Academic Program Review Dossier Cover Page | 2023 Cycle

Name, Lived Named: Tunyalee Martin

Preferred Pronoun: she/her

Academic Title: Academic Coordinator III

County/Program: UC Statewide Integrated Pest Management Program (UC IPM)

Review Type: Merit

Current Rank/Step: 5

Requested Rank/Step: 6

Review Time Period: 01 October 2019 to 30 September 2022

Thematic Areas: Vision, Strategy, and Execution of UC IPM Communications; Plan, Coordinate, and Implement IPM Educational Products; and Manage Resources

POSITION DESCRIPTION

Tunyalee Martin
Associate Director for Communications (Academic Coordinator III)
Effective Date: October 01, 2022

Purpose & Clientele

The associate director supports the Division of Agriculture and Natural Resources (ANR) Statewide Integrated Pest Management (IPM) Program. The associate director leads the Program's communications activities related to transforming science-based information into products that educate, train, and help practitioners apply IPM methods. Working with the IPM Program's subject matter leaders, UC ANR subject matter experts, and others as appropriate, the associate director provides leadership for the IPM Program's online presence including Web sites, databases, online courses, and interactive decision-support tools, as well as development of printed educational materials. The associate director manages communications staff, budget, and physical resources to carry out the activities; prepares communications that publicize IPM Program products and activities; and develops communications policy and practices for the program. The position is also responsible for planning long-term communications strategies and coordinates with other ANR units.

The associate director supports effective means for UC Cooperative Extension (UCCE) personnel to deliver unbiased, science-based IPM information, in forms—publications, databases, webinars, online courses, and online tools—that can be readily used by their clientele. While the purpose of the position is to support UCCE in its California outreach, the results of the associate director's work interface directly with a worldwide public (e.g., growers, legislators, consumers, researchers and extension staff of other institutions, media, agency personnel) who are end users of the information.

The associate director for communications is a member of the ANR Statewide IPM Program and serves on the IPM Program's leadership team. The position is located at the ANR building in Davis.

Major Responsibilities

- Lead IPM communications strategy development and planning.

  - Lead development of a vision for centralized UC IPM communications and products that support the vision and mission of the UC IPM Program.
  - Identify appropriate types of products, technologies, and methods to meet IPM's extension needs and develop proposals and implementation plans.
  - Anticipate changes in outreach methods and technologies, and their impacts on the program's ability to deliver IPM information to clientele.
  - Plan and prepare materials about program activities for broad distribution.
  - Establish policies and procedures to ensure fair and appropriate use of materials, and to ensure that materials comply with policies, laws, and standards.

- Coordinate projects to develop IPM outreach products.

  - Promote consistently high-quality content and design of educational materials to support the vision and mission of the IPM Program.
  - Oversee projects carried out by professional scientific editors who develop IPM outreach materials and events; production staff who generate documents for print or online; and database, programming, and technical support staff who develop online publishing tools, computer applications, and databases.
  - Develop products that are appropriate for the audience and situation.
  - Serve as a liaison to cooperating units within ANR, as well as government agencies, nonprofits, and other IPM Program partners.
  - Work with ANR colleagues to plan projects and their IPM communications resource requirements. Prepare funding proposals for consideration by the IPM management team and external organizations.

- Manage resources.

  - Effectively supervise staff, including oversight, direction, and performance management; make effective use of staff expertise to strengthen the team; and invest in improving all staff expertise and support professional development.
  - Effectively manage resources in support of established priorities; monitor use of resources and comply with all relevant policies and procedures.
  - Develop annual work plans for all communications operations based on approved projects and on-going operational needs.
  - Develop annual budget requests for all communications operations related to maintain and developing staff and to maintain equipment and other physical assets.
  - Develop procedures to continually improve effectiveness of products and operations.
  - For program-wide grant proposals, coordinate the proposal development process among subject matter authors/leaders.

- As a member of the UC IPM Leadership Team, participate in planning, discussion, and decision making related to IPM Program issues.
- Provide vision, inspire, and motivate others with attitude and actions; sets a high standard for excellence; innovate and foster positive change; model and support a good team working environment; effective listener and communicator; takes responsibility for actions; keep commitments; and explore new ideas and innovative changes.
- Demonstrate professional competence and participate in University and public service.
- Participate in professional organizations and collaborate with federal, state and county governmental agencies, non-government organizations and others by providing independent expertise and leadership.
- Maintain a program of continual self-improvement by participating in in-service training, seminars, workshops, workgroup and program team meetings, short course, professional society meetings or other relevant opportunities.
- Participate in UC and ANR leadership through workgroups and program teams, committees, task forces and other formal or informal structures.
- Serve the California public by participating in activities of public agencies and organizations.

Affirmative Action and Diversity, Equity, and Inclusion (DEI)

- Comply with all applicable federal and state laws and regulations, and all University polices regarding affirmative action, including prohibition of discrimination on the basis of race, color, national origin, religion, sex, sexual orientation, physical or mental disability, age, veteran status, medical condition, ancestry or marital status.
- Take all measures necessary to assure than any employee or volunteer workers supervised by this position fulfill their affirmative action responsibilities.
- Promote, in all ways consistent with other responsibilities of the position, accomplishment of the affirmative action goals established by UC ANR.
- Identifies and resolves accessibility barriers to ensure that UC IPM communication products meet accessibility standards. Commitment to improve understanding of people with a wide range of experiences and backgrounds. Continually improve understanding of diversity and equity as well as build equity into organizational structures and processes. Open and willing to participate in conversations and actions to improve diversity, equity, inclusion, and belonging in the work of UC IPM.

Relationships

This position reports to the Statewide IPM Program Director. The associate director supports IPM leaders in achieving programmatic goals by providing expertise and planning and carrying out production of products. Two supervisors report directly to the associate director; the position oversees 15 positions total. The associate director serves as a resource to IPM advisors and draws on UC ANR personnel for advice and assistance in developing outreach products.

Qualifications

A Masters Degree in an appropriate field is required. Professional experience must demonstrate capacity or potential to accomplish team-based programs and projects consistent with the values of UCCE. Knowledge of pest management, agriculture, and pesticides is preferred.

Must demonstrate:

- Strong communications experience that includes communicating technical information in an understandable manner through a wide variety of media, organizing diverse materials into a cohesive website, understanding of principles and best practices related to usability of print and electronic materials by diverse audiences.
- Understanding of web technologies and their application.
- Systems analysis skills and ability to integrate diverse information into coherent documents or systems.
- Strong experience in project management and planning.
- Experience supervising staff, managing budgets, and preparing proposals for funding or in-kind support.
- Interpersonal and communication skills to facilitate work between communications team and content providers, and to communicate professionally and collaboratively with individuals from diverse backgrounds and perspectives.
- Excellent interpersonal skills and ability to express ideas clearly, orally, and in writing.

_____   Date:

Dr. Tunyalee Martin, Associate Director for Communications

_____   Date:

Dr. James Farrar, Director

_____   Date:

Dr. Deanne Meyer, Interim Associate Vice President

Program Summary Narrative

Introduction

I am Associate Director for Communications, Academic Coordinator III, 1 FTE, Step 5 seeking a merit to Step 6. My job with the UC Statewide Integrated Pest Management Program (UC IPM) is to find resources (funding and people), develop extension products, and tell everyone about them. This forms my themes: 1) Vision, Strategy, and Execution of UC IPM Communications; 2) Plan, Coordinate, and Implement IPM Educational Products; and 3) Manage Resources. My work with subject matter experts develops the latest research on integrated pest management (IPM) into extension products to increase the adoption of IPM practices and programs by pest management professionals and the general public.

