15 - 4:45 pm	Turf Weeds Krystal Jenkins			
4:45 - 5:15 pm	Digitalizationn of Label Information and Bringing Agriculture into Modern Times Sarah Hovinga			

TUESDAY OCTOBER, 15 - LABEL UPDATE & NEONICS - MAGIC KINGDOM BALLROOM

DPR 1.5 (1.5 LAWS)

7:30 - 9:00 am	Label Update
9:00 - 9:15 am	Neonic Perspective - Understanding New Regulations Dr. Kevi Mace

TUESDAY OCTOBER, 15 - GENERAL SESSION - GRAND BALLROOM

DPR 2.5 (2.5 OTHER)

9:30 - 10:00 am	The Winery Says "No Roundup" - What Are Your Options? John Roncoroni
10:00 - 10:30 am	Managing Plant Invasions in the Face of Environmental Change in California's Dr. Justin Valliere
10:30 - 11:00 am	Soil-Borne and Insect-Vectored Diseases in Processing Tomatoes and Cucurbits Dr. Zheng Wang
11:00 - 11:30 am	Routes of Insecticide Activity in Crops Dr. Jesse M. Richardson
11:30 - 12:00 pm	Pest and Disease Research Update - Pistachios Steve Vasquez
12:00 - 12:05 pm	Conference Summary and Closing Questions

SPONSORS

TITLE



BOOTH #103

TUESDAY BREAKFAST



BOOTH #104

CHARGING LOUNGE & THANK YOUR PCA



BOOTH # 127/133

50TH COMMEMORATIVE PROGRAM



BOOTH #124

STUDENT NETWORKING EVENT



BOOTH # 116

50TH COMMEMORATIVE POCKET PROGRAM



BOOTH # 230/232

EXHIBIT HALL



BOOTH #705

CAPCA COOKIE



BOOTH #426

SUNDAY BREAKOUT



BOOTH # 205/207/209

MEMBERSHIP DRAWING



BOOTH #115

STUDENT NETWORKING EVENT



BOOTH # 714/716

STUDENT NETWORKING EVENT & THANK YOUR PCA



BOOTH # 425

CONFERENCE CARRY BAGS



BOOTH # 331/333

NAME BADGE & LANYARD



SUNDAY BREAKOUT & THANK YOUR PCA



HIDDEN LOGO GAME



BOOTH # 309/311

STUDENT NETWORKING EVENT



BOOTH #709

THANK YOUR PCA



BOOTH # 126/128



SMART SOLUTIONS FOR SUPERIOR YIELDS.

Your high-value crops deserve high-performing disease protection.

The Albaugh family of HiBio™ fungicides deliver the highest levels of bioavailable copper ions. Derived from premium metallic copper and optimized for maximum absorption, you get long-lasting protection at lower use rates. That means more value for your fungicide dollar and harvest results you can take to the bank.

Learn more about the advantage of HiBio Nu-Cop* HB and Nu-Cop* 30HB, and our other premium copper fungicides, including Nu-Cop* 50DF, at albaughcrop.com.







©2023 Albaugh, LLC. Albaugh, the Albaugh logo, and Nu-Cop are registered trademarks, and HiBio is a trademark of Albaugh, LLC. Always read and follow label directions, precautions, and restrictions for use. Some products may not be registered for sale or use in all states or counties. Please check with your local extension service to ensure registration status.

EXHIBITORS

A4 Promotions #415 Acadian #329 AEF Global #315 Ag Craft #708 Agrauxine #411 AgroLiquid #201/203 AgroPlantae #702 AgroThrive #410 Albaugh #204 Almond Board of California #401/403 Alzchem #222 AMVAC #431/433 APC Agro #422 Atlantic Pacific Ag #413 Atticus #714/716 Azotic Technologies #416 Baicor #405 Balchem Corporation #219 BASF #331/33 Bayer #103 BioSafe Systems #231/233 BioWorks #429 Bird Gard #614 Blue Mountain Minerals #532 Blue White #712 Brandt #100/102 California Agricultural Aircraft Association #3221 California Farm Bureau #215 Certis #300/302 Chemurgic #328 Citrus Pest and Disease Prevention Division #212 Corigin #216 Corteva Agriscience™ #130/132 Crop Vitality #228 CropX #213

D & V Unlimited #501/503 Duarte Nursery, Inc. #223 EarthSol #122 Eco2Mix #418 Enlightened Soil #417 FarmSense #423 FarmX #407 FMC #709 Gowan USA, LLC #126/128 GroPro #225/227 Grow West #425 Helena #116 Heliae #500 Heritage Crop Science #224/226 Huma #706 ICL #408 Impello Bio #106 Irrometer #211 JH Biotech #304 **KELPAK #419** Kemin #120 Kop Coat Protection Products #318 Koppert #229 Liventia #220 Magna-Bon II, LLC #210 Malcolm Media #704 Marion Ag Service, Inc. #313 MGK #426 Miller Chemical #108/110 Momentive #618 Motomco #409 Neudorff USA #319 Nichino #200/202 Novasource #230/232 Novonesis #305/307 Ocean Organics Corporation #424 Pacific Biocontrol #406 Parabug #525

Plant Food Systems #118 Polymer Ag #710 ProFarm #109 Purdue Ag Economics #221 Qualitech #308 Quest Products #427 Redox Bio-Nutrients #124 Reforestation Technologies International #420 Rovensa Next #115 SAN Agrow #309/311 **Semios #121** Sipcam Agro #217 Spectrum Technologies, Inc. #610 **SQM #703** Suterra #726/728/730 Sym-Agro #218 Syngenta #705 TCR Industries #523 Teleos Ag #310 TELUS Ag #104 Terramera #534 The Mosaic Company #527 Tiger-Sul Products, LLC #314 Trece #112/114 Trical, Inc. # 312 True Organic #600 UC Statewide IPM Program #718 UPL #301/303 Valent U.S.A. #400/402 Verdesian #602 Vestaron #530 Vive Crop #612 Western Growers Association #205/207/209 Western Region of Certified Crop Advisers #214 YARA #206/208



Cultiva LLC #616



HONORING PCAs

THE HEART OF CAPCA'S 50TH ANNUAL CONFERENCE & AGRI-EXPO

The California Association of Pest Control Advisers (CAPCA) is thrilled to mark a momentous occasion with our 50th Annual Conference & Agri-Expo in 2024. This event isn't just a conference and expo—it's a celebration of the professionals who keep California's agriculture thriving. Each year, over 1,500 Pest Control Advisers (PCAs), applicators, and industry leaders come together for an experience that transcends traditional networking, offering unparalleled educational opportunities and memorable social connections.

But this year, we're focusing on the "Why" behind it all: the remarkable contributions of PCAs. These are the experts who stand at the forefront of agricultural innovation, ensuring that our food supply is safe, our environment is protected, and our farms are more productive than ever. PCAs are the unsung heroes of California's vast agricultural landscape, and this event is our way of recognizing their critical role in driving the industry forward.

At its core, the 50th Annual Conference & Agri-Expo is about more than just coming together—it's about honoring those who make it all possible. It's a tribute to the knowledge, dedication, and passion that PCAs bring to their work every day, safeguarding the future of agriculture for generations to come.



Photo submitted by Krista Tavares

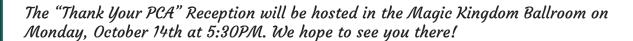
THIS EVENT IS MADE POSSIBLE BY OUR GENEROUS SPONSORS!



BOOTH # 201/203









Worms, Thrips, Leafminers IN ONE PASS



Radiant®sc

Jemvelva active

INSECTICIDE

Only Radiant® SC insecticide with Jemvelva™ active controls worms, thrips and leafminers. ("3 Bugs. 1 Jug.") And university trials in Arizona and California show that Radiant outperforms other commonly-used vegetable insecticides on all three of these pests. As a member of the spinosyn class of chemistry (IRAC Group 5), Radiant controls pests like no other class of chemistry used in vegetables. The Re-Entry Interval is only 4 hours, and the Pre-Harvest Interval is 1 day for most crops.





2024 SWS Scholarship Winner

CAPCA, in partnership with the Stanley W. Strew Trust, is proud to administer an annual scholarship program designed to support students pursuing careers in the pest management industry. This outstanding opportunity is available to all students, whether enrolled in a community college or a fouryear university, with a particular focus on those planning to study agricultural or horticultural fields in the upcoming fall semester. Preference is given to students entering their junior or senior years. We encourage students to apply every year they remain eligible, regardless of whether they have previously received the scholarship.

CAPCA is excited to announce this year's \$3,000 scholarship recipient: Carlos Zavala.

Carlos Zavala 2024 Scholarship Recipient

Carlos is a junior at Cal Poly SLO, majoring in Plant Science with a minor in Agribusiness. He plans to apply for his PCA license in his senior year and pursue a career as a PCA in the Salinas Valley after graduation.

In his application, Zavala shared, "My dad has been my inspiration throughout my journey. At a very young age, I watched my dad walk lettuce fields, and I always found his job very interesting."



We received a note of gratitude from Carlos shortly after he was informed of his scholarship award:

Dear Trustees,

Thank you for awarding me the 2024 CAPCA/Stanley W. Strew Scholarship. I am truly honored to be this year's recipient and am grateful for the financial assistance that will significantly aid in covering my expenses for the upcoming fall quarter. Your support alleviates financial burdens and reaffirms my dedication to my studies and future career. This scholarship motivates me to continue working hard and to strive for excellence in all I undertake... Thank you once again for your generosity and support. I am eager to meet the expectations set by the CAPCA/Stanley W_{\cdot} Strew Scholarship and to contribute to our field with the same passion and dedication that this award symbolizes.

Sincerely,

Carlos Zavala



SUPPRESS® Herbicide EC

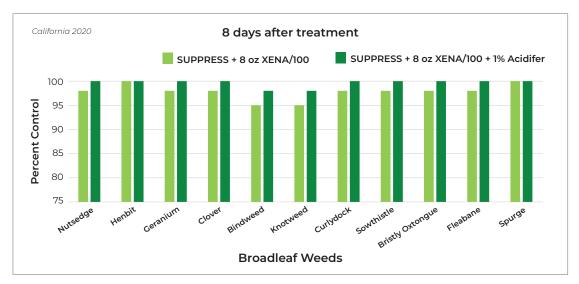
YOUR YEAR-ROUND ORGANIC SOLUTION FOR WEED CONTROL AND DESICCATION

SUPPRESS® Herbicide EC is the first and trusted leader in certified organic weed control. With years of grower-proven efficacy and university testing, **SUPPRESS®** consistently provides fast and effective broad-spectrum burndown on a wide variety of postemergent grasses and weeds.

