UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

II. Academic Program Review Dossier Cover Page | 2024 Cycle

Name, Lived Name: Preferred Pronoun(s):	Brenna Aegerter (she/her)
Academic Title:	Full Cooperative Extension Advisor
County/Program:	UCCE San Joaquin County
Review Type:	Merit
Current Rank/Step:	Full Rank, Step IV
Requested Rank/Step:	Full Rank, Step V
Review Time Period:	October 1, 2021 to September 30, 2024
Thematic Areas:	Integrated Pest and Disease Management in Vegetable Systems Efficiency and Sustainability of Vegetable Farming

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

UNIVERSIDAD DE CALIFORNIA
Agricultura y Recursos Naturales

Position Description
Brenna J. Aegerter
CE Vegetable Crops Advisor
San Joaquin County
Effective Date: 01/01/23

PURPOSE & CLIENTELE

The focus for the CE Vegetable Crops Advisor position headquartered in San Joaquin County is to conduct and coordinate an educational and applied research program encompassing vegetable production. Program emphasis is on pest management, variety development, irrigation, and nutrient management for the area's major vegetable crops. The purpose of this position is to generate and/or supply critically needed information to ensure and maintain an economically vibrant and ecologically prudent vegetable crop industry in San Joaquin County. This position addresses UC ANR's Strategic Initiatives in 'Sustainable Food Systems' and 'Endemic and Invasive Pests and Diseases'. The position works collaboratively with campus-based department AES faculty, extension specialists, and other CE advisors. Activities of the program are directed primarily toward growers, processors, and allied agribusiness personnel.

ACADEMIC PROGRAM MAJOR RESPONSIBILITIES

Develop and implement effective UC ANR Cooperative Extension applied research and educational programs to address the identified priority needs of the clientele that are consistent with UC ANR's Strategic Vision.

- **Technical Competence & Impact**
    - Ensure clientele needs are assessed, and develops program goals to successfully meet clientele needs, in alignment with UC ANR's statewide Strategic Vision and initiatives.
    - Conduct applied research designed to solve locally relevant problems and monitor related changes.
    - Maintain and promote UC ANR's credibility by providing science-based knowledge and skills independent of personal or parochial interests.
    - Represent UC ANR locally in a professional manner.
- **Communication**
    - Conduct and report regular needs assessments to identify priority issues or problems relevant to the local clientele groups being served.
    - Disseminate useful, science-based information to inform clientele, using extension methods that are responsive to clientele needs and appropriate for the audience and situation.
    - Evaluate programs and report accomplishments, results, and potential or actual impacts to scientific and lay audiences.
    - Foster an increased understanding of UC ANR's Cooperative Extension's research and education programs in clientele, the public and policy makers.

    - Effectively use online communication methods and associated software programs to support research and instruction.
    - Actively advocate for UC ANR program awareness and support.
- **Collaboration, Teamwork & Flexibility**
    - Develop collaborative teams with other UC ANR academics, campus-based specialists and faculty and/or others, to address priority issues for UC ANR.
    - Act as a facilitator in the public policy arena to effectively bridge divergent interests around issues that impact subjects within the UC ANR purview.
    - Interact with UC ANR Program Teams, specialists and others within the research/extension network to develop, strengthen and expand program goals.
    - Participate in UC and UC ANR leadership, through committees, task forces and other formal or informal structures.
    - Serve the California public by participating in activities of public agencies and organizations.
    - Interpersonal Relationships: Be an effective listener and communicator, take responsibility for our own actions, motivate others, keep commitments and cultivate political and industry support for UC ANR.
    - Build relationships to work with diverse populations and acclimate to varying circumstances.
- **Professional Development & Lifelong Learning**
    - Participate in professional organizations and collaborate with federal, state and county governmental agencies, non-government organizations and others by providing independent science-based information and leadership.
    - Maintain a program of continuous self-improvement by participating in in-service training, seminars, workshops, work group & program team meetings, short courses, professional society meetings and other relevant opportunities.

AFFIRMATIVE ACTION and DIVERSITY, EQUITY, AND INCLUSION (DEI)

- Comply with all applicable federal and state laws and regulations, and all University policies 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.
- Promote, in all ways consistent with other responsibilities of the position, accomplishment of the affirmative action goals established by UC ANR.
- Take all measures necessary to assure any employee or volunteer workers supervised by this position fulfill their affirmative action responsibilities.
- Develop a statement of program mission and definition of potential program clientele that embody a commitment to serve diverse ethnic and gender groups.
- Plan and conduct programs in such a manner as to provide equitable service to all ethnic and gender groups that comprise the potential clientele population for the program.
- Identify any barriers to clientele participation related to ethnicity, gender, or other characteristic of concern under the University's affirmative action policies and take corrective action as needed to remove such barriers.