During this review period I focused on the path towards efficiency in managing content, updating content, and enabling content to be used in multiple ways. Ensuring accessibility continues to play a large role in what I do. The relationships I've built over time resulted in increased funding to develop great products. We were also able to support the maintenance of our current content by inputting it into a database for our future content management system. While my purpose is to support UC Cooperative Extension (UCCE) in its California outreach, the results of my work interface directly with a worldwide public (e.g., growers, legislators, consumers, researchers and extension staff of other institutions, media, and agency personnel) who are end users of the information.

My work addresses the public values of Promoting Economic Prosperity in California, Protecting California's Natural Resources, Safeguarding Abundant and Healthy Food for All Californians, Developing a Qualified Workforce for California, Promoting Healthy People and Communities, and Developing and Inclusive and Equitable Society. My three themes work toward the overall goal of all Californians practicing IPM to manage pests. Californians using IPM is anticipated to contribute to ANR's condition changes to increase agriculture and forestry efficiency and profitability; improved management and use of land; improved air quality; increased ecological sustainability of agriculture, landscapes, and forestry; improved water quality; increased workforce retention and competency; and to a lesser extent improved health for all; improved food safety; and increased diversity, inclusiveness, and cultural competency in California's workplaces.

Vision, Strategy, and Execution of UC IPM Communications: curating IPM information, capitalizing on new technologies, and communicating UC IPM and ANR's pest management success (program planning and development; assessment of program and constituency needs; evaluation of academic program activity and functions)

Background, Rationale, Problem

UCCE is known for being on the ground and in your county. The internet enables people to access information differently than in the past. There is good information and misinformation, too much information, information in many forms, and information at any time. My vision for UC IPM Communications is for Californians to be able to learn about IPM solutions for their

pest problems WHEN they want it and HOW they want it. I am implementing this vision by identifying and developing products and/or projects for specific audiences, including the preferred strategies to communicate with the different groups. UC IPM's external communications let people know what we are doing to solve their pest problems and contribute to our mission and impact. I actively seek opportunities to incorporate diversity and diversity of ideas into projects and processes. My audience for this theme is the general public, regulatory agency staff, media, and legislators.

Methods and Outcomes

For program communications, I focused on making progress on the communications vision and 2015–2025 UC IPM Strategic Plan. I published two UC IPM annual reports for 2020 and 2021. With a focus on projects and funding during this review period, I only maintained social media (program's Instagram, Twitter, Facebook, and LinkedIn), and as a result it did not grow as much as it has in the past. We did begin conversations on LinkedIn, focusing on sharing resources and the people aspect of our work.

I enjoyed learning and implementing processes and tools for product accessibility. In 2021, accessible branding colors were developed and are being used on all new webpages and products. UserWay (an accessibility widget) was added to refreshed webpages. We knew we were lacking contrast and font size adjustment, and UserWay provided an immediate solution. In 2020, I began investigating making PDFs accessible. It is not easy, and we are working on alternatives (e.g., direct printing from the website). New content tables are designed with accessibility in mind (primarily even rows and columns). For established tables, we are working on a redesign (e.g., treatment tables in the Pest Management Guidelines). One longstanding publication we assist with, *Fungicides, Bactericides, Biocontrols, and Natural Products for Deciduous Tree Fruit and Nut, Citrus, Strawberry, and Vine Crops in California*, we have not entirely determined how to make it accessible. We did remove the current use of symbols (plus and minus) and changed it to a numbered rating (imagine a screen reader reading efficacy of three pluses as "plus, plus, plus" for multiple columns and rows). For social media, we add alt text images. For videos, we add closed captioning to meet the Americans with Disabilities Act (ADA), Section 508 of the Rehabilitation Act, and Web Content Accessibility Guidelines (WCAG) 2.0 requirements and ensure the closed captions are 99.9% correct to meet Federal Communications Commission (FCC) requirements. For webinars, we used 3PlayMedia to provide simultaneous closed captioning until March 2021 when Zoom provided this service. We added a place for accommodation requests on our webinar registration survey. UC IPM's online courses also meet accessibility requirements for screen readers and keyboard navigation.

For the website, online tools, online courses, and webinars, we evaluate their use and the users. In 2022, we added a feedback survey tab to our new webpages that will assess our users' knowledge and intentions. (Is it wrong to ask that if and are reading this now, the next time you use our resources, please fill out the feedback survey!)

With UC IPM colleagues, I incorporated accessibility or diversity, equity, and inclusion (DEI) trainings into staff meetings. We arranged for four DEI trainings taught by the UC Davis Office of DEI for UC IPM and invited the Davis-based UC Master Gardener staff (25 to 30 attendees for each training). I requested the program support an Intercultural Development Inventory (IDI) for all staff. It was approved. I coordinated the conversations and implemented the survey. With

colleagues, I helped people review their IDI survey results and set up drop-in meetings on the subject of IDI improvement planning.

As part of the effort to bring all ANR content onto one website, I participated in the conversations with ANR IT on the integrated web project (IWP). We discussed how we could add UC IPM content there, while still managing the content and ensuring content accuracy.

Impacts
We know integrated pest management practices are being adopted (Mullen et al. 2003, Farrar et al. 2016a). We are improving our knowledge of how best to revise and deliver online resources to better reach a broader audience. From Diaz et al. (2020) we know there is a positive relationship between the level of IPM knowledge and adoption of IPM practices. We have seen steady increases in visits to UC IPM webpages (2020: 2.2 million users & 3 million sessions; 2022 2.5 million users & 3.3 million sessions). We use evaluation survey responses to ensure users find the information they need and inform program improvement. In one survey, we evaluate if users of our resources adopt IPM practices. For UC IPM online courses, we found that users responded they were ready to act (n=23), made different pest management choices (n=22), made better or timed applications (n=22), timed their monitoring (n=17), used IPM tools (n=15), shared the information with others (n=9), and used prevention practices (n=4), three to six months after taking an online course.

Plan, Coordinate, and Implement IPM Educational Products: develop and support successful educational products and tools that enable the extension of IPM research and information

Background, Rationale, Problem
This theme fits under the Endemic and Invasive Pests and Diseases Initiative and works towards all three focal areas of keeping invasive pests and pathogens out of California, solving new problems with existing pests and diseases, and increasing the adoption of integrated pest management (IPM). Wikipedia states information overload as the difficulty in understanding an issue and effectively making decisions when one has too much information. My goal is to stay current with how people access information and share IPM information in different ways so that people can pick the format where they learn best. I develop innovative ways to engage customers, removing barriers to collaboration, and delivering excellent customer service. The primary audience for this theme is UCCE advisors and specialists and pest management professionals (landscape professionals, structural professionals, growers, pest control advisers).

Methods and Outcomes
My team and I spend the majority of our time working on integrated pest management projects, including peer-reviewed publications, identification cards, databases, online decision-support tools, videos, and online courses. UC IPM's Communications Team includes content developers and Information Technology (IT)/Production specialists. My role in these projects ranges from Project Manager (leadership, direction, timeline management, doing 50–100% of the work, coordination with others, providing expertise), to Subject Matter Expert (providing expertise in communications, integrated pest management), to Supervisor (staff supervision, timeline

management, coordination with others, input/feedback/participate in discussions to make key decisions, doing 1–25% of the work).