ADVANTAGES

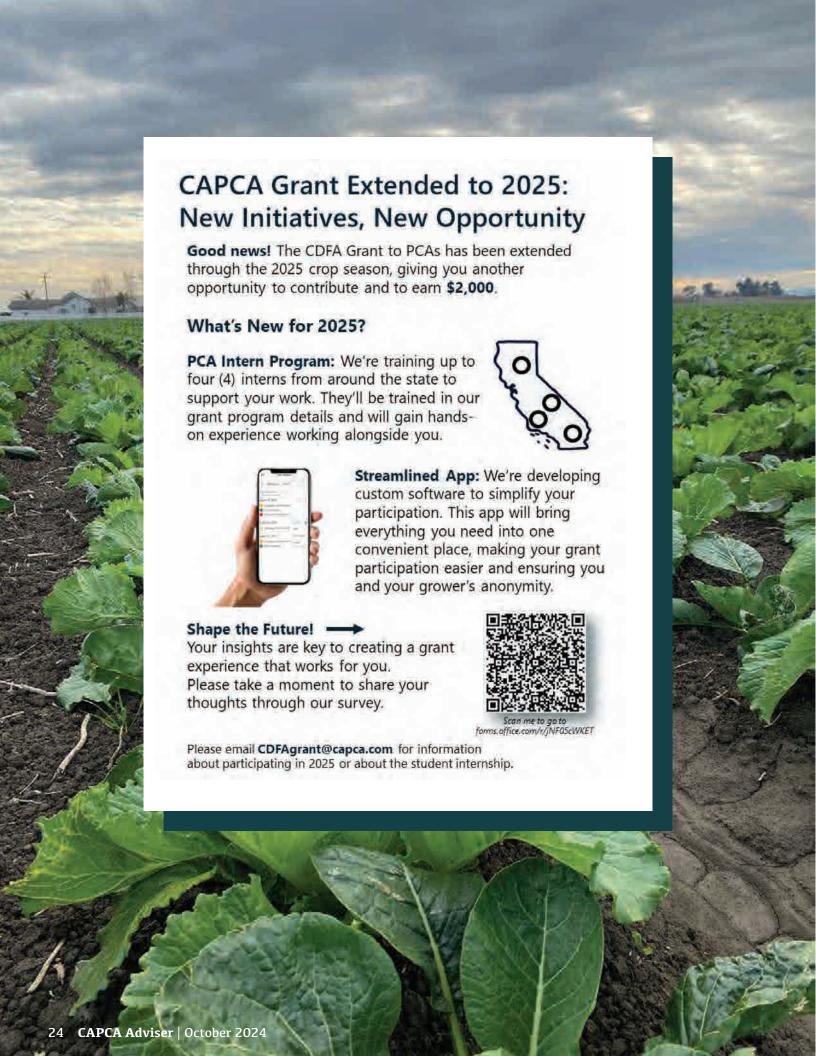
- Excellent tool in IPM programs
- Helps break chemical resistance
- No pre-harvest interval or MRLs
- Low-foaming and easy-to-use
- Highly effective pre-harvest desiccant

Apply XENA® Spreader-Sticker and BioLink® Acidifier with SUPPRESS® Herbicide EC to Enhance Control of Broadleaf Weeds in Almonds











vestaron.com/spear-lep

As a new mode of action derived from venomous species and the only Group 32 insecticide, SPEAR® LEP provides outstanding control of lepidopteran pests and replaces conventional products on a 1:1 basis, with no negative impacts.

MRL EXEMPT • 0-DAY PHI • 4-HOUR REI • SOFT ON BENEFICIALS





Membership

The Time is Now: Renew Your **CAPCA** Membership Today

As we approach the annual Conference, CAPCA experiences its busiest membership renewal period, from October to February. During this time, the CAPCA state office receives a surge in member dues payments, with January typically seeing more than 100 membership renewals per day. In recent years, we have seen an increase in digital renewals, reflecting the convenience and efficiency of online transactions. While renewing your CAPCA Membership online is easy, we understand that some members still prefer sending in the traditional paper application. To accommodate this preference, we continue to include the 2025 Member Dues Application in the Adviser for convenience. Whether you choose to renew digitally or via paper, CAPCA is committed to making the process as smooth as possible.

As in past years, assistance is readily available for members opting to renew via the digital route. If you encounter any difficulties while renewing, logging in, or making a purchase on the CAPCA website, please contact support@capca.com. Our support team is dedicated to resolving issues promptly, ensuring a seamless renewal experience.

For membership support or specific information, you can reach out to Briana Love at (916) 928-1625 ext. 1. Briana is available to assist with any membership-related inquiries, providing personalized support to ensure your renewal process is straightforward.



As you prepare to renew your 2025 CAPCA membership, please keep the following in mind:

- Active PCA Membership: Ensure you purchase an Active Membership if you are an active Pest Control Adviser.
- 2. Weekend Office Closure: The CAPCA office is closed on weekends, and membership renewals are not processed during that time. If you need assistance, please email support@capca.com, and we will respond as soon as possible on the next business day.
- 3. Patient Communication: When contacting the CAPCA office, please be patient. Leave a voicemail or send an email to support@capca.com, and rest assured that we will address your concerns promptly.

During this busy renewal period, CAPCA strives to provide excellent customer service to all members. We appreciate your patience and support as we work diligently to process renewals and assist with any inquiries. Your membership is vital to the continued success and growth of CAPCA, and we are grateful for your ongoing support.

And don't forget - renewing your CAPCA membership ensures that you remain part of a vibrant community dedicated to the evolution of the pest management industry. Your involvement helps CAPCA continue to provide valuable benefits, including continuing education, advocacy, and networking opportunities. Let's make 2025 another successful year together. Renew your CAPCA membership today!

THE SPOTLIGHT IS ON YOU!

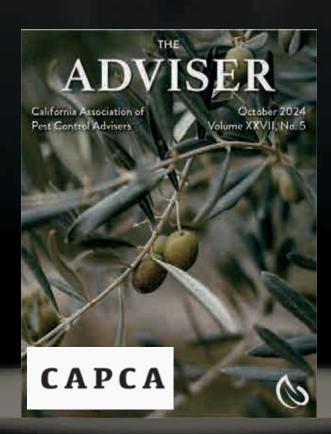
Share your ideas for Adviser magazine by taking our quick survey.

Your input will shape content that truly matters to you.

Scan the QR code or use the link below and let your

voice be heard!





<u>HTTPS://FORMS.OFFICE.COM/R/J8JGD33ST7</u>

PCA Profile

Jeannette Rapicavoli

Desert Valleys Chapter Member & Incoming **CAPCA** Secretary

By CAPCA Staff

Jeannette's path into the world of agricultural pest control is as unique and resilient as the crops she now helps manage. Raised in the suburbs of the San Francisco Bay Area, Jeanette didn't have a family background in farming. This absence of agricultural roots often left her feeling like an outsider, especially in an industry where many professionals come from generations of farming. But her love for plants and a desire to make a meaningful impact pushed her forward.

Jeannette pursued a B.S. in Environmental Horticultural Science at California Polytechnic State University in San Luis Obispo, followed by a Ph.D. in Plant Pathology from the University of California, Riverside. Her academic journey was rigorous, but it was the practical experience she gained during her time as an R&D Scientist at Syngenta that truly prepared her for her current role. Conducting field trials across Southern California and Arizona, Jeanette faced the challenges of applying scientific knowledge in real-world scenarios conducting trials in the desert heat, understanding pesticide formulations, and managing multiple crop-pest combinations.

"I knew that no matter what career I ended up in, a PCA license would be beneficial," Jeannette explains. "Toward the end of my Ph.D., I was actually leaning toward a career in cooperative extension. I was working in a molecular lab setting, but I desired to be the 'boots on the ground.' I wanted to have that direct interface with growers and to provide them with tangible solutions."

In 2023, Jeannette achieved a significant milestone by obtaining her PCA license. This credential, combined



with her extensive background in plant pathology, positioned her perfectly for her role as an Agronomic Service Representative at Syngenta, where she provides technical support across California, Arizona, and Hawaii. But beyond the technical aspects of her job, Jeanette finds deep satisfaction in problem solving and building relationships with growers.









FOLIAR APPLIED NOVEL PLANT GROWTH TECHNOLOGY

Valena™ FLOW is an innovative foliar plant growth technology that contains 1,3-ß-glucan derived from Kemin's proprietary strain of unicellular microalgae Euglena gracilis and a zinc micronutrient derived from zinc oxide.

Applying Valena Flow, a flowable suspension, though foliar spray early in the active growing stage can help improve crop quality, combat zinc deficiency, and prevent yield loss.

Incorporate Valena FLOW into your crop nutritional program today!

WHAT VALENA FLOW CAN DO FOR YOUR YOUNG STOCK PLUGS

(SOURCE: SD-23-26217)



Negative Control



One application of Valena FLOW



Two applications of Valena FLOW

LEARN MORE, VISIT



"I don't think you get into this line of work unless you love exercising your critical thinking skills," she says. "There is nothing more satisfying than working through a problem with a grower and helping provide possible solutions. I also love the relationship aspect of this role, and interacting with so many different people. Not being stuck in an office all day is also a blessing!"

Jeannette's involvement with CAPCA began well before she earned her PCA license. She joined CAPCA as a Student Member 15 years ago, seeking resources and connections that would guide her career. Over time, her participation in CAPCA events and interactions with established PCAs helped her develop the confidence to share her knowledge and tell her own story.

"One of the greatest benefits of being involved with CAPCA is connecting with our community of professionals and experts." Jeannette continues, "This is especially important for newer PCAs. CAPCA events (conferences, chapter meetings) provide the opportunity to exchange ideas and learn from established PCAs. I think that's one of the most critical ways we develop in this role - by gleaning what we can from their experiences and desperately trying to absorb every bit of knowledge they pass along."

Recently, Jeannette's dedication to the industry and her leadership qualities have earned her a place on CAPCA's Executive Committee as Secretary. As she begins this role in 2025, it will allow her to give back to the community that supported her early in her career, and to help guide the next generation of PCAs.

Reflecting on her journey, Jeannette acknowledges the importance of sharing her story—particularly in a region where the disconnect between food production and consumption is growing. "California is a big state with people and stories as diverse as the crops we grow," she says. "If we don't own our narrative and share our stories, someone else will do it for us."

Jeannette's story is a testament to the power of passion, dedication, diverse backgrounds, and the importance of community in overcoming challenges. From feeling like an outsider to becoming a respected scientist, PCA, and CAPCA leader, her journey reminds us that the most meaningful contributions often come from those who dare to embrace their own unique paths.



"I think the simplest analogy is that we're plant doctors: we investigate and diagnose issues in the field and try to provide the grower with the best treatment." - Jeannette Rapicavoli



A SOIL AMENDMENT FOR THE 21ST CENTURY



By Dan Cook, CCA & PCA

Southwest Regional Agronomist, Crop Vitality

For many western growers, accumulation of salts in the crop root zone is a serious concern. Ironically, one of the main sources of these salts, irrigation water, is also the solution to the problem. Only water leaches salts from the root zone, which is why experts have preached about leaching requirements for many years. The question then becomes, how can the efficiency of water applied for leaching be improved? The solution, in part, is soluble calcium.