- Collect, and keep current, demographic data identifying the ethnic and gender distribution of the potential clientele populations for the program and describing other characteristics of the population relevant to the pursuit of the Division's affirmative action goals.
- Compile and maintain documentation of service to each ethnic and gender group within the clientele population served by the program, including statistical records of clientele contacts, quantitative evaluations of benefits realized by clientele and reports of any special efforts to serve under-represented groups.

RELATIONSHIPS

Administratively responsible to the UC Cooperative Extension San Joaquin County Director for the conduct of the UC ANR program.

QUALIFICATIONS

A Master's degree in a biological, agricultural, or plant science, preferably specializing in vegetable crops, is required. Specialty and/or professional experience must demonstrate capacity or potential to accomplish team-based research and education programs consistent with the values of Cooperative Extension.

Must be able to work independently and collaboratively in teams and provide leadership for research and education activities. Must be adaptable to different work circumstances and work with a diversity of people and collaborators.

Must be literate in internet communications and software appropriate to support research and education programs.

The CE advisor must obtain a Qualified Pesticide Applicator Certificate (QAC) or License prior to applying or supervising the application of any pesticide.

Dr. Brenna Aegerter
CE Vegetable Crops Advisor

1/3/2023
Date

Dr. Brent Holtz
San Joaquin County Director

1-3-2023
Date

Final Approvers:

D. Obrist

Dr. Daniel Obrist
Vice Provost of Academic Personnel

3/1/2023
Date

PROGRAM SUMMARY NARRATIVE

Statement of assignment and Introduction

I serve as the Vegetable Crops Farm Advisor for San Joaquin County (SJC). My programmatic assignment is in the UC Agriculture and Natural Resources (ANR) issue areas Pest Management (0.5 FTE) and Sustainability and Viability of Agriculture/Plant Management Systems (0.5 FTE). My research and extension programs are focused primarily on tomato, potato and onion, which together accounted for 55 percent of San Joaquin County vegetable acreage in 2023. My program significantly impacts producers of other vegetable crops (pumpkin, melon, cucumber, sweet corn, garlic and smaller acreage vegetables) via my farm calls and substantial diagnostic efforts. My primary clientele consists of growers, pest control advisors, consultants, packers, processors, and seed companies. The overall goal of my program is to extend research-based information to producers and allied industry to help them improve crop productivity and product quality while minimizing their economic risks and reducing environmental impacts. I assist them in diagnosing field production problems, and I conduct research to identify and/or improve upon effective and economical solutions to their problems. I help them understand and comply with new regulations, and I have developed research projects to address the efficient use of water and fertilizers and the adoption of reduced-risk pesticides. My efforts have contributed to an increase in the efficiency, profitability, and sustainability of agriculture which aligns with UC ANR's Public Values of 'Promoting economic prosperity in California' and 'Protecting California's natural resources'.

Theme: Integrated Pest and Disease Management in Vegetable Systems

Background, Rationale, and Problem

My work in this area is focused on emerging pest and disease problems and integrated pest management (IPM). The overall goal within this program theme is to minimize the impact of pests and diseases on vegetable crops by providing the industry with accurate and timely diagnoses and by identifying and evaluating effective management strategies that minimize impacts on the environment. Pest problems continue to be the top reason clientele contact me; they are looking for assistance with pest identification and management solutions.

Bacterial pathogens of onion cause more than $60 million in losses annually to our $925 million, 140,000-acre US onion industry. In our pre-project survey of onion growers and handlers, 72 percent were extremely or very concerned about challenges from bacterial diseases, with 45 percent feeling poorly equipped to manage them. Likewise, tomato growers consistently rank soilborne and virus diseases as among the biggest challenges they face. Unfortunately, each year brings new invasive pests to California. During the past decade, growers in my county were challenged by a resurgence of the parasitic weed broomrape, the first appearance of Cucumber Green Mottle Mosaic Virus in local watermelons, the first report of resistance-breaking tomato spotted wilt virus in tomatoes, a new species of Fusarium causing a crown rot and vine decline disease of tomato, and the spread of resistance-breaking strains of root knot nematode. For some of these challenges, management information is available but needs to be extended to local producers. But for many of these problems, locally relevant, research-based information needs to be developed to address these pest challenges.