During the review period I worked on four publications. I was the project manager, working closely with S. Parreira, A. Vinchesi-Vahl, and C. Swett on the Processing Tomato Pest Management Strategic Plan and R. DeBiase, L. Espino, W. Brim-DeForest, and K. Al-Khatib on the Rice Pest Management Strategic Plan. These strategic plans bring together Cooperative Extension, growers, industry representatives, and pest control advisers to record the current state of a crop and pest management. It captures policy, research, and extension needs, and what is known about pest management in a particular crop. As supervisor, we continue to refresh the 48 crop *Pest Management Guidelines* to the new design and develop the database for the content. The content is now in a database as a whole and we'll continue to label and tag the content in finer components. I am the project manager, working with L. Espino and W. Brim-Deforest, on a rice pest identification card set. I assisted in gathering the content and drafted the identification text. We're currently reviewing the text, noting good photos, and identifying what photos are still needed before we begin layout.

Databasing and cataloging information is very important to improve efficiency of updating our online content and developing new online tools. We've been working on this since I started in 2014! I am currently working on two project databases. I am supervising a project to database the urban pesticide active ingredients. I ensure, with subject matter expert K. Windbiel-Rojas, that the database fields and relationships are understood, and that web standards and styles are followed when the content is entered. We have the database designed and are entering the content. UC IPM has over 100,000 photos with the metadata organized in a home-developed database. Over the summer in 2022, we worked with ANR to assess Bynder as an image storage database, but unfortunately in order to be use photos on our website from this database, all of our photos would be public to anyone who has Bynder access. We have a number of photos with strict permissions. As project manager, we are continuing on the path to develop an updated image database. We have the database designed and are migrating content to be reviewed to make sure everything is moved over correctly.

To assist pest managers in making good decisions, we developed three online tools that make identification and decision making easier. As supervisor, I worked with K. Windbiel-Rojas to design and publish the Wildlife Pest Identification Tool that helps users identify vertebrate pests from observation, damage, or feces. I ensured content organization standards and web standards and styles were met. As project manager, I worked with the California Invasive Plant Council to develop WeedCUT, which assists land managers to choose the best nonherbicide practice for managing weeds. I worked to develop the website design and database behind the tool, which was a complex matrix of plant attributes, site characteristics, and ratings for the management practices. WeedCUT is published and we're currently working to update it with herbicide information. Working with W. Brim-DeForest, I worked as supervisor to develop the online tool Rice Rotation Calculator, which calculates the costs/profits of crop rotation. I assisted with the design and ensured web standards such as accessibility were met.

As a first step to improving online tools, I worked as project manager to evaluate the Weed Susceptibility to Herbicides tables in the Pest Management Guidelines. I talked to 10 people who use the tables. Their feedback will inform the next version we develop.

I supervised the development of 6 new instructional videos on avocado, nut, and agronomic crops; 33 webinars through the UC Ag Experts Talk series; and 2 online courses, one published on reducing spray drift and the other still in development on bees and IPM. I help determine the direction, answer content questions, review scripts and storyboards, comment on design, and ensure styles are followed and basic accessibility is met.

I am the supervisor of the project to develop a way to log in to UC IPM resources leading to a future MyIPM platform, where users can customize their resources to get to the pest management information and tools used most. Our philosophy is to authenticate users by popular platforms such as Google, LinkedIn, and UC Davis. As part of MyIPM, I'll be working as project manager to develop weather alerts for pest weather models. Users will receive alerts based on their selected weather station and added location biofixes.

Impacts

Research demonstrates that increased integrated pest management adoption saves money and in certain cases can reduce pesticide applications (Mullen et al. 2003, Gouge 2006). Farrar et al. (2016b) assessed and concluded that pesticide risk from consuming food is low, risk of harm from pesticides in the air is low, and risk of harm from pesticides in surface water is decreasing. IPM programs decreased the use of certain pesticides and reduced the health and environmental risks associated with them. My work contributes to appropriate pest management decisions and the adoption of IPM, thus contributing to a healthy state economy, protection of our natural resources, and building the capacity of Californians to ensure safe food.

Manage Resources: provide leadership to staff and support staff positions through federal grants and other funds (development of proposals for extramural funding of programs and identification of support resources; supervision and leadership of staff)

Background, Rationale, Problem

To continue to adapt and be at the forefront of extending information, funding and good people are needed to make change happen. I am always balancing the development of new tools, which attracts funding, and the commitment to long-term maintenance of these new products, which is difficult to fund when it's no longer new and sexy. It's important to me to determine what employees want from work, since they can be different things. After mandatory telecommuting and then returning to the office, flexibility is even more important. My goal is to ensure the people who join my team are successful, growing, and feel heard. The primary audience for this theme is IPM staff and academics.

Methods and Outcomes

I have been fortunate to work with partners that bring in good ideas, and that the good ideas brought in funding (over $5 million). See **Plan, Coordinate, and Implement IPM Educational Products** above and the **Supporting Documents, Project Summary table**.

As a supervisor I focus on things I have control over—flexibility in schedule, following ideas (i.e., trying new things), work-life balance, growth, diversity in the type of work, and ensuring a

positive and inclusive culture. I am fortunate to have two team supervisors to assist me in modeling good behavior.

Building on my previous work of clear expectations and realistic work plans, during this review period I focused on empowering my team to work on what they enjoy and acknowledging people for their successes. A few on my staff have added accessibility and diversity, equity, and inclusion projects to their work plans. One employee has a background in bees. I encouraged the idea of them developing a bee and IPM online course. One employee enjoys making animations. I encourage them to do so because it's something they enjoy, and animations help keep a learner's attention when viewing online courses, videos, and social media.

I acknowledged folks through shared words with their supervisors and UC IPM's leadership, passing them our internal Buggy Awards during bimonthly meetings, nominating people for On-the-Spot awards, and nominating people for ANR's STAR award (nominations for A. Carr, E. Lander, and S. Parreira). I assisted J. Farrar with nominations for the UC Almond Team for the International IPM Symposium Achievement Awards. I also assisted P. Kosina to apply to the Association for Communications Excellence Critique & Awards Program for the work he did on an online course.

Impacts
During the review period, I brought in over $5 million in funding as PI, Co-PI, or collaborator. With soft funds, I supported 4.3 FTE during the review period, which will expand to 7.3 FTE in 2023. I have made partnerships with people in ANR and groups outside of ANR. The outputs we develop are award-winning people (my STAR nominations were awarded) and extension tools (e.g., online course and WeedCUT). While my efforts to retain staff still means they leave, I am usually a reference, and the exit interview conversations encourage me to continue what I am doing. I anticipate my endeavors for employees to be successful in their work and enabling them to work on what they enjoy will assist with reducing turnover and sustain our organizational knowledge (Crail 2022).

University and Public Service
I served or am currently serving on the Academic Coordinators Committee as a member, chair, and co-chair, as well as Academic Assembly Council as Secretary. I was on the Strategic Communications & Publishing Strategic Plan development advisory committee and provided input into ANR's Brand Audit. I was an ANR mentor. I chaired or served as a member on 11 hiring committees for UC IPM and ANR (e.g., Director of Publishing, Vice Provost for Academic Personnel and Inclusive Excellence, Social Media Strategist).

I responded to 57 requests for information regarding our content and photos. Besides providing free, publicly available resources, answering requests is primarily how I serve the public. Most requests are from the media and answering these often leads to increased awareness and more ANR experts being interviewed by the media regarding pest management.