When calcium is added to sodium affected soils, soil structure is greatly improved as the calcium displaces sodium from the soil exchange sites causing soil colloids to flocculate. Soil pore sizes then increase, and water can move more freely into and throughout the soil profile, carrying with it potentially harmful ions like sodium and chloride and lowering the overall soil electrical conductivity (EC). For decades, gypsum has been the product recommended to deliver calcium to soils, and while gypsum generally gets the job done, it has 3 major limitations: solubility, placement and timing.

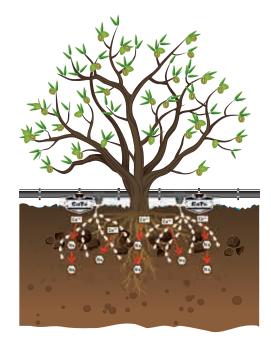
Solubility – Standard solution grade gypsum has a solubility of 2.41 grams per liter of water. This means that gypsum broadcast applied at a one ton per acre rate would require 100,000 gallons of water (0.306 ac-ft) to fully dissolve. Additional irrigation water will be required for the calcium in gypsum to enter the soil solution – California rainfall is not sufficient. **Placement** – When irrigation water is used for leaching, it is important that the calcium soil amendment is applied exactly where water is applied, when broadcasting gypsum a portion of the product will be applied outside of the irrigation wetting pattern rendering it useless. **Timing** – Most gypsum is fall applied, while this is useful when applied as part of a winter leaching program, the reality is that by the time the growing season arrives, most of the applied gypsum will have moved below the soil surface, so infiltration issues may return when crops need water most.

There is a better option.

CaTs® (0-0-0-10S-6Ca) from Crop Vitality® is a viable alternative for growers who want fast and effective sodium displacement. CaTs is a neutral to basic, chlorine-free, clear liquid soil amendment. The strengths of CaTs cover all of gypsum's weaknesses. Solubility—The calcium in **CaTs** is **soluble**, so the calcium immediately interacts

with soil colloids upon application. Placement — CaTs can be applied through all irrigation system types and goes where the water goes. Timing — Due to the liquid form of CaTs it can be applied whenever irrigation is running and requires no additional trips through the field.

For more information on how CaTs can help manage soil salinity issues, **start a conversation with your Crop Vitality Specialist today.**



Category	CaTs®	Gypsum		
Solubility	100% Soluble	0.25% Soluble		
Application Methods	Inject through all types of irrigation systems; CaTs® goes where the water goes	The placement of broadcasted gypsum is constrained by the application equipment		
Timing	Whenever the irrigation system is running	Usually applied once annually		



NEW EPISODE

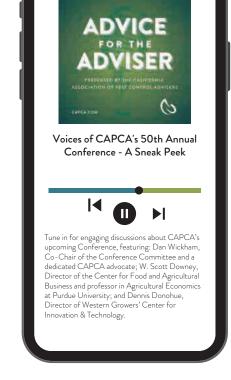
NEW ADVICE FOR THE ADVISER PODCAST!

Voices of CAPCA's 50th Annual Conference - A Sneak Peek

We're excited to announce the latest episode of the Advice for the Adviser podcast, featuring an esteemed lineup: Dan Wickham, Co-Chair of the Conference Committee and a dedicated CAPCA advocate; Scott Downey, Director of the Center for Food and Agricultural Business and professor in Agricultural Economics at Purdue University; and Dennis Donohue, Director of Western Growers' Center for Innovation & Technology!

Tune in for engaging discussions about CAPCA's upcoming Conference, celebrating its 50th Anniversary. Whether you're a veteran attendee or joining us for the first time, there are plenty of fresh insights to discover!

Tune in now on your preferred podcast platform.









Scott Downey
Director of the Center for Food &
Agricultural Business and Professor,
Purdue University



Dennis Donohue
Director of Western Growers'
Center for Innovation &
Technology



Serving California Grape, Nut & **Tree Fruit Growers**

- Grape, Nut & Tree Fruit Seminars
- Continuing Education Credits
- Free Breakfast & Tri-Tip Lunch



November 12, 2024 in Turlock, California



November 8, 2024 in Fresno, California



agexpo.biz

Call 559-298-6020 for Exhibit Info

a presentation of malcolm media • ag publishing

Featured Article



Licensing and Certification Regulatory Update

By: DPR's Licensing and Certification Program



Governor Gavin Newsom's 2024-2025 budget, originally introduced in January 2024, included a proposal to provide stable, sustainable funding for the Department of Pesticide Regulation (DPR), which included funding through a phased-in increase to the department's mill assessment, registration fee increases and increased license and certificate fees. The funding increases will streamline processes and increase equitable access to safer, effective alternatives, strengthen statewide services and provide critical support for local partners and communities.

DPR's licensing program is responsible for examining and licensing over 25,000 qualified pesticide applicators, businesses, and pest control advisers in the state, to ensure they have the knowledge and ability to use pesticides safely and effectively. Most recently, this included significant updates to the program to align California's program with the federal certification and training requirements.

Licensing and certification fees set in 2004 were no longer sufficient to support the program's work. State law requires DPR's director to set fees for licensing programs that support the cost of these programs. To cover the cost of the program and to enhance the support services DPR provides to licensees, licensing application, exam, and renewal fees were increased to cover the costs of the program. The new fees became effective August 5, 2024. Under state law, any future funding needs for the licensing program for a given calendar year must be announced by January 31.

In addition to filling current licensing and certification program funding needs, fee increases will support a streamlined process at DPR, with new resources dedicated to launching an online, electronic application and renewal process, including electronic payment systems, expanding access to electronic testing, enhancing study guides and offering exams in multiple languages and transitioning to a three-year license renewal cycle. DPR's new resources will directly impact license renewal timelines and provide additional support for California's professional pesticide applicators.

California Department of Pesticide Regulation Licensing and Certification Program Fee Table – New Fees Effective 8/5/2024

	NEW APPLICATION	2ND YEAR	RENEWAL	LATE RENEWAL	EXAM	DUPLICATE
LICENSE TYPE	FEE	FEE	FEE	FEE	FEE	FEE
Individuals						
QAC - Qualified Applicator Certificate	90.00	70.00	140.00	70.00	115.00	20.00
QAL - Qualified Applicator License	180.00	135.00	270.00	135.00	115.00	20.00
PCA - Pest Control Adviser	180.00	160.00	320.00	160.00	115.00	20.00
APC - Apprentice Pilot	135.00	100.00	200.00	100.00	115.00	20.00
JPC - Journeyman Pilot	135.00	100.00	200.00	100.00	115.00	20.00
VCT - Vector Control Technician Pilot	135.00	100.00	200.00	100.00	115.00	20.00
DDA - Dealer Designated Agent	55.00	55.00	110.00	55.00	115.00	20.00
Businesses						
PCM - Pest Control Business, Main	360.00	360.00	720.00	360.00	-	20.00
PCB - Pest Control Business, Branch	180.00	180.00	360.00	180.00	-	20.00
MGB - Maintenance Gardener Business	180.00	180.00	360.00	180.00	-	20.00
PDM - Pesticide Dealer, Main	360.00	360.00	720.00	360.00	-	20.00
PDB - Pesticide Dealer, Branch	180.00	180.00	360.00	180.00	-	20.00
PBM - Pesticide Broker, Main	20.00	20.00	40.00	20.00	-	20.00
PBB - Pesticide Broker, Branch	20.00	20.00	40.00	20.00	-	20.00

CE Sponsors - Continuing Education Course Fee 45.00

Please visit DPR's Licensing and Certification webpage at https://www.cdpr.ca.gov/docs/license/liccert.htm for updated application and renewal forms with the correct fee amounts.

2024 Renewal Season: A-L Licenses and Certificates

NEW Individual License/Certificate Renewal <u>Application Forms</u> - The updated individual license/ certificate renewal form requires applicants to submit DPR's Continuing Education Record Renewal Summary (LIC-141, Pg 2) with the renewal application. Beginning January 1, 2024, to renew a license, the submitted form must contain information on all the continuing education (CE) courses taken during the valid license period. Missing CE information may prevent verification of completed CE hours and delay processing a renewal. The CE Record Renewal Summary must be filled out completely and accurately. To accurately complete the CE Record Renewal Summary form, licensees should reference the information on their CE course completion certificates. Submitting the signed and

completed renewal packet is a declaration that the submitted information is true and correct and all requirements established in regulation for renewal have been met. If an incomplete renewal packet is submitted, the licensee will be provided a problem letter via email that notifies them of the issue and instructions for how to correct the problem(s). Only the DPR official CE Record Renewal Summary form will be accepted for renewal.

New 2024 Regulations May Have Affected Your CE Requirements – If you renew in 2024 and your license or certificate was affected by the elimination of subcategories, or you acquired the new Category L (Soil Fumigation) or Category M (Non-Soil Fumigation), your CE requirements may have changed. The chart below is to provide guidance to those affected.

2024 CE HOUR REQUIREMENTS – CERTIFICATION AND TRAINING						
Category(ies) Held	New Issue Date	Previous Issue Date	Expiration Date	CE Hours Required for 2024 Renewal		
Only Category L and/or Category M	January 1, 2024	*N/A	December 31, 2024	10 Total Hours, including 2 Laws		
	On or After January 2, 2024	*N/A	December 31, 2024	No CE Required		
Category L and/or M and One or More Category(ies) A-G, I-K	January 1, 2024	On or Before April 30, 2023	December 31, 2024	20 Total Hours, including 4 Laws		
	January 1, 2024	On or After May 1, 2023	December 31, 2024	10 Total Hours, including 2 Laws		
	On or After January 2, 2024	On or Before April 30, 2023	December 31, 2024	20 Total Hours, including 4 Laws		
	On or After January 2, 2024	On or After May 1, 2023	December 31, 2024	10 Total Hours, including 2 Laws		

For all other CE scenarios, please review the CE requirements in DPR's Continuing Education Requirement Summary for Advisers and Applicators document: https://www.cdpr.ca.gov/docs/license/pdf/ce_hours.pdf

Renewal Packet - Important Dates - In August, DPR mailed out prefilled renewal packets to those who have a license or certificate that expires on December 31, 2024. To maintain a valid license, submit your renewal application to DPR by October 1 to ensure you receive your renewed license or certificate by December 31. A high volume of applications are submitted at the end of the year, which creates delays. If you did not receive your application in the mail, you can print one from DPR's Licensing Renewal Information webpage: https:// www.cdpr.ca.gov/docs/license/licensing_renewal.htm

<u>Tips for Renewal Success</u> – Submit your renewal applications early. Submitting early allows time for your application packet to be received in the mail, payment processed, and time for staff to review your application and contact you, before your license expires, if anything is missing. To avoid receiving a problem letter and delaying your renewal application processing, ensure your application is signed on page one, your CE Record Renewal Summary on page 2 is filled out completely, and your payment information is filled out completely and accurately prior to putting your renewal packet in the mail.