Methods and Outputs

Improving management of bulb rots of onion. Based upon my reputation as an applied plant pathologist, I was invited by Lindsey du Toit, Washing State University Plant Pathologist, to help lead a team of scientists who were collaborating to address persistent problems with bacterial bulb rots in onion production in the U.S. Our team brings together researchers from twelve Land Grant Universities and from numerous disciplines (plant pathology, horticulture, soil science, economics, and computer science). Together, we wrote a research grant proposal that addressed stakeholder-identified needs and we have received $4.04 million from USDA NIFA and another $2 million from stakeholders for a six-year project. Although this project team is comprised of 25 professors or extension faculty, I am one of just six co-Principal Investigators that are leading the project. I am also the state lead for our UCCE team of three advisors. This project identified which bacteria are causing bulb rots in various regions of the country and identified effective and economical IPM practices to reduce bulb rot losses. It took considerable effort to equip our SJC laboratory for this work, I learned new techniques, isolating bacteria from onion samples from all regions in California. To date, the result is a collection of 270 bacterial isolates from California, some of which have become part of the *National Onion Bacterial Strain Collection* housed at the University of Georgia. We conducted field trials in three California regions to evaluate the effects of irrigation methods and bactericides on disease levels and yields. Project results were extended via newsletters, presentations, our national project website and in meetings with our project's 14-member Stakeholder Advisory Panel. Our CA team has one publication in a scholarly journal (Wilson, Aegerter and La Hue, 2024) and other scholarly publications are currently in preparation or in peer-review, a pre-print of one is available (Shin et al.). With a different multi-state team of researchers, I have begun to work on Fusarium basal rot of onion and garlic, a fungal bulb rot disease that has been increasing in incidence in the Central Valley. Our UC team began with funding from the California industry, then invited in other researchers across the US and secured a one-year USDA NIFA planning grant ('23-'24). I am the lead for the onion biology group, and we are currently preparing a grant proposal to USDA for a four-year project ('25-'29) that could involve six states plus Ontario, Canada.

Integrated management of soilborne diseases of tomato and potato. Collaborating with Specialist Cassandra Swett, her students and postdoctoral researchers, I was the lead researcher for field-based studies that addressed soilborne fungal diseases of tomato and potato. The diseases we targeted included Fusarium stem rot and decline of tomato and Southern blight of potato. We evaluated various integrated management strategies such as cultivar tolerance, chemical control, crop rotation and disease risk modeling. These diseases are incredibly challenging to manage, so we are far from a solution, but we have provided growers with some options to consider in terms of using less susceptible crop varieties or chemical control options that have proved effective. I extended these results via presentations to clientele and local newsletters as well as presentations at scientific societies. One very popular output is a table of disease-tolerant processing tomato cultivars that we update annually as new varieties are released.

Outcomes and Impacts of Pest Management Projects

In our research, we demonstrated a lack of efficacy of bactericides against bacterial bulb rots. We have extended that information to the industry and anticipate that applications of fungicides and bactericides should be declining (data on pesticide use lags several years so we have not been able to examine this yet). Decreased pesticide use should reduce grower costs and worker exposure. We also demonstrated that improved irrigation methods can significantly reduce the risk of bulb rots. Although not yet widely adopted, the use of drip irrigation for onions could both reduce disease as well as reduce water use.

To document grower adoption of Fusarium-tolerant tomato varieties that were identified through our research, we examined records of the California Processing Tomato Advisory Board which tracks all tomato loads going to canneries. We discovered that from 2023 to 2024, there was a 4 percent increase in the number of loads of the tolerant varieties we identified and are recommending, which represents an estimated increase of over 9,000 acres. Although other factors beyond our project have contributed to this rapid increase, the use of tolerant varieties reduces disease losses and minimizes the need for other management tactics such as chemical control.

In the long term, we anticipate that adoption of improved disease management practices will reduce losses and reduce off-target impacts. According to Farrar et al. (2016), adoption of IPM in California has helped to increase agricultural productivity and has reduced some of the risks to human health and the environment from pesticide applications through decreases in use.