Professional Competence
I viewed webinars during the COVID lockdown to keep current on pest management; communications; leadership; diversity, equity, and inclusion (DEI); and accessibility information. This fueled changes in my work. With others in my communications' professional

society, we requested a new accessibility learning community, and I am now co-chair for the Diversity and Accessibility Learning Community. I took the Intercultural Development Inventory (IDI) to assess my cultural competence and became a Qualified Administrator (I can facilitate report meetings). My colleagues and I submitted an abstract summarizing the work we did on DEI within UC IPM. The poster was presented at the 10th International IPM Symposium. For my communications professional society, I am a member of the Branding and Marketing Committee, and I was invited to work on the 2024 Conference Planning Committee. Several integrated pest management projects I worked on were recognized by the Department of Pesticide Regulation (IPM Achievement Award: WeedCUT online decision support tool) and the Association for Communications Excellence (Gold Award: WeedCUT; Gold Award: Diagnosing Herbicide Injury Symptoms online course)

Affirmative Action and Diversity, Equity, and Inclusion

My work in accessibility and diversity, equity, and inclusion (DEI) have increased. I continue to ensure the minimum levels of accessibility in social media, online courses, videos, and the website, including online tools. For hiring, I require everyone on the committee to take the UC Office of the President implicit bias online course. We then discuss biases, with the clear expectation that they will be called out if they occur. I personally redact the application package (e.g., exchanging years of experience for dates), have a scoresheet with defined scores and weighted requirements, and interview questions tied closely to the job requirements. For onboarding, we've improved our new employee checklist with the goal to ensure the employee's success and make them feel welcome. Finally, after a conversation with others in UC IPM, I sent an email to the California Department of Food and Agriculture's DEI Steering Committee. This led to a common name change of an invasive annelid, removing reference to geography and stigmatizing language, to jumping worm.

Summary

Our funding situation right now is good. I will continue ensuring accessibility and moving our content into a database, updating our webpages to the new mobile design (Appendix 1). With the influx in funding, I will be spending time onboarding, training, and getting to know the new folks on my team. If we can have some stability in personnel, I anticipate making good progress on putting our content into a database and solidifying our online foundation to present information using a content management system. Having content in a database will also enable us to continue to distill and identify (tag) our content to improve search and user customization. We have mastered websites, videos, online courses, and webinars. We'll keep our feelers out for what is next in extending information, so people learn about IPM, then practice IPM (Appendix 2).

References

CDFA. 2017. California Pest Rating Proposal for *Amynthas agrestis* Goto & Hatai, 1899 Jumping worm. California Department of Food and Agriculture. https://blogs.cdfa.ca.gov/Section3162/wp-content/uploads/2021/12/Amynthas-agrestis_ADA_PRP.pdf [accessed 19 January 2023]

Crail C. Effective Employee Retention Strategies in 2023. Forbes. https://www.forbes.com/advisor/business/employee-retention-strategies/ [accessed 19 January 2023]

Diaz JM, Warner LA, Oi F, Gusto C. 2020. What Do They Know and What Do They DO? A National Evaluation of Landscape Integrated Pest Management Knowledge and Use in the United States. *Journal of Integrated Pest Management* 11(1): 19, 1–5. doi: 10.1093/jipm/pmaa017

Farrar JJ, Baur ME, Elliott SF. 2016a. Adoption of IPM Practices in Grape, Tree Fruit, and Nut Production in the Western United States. *Journal of Integrated Pest Management* 7(1): 8, 1–8. doi: 10.1093/jipm/pmw007.

Farrar JJ, Baur ME, Elliott SF. 2016b. Measuring IPM Impacts in California and Arizona. *Journal of Integrated Pest Management* 7(1): 13, 1–6. doi: 10.1093/jipm/pmw012.

Gouge DH, Lame ML, Snyder JL. Fall 2006. Use of an Implementation Model and Diffusion Process for Establishing Integrated Pest Management in Arizona Schools. *American Entomologist*, 190–196.

Lancette J. Winter 2021. Breaking Barriers in Entomology: The Better Common Names Project, *American Entomologist*, Volume 67, Issue 4, Winter 2021, 10–11. https://doi.org/10.1093/ae/tmab061.

Mullen JD, Alston JM, Summer DA, Kreith MT, Kuminoff NV. 2003. Returns to University of California Pest Management Research and Extension. Overview and Case Studies Emphasizing IPM. *UC ANR Publication* 3482. Davis, CA, USA.

UC IPM. UC Ag Experts Talk website. University of California Statewide Integrated Pest Management Program. https://ucanr.edu/sites/ucexpertstalk/. [accessed 19 January 2023]

IV. Supporting Documentation

A. Project Summary

Project Title	Role	Collaborators	Support Amount / Duration (if applicable)	Support Source
Communications (1)				
Bridging the Communications Gap: Toward a More Informed Public Understanding of Sustainable Farming	Collaborator	Claire Sullivan @ Oregon State University, Michael Rozyne @ Red Tomato. Julie Sweetland @ FrameWorks Institute	None ($348,841) 04/01/2021 to 03/31/2024	Western Sustainable Agriculture Research and Education
IPM Educational Products (12)				

Training California's Pesticide Applicators to Reduce Drift Near Schools	Collaborator	Lynn Wunderlich @ UC ANR, Franz Niederholzer @ UC ANR	$24,383 ($218,896) 07/01/2017 to 03/31/2020	CA Department of Pesticide Regulation Y17-3636
2017 California Extension Implementation Program (University of California)	Co-PI	Jim Farrar @UC ANR, Lisa Blecker @UC ANR, Emily Symmes @UC ANR, Karey Windbiel-Rojas @UC ANR	$1,036,000 09/01/2017 to 08/31/2022 with NCE	USDA-NIFA, Crop Protection and Pest Management
BMPs for Non-Herbicide Approaches to Invasive Plant Management in Wildlands	Collaborator	Jutta Berger @Cal-IPC (PD), Doug Johnson @Cal-IPC	$18,000 ($194,765) 03/2018 to 02/2021	California Department of Pesticide Regulation Alliance Grant
Pest Management Strategic Plan for Rice in California	PI	Kassim Al-Khatib @ UC ANR, Whitney Brim-DeForest W @ UC ANR, Luis Espino @ UC ANR	$15,000 03/01/2019 to 02/29/2020	Western Integrated Pest Management Center
PMSP for Processing Tomato in California	Co-PI	Cassandra Swett @ UC ANR, Amber Vinchesi-Vahl @ UC ANR	$15,000 03/01/2019 to 02/29/2020	Western Integrated Pest Management Center
Pollinator Webinars	Collaborator	Monique Rivera @ UC ANR	$3532 03/01/20 to 02/28/21	Subaward from Montana State University
2020 California Extension Implementation Program (University of California)	Co-PI	Jim Farrar @UC ANR, Karey Windbiel-Rojas @UC ANR	$237,000 09/2020 to 08/2022 with NCE	USDA-NIFA, Crop Protection and Pest Management

Rice Rotation Calculator	Collaborator	Brim-DeForest	$15,880.35 03/21/21 to 06/30/22	Western IPM Center
Best Management Practices for Herbicide-Based Approaches to Invasive Plant Management	Co-PI	Jutta Berger @Cal-IPC (PD), Tom Getts @UC ANR, Doug Johnson @Cal-IPC	$55,037 ($289,291) 08/2021 to 6/2024	California Department of Pesticide Regulation Alliance Grant
2021 California Extension Implementation Program (University of California)	Co-PI	Jim Farrar @UC ANR, Karey Windbiel-Rojas @UC ANR	$237,000 09/2021 to 08/2024	USDA-NIFA, Crop Protection and Pest Management
Mainstreaming Effective Herbicide Calibration for Wildland Weed Work	Collaborator	Berger J (PD), Johnson D	$40,630 ($159,493) 08/2022 to 12/2025	California Department of Pesticide Regulation Alliance Grant
Integrated Pest Management Outreach and Tools	Co-PI	Jim Farrar @UC ANR, Karey Windbiel-Rojas @UC ANR	$3,750,000 06/01/22 to 03/31/26	California Department of Pesticide Regulation

B. Professional Competence and Professional Activity

Professional Development and Training

Begin Date to End Date	Location	Name, Description and Occurrence of Activity
Communications		
14 Nov 2019	webinar	ANR Social Café with Rose Hayden-Smith: conversations and questions about the effective use of social media and communications in Extension work.
06 April 2020	webinar	SiteBuilder 201: Functionality, Navigation, and Basic Web Design