<u>Business Renewal Success</u> – Your qualified person (QP) must be renewed before your business license can be renewed. Submitting both renewals together can reduce renewal times and prevent renewal delays.

Continuing Education Updates

CE Sponsor Attendance Records Submission to DPR – Beginning January 1, 2024, CE sponsors are required to submit their course attendance records to DPR within 14 days of course completion. Upon approval of a CE course application, a pre-filled CE Sponsor Attendance spreadsheet is emailed to the sponsor of the course for attendee information collection. The spreadsheet can then be submitted to the Department by emailing it to SponsorRecords@cdpr.ca.gov.

Stay Informed

To be notified of information pertaining to regulatory changes, renewals, and more, sign-up for DPR's "Licensing & Certification (Individuals & Businesses)" and "Continuing Education" electronic mailing lists at https://www.cdpr.ca.gov/docs/dept/listserv/listdesc.htm. For questions, email LicenseMail@cdpr.ca.gov.

^{*}Previous issue dates of licenses or certificates with only eliminated subcategories are no longer valid

VISIT CAPCA'S **DPR RENEWAL HUB**

DPR LICENSING RENEWALS ARE OPEN!

DPR has changed the renewal process and raised its fees.

Stay updated with the latest and most accurate information for all your DPR licensing renewal needs at CAPCA's DPR Renewal Hub, your ultimate resource!

HERE IS WHAT YOU NEED TO DO TO **STAY INFORMED:**

- Visit the DPR Renewal Hub page by using the QR code to the right, or at https://capca.com/dpr-renewal-hub/
- · Check back regularly for updates!
- Read everything carefully to avoid any delays with your license renewal.



DPR Electronic Mailing List Subscriptions

Scan the QR code to sign up for one or more email lists covering a range of topics:



- **Environmental Monitoring**
- Environmental Justice
- Grants
- Integrated Pest Management (IPM)
- Licensing
- News
- Pest Management

- Pesticide Registration & Evaluation
- Pesticide Use Reports
- Regulatory Notices
- Statewide Notification System
- Human Health Mitigation
- Rulemaking
- Pesticide Safety



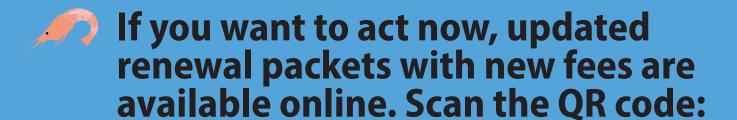
A - L License & Certificate Holders, it's Time to Renew!



If your continuing education is done, you can send in your renewal early.



Renewal packets have been mailed out.













EFFECTIVE TOOLS TO PREVENT AND COMBAT POWDERY MILDEW AND BOTRYTIS

Fungal plant pathogens are a main cause of considerable economic crop losses each year. Botrytis and powdery mildew are two destructive diseases that can quickly and significantly impact a wide variety of California crops. It is important to find effective disease management solutions to prevent and minimize crop damage.

BOTRYTIS

Botrytis cinerea, the pathogen responsible for gray mold diseases, is a highly successful pathogen due to its flexible infection modes, high reproductive output, wide



host range, and ability to survive for extended periods. Botrytis overwinters on plants, in or on the soil, and as sclerotia. Symptoms appear as grayish colored soft mushy spots on leaves, stems and flowers. Spores develop when conditions are optimal and are moved by wind or water onto blossoms or leaves, where they germinate and can enter the plant through wounds on plant surfaces.

POWDERY MILDEW

Powdery mildew is a fungal plant disease that causes a powdery growth on the surface of leaves, buds, shoots, fruits, and flowers. It does not need a vector to spread.



Spores are carried by air currents from a proliferation site to new infection sites, where they can stunt and distort plant growth. Cultural and biological practices may reduce the risk of infection but standard fungicides from multiple chemical groups are an effective way to manage powdery mildew and limit chemical resistance.

SAN Agrow products can be used in an Integrated Pest Management program that can be implemented throughout the growing season to optimize crop quality and yield, and reduce resistance issues. At SAN Agrow, we have developed effective organic and sustainable crop protection and nutrition solutions that provide comparable efficacy to conventional inputs. SAN Agrow products are MRL exempt, have zero or low entry intervals and can be used up to the day of harvest.

SAN Agrow offers a toolbox of solutions to help manage botrytis and powdery mildew diseases throughout the season. Get ahead of disease infection with preventative products such as BOTECTOR®. As disease pressure increases, DART® and GARGOIL® can be utilized as curatives to manage disease once it sets in.

DART[®]

Fungicide EC

DART® is a great fungicide to include in your cleanup sprays, and is an excellent tool for IPM programs to combat resistance issues. Apply DART® starting at initial powdery mildew infection pressure, and continue through the beginning of bloom. Protection against powdery mildew can also help prevent Botrytis infection. Powdery mildew leaves behind microcracks on plant surfaces, which become entry points for secondary fungi like Botrytis. DART® is a contact fungicide, therefore non-systemic. Good coverage is important.

BOTECTOR°

Biofungicide

BOTECTOR® works through competitive exclusion to stop disease before it gets started. Beneficial microorganisms in BOTECTOR® out-compete the Botrytis pathogen for space and nutrients, creating a protective barrier between the plant and potential disease. In berries, BOTECTOR® applications can be made from the beginning of bloom until the end of harvest. For additional crop application timings and rates, contact your local SAN Agrow representative.

GARGOIL

Insect, Mite & Disease Control

GARGOIL® provides fast and effective broad spectrum control of fungal diseases, including Botrytis and powdery mildew. Apply GARGOIL® when disease pressure is low to limit spread of disease. it can be applied throughout the growing season up to day of harvest. No PHI or MRLs, and no limit on the number of applications per year.

Contact your regional sales representative for more information about the SAN Agrow product line, application timings and tank mix compatibilities.



Featured Article

Developing Proactive Control Options for an Invasive Tomato Pest

Brian Hogg, Research Entomologist, USDA-ARS Ricky Lara, Senior Environmental Scientist, CDFA Evelyne Hougardy, Research Associate, USDA-ARS Joanna Fisher, Senior Environmental Scientist, CDFA Pablo Urbaneja, Research Scientist, IRTA

A pest on the move

The invasive moth South American tomato pinworm, Phthorimaea absoluta (Lepidoptera: Gelechiidae; known until recently as Tuta absoluta), has become a devastating pest of tomatoes on several continents. Adult moths are small, nondescript and brown-gray in color (Figure 1). The larvae feed voraciously on tomato leaves, stems, and fruits, destroying plant tissue, disrupting photosynthesis, and resulting in unmarketable produce (Figure 1). Yield losses can reach 100% if no management actions are taken. The larvae feed mainly on crops and weeds in the nightshade family (Solanaceae), with tomato, potato, and European black nightshade (Solanum nigrum) the

most suitable hosts. The ability of P. absoluta to persist on solanaceous weeds outside crop fields helps it spread and complicates control efforts.

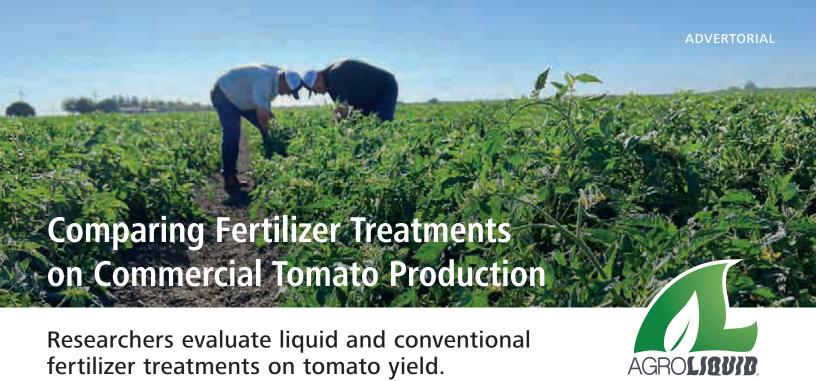
Phthorimaea absoluta is native to the central highlands of Peru, and began spreading to other South American countries in the 1960s. It occurred only in South America before being discovered in Spain in 2006. Just 12 years later, in 2019, it had spread to 109 countries, including most of Europe, Africa and Central and Southwest Asia, moving about 500 miles per year. The moth now infests 60% of the land devoted to tomato production worldwide. Adult moths are not considered strong fliers but can easily disperse to new areas with movement of infested material and the aid of wind currents

In the neotropical region, P. absoluta is spreading northwards through Central America, and now can be found in Costa Rica and Panama. The establishment

Continued on pg, 42



FIG. 1. Left: Adult Phthorimaea absoluta; Right: Feeding damage from P. absoluta larvae on fruit (photo credit: Metin GULESCI, Leaf Tobacco, Bugwood.org).



In a study conducted by Pacific Ag Research, results showed a signficant yield increase using a liquid fertilizer program over the conventional grower standard program.

Contract Research Results

Research conducted by Pacific Ag Research in Five Point, CA

Program Comparison	
Treatment	% yield increase over grower standard
Grower Standard (10-34-0/potassium thiosulfate)	<u>—</u>
AgroLiquid (PrG™/Kalibrate®)	8.6%
AgroLiquid + Foliar (Sure-K® + LiberateCa® x 2)	21.3%

In addition to yield, quality is of primary concern for tomato growers. Brix levels measure the Total Soluble Solid content, which is mainly sugars. Higher Brix readings indicate good soil fertility. Balanced phosphorus and potassium levels in the soil will ensure more even Brix development in the plant. In addition, higher levels of potassium in the plant also increases the acidity of the fruit. The best combination in the fruit is a high sugar and high acid content. Depending on soil type, 90-98% of total

soil potassium is unavailable. Feldspars and micas are clays that contain large amounts of potassium, but plants cannot use the nutrient if it is trapped between the layers of those clays. In persistently dry soils, potassium remains unavailable, as there is no water film surrounding the soil particles. Over time, these minerals break down, and the potassium is released. However, this process is too slow to provide crops the amount of potassium needed for optimal yield. Typically, only 1-2% conventional potassium fertilizers applied to the soil is available at one time.

Micronutrient deficiencies can be difficult to recognize because they resemble other problems. For instance, in tomatoes, manganese deficiency produces yellowing, which can look like a sulfur deficiency or even be confused with nitrogen deficiency. Often tissue testing can determine the cause, but it is best to have a good soil test so any problems can be addressed ahead of seeing nutrient deficiency symptoms.

Why are micronutrient deficiencies increasingly being seen in the soil?

- Increased yields due to various technologies means higher removal of micronutrients from the soil.
- Some micronutrients are no longer contained in high analysis fertilizers and fertilizer materials.
- Any type of land preparation which results in the removal of several inches of topsoil can result in a deficiency of certain micronutrients on the cut areas.
- · High phosphorus levels can induce micronutrient deficiencies.

AgroLiquid agronomists work with individual growers to determine the needs of their crops. Balancing crop demands, yield and quality goals, and environmental constraints is paramount to growers and the AgroLiquid team.

For more information, visit **AgroLiquid.com** or contact your local AgroLiquid representative.



FIG. 2. Left: A Dolichogenidea gelechiidivoris female searching for host larvae on a tomato leaf (photo credit: Evelyne Hougardy); Center: Testing D. gelechiidivoris in vials containing larvae of a native moth species on lupine cuttings (photo credit: Evelyne Hougardy); Right: Collecting native moth caterpillars in the field for testing (photo credit: Ricky Lara).

of P. absoluta in Mexico would put the tomato industry in the United States at high risk. The United States is the fourth-largest producer of tomatoes in the world, producing about 12.6 million tons a year, and production is based almost entirely in California. The most likely route for invasion is commercial trade. The United States imported 1.5 million tons of tomatoes in 2017, 95% of which were from Mexico.

Effective, sustainable tools are urgently needed for managing P. absoluta in invaded regions, and will be needed in California after the expected arrival of P. absoluta in the state. No control option is likely to provide complete control on its own. Comprehensive IPM programs that combine chemical, cultural, and biological methods are still in development in invaded regions. Pesticide use increased in invaded regions after the arrival of P. absoluta. For instance, additional pesticide applications led to increases in costs of 450 € (~\$500 USD) per ha the first year of detection in Spain, but dropped to 100-150 € (~\$110-170 USD) after optimization and better knowledge of the pest. However, the emergence of pesticide-resistant P. absoluta populations in Europe, Africa, and South America threatens to erode the future sustainability of pesticide controls.

Proactive biological control of P. absoluta

Proactively developing a management program for P. absoluta is critical for maintaining competitive tomato production in California. Delays in finding effective control methods after the arrival of P. absoluta could result in major economic losses. Reactive pesticide use could also disrupt IPM programs for current tomato pests. Providing a non-insecticide control option would be particularly important to organic tomato growers in California who would have few tools to control P. absoluta. A long-term solution is classical biological control, i.e., the importation and release of natural enemies from the native region of P. absoluta. The introduction of an effective biological control agent can permanently reduce populations of invasive pests to levels that no longer cause economic or environmental damage.

Fortunately, a parasitic wasp from P. absoluta's native range in South America, Dolichogenidea gelechiidivoris (Hymenoptera: Braconidae, Figure 2) shows promise as a biological control agent for P. absoluta. It parasitizes all larval stages of P. absoluta and can tolerate a wide range of temperatures. Furthermore, this wasp is the dominant natural enemy of P. absoluta, and parasitizes up to 77% of P. absoluta larvae in some areas. Sourcing

BURNDOWN + LONG-LASTING

Fleabane, Marestail, Filaree, Malva



With its two active ingredients, Pindar® GT herbicide provides pre- and postemergence control of 51 broadleaves in almonds, walnuts, pistachios, pecans and certain stone/pome crops. It is an excellent fit in "residual" weed control programs that provide up to six months of clean strips in orchards and minimize the number of contact herbicide applications needed for clean-up sprays.



Long-Lasting Performance

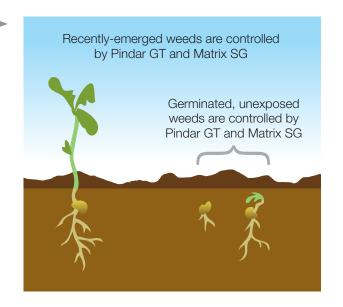
Since introduction, Pindar GT has been applied to hundreds of thousands of acres in California under widely variable conditions. Despite the weather variations, weed control provided by Pindar GT has been consistent and long-lasting across geographies, soil types and rainfall levels. Excellent control was achieved on many major weeds, including fleabane, marestail and glyphosate-resistant fleabane and marestail. Furthermore, the residual control often lasted up to six months.

Burndown Activity

Ideal timing of residual herbicide applications is often in the fall before rains occur and before new weeds emerge. However, these "spray the dirt" applications aren't always feasible. By the time residual herbicides are applied, some weeds may have already emerged or germinated but remain under the soil surface. The post-emergent activity of Pindar GT will control those recently emerged or germinated weeds in the soil if incorporated by water.

Rising Input Costs Necessitate RESIDUAL Programs

As diesel, labor and herbicide costs go up, minimizing the number of passes that a spray rig makes through an orchard can help keep weed management costs down. Using residual herbicides - like Pindar GT and Matrix® SG herbicide - can help keep orchard passes to a minimum.





Visit us at Corteva.us/treenut

**MTrademarks of Corteva Agriscience and its affiliated companies. Certain products are not registered for sale or use in all states. Contact your state regulatory agency to determine if a product is registered for sale or use in your state. Always read and follow label directions. ©2024 Corteva



D. gelechiidivoris from areas that share a similar Mediterranean climate with California is crucial for facilitating its establishment, should it ever be released in California, and models have shown that California is climatically similar to the coastal region of Peru and other parts of Europe where the parasitoid is established.

The next step for this project is to evaluate the host range of D. qelechiidivoris to ensure this candidate biological control agent is target-pest specific, and meets the environmental safety standards required for future regulatory field release approval in the U.S. To this end, USDA-ARS and CDFA assembled a database of non-target moth species closely related to P. absoluta, in the family Gelechiidae, that occur in California. Dolichogenidea gelechiidivoris is being delivered to a USDA-ARS high security quarantine facility in California from the Institute of Agrifood Research and Technology (known as IRTA in Spanish) in Spain, where D. gelechiidivoris was recently discovered and is being studied for control of P. absoluta. In quarantine lab tests conducted by USDA-ARS, adult D. gelechiidivoris are offered a representative selection of larvae of North American moth species (Figure 2). Non-target species are being prioritized based on abundance and the widespread occurrence of their host plants. Thus far, approximately 15 moth species have been collected by USDA-ARS and CDFA for lab testing (Figure 2). Larvae of many of the species appear to occur only during spring, when new plant growth is available. Field surveys for additional non-target species are continuing.

Proactive monitoring in California

CDFA is also conducting proactive detection trapping for P. absoluta. Traps (Figure 3) have been placed in tomato fields located in the Central Valley, and will be monitored during a portion of the summer months. This pest is difficult to identify so taxonomists at CDFA's Plant Pest Diagnostic Center are developing a screening



Figure 3. Trap used for proactive monitoring of *Phthorimaea absoluta* (photo credit: Ricky Lara).

guide for CDFA staff, which will increase the efficiency of trap screening. The *P. absoluta* detection trapping survey is part of the Solanaceous Commodity survey which CDFA is conducting in 2024 to monitor key pests of solanaceous crops, including false codling moth (*Thaumatotibia leucotreta*), pale cyst nematode (*Globodera pallida*), and the tomato brown rugose fruit virus (Tobamovirus). Along with proactive biological control, these pest surveillance efforts will ensure California's tomato production system remains healthy and competitive.



THE THRIPS THREAT

HOW TO CONTROL THRIPS AS AN INSV VECTOR AND PROTECT YOUR CROP



Impatiens Necrotic Spot Virus Infected Lettuce

The threat of Impatiens Necrotic Spot Virus (INSV) grows in the southwestern United States, especially for California lettuce growers. Carried by thrips, INSV poses a significant risk to various crops throughout the region, but particularly lettuce crops in Salinas Valley. Infected plants may have stunted growth, necrotic spots, chlorosis and leaf curling, which could lead to reduced yield. Growers are leveraging Lannate® as a knockdown solution.

Lannate: No Ordinary Insecticide

Lannate by NovaSource is a fast-acting carbamate insecticide with a powerful punch against a broad range of pests, including Western Flower Thrips, Lettuce Aphid, Beet Armyworm and Cabbage Looper. This mode of action makes Lannate a highly effective insecticide against thrips, as it provides rapid control and prevents thrips from causing further damage to crops. Lannate is effective against larvae, nymphs and adults, and can control eggs by direct contact.

Lannate's translaminar activity gives the active ingredient, methomyl, the ability to move from one side of the leaf to the other, making it extremely effective in combating insects that feed on the top and bottom of the leaf. This means thorough protection of your crop without needing complete coverage, and safeguarding growers, limited resources.

Flexible Formulations

Lannate is available in two formulations: a water-soluble powder (Lannate SP) and a water-soluble liquid (Lannate LV) for flexible application options depending on the specific needs and preferences of farmers. Lannate may be applied as a foliar spray or via chemigation, providing convenience and compatibility with various farming practices.

Lannate does not accumulate in plant tissue or soil, and there are no damaging effects on nitrifying bacteria or other soil microorganisms, which means growers can plant their next crop with more confidence. Its relatively short residual and preharvest interval means growers can enter their fields soon after applying and harvest their crop when its ready.

As a carbamate, Lannate is highly effective in resistance management programs with other insecticides that have a different mode of action. Some thrips species have already developed resistance to the newest insecticides on the market, reinforcing the vital need to follow sound resistance management practices.

A Broad Spectrum of Protection

Thrips can pose a significant threat to lettuce crops, but with the right insecticide such as Lannate, farmers can effectively manage thrips populations and protect their crops from damage. Lannate offers broad-spectrum activity, quick knockdown, flexible application, efficacy against multiple stages of insect pests, and short residual and pre-harvest interval, making it a trusted resistance management tool for thrips control. By incorporating Lannate into their pest management program, farmers can ensure healthy crops and optimize their yields. It is essential to follow the label's instructions, including proper application rates and safety.



Find out more and view the label by visiting NovaSource.com/Lannate.



Call 800.525.2803 | Email info@novasource.com 2910 N. 44th Street Suite 100 Phoenix, AZ 85018

NovaSource®, Lannate® LV, and Lannate®SP are registered trademarks of Tessenderlo Kerley, Inc. ©2024 Tessenderlo Kerley, Inc. All rights reserved.

Ag Commissioner Profile

Korinne Bell:

Leading Ventura County's Agricultural Future



Korinne Bell's life and career are deeply rooted in California's agricultural heritage. As the first female Agricultural Commissioner of Ventura County, she brings 46 years of experience, knowledge, and leadership to a role that demands both strategic foresight and hands-on involvement in protecting and promoting the region's agricultural landscape.

A Legacy in Agriculture

A tenth-generation Californian, Korinne's family history stretches back to the earliest days of California's statehood. Her ancestor, Don Manuel Dominguez, was a cattle rancher and the first governor of California, demonstrating a familial connection to both agriculture and public service. From a young age, Korinne was

immersed in the world of farming, cattle ranching, and animal feed, helping shape her deep respect for the land and the people who work it.

In 2001, Korinne earned a Bachelor of Science in Agricultural Business from California Polytechnic State University, San Luis Obispo, further building on the foundation of her agricultural upbringing. However, like many journeys, hers wasn't a straight line.

From Teacher to Agricultural Leader

After college, Korinne briefly worked for her family's businesses but eventually took a teaching position at a private Catholic school in Santa Paula. While teaching honed her leadership and public speaking skills, financial realities led her to take a part-time role with the Ventura County Agricultural Commissioner's Office. What began as data entry soon led to an invitation for field inspections, where Korinne discovered her passion for agricultural work beyond the classroom. This pivotal moment set her on a new career path.

Korinne's commitment to agriculture solidified as she worked her way through the ranks of the Agricultural Commissioner's Office, starting as an Agricultural Inspector Biologist. She gained certifications in Pesticide Regulation, Integrated Pest Management, and Commodity Regulation, among others, all of which laid the groundwork for her leadership roles. Her responsibilities grew as she was promoted to Deputy Agricultural Commissioner and then Chief Deputy Agricultural Commissioner, managing a team of over 70 employees and overseeing 30 programs across pesticide use enforcement, pest exclusion, consumer protection, and more.

Ventura County's Agricultural Commissioner

In September 2023, Korinne became Ventura County's first appointed female Agricultural Commissioner, a role she sees as the culmination of decades of dedicated service. Leading one of California's most agriculturally rich regions, she is responsible for promoting agriculture, ensuring equity in the marketplace, and protecting public and environmental welfare. Her leadership has already been tested, including managing the county's response to the discovery of citrus greening disease (HLB) and the Queensland fruit fly quarantine. Surviving that first year of challenges has been one of the proudest highlights of her career.

Korinne views agriculture holistically, emphasizing the interconnectedness of farmers, farmworkers, the environment, and the consuming public. She believes her greatest daily challenge is maintaining this balance: "If you lean too far in one direction, or focus your attention on only one sector, then you fail at this job," she says. It's a responsibility she takes seriously, ensuring Ventura County agriculture remains both productive and sustainable.

Partnership and Advocacy

Korinne has built strong relationships with Ventura County's growers, PCAs, and organizations like CAPCA. She sees these partnerships as essential to the success of local agriculture, working together to address issues such as invasive pests, water shortages, and international competition. Recently, she has been actively involved in planning joint pesticide disposal events and securing funding for a 2025 Spray Safe event to promote pesticide safety.

In addition to her partnerships, Korinne is concerned with the shrinking list of viable pesticides available to growers, as well as the growing issue of pesticide resistance. She is working on forming a Pesticide Resistance Advisory Committee to address this issue locally, demonstrating her forward-thinking approach to ensuring agricultural sustainability.

Key Crops and Industry Concerns

Ventura County is home to a diverse array of crops, from strawberries to citrus, avocados, and more. However, the agricultural industry faces numerous challenges, including water and labor shortages, international competition, and invasive pests such as the Asian citrus psyllid (ACP). Korinne is at the forefront of addressing these concerns while maintaining a focus on both shortterm solutions and long-term resilience.



Korinne's work includes overseeing the implementation of strict pesticide regulations and working closely with local farmers to ensure safety and compliance. One common question she often addresses involves proper A-9 Hazard Communication postings to protect workers in treated fields—a reminder of her ongoing commitment to safeguarding both people and crops.

A Vision for the Future

Korinne's leadership is not just about managing today's issues but preparing for tomorrow's challenges. She is passionate about promoting sustainability through innovative farming practices, particularly in the face of climate change. Her leadership on projects such as Ventura County's annual Crop and Livestock Report highlights the county's resilience, especially in the wake of droughts and natural disasters like the Thomas Fire.

Looking ahead, Korinne is optimistic about the future of Ventura County agriculture. "Ventura County has some unique advantages that provide us all the ingredients we need to succeed," she says, underscoring her belief that the region's potential can be attributed to its innovative growers, fertile soil, access to global markets, world-class researchers, passionate advocates, and an amazingly supportive Board of Supervisors.

With over 18 years of service in Ventura County and a lifetime connected to agriculture, Korinne Bell continues to lead with purpose, passion, and an unwavering commitment to the industry. Her journey from teaching to agriculture, and her rise to Agricultural Commissioner, are a testament to her dedication and her enduring impact on Ventura County's agricultural legacy. 🔲

CAPCA Member Benefits

Membership with CAPCA is the best way to take your involvement, education, and skill set to the next level. There are three levels of membership available:

ACTIVE MEMBER

Only California State licensed Pest Control Advisers are eligible for active membership in CAPCA.

ASSOCIATE MEMBER

An associate member is any person not licensed as an agricultural Pest Control Adviser, but may hold other licenses issued by the State of California, and wants to promote the purpose of the Association.

STUDENT MEMBER

A student member is a student regularly enrolled in a college or university, majoring in biological or agricultural sciences and preparing for a career in pest management. A student member may not hold a DPR license.

SCAN TO JOIN



SIGN UP OR RENEW TODAY!

Contact sales@capca.com







2025 SUSTAINING MEMBERSHIP **NOW OPEN!**



Choose from Bronze, Silver, Gold, Chrome, or Diamond levels and help keep CAPCA at the forefront of plant health.





Valena™ FLOW: A novel 1,3 ß-glucanbased technology for enhanced grape and specialty crop production

Kemin Crop Technologies strives to address pest and nutrition challenges in crop production sustainably with high-quality and innovative ingredients. Curiosity and a hunger to provide cutting-edge technologies that effectively improve crop health, growth, and yield are core principles that drive Kemin Crop Technologies in developing new products.

Valena™ FLOW is a novel foliar-applied 1,3 ß-glucan-based micronutrient technology for grape and specialty crop production designed to enhance plant growth and address zinc deficiency. The 1,3-ß-glucan is sourced from Kemin's proprietary strain of unicellular microalgae, *Euglena gracilis*, that produces ≥50% 1,3-ß-glucan per cellular mass, ensuring a consistent and high-quality end material.



The 1,3-ß-glucan in Valena FLOW is a Pathogen Associated Molecular Pattern (PAMP) and triggers the Systemic Acquired Resistance (SAR) pathway when it contacts Pattern Recognition Receptors (PRRs) on plant tissue surfaces. Improved overall growth is achieved via the activation of defense genes, increased nutrient uptake and transportation, and cell wall and cuticle thickening.

Microbiologist and Plant Pathologist at Kemin Crop Technologies', Bridget Hatfield, Ph.D, is passionate about harnessing the power of biologically sourced raw materials to aid growers in solving crop health and nutrition challenges. Here, she shares the best practices for success when adding Valena FLOW to your integrated pest management (IPM) and nutrition programs.

SPRAYING EARLY IS KEY

Valena FLOW should be applied as a foliar spray to young plants when rapid growth occurs, as soon as 2-4 true leaves have become visible, using a comprehensive spray technique for full coverage. For perennial crops such as grapes, spray Valena FLOW as soon as new growth appears in the spring.

Valena FLOW works "behind the scenes" on growing roots, translocating nutrients, and thickening cell walls. Allow its active ingredient the time to work and reapply every 21-28 days (3-4 weeks). Trust the process!

TANK MIX COMPATIBILITY

Valena FLOW seamlessly integrates with standard IPM and nutrition programs which should be followed to provide the best nutrition regimen for your growing crop. Incorporation of Valena FLOW will aid in raising your crops performance above and beyond. In addition, no phytotoxicity issues occur when used at recommended label rates.

3 PERFORMANCE AND ROI INCREASE DEMONSTRATED

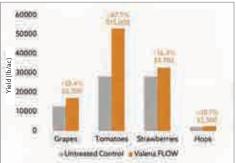
Experiments conducted on grapevines have shown enhanced nutrient distribution and tissue growth, particularly in the roots of young vines, along with increased chlorophyll levels. Furthermore, there has been a documented yield increase of 4,290 lbs per acre (resulting in over \$2,300 per acre gross margin improvement) observed in wine grapes.

Additionally, hops have shown increased chlorophyll content, vigor, and a 419 lbs per acre increase in dry cone yield (resulting in over \$2,500 per acre gross margin). Tomatoes have demonstrated a substantial yield increase of 24,760 lbs per acre (approximately \$15,000 per acre gross margin improvement), while strawberries have shown a 4,626 lbs

per acre yield increase (\$3,702 per acre gross margin improvement). Moreover, young plugs of vinca, impatiens, pepper, and tomato have displayed enhanced nutrient composition.

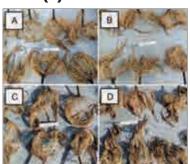
Valena FLOW enhances nutrient uptake efficiency, root growth and development, significantly increases mass and marketable yields, and improves overall plant quality.

Valena FLOW Yield Results, Field Trials 2023



Summary of four separate field efficacy trials conducted with Valena FLOW on diverse crops across different regions: grapes in Italy, tomatoes in Tampa, FL, strawberries in Oxnard, CA, and hops in Yakima, WA (Reference: SD-24-27071).

Higher root mass (D) and longer roots (C) with Valena FLOW



Visual observation of young grapevine roots treated with valena FLOW. (A) water, (B)Valena FLOW at 13.7 oz/ac, (C) Valena FLOW at 20.5 oz/ac, and (D) Valena FLOW at 27.4 oz/ac treatments. (Reference: SD-23-25-765,



Include Valena FLOW in your nutritional program today!

Richard Jones, Sales Manager California | 626-372-1153 | Richard.Jones@kemin.com

Scan for more information about Valena FLOW:



f in Follow us!

@Kemin Crop Technologies

KEMIN.COM/CROPTECH

A New Era of Strategic Engagement: CAPCA's 2025 Media Kit

The California Association of Pest Control Advisers (CAPCA) continues to stand at the forefront of the agricultural industry, offering unparalleled opportunities for businesses to connect with key PCAs through its newly launched 2025 Media Kit. This carefully curated selection of advertising options is designed to meet the evolving needs of the agricultural sector, providing tailored solutions for maximizing brand exposure and ensuring effective engagement with CAPCA's diverse and influential audience.

Targeted Print and Digital Advertising Opportunities

CAPCA's 2025 Media Kit presents a strategic blend of traditional print and cutting-edge digital advertising options. The print opportunities within the Adviser magazine, CAPCA's flagship publication, are structured to ensure advertisers can capture the attention of over 2,900 CAPCA members. From full-page spreads to strategically placed half-page advertisements, the options are diverse, providing flexibility in both size and placement. For those seeking premium visibility, the Center Spread placement offers a commanding presence, ideal for making a lasting impact.