Theme: Efficiency and Sustainability of Vegetable Farming

Background, Rationale, and Problem

Vegetable producers have been feeling the pinch of increasing production costs and often stagnant prices for their harvested products. Therefore, to remain economically viable, producers need solid, research-based information on how to maximize yields and minimize costly inputs and the use of labor. In addition to these economic constraints, there are also regulatory pressures to increase efficiencies in nitrogen fertilization, as well as regulatory pressures that affect labor costs and availability.

Methods and Outputs

Evaluation of grafted tomatoes for California production systems. I have been collaborating with colleagues in UCCE, UC Davis and across the country to evaluate the use of grafted tomatoes with funding from Federal and State agencies and private companies. This involves using rootstocks which are hybrids of cultivated tomato and a wild tomato species. With traits gained from the wild tomato species, these rootstocks have higher vigor, tolerance to abiotic stress, and greater resistance to soil borne diseases and nematodes. We have demonstrated that grafting can increase processing tomato yields by about 10 to 50 percent, depending on the inherent productivity of the field site, disease pressure and other environmental and agronomic factors. We have worked closely with two local commercial plant nurseries on both hand grafting and automated robotic grafting. California's largest vertically integrated tomato processor now owns a grafting facility with the capacity to produce 10 million grafted plants annually. Our team has produced the first publicly available information on this practice from assessments conducted under California conditions. We have been extending this information via a California Grower Guide, a national project website (www.vegetablegrafting.org), field days, a national webinar presentation, and numerous other extension presentations.

Improving efficiency of irrigation and fertigation in drip-irrigated processing tomatoes. Nutrient Management Specialist Daniel Geisseler obtained funding from CDFA's Fertilizer Research and Education Program which allowed our team to make major improvements to our understanding of the water and nutrient dynamics of drip-irrigated tomatoes. Through campus-based research trials and extensive soil and tissue sampling in commercial tomato fields, we were able to improve UC guidelines for nutrient and water management in tomatoes. The results of this work fed directly into the development of two different decision support tools whose development was led by Michael Cahn and Daniel Geisseler: 1) CropManage for tomato; a computer-based tool for growers to aid in irrigation and nutrient management decisions and 2) a simple online tomato nitrogen budget calculator. These tools are publicly available online, and information was extended to growers and consultants via numerous extension presentations and a newsletter article.

Outcomes and Impacts

- At our annual extension tomato meeting held on February 7th, 2024, 26% of attendees completed a written evaluation form regarding the educational value of the meeting. 100% of respondents said that they gained knowledge that was relevant to their work and 77% said they expected to apply what they learned in the coming 12 months (the other 23% said they probably will apply what they learned, but not in the near term).
- Use of CropManage (all crops) has increased by 36% from 2022 to 2023. A UCCE study showed that in lettuce production, use of CropManage helps growers reduce nitrogen and water use by 30 percent or more (UC Delivers story) and sustainable nitrogen management reduces impacts on groundwater (Hansen et al., 2017).
- Adoption of grafting by Morning Star, the world's largest tomato processor and now the owner of a California grafting nursery facility with the capacity to produce grafted tomatoes for thousands of acres. If the price comes down, adoption of grafting is expected to follow. With continued adoption, we expect to observe reductions in the use of the soil fumigant metam, as grafted plants are more resistant to soilborne pest problems (Grieneisen et al., 2018). Reductions in metam use should lead to improved air quality and reductions in occupational exposure by pesticide handlers.

Professional Competence and Activity

During this review period, I worked to improve my knowledge and skills in soil health, statistics, onion production and pest management. I attended four national onion research conferences or meetings and two international processing tomato meetings.

As evidence of my professional competence, I was honored to have been asked to help lead the onion project described above. I continue to serve as Associate Editor for Pest Management for UC ANR publications. My expertise is further evidenced by the invitation to review manuscripts for the journals Plant Disease, Crop Protection and Plant Health Progress. I also was invited to serve on the technical advisory committee for a USDA-funded onion project and to review plant-pathology related proposals for two vegetable commodity boards. I was invited to make presentations across California as well as four talks over three years in Ontario, Canada. In 2022, I was granted a volunteer position with US Agency for International Development's (US AID) Farmer-2-Farmer program, serving 15 days in Guatemala to develop and extend an integrated disease management plan for white rot of onion and garlic.

University and Public Service

The ANR Workgroups and Program Teams with which I am most involved include the Plant Pathology Workgroup and the Vegetable Crops Program Team of which I am the current co-chair, served on the meeting planning team in 2023 and contribute content to our team's Vegetable Research Information Center. During the review period, I was on three successful search committees, one of which I chaired. During the review period, I spent considerable time mentoring new farm advisor Patricia Lazicki. Starting in July 2020, I joined the UC ANR Academic Assembly Council Personnel Committee and in 2021-2022, I chaired this committee that guides the merit and promotion process for UC ANR academics.

One new role for me combines University and Public Service; starting in June of 2022 I became UC ANR's liaison to the California Tomato Research Institute, a voluntary, industry funded commodity board. Locally, I have supported Ag Education at all levels – elementary school, high school and community college. In addition to my local Public Service activities, I have continued to serve on the California Department of Pesticide Regulation's Pest Management Advisory Committee which assists the Department in identifying and promoting sound pest management practices. A major responsibility is reviewing proposals for their two grant programs: Pest Management Research and Pest Management Alliance. This is an influential appointment; we make decisions that guide the funding of pest management research in California, with over $12.3 M awarded during the review period.

Affirmative Action

In each of the three years, my program was compliant with UC ANR's Civil Rights goals to track demographic information when feasible, to provide the same meaningful access to educational information and resources to all program participants, and to make a concerted effort to reach new clientele that may not have participated in the past. My newsletters and meeting announcements go out to subscribers via print (282 subscribers) and email (1,169 subscribers) and are further publicized by trade publications and online calendars maintained by grower and trade organizations. I also value one-on-one relationships, and I respond to all inquiries promptly, regardless of whether I know the person or not. I devote time to personal calls, texts and emails in advance of local meetings to encourage attendance, and always include under-represented groups in those efforts. In addition to my regular contacts, new clientele also get in touch with me after learning about my program via my website, trade publications, the Vegetable Research and Information Center website, the California Tomato Research Institute website or other online outlets.

One program output of which I am particularly proud is a recent two-year collaboration with the local non-profit Black Urban Farmers Association (BUFA). I helped them build a refrigerated trailer for storage of harvested produce from their small farm. The new trailer is now being used for their mobile farmers market that they bring to disadvantaged neighborhoods in Stockton. BUFA knew what they wanted, and my team built it for them. I also built BUFA a system to inject food-safe citric acid into their irrigation system to mitigate irrigation clogging problems caused by high-pH, high-carbonate well water. The irrigation project required a significant effort to figure out a solution that kept them in compliance with organic produce standards but also easy to use. Along the way, both UCCE and BUFA learned more about what the other organization is doing to make change in our community.

It is truly gratifying to see what our UC teams have achieved to improve California agriculture, and I am proud of my significant contributions to a number of those teams. My research and extension activities have reduced vegetable losses due to pests and diseases, addressed environmental challenges associated with agriculture and have helped vegetable farming to remain economically viable.

Acronyms:
USDA NIFA: US Department of Agriculture National Institute of Food and Agriculture
CDFA: California Department of Food and Agriculture
CDPR: California Department of Pesticide Regulation

PROJECT SUMMARY TABLE

Theme: Integrated Disease Management for Vegetable Crops

			Financial support	
Project title/Duration	**My role**	**Collaborators**	**Amount to my program Duration**	**Source**
Control strategies for Fusarium stem rot and decline, a new disease in CA tomatoes Jan 2018 - ongoing	co-PI, lead of UC farm advisor portion of the project	co-PIs: C. Swett, UC Davis, A. Vinchesi-Vahl, P. Lazicki, T. Turini, UCCE	$28,000 over three years, 2022-2024	Ca Tomato Research Institute award of $18,434 to UC advisor team, chemical manufacturers, IR-4 Program, in-kind support of cooperating growers
Stop the rot: Combating onion bacterial diseases with pathogenomic tools and enhanced management strategies Oct 2019 - ongoing	co-PI, I am one of six co-PIs on the project, and am the lead researcher for the California team	co-PIs: L. du Toit, WSU, B. Dutta & B. Kvitko, UGA, C. Hoepting, Cornell, M. Uchanksi, CSU. Collaborators: 19 researchers, incl. A. Putman, UC Riverside, J. Sidhu, R. Wilson, UCCE	$ 20,000 Over five years Oct 2019-Sep 2024	USDA-AFRI-NIFA Award of $4.044 M to national team, Ca Garlic & Onion Research Advisory Board awards of to Sidhu and Aegerter, in-kind support of cooperating growers