22 Jul 2020	webinar	Science Through Visual Stories
22 May 2020	online	Risk communication presentation with Dr. Frewer, Newcastle University
14 Aug 2020	webinar	Communicating Science Using the Science of Communication
23 Oct 2020	webinar	Association for Communications Excellence: How To Tell Your Story Through and with NIFA
09 Nov 2020	webinar	eXtension: How to Host Engaging Webinars
17 Feb 2021	webinar	UC Davis | Leveraging social media to launch or grow your business
25 Jun 2021	online	Internal Vyond training for animation
24 Mar 2022	webinar	What the Climate Change Misinformation Campaign Can Teach Us about All Science Communication

Integrated Pest Management Professional Development

25 Feb 2020	Oakland, CA	Nonchemical weed control techniques training
09 Jun 2020	webinar	UC Ag Experts Talk on airblast sprayer calibration
04 Mar 2020	online	Research to Policy Program Team meeting
04 to 05 Jun 2020	online	Pest Management Program Team meeting
10 Nov 2020	online	ANR: Methods to Analyze Surveys: Part 2
13 Nov 2020	webinar	Introduction to Tribal Lands & Their Management
17 Nov 2020	online	ANR: Methods to Analyze Surveys: Part 3
04 and 11 Dec 2020	online	Vegetable Crops Program Team meeting
08 Jun 2021	online	IPM Soilborne Pests Workgroup meeting
09 Jun 2021	online	Pest Management Program Team meeting
09 Jun 2021	online	Entomology Workgroup meeting

10 Jun 2021	online	Pesticide Use Reporting Workgroup meeting
10 Jun 2021	online	Plant Pathology Workgroup meeting
03 to 04 Nov 2021	online	Vegetable Crops Program Team meeting
05 Nov 2021	online	Pest Management Program Team meeting
22 to 23 Feb 2022	online	UCCE Walnut Series
01, 08, 15, 22, 29 Mar and 05 Apr 2022	online	Statistics Workshop for ANR Supervisors: Regression Analysis, ANOVA, Linear Regression, Linear Mixed Models, Assumptions
22 Sep 2022	Davis, CA	Hemp Field Day
Administrative and Leadership Trainings		
04 Nov 2019	ANR, Davis	Conflict De-escalation Workshop
02 to 03 Mar 2020	ANR, Davis	Grant Essential Summit
13 Jan 2021	online	Is it Bullying? Awareness, Understanding & Strategies in Dealing with Abrasive Behaviors in the Workplace
21 Jan 2021	online	UC Davis | Handling difficult conversations at work
15 Mar 2021	webinar	UC Davis | Career Resilience Webinar Series: LinkedIn 101
29 Jun 2021	online	Questions answered by Mary Vlandis and Jodi Rosenbaum about my understanding of reporting incidents of bullying and harassment, including resources (what's confidential what's not)
15 Sep 2021	webinar	Managing Remote and Hybrid-Remote Teams
29 Sep 2021	webinar	Steps to Manage Your Career During Times of Transition
25 Jan 2022	online	Fundamentals of Change Management
Accessibility and Diversity, Equity, Inclusion Trainings		
03 Dec 2019	UC Davis	Acrobat DC: Creating Accessible PDF Documents

10 Mar 2020	webinar	Digital accessibility can seem like a monumental task to undertake. Where do you even begin?
13 to 17 Jul 2020	online	National Association of Extension Program and Staff Development Professionals summer school: Program Planning Process Designed to Increase Access and Grow Programs; Making Change from the Inside Out; A Proactive Approach to Inclusion of Individuals with Disabilities; Negotiation Across Diversity: Application for Extension Work; Diversity, Equity, and Inclusion in Extension Evaluation
15 Jul 2020	webinar	Dismantling Racism and Addressing Anti-Blackness in Your Organization
20 Jul 2020	webinar	Ibram X. Kendi: How to Be an Antiracist
15 Sep 2020	UC Davis, online	Implicit bias training
08 Oct 2020	UCOP, online course	Implicit Bias
22 Oct 2020	webinar	Association for Communications Excellence: Language Translation and Online Interpreting
19 Jan 2021	webinar	Growing as a Community: Foundations of Anti-Racism
25 Jan 2021	webinar recording	UC Master Gardeners	Digital Inclusion: Making Our Content Accessible
29 Jan 2021	webinar	Association for Communications Excellence: Equitable and Inclusive Service and Communication
26 Mar 2021	webinar	Association for Communications Excellence: The Power of Communication: How What We See and Hear Shapes and Reinforces Hidden Prejudices
07 Apr 2021	online	UC Davis: Implementing the Diversity and Inclusion Strategic Vision
19 Apr 2021	webinar	UC Davis	Navigating Racism in Career Advancement
19 Oct 2021	webinar	National Center for Faculty Development and Diversity	Dismantling Disciplinary Whiteness: Centering Care in Editorial

26 Oct 2021	webinar	Association for Communications Excellence: How HR can help build a team with inclusion, diversity, equity and access
14 Mar 2022	online	UC Davis Intercultural Recruitment and Selection
31 Mar 2022	webinar	UC ANR Virtual Workshop Pronouns and Why They Are Important with Kayla Oberstadt and Joe Rand
12 Jul 2022	webinar	Document Accessibility in Higher Education
13 Jul 2022	webinar	Assessing Policy to Promote Racial Equity
23 Aug 2022	webinar	Equitable, Accessible, and Inclusive Teaching Practices

Disciplinary Society or Professional Association

Disciplinary Society/Professional Association Name	Membership/Meetings Attended/Activities
Association for Communications Excellence (ACE)	• Marketing and Branding Standing Committee (15 Mar 2022 | ongoing): new member welcome letter, website improvements implementation, photo database • Diversity and Accessibility Learning Community co-chair (Aug 2022 to June 2023): spearheaded effort to add accessibility as a learning community topic, which was approved • Learning Community Leaders (monthly meetings Aug 2022 | Ongoing) • 2024 Conference Planning Committee (10 Aug 2022 | Ongoing) • Instructional Design and IT Learning Community member • Media Relations and Writing Learning Community member • ACE Intercultural Development Inventory (IDI) participant: group report and individual report (18 Dec 2019) • 22 to 25 Jun 2020 ACE annual conference participant • 21 to 23 Jun 2021 ACE annual conference participant • 12 to 14 Jun 2022 ACE annual conference participant and presenter
International Integrated Pest Management Symposium	• Awards Committee (monthly meetings Nov 2019 to Dec 2021): communications; reviewed criteria and nominations • Poster Committee (monthly meetings Feb 2020 to Feb 2022): communications; reviewed criteria and abstracts

Evidence of Professional Competency

Begin Date to End Date	Location	Name, Description and Occurrence of Award,

		Recognition, Professional Presentation, Office or Activity
14 May 2020	online	Department of Pesticide Regulation Pest Management Advisory Committee on behalf of Jim Farrar: grants review for the Research Grants Program
19 to 21 May 2021	online	Intercultural Development Inventory Qualifying Seminar to become a Qualified Administrator
2020	online	Department of Pesticide Regulation IPM Achievement Award: UC Spray Application Pest Management Alliance Team for the development of an online training for properly calibrating airblast sprayers
2021	online	Department of Pesticide Regulation IPM Achievement Award: California Invasive Plant Council for the development of the online decision support tool WeedCUT for managing weeds using nonherbicide management practices
2022	Kansas City, MO	Association for Communication Excellence Gold Award Winner: WeedCUT a new online tool to manage invasive weeds without pesticides in Wildlands (UC IPM and the California Invasive Plant Council)
2022	Kansas City, MO	Association for Communication Excellence Gold Award Winner: Self-paced online course Diagnosing Herbicide Injury Symptoms

C. University Service

Begin Date to End Date	Name, Description, and Occurrence of Activity	Org Level	Your Contribution and Leadership Role
01 Mar 2015 (Ongoing)	Academic Coordinators Committee	Division	Chair (2020–21), Co-Chair (2022–23), Member; Academic Coordinator Expectations Working Group (2020): gather feedback on issues and needs faced by Academic Coordinators, find solutions through training and ANR leadership
01 Jul 2016 to Dec 2021	Academic Assembly Council	Division	Secretary: minutes, meeting logistics; ANR@Work survey subcommittee:

			worked with Human Resources on assessment questions for ANR employees
16 Oct 2019 to 28 Feb 2020	UC ANR Strategic Communications & Publishing Strategic Planning Committee	Division	Committee Member: input on priorities and feedback on drafts to develop the strategic plan
21 Jan to 01 Mar 2020	UC IPM UI/UX Specialist and Production Coordinator search committee	Division	Member: applications review, interview / portfolio assessment
06 May 2020 (Ongoing)	ANR Training Forum	Division	Member
10 Jul 2020 (Ongoing)	UC ANR Integrated Web Project (IWP)	Division	Partner: how to integrate UC IPM content into IWP
15 Sep 2020 (Ongoing)	ANR DEI Alliance	Division	Member, DEI Policy Subcommittee Member, Workplace Diversification Subcommittee Member
22 Oct 2020 to 28 Feb 2022	UC IPM Pest Management Guidelines Coordinator search committee	Division	Chair: develop applications score sheet, develop interview questions tied to requirements, develop work sample, invite committee, ensure implicit bias requirements, redact applications, applications review, interview / work sample / writing sample assessment, call references, communicate with Human Resources
04 Nov to 09 Dec 2020	ANR Social Media Strategist search committee	Division	Member: applications review, interview assessment
19 Jan to 26 Oct 2021	ANR Mentor Program	Division	Mentor: participated in ANR set meetings, met monthly with mentee
26 Jan 2021 (Ongoing)	ANR Communicators	Division	Member

11 Mar to 31 Oct 2021	Vice Provost for Academic Personnel and Inclusive Excellence search committee	Division	Member: applications review
11 Mar to 16 Jun 2021	UC IPM Programmer 3 search committee	Division	Member: applications review, interview assessment
05 to 28 May 2021	ANR Asian Pacific Heritage Month Planning Committee	Division	Member; planned and facilitated one of four online events
28 Jul 2021 to 03 Mar 2022	UC ANR Learning & Development Budget call: proposed Accessibility Training	Division	Proposal developed but not funded until late in year when time limited success with D. Garay @ UC ANR, S. Morikawa@ UC ANR, M. Womack@ UC ANR, S. Parreira@ UC ANR, E. Lander@ UC ANR
10 Aug 2021 to 10 Feb 2022	UC ANR and Bynder	Division	Weekly trainings on Bynder (image database) use in ANR
08 Oct 2021 to 01 Feb 2022	UC IPM Computer Resource Specialist search committee	Division-wide	Member: applications review, interview assessment
01 Dec 2021 to 07 Jan 2022	ANR Social Media Assistant search committee	Division	Member: applications review, interview assessment
14 Feb to 30 Jun 2022	UC IPM Writer Editor 4 search committee	Division	Member: applications review, interview assessment
16 Mar to 12 Aug 2022	ANR Director of Publishing search committee	Division	Member: applications review, interview assessment
10 May to 09 June 2022	ANR Brand Audit	Division	Interview to provide insight and workshop as a process to develop branding

12 Aug 2022 (Ongoing)	UC IPM Writer Editor 3 search committee	Division	Member: applications review, interview / writing sample assessment
19 Sep 2022 (Ongoing)	UC IPM Programmer 3 search committee	Division	Member: applications review, interview assessment; called references

D. Public Service

Begin Date to End Date	Name, Description, and Occurrence of Activity	Org Level	Your Contribution and Leadership Role
01 Oct 2014 (Ongoing)	Respond to, on average per year, 25 public requests for information (Communications Team total about 135 requests annually not including requests to me).	National	Responded to requests for pest management information, referred people to local pest management experts / information, responded to requests to use content and photos and made changes as requested to the UC IPM website. Provide leadership by developing and updating the policy and processes for permissions to use content and photos / illustrations.
01 Jan 2017 (Ongoing)	WERA 1017 Coordination of Integrated Pest Management Research and Extension/Educational Programs for the Western States and Pacific Basin Territories	National	Multi-State Committee Member: annual meeting participant, draft California IPM Coordinator state report
12 Feb 2020	Endangered bee webpage stakeholder meeting	Statewide	Aware of website, recent status, and asked to share information
12 Feb to 26 Mar 2020	Pierce's Disease/Glassy-winged Sharpshooter Research and Outreach Grant Program review panels coordination	Statewide	Assist with the coordination of the review panels for the research grant: invitations, communications to initiate the review of proposals, meeting logistics, and meeting minutes

27 Feb 2020	Information interview about working with UC IPM	Local	At request met with person about working in UC IPM

E. Extension Activities

Meetings Organized

Begin Date to End Date	Meeting Name and Type	Topic/no. of repetitions	Role	Location(s)	Total No. of Attendees
Communications (3)					
28 to 29 May 2020; 27 to 28 Apr 2021; 05 to 06 May 2022	UC IPM Annual Program Meeting	Reporting and informing/3	Co-Coordinator, Facilitator, Attendee	Zoom, Davis CA	20 to 35
02 Jun 2020 to present	UC IPM JEDI planning meeting	Diversity, equity, inclusion planning, activities, and training within program/36	Rotate chairs	Zoom	4
07 May 2021 to 31 Aug 2022	Program Advisory Committee Meeting	Reporting, informing, and getting feedback/3	Co-Coordinator	Zoom, Davis CA	15
IPM Educational Products (1)					
13 May 2022	Pest Management Guidelines Advisory Committee	Reporting, informing, and feedback/1	Co-Coordinator	Zoom	7
Resources (3)					

12 Nov 2019 to present	Exit interviews	Feedback from employees leaving UC IPM/3	Facilitator	Davis CA, Zoom	1
03 Apr 2020 to present	Racial equity chat group	Diversity, equity, inclusion/26	Rotate chairs	Zoom	6 to 8
26 Feb 2021 to 03 Aug 2022	IPM Staff Meeting	Reporting, informing, and training/8	Coordinator, Rotate chairs	Zoom, Davis CA	25

Educational Presentations

Begin Date to End Date	Meeting Name and Type	Topic/no. of repetitions	Role	Location(s)	Total No. of Attendees
Communications (6)					
19 Feb 2020	Technology Showcase National Resources Conservation Service All Employees Training Conference	UC IPM Resources	Presenter	Sacramento CA	50
01 Oct 2020 to 22 Sep 2022	UC Davis Plant Science 105	UC IPM Website Tour/3	Presenter	Zoom, Davis CA	30
22 and 24 Feb 2021; 06 Oct 2021	National Resources Conservation Service IPM Trainings	UC IPM Resources/3	Presenter	Zoom	30
28 Feb to 03 Mar 2022	10th International IPM Symposium	Evaluation of IPM online courses/1	Poster	Denver, CO	150
01 Oct 2020 to 22 Sep 2022	10th International IPM Symposium	Lessons learned from three years of organizing and facilitating	Poster	Denver, CO	150

Begin Date to End Date	Description	No. of Instances

	IPM webinars/1				
01 Oct 2020 to 22 Sep 2022	10th International IPM Symposium	UC IPM diversity, equity, inclusion, and justice actions/1	Poster	Denver, CO	150

Other (including websites, social media, blogs, collaborations with other agencies, organizations, policy engagement)

Begin Date to End Date	Description	No. of Instances
Communications (3)		
Feb 2014 (Ongoing)	Social media (project manager for program channels in partnership with @ucipmurban channels) • Twitter: @ucipm (followers: 1,385 (+**373** since 2020); mentions: 748 (+**397** since 2020); profile visits: 8,659; tweet impressions: 149,934; link clicks: 447) • Instagram: @ucipm (followers: 1,224 (+**691** since 2020); likes: 1435; comments: 42; shares: 83; bookmarks: 71; website or link clicks: 75) • Facebook: @ucipm (followers: 403) • LinkedIn: @ucipm (followers: 215)	279 tweets 52 Instagram posts 54 Facebook posts 21 LinkedIn posts
January 2015 (Ongoing)	Blog posts from UC IPM Communications Team to ANR pest management blogs	9 articles (supervising editor)
22 Feb 2021	California Department of Food and Agriculture Japanese beetle briefing	1
IPM Educational Products (13)		
Feb 2014 (Ongoing)	Website Project manager for implementing graphic redesign, continuing to move content into a database, focusing on mobile-first when designing for improved access on mobile devices, and focusing on accessibility	

	New and improved webpages: - *Pest Management Guidelines*: 13 revisions and updates (supervising editor: review content and styles) ipm.ucanr.edu/agriculture/ - Weed Gallery: added Italian thistle and slenderflower thistle (supervising editor: review content and styles) https://ipm.ucanr.edu/PMG/weeds_intro.html - UC IPM Glossary revised (supervising editor: review content and styles) https://ipm.ucanr.edu/PMG/glossary.html - Bee Precaution Pesticide Ratings: revised Frequently Asked Questions (supervising editor: review content and styles) https://ipm.ucanr.edu/bee-precaution-pesticide-ratings/ - Protecting Natural Enemies and Pollinators: revised (supervising editor: review content and styles) https://ipm.ucanr.edu/mitigation/protect_beneficials.html - Natural Enemies Gallery: predator webpages revised with three new predators (supervising editor: review content and styles) https://ipm.ucanr.edu/natural-enemies/index.html - Fungicides, Bactericides, Biocontrols, and Natural Products for Deciduous Tree Fruit and Nut, Citrus, Strawberry, and Vine Crops in California 2022: published (supervising editor: review content and styles)	
Feb 2014 (Ongoing)	Pest weather models (project manager) - Cotton planting forecast: starting model - Grape powdery mildew index: biofix dates gathered to start model - Personal weather stations and models use with G. Torres @ UC ANR and C. Lam @ UC ANR - Increasing use of grape powdery mildew index with L. Wunderlich @ UC ANR, A. Eskalen @ UC ANR, K. Lund @ UC ANR, K. Arnold @ UC ANR, G. Zhuang @ UC ANR, G. Torres @ UC ANR, L. Bettiga @ UC ANR, C. Gispart @ UC ANR, M. Battany @ UC ANR - Thrips weather models with N. McRoberts @ UC Davis	- Models annual initiation and communication (6) - Weather stations (2) - Grape PMI (2 meetings, 1 webinar) - Thrips models (1)
Feb 2014 (Ongoing)	Online courses (supervising editor: review content and styles) - Air Blast Sprayer Calibration - Citrus Thrips - Diagnosing herbicide injury - Selección, Uso y Retiro Adecuados de Equipo de Protección Personal	4 courses

Feb 2014 (Ongoing)	Videos (supervising editor: review content and styles) • YouTube UCIPM (subscribers: 3,710; all time views: 1,374,176) • UC Ag Experts Talk recordings (34) • Instructional videos (6) • Monitoring for Mites in Avocado Orchards • Monitoring for Root and Crown Diseases in Avocado Orchards • Monitoring for Thrips in Avocado Orchards • Soil Sampling for Nematodes in Walnut and Almond Orchards • Monitoring Sixspotted Thrips in Almond Orchards for Spider Mite Control • Brown Marmorated Stink Bug Identification and Monitoring in Almond Orchards	58 new videos
Aug 2018 (Ongoing)	Webinars (supervising editor: review content and styles) • UC Ag Experts Talk (approximately monthly) • Science for Citrus Health webinar series (8 over 2 years) • South American palm weevil (2)	43
12 Feb and 24 Aug 2020	AgroLogics—UC IPM content discovery and partnership discussions	2 meetings
14 Feb 2020 (Ongoing)	California Invasive Plant Council (Cal-IPC) informational, coordination, grant proposal development, and working meetings: project manager for the WeedCUT decision support tool and Plant Risk Evaluation (PRE) tool	16
30 Mar to Dec 2020	Almond Board of California Almond Pest Identification Cards licensing through ANR Publishing	10
22 Jul 2020	Revising the IPM Impacts website with N. McRoberts @ UC Davis, M. Baur @ Western IPM Center	1
19 Nov 2020	Artificial intelligence to identify herbicide injury to plants with K. Al-Khatib @ UC ANR, C. Lam @ UC ANR	1
24 Nov 2020	Proposed date palm Pest Management Guidelines with S. Rios @ UC ANR, Tom Perring @ UC Riverside, M. Rethwisch @ UC ANR, P. Kosina @ UC ANR	1
15 Jan 2021	Sharing UC IPM Pest Management Guidelines on national Integrated Pest Management Centers website	1

| 30 Mar 2022 | Natural Resources Conservation Service Windows Pesticide Screening Tool (WIN-PST) and UC IPM WaterTox integration and updating with E. Hesketh @ NRCS, C. Lam @ UC ANR, P. Bandipalli @ UC ANR | 1 |

Other (including TV and / or radio interviews/programs, newspaper / trade magazine interviews)

Begin Date to End Date	Description	No. of Instances
Communications (1)		
Feb 2014 (Ongoing)	UC IPM column in CAPCA Adviser magazine (California Association of Pest Control Advisers)	19

F. Publications (Bibliography)

NON-PEER REVIEWED

Technical reports and other non-reviewed articles (D)

Martin TA. 2022. UC IPM Highlights Annual Report. http://ipm.ucanr.edu/IPMPROJECT/annualreports.html

Martin TA. 2021. UC IPM Highlights Annual Report. http://ipm.ucanr.edu/IPMPROJECT/annualreports.html

UC IPM WEBSITE VISION

The UC Statewide Integrated Pest Management Program has a mission to make ecosystem-based integrated pest management the way Californians manage pests. The website is the main vehicle with which UC IPM disseminates credible, relevant information to solve pest problems, increase the economic benefits of using IPM, and reduce human health and environmental risks from pests or managing pests.

Website Goals

The overall goal for the UC IPM website is to increase adoption of IPM through the use of website resources, and by providing the information in the way our users want to receive it (e.g., online courses, videos, decision support tools, web apps). We work to get new stakeholders and audiences to use IPM and want our users to be able to state why IPM was beneficial for them. Short-term goals include increasing awareness and knowledge about IPM and IPM successes.

Working Goals

- Engage users by using new technology for mobile devices
- Adapt existing knowledge into easy to use decision-making tools and web apps
- Facilitate production of new products in collaboration with existing and new stakeholders and collaborators
- Increase UC IPM knowledge about website use and user needs

WEBSITE AUDIENCE

Our target audiences are the professionals who manage pests, and the Californians who manage pests in their residences and gardens.

- 4,000 pest control advisers
- 20,000 structural pest control operators
- 6,000 UC Master Gardeners
- UC Cooperative Extension and others in Agriculture and Natural Resources
- Retail nursery and garden center employees
- Property managers
- Landscape professionals
- Farmers and ranchers
- All California households
- Local, state, and federal groups (commodity organizations, California Department of Food and Agriculture, Department of Pesticide Regulation, California Structural Pest Control Board, Natural Resources Conservation Service, and U.S. Environmental Protection Agency)

ROADMAP

Current Website

- Static website

- No database
- No content management system
- No customization

First Step—The Refresh
- Implementation of graphic redesign
- Moving content to database
- Mobile-first focus for improved access on mobile devices
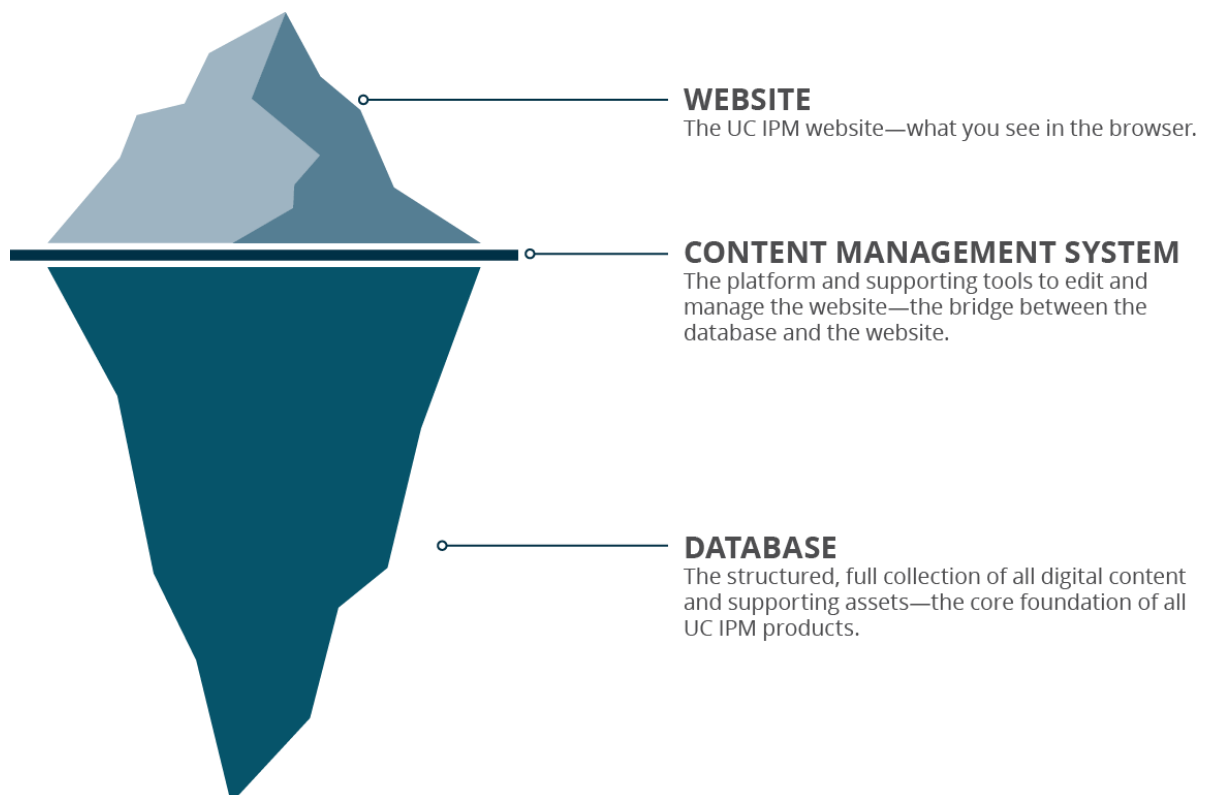- Focus on accessibility

Goal—Database-Driven Website
- MyIPM a customizable user portal to UC IPM web information and tools
- Ability for users to search for information by pest, crop/host plant, or management technique, as well as by audience (i.e., commercial grower vs. a gardener)
- Controlled access to the content by others to enable partnership product development or content sharing (e.g., for apps or to feed to ANR websites/products)
- Development of monetizable content within MyIPM (e.g., pest management activity alerts by crop and season or pest weather model thresholds, electronic identification card sets)

THE REFRESH
Elements of the Refresh: 3 parts
Refresh Goals: Bring website and other digital products into alignment with UC IPM brand

WEBSITE
The UC IPM website—what you see in the browser.

CONTENT MANAGEMENT SYSTEM
The platform and supporting tools to edit and manage the website—the bridge between the database and the website.

DATABASE
The structured, full collection of all digital content and supporting assets—the core foundation of all UC IPM products.

Refresh Goals

- Modernize user interface/user experience (UI/UX)—Website
  - Update the look and feel of all UC IPM site elements and assets (tables, images, etc.)
  - Create a seamless experience from desktop to mobile
  - Navigation to help user move through the content easier
- Consistency—Content Management System and Database
  - Avoid duplication of content
  - Ability to make global changes to content—change in one place, all instances that have that same content are updated
- Foundation for customized user experiences—Content Management System and Database
  - Interactivity with data
  - Looking at content from an atomic level (like Lego bricks)—being able to leverage the granularity of data information for IPM products
  - We're building a foundation where one didn't exist previously; once this foundation is built, then things can move quicker
  - Ability to generate more detailed reports of IPM content

Current Status of the Refresh

- Visual redesign of the main *Pest Management Guidelines* webpages (45 of 47 crop guidelines completed)
- Visual redesign of the *Pest Notes*, started with vertebrate pests, now completed and continuing.
- Creation of the foundational database and Content Management System for all *Pest Management Guidelines* and *Pest Notes* content
- Adding pesticides to the database for treatment tables, asset management
- Creation of tools to help make changes quickly—Search and Replace

Appendix 2. UC IPM Communications Map

Theme: Communications (*)
Theme: IPM Educational Products (#)
Theme: Manage Resources ($)

WHERE I STARTED

- Pest Management Guidelines not current#
- No Pest Management Guidelines Coordinator$
- Proposal for 3-year USDA CPPM funding$
- New IT and Content supervisors$

WHAT I PRIORITIZED NEXT

- MyIPM idea conceptualized*
- Pest Management Guidelines as current as possible based on Advisory Committee feedback#
- New communications platforms successful: online courses, instructional videos, webinars#
- Pest Management Guidelines Coordinator funded by ANR again$
- IT and Content supervisors on a roll$
- USDA CPPM funding successfully acquired (3 times) $
- CDFA funding enables team to expand for a set time$

I AM HERE

- Accessibility conversion of online content in progress*
- Website foundation development*
  - Database content
  - Content management systems developed
  - Updated web design (mobile)
- Reduced or stable ANR funding and increased reliance on contracts, grants, and cost recovery$
- Team turnover (6 folks) $
- Team additions (10 folks) $

GETTING TO

- IPM products accessible*
- Online foundation complete*
- Increased third party (ScoutPro, ANR, CDMS, etc.) use of content made possible via online foundation for a multiplier effect*
- New communications platforms successful: what's next? #
- MyIPM = user customization and alerts#
- Tagged content allowing search via platform (e.g., video or online), pest, plant/crop, or audience (e.g., pest control adviser or urban gardener) #

- ANR integrated web project[#]
- Continuous USDA CPPM funding success[$]
- Successful funding partnerships[$]
  - Grants with academics
  - Fee for service
  - Cost recovery

ULTIMATE GOAL: IPM INFORMATION TO CALIFORNIANS IN THE WAY THEY WANT SO THEY PRACTICE IPM