Digital offerings, meanwhile, provide advertisers with access to CAPCA's expansive online presence. Options include prominently placed website banners and engaging video content on CAPCA's digital platforms, ensuring that brands remain top-of-mind across multiple touchpoints. A newly introduced feature for 2025, the Website Pop-up Ad, provides an innovative way for advertisers to capture immediate attention, ensuring their message resonates with CAPCA's audience in a meaningful way.

Expanding Reach Through Enhanced Content

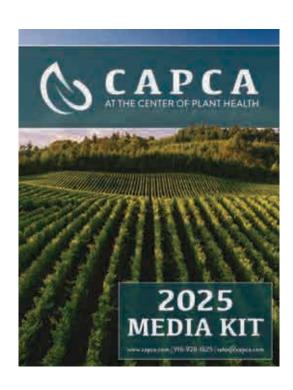
Understanding the power of targeted content, CAPCA has also expanded its digital advertising opportunities to include new formats such as Online CE Commercials and "Advice for the Adviser" Podcast Sponsorships. These avenues allow advertisers to align their brand with the high-value educational content CAPCA is known

for. With the ability to include 30-second video spots at the beginning of CE courses or sponsor specific podcast episodes, advertisers can deliver their message directly to engaged listeners, making these formats a mustconsider for 2025.

A Commitment to Quality and Professionalism

CAPCA's 2025 Media Kit is about fostering meaningful connections within the PCA community. By offering a wide array of advertising formats, CAPCA ensures that every brand, regardless of size, has the opportunity to engage with its members in a way that is both impactful and relevant. Whether through print, digital, or emerging content formats, CAPCA's media offerings are tailored to help advertisers effectively reach their target audience and achieve their marketing goals.

As CAPCA continues to evolve, so too does its approach to advertising, always striving to provide value to both its members and advertisers. The 2025 Media Kit is a testament to this commitment, offering innovative solutions that meet the needs of today's dynamic agricultural industry. For those looking to make a significant impact in 2025, CAPCA's Media Kit is an essential tool in their marketing arsenal.





HELP US TRACK OUR

CE HOURS

ATTENTION CE SPONSOR!

Your CE attendees need your support. They rely on CAPCA to track their CE attendance, allowing them to stay focused on their important work. You can make a significant difference by using our quick and free service, CE Hours Reported!

WHY CE HOURS REPORTED?



Ease of Use

Simplifies your role as a CE sponsor.



Efficiency

Fast and user-friendly, making it a breeze to manage CE events.



Free

All CE attendees and CE sponsors can use this service without charge.

VISIT OUR WEBSITE AT CEREPORTED.COM

HERE'S HOW YOU CAN HELP

Sign Up



Create a Sponsor account.

Upload Past Courses



Watch this video on instantly uploading past courses and update any missing records.

Learn More



Join a live weekly demo to discover how CE Hours Reported can make hosting CF events seamless.



Send your questions to help@cereported.com

Join us in making CE reporting and tracking effortless for everyone involved. Thank you!

Online CE

12.5 FREE Hours of Online CE Available NOW for 2024 CAPCA Members

As part of CAPCA's 2024 membership benefits, all Active and Associate Members have received FREE online CE courses! These courses are approved for a total of 12.5 DPR Hours (5.0 Laws, 7.5 Other) and are available in your member Online Learning portal on CAPCA.com.

To access the courses:

- 1. Log into your CAPCA account
- 2. From your Dashboard, choose ONLINE LEARNING
- 3. Complete a course to earn your CEUs hassle-free!

If you have questions or issues, please email support@capca.com

FREE 2024 ONLINE CE COURSES:

ARA CPDA Course: Drift Reduction & Surfactant Adjuvants — 2.0 DPR hours (2.0 Other)

- Using Drift Reduction and Deposition Adjuvants to Enhance Your Chemical Investment, by Joe Gednalske
- · Surfactant, Sticker, and Silicone Spray Adjuvants, by Joe Gednalske

The SPM Roadmap — 1.5 DPR hours (1.5 Other)

 SPM Panel Discussion with panelists Julie Henderson, Christine Birdsong and moderator Taylor Roschen

Label Update Recap, Hour 1—1.0 DPR hour (1.0 Laws)

· 2023 Label Updates from Corteva, AgBiome, Trece, and TELUS Agriculture

Label Update Recap, Hour 2—1.0 DPR hour (1.0 Laws)

 2023 Label Updates from SAN Agrow, UPL, Nichino, and Suterra

County Ag Commissioner 101 – 1.0 DPR hour (1.0 Other)

CAC 101, by Ruben Arroyo

Industry 101, Part 1-2.0 DPR hours (1.0 Laws, 1.0 Other)

- Spray Safe 101, by Ruben Arroyo & Louie Mendoza
- · How to Be Prepared to Defend a Violation, by Robert Atkins
- Discussion Panel: CAC/Enforcement Be Educated, Be Proactive, with panelists Ruben Arroyo, Louie Mendoza, Robert Atkins and moderator Paul Crout

Industry 101, Part 2 - 3.0 DPR hours (2.0 Laws, 1.0 Other)

- PPE & Health Effects for Workers, by Ben Laverty
- Updates on Soil Fumigant Application Requirement, by Dr. Rais Akanda
- · Why is Weed Management So Difficult?, by Dan Wickham

CE hours Reported & ESA Updates — 1.0 DPR hour (1.0 Other)

- CE Hours Reported, by Patrick Dosier
- ESA Regulations, by Patrick Dosier

2024 ONLINE CE COURSES & BUNDLES

Available for Anyone to Purchase:

PCA 101 — 1.0 DPR hours (1.0 Other), \$20.00 2023 Conference Presentations:

- Recommendations in Agriculture: A Team Effort, by Anthony Duttle
- Drift Mitigation & Accountability, by Paul Squires

2024 Regulatory Updates - 3.0 DPR hours (2.0 Laws, 1.0 Other), \$60.00

2023 Conference Presentations:

- CACASA & BeeWhere Update, by Ruben Arroyo
- Navigating California's Regulatory Landscape with Innovative Technology, by Erik Nijskens
- EPA's ESA Workplan, by Rachel G. Lattimore
- Neonic Regulation Update & CDPR Licensing Update, by Josh Ogawa

Pest, Disease, & Innovation — 4.0 DPR hours (0.5 Laws, 3.5 Other), \$80.00

2023 Conference Presentations:

- Development and Application of an In-Field Optical Biosensor for Early Detection of Plant Diseases, by Dr. Perry Edwards
- The Imperative Need for Bio-Solutions and Novel Technology in Conventional Systems, by Drew Wolter
- Harnessing Aerodynamics through Technology in Aerial Application, by Doug Thiel & Dan Gudgel
- Pest Management, Water Quality, and the Future of Rice, by Tim Johnson
- Managing Pests and Diseases in Pistachios: Current Technology and Works in Progress, by Dr. Bob Klein
- Managing Insecticide Resistance in Spotted Wing Drosophila Using Integrated Approach, by Dr. Jhalendra Rijal
- Managing Herbicide Resistant Chickweed in Small Grains, by Nicholas Clark
- Beet Curly Top Virus Control Program, by Kendra Tapia

Technology Roundtable -2.5 DPR hours (2.5 Other), \$37.⁵⁰

2023 Conference Roundtable Presentation:

Joan Vernon, TelusAg | Justin Kerr, Factor IV Solutions | Greg Guyette, Insero | Josh Minor, John Deere Moderator: Paul Crout

Weather-proof snail & slug killers

Damp, Dry or Wet, Ferroxx AQ® and Sluggo Maxx® kill more slugs and snails.

It doesn't matter what conditions are, Ferroxx AQ and Sluggo Maxx slug and snail baits deliver their highly efficacious iron phosphate formulation via the most baiting points possible. They kill fast, no matter the weather. Dead slugs and snails are observed within 24 hours.

Their broad labels cover most agricultural and turf/ornamental crops. They can be applied using aerial, broadcast or over-the-top methods. Plus, they can be used around pets and wildlife. An unlimited number of applications is allowed yearly, with no retreatment interval.



- Waterproof
- MRL exempt
- · 4-hour REI/zero PHI

SLUGGO MAXX.



- The most powerful slug and snail bait for organic agriculture
- Fast-acting protection up to the day of harvest
- Water-resistant



NeudorffPro.com

Contact: Morgan Silva | Morgan.Silva@neudorff.us









Follow CAPCA on Social Media!

CAPCA is working hard to build out a robust social media presence to connect with members, and to bring them additional industry-focused content.

- Facebook @California Association of Pest Control Advisers (CAPCA)
- Instagram @capca_plant_health
- X (formerly Twitter) @CAPCA3
- in LinkedIn @California Association of Pest Control Advisers (CAPCA)

Unlock Exclusive Opportunities with CAPCA's 2025 Sustaining Membership







Advice for the Adviser



Renew in September to Stay at the Forefront of Agriculture
Secure Your Sustaining Membership Today

More information is coming soon about the exceptional advantages awaiting our 2025 Sustaining Members.

Prepare to unlock opportunities that will enhance your professional journey and connect you with the industry's best and brightest.

Thank You 2024 Sustaining Members

PLATINUM LEVEL







DIAMOND LEVEL



















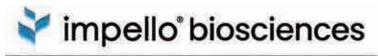
Thank You 2024 Si

CHROME LEVEL









The Biostimulant Company

















Knowledge grows











ustaining Members

GOLD LEVEL







































novonesis



Thank You 2024 Sustaining Members

SILVER LEVEL

Adama

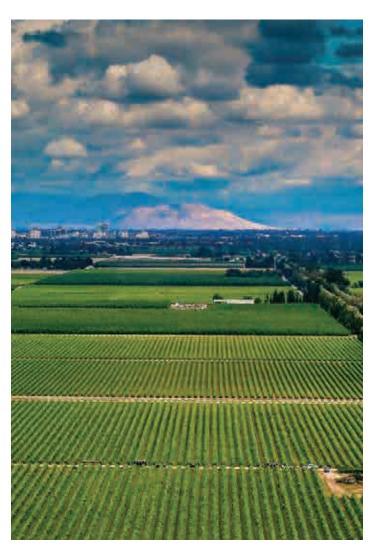
Atticus

BioSafe Systems

FarthSol

Wilbur-Ellis

Wonderful Nurseries



BRONZE LEVEL

Ag1 Source

Agrauxine by Lesaffre

APC Agro

Baicor

Bio Ag Services Corporation

Blue Mountain Minerals

California Safe Soil

Custom Ag Formulators, Inc

Diversified Waterscapes, Inc

Farm X

Lallemand

Meister Media Worldwide

Motomco

Nutrient Tech

Pacific Biocontrol

Polymer Ag

Semios

Southern Valley Chemical Company

Spectrum Technologies

Summit Agro USA

Sunridge Nurseries

Teleos Ag Solutions

The Morning Star Company

Tiger-Sul Products, LLC

True Organic Products

Western Region Certified Crop Advisers



Mission & Purpose

CAPCA's mission is to facilitate the success of the PCA and to represent our 3000 members who provide pest management consultation for the production of food, fiber and ornamental industries of California.

CAPCA's purpose is to serve as the leader in the evolution of the pest management industry through the communication of reliable information

CAPCA is dedicated to the professional development and enhancement of our members' education and stewardship, which includes legislative, regulatory, continuing education and public outreach.



PLATINUM

\$25,000

Complimentary and timely access to insider knowledge about the concerns and advances in the PCA industry.

Acknowledgement on the CAPCA Website and in Each Issue of Adviser Magazine - For the Year Once Membership is Confirmed.

Access to CE Hours Reported for all your DPR reporting needs.

2 Subscriptions to Adviser Magazine.

Discounts on exhibitor fees and registration for CAPCA Conference & Spring Summit.

1st Priority Placement for Conference Exhibit Booth. Must be signed up by 10/31/24.

Full Page Adviser Ads	2
Adviser Advetorial	1
Website Banner Ad	1
Website Pop-up Ad	1
Job Opportunities**	3
Digital Advertising Discount***	25%
CEHoursReported.com Discount Packages	90%
Conference Booth Discount*****	\$1,000
Complimentary Conference Registration	2
Complimentary Spring Summit Registration****	2
Additional Conference Regitration Discount (+5 or more)****	25%
Advice for the Adviser Audio	1

Commercial (:30s spot)

DIAMOND

\$10,000

Complimentary and timely access to insider knowledge about the concerns and advances in the PCA industry.

Acknowledgement on the CAPCA Website and in Each Issue of Adviser Magazine - For the Year Once Membership is Confirmed.

Access to CE Hours Reported for all your DPR reporting needs.

2 Subscriptions to Adviser Magazine.

Discounts on exhibitor fees and registration for CAPCA Conference & Spring Summit.

2nd Priority Placement for Conference Exhibit Booth. Must be signed up by 10/31/24.

Full Page Adviser Ads	1
Website Banner Ad	1
Job Opportunities**	3
Digital Advertising Discount***	15%
CEHoursReported.com Discount Packages	50%
Conference Booth Discount*****	\$500
Complimentary Conference Registration	2
Complimentary Spring Summit Registration****	2
Additional Conference Regitration Discount +5 or more****	15%
Advice for the Adviser Audio	50%

Commercial Discount :30s spot

CHROME

\$6,500

Complimentary and timely access to insider knowledge about the concerns and advances in the PCA industry.

Acknowledgement on the CAPCA Website and in Each Issue of Adviser Magazine - For the Year Once Membership is Confirmed.

Access to CE Hours Reported for all your DPR reporting needs.

2 Subscriptions to Adviser Magazine.

Discounts on exhibitor fees and registration for CAPCA Conference & Spring Summit.

3rd Priority Placement for Conference Exhibit Booth. Must be signed up by 10/31/24.

1/2 Page Adviser Ads	1
Website Banner Ad	1
Website Square Ad*	1
Job Opportunities**	2
Digital Advertising Discount***	15%
CEHoursReported.com Discount Packages	20%
Conference Booth Discount*****	\$500
Complimentary Conference Registration	1
Complimentary Spring Summit Registration****	2
Additional Conference Regitration Discount - +5 or more****	15%
Advice for the Adviser Audio Comercial Discount :30s spot	25%

There is a limited window to sign up for 2025 Sustaining Membership: Sept. 9, 2024 to April 30, 2025. For Sustaining Membership sign-up, visit CAPCA.com.

Complimentary ads are not available during the October Issue of the Adviser. All other issues are on a first come, first served basis. Only purchasable ads available.

CAPCA will provide Sustaining Member companies redeemable Conference and Spring Summit registration codes for their employees. A \$100 service fee will be applied to any refund requested for a registration purchased without the redeemable registration code provided. Complimentary Conference and Spring Summit Registrations: Pending the availability of hosting in-person events in 2025. CAPCA reserves the right to limit benefits and/or adjust to online programming value due to unknown gathering and spacing restrictions.

^{*}Skyscraper and Footer Ads: Maximum of 5 comps available. First come, first serve basis. Order must be placed by 12/15/24.

^{**}Digital Job Opportunities are exclusive for our Sustaining Members. Digital discount will apply.

GOLD \$3,850 Complimentary and timely access to insider knowledge about the concerns and advances in the PCA industry.

Acknowledgement on the CAPCA Website the Year Once Membership is Confirmed.

Access to CE Hours Reported for all your DPR reporting needs.

1 Subscriptions to Adviser Magazine.

Discounts on exhibitor fees and registration for CAPCA Conference & Spring Summit.

4th Priority Placement for Conference Exhibit Booth. Must be signed up by 10/31/24.

1/2 Page Adviser Ads	1
Website Square Ad*	1
Job Opportunities**	2
Digital Advertising Discount***	15%
Conference Booth Discount*****	\$300
Complimentary Conference Registration	1
Complimentary Spring Summit Registration****	2
Additional Conference Regitration Discount - +5 or more****	10%
Advice for the Adviser Audio Commercial Discount :30s spot	25%

SILVER

\$2,500

Complimentary and timely access to insider knowledge about the concerns and advances in the PCA industry.

Acknowledgement on the CAPCA Website and in Each Issue of Adviser Magazine - For the Year Once Membership is Confirmed.

Access to CE Hours Reported for all your DPR reporting needs.

1 Subscriptions to Adviser Magazine.

Complimentary registration for Spring Summit.

5th Priority Placement for Conference Exhibit Booth. Must be signed up by 10/31/24.

Email Skyscraper Ad*	1
Job Opportunities**	1
Digital Advertising Discount***	10%
Complimentary Spring Summit Registration****	2
Advice for the Adviser Audio Commercial Discount :30s spot	15%

BRONZE

\$750

Complimentary and timely access to insider knowledge about the concerns and advances in the PCA industry.

Acknowledgement on the CAPCA Website and in Each Issue of Adviser Magazine - For the Year Once Membership is Confirmed.

Access to CE Hours Reported for all your DPR reporting needs.

1 Subscriptions to Adviser Magazine.

Complimentary registration for Spring Summit

6th Priority Placement for Conference Exhibit Booth. Must be signed up by 10/31/24.

Email Footer Ad*	1
Job Opportunities**	1
Digital Advertising Discount***	10%
Complimentary Spring Summit Registration****	1
Advice for the Adviser Audio Commercial Discount :30s spot	10%



www.capca.com | 916-928-1625 | sales@capca.com

2025 SUSTAINING MEMBERSHIP

Negotiated Benefits: Complimentary ad exchange may be negotiated. Value of Negotiated Benefits must be completed by 2/21/25. Complimentary ad will be discounted if ad is upgraded.

The rights, privileges, membership benefits and unused portion thereof of CAPCA Sustaining Members applies only to the Company purchasing membership and cannot be transferred or assigned to said Company's subsidiary(ies) or any other entity(ies) of which the Company has full or partial ownership. The rights, privileges, membership benefits and unused portion thereof of CAPCA Sustaining Members applies only to the calendar year. (Jan. 1-Dec. 31) for which the Company purchases membership and cannot be transferred or rolled over to any subsequent calendar year.

^{***}Digital Ad Discount: One time discount if order is placed by 12/15/24.

^{****}Discount on Additional Conference Registrations Bulk of 5 or more registrations must be purchased to qualify for the discount.

^{*****}Discount on Conference Exhibitor Booth. Discounts determined based on Sustaining Member Level. Max discount \$1,000.

CAPCA

OUR TEAM



RUTHANN ANDERSON CEO/President Ruthann@capca.com



CRYSTELLE TURLO Chief Operations Director Crystelle@capca.com



PATRICK DOSIER Innovation & Technology Director Patrick@capca.com



ASHLEY HINSON Content Curator Ashley@capca.com



CE& Hours Reporting Mgr Carrie@capca.com



KATRINA SILVER Office Manager Katrina@capca.com



BRIANA LOVE Office Assistant Briana@capca.com



MEGHAN CARLSEN Sales & Marketing Coord. Meghan@capca.com

Do you have a specific question?

For assistance from one of these CAPCA State Office departments, send email to:

Accounting Inquiries **CAPCA State Events** Chapter Questions Latest Information Sales Inquiries Support Questions

accounting@capca.com conference@capca.com chapter@capca.com news@capca.com sales@capca.com support@capca.com





Events Coordinator Ryan@capca.com

Ryan Dana Joins CAPCA as **Events Coordinator**



Ryan Dana has recently been appointed as the Events Coordinator for CAPCA. In this role, she will be instrumental in organizing CAPCA's 50th Anniversary Conference and Agri-Expo in Anaheim, as well as CAPCA's Spring Summit in San Diego. Ryan aims to

introduce fresh and innovative trends to these events while actively engaging with CAPCA's Membership. She is passionate about creating networking opportunities and fostering knowledge-sharing, stating, "I enjoy creating spaces for clients to network and learn new topics. There's something special about transforming an empty room into an environment for others to flourish."

Prior to joining CAPCA, Ryan gained extensive experience in conceptualizing, developing, and executing a wide range of events in the nonprofit sector. Her portfolio includes events such as SRBX/CIEF's Charity Golf Tournament, LGC's Yosemite Policymakers Conference, the Statewide Energy Efficiency Conference, Capitol Regional Policymakers Dinner, and the HM Certified Trainers Conferences across the United States.

Ryan holds a Bachelor of Arts in Social Science from San Jose State University and an Associate of Arts degree in History from Cabrillo College. She has a deep interest in California's history and future. In her free time, she enjoys walking her two French bulldogs, Penelope and Beatrice, gardening, and savoring a wellbrewed cup of coffee.

Meghan Carlsen Joins CAPCA as Sales & Marketing Coordinator



CAPCA is pleased to announce Meghan Carlsen as the new Sales & Marketing Coordinator. Meghan joined CAPCA in April 2024, bringing with her a strong background in marketing, business development, and event promotion.

In her new role, Meghan is dedicated

to enhancing CAPCA's outreach efforts and promoting key events, including the CAPCA Conference this October at Disneyland. Her strategic focus is on driving member engagement and expanding CAPCA's presence within the pest management industry.

Before joining CAPCA, Meghan served as the Marketing Coordinator at Frontline Metal, where she led B2B and B2C marketing initiatives and implemented the Odoo platform to optimize business operations. She also worked as the Director of Digital Strategy at McCreery's Home Furnishings, where she was pivotal in refining digital marketing strategies and enhancing the company's online footprint.

Meghan holds a Bachelor of Science in Criminal Justice Studies with a minor in Psychology from Grand Canyon University. She is enthusiastic about leveraging her marketing skills and communication expertise at CAPCA, where she will contribute to shaping the organization's future and strengthening industry relationships. Her innovative mindset and dedication to excellence make her a valuable asset to the CAPCA team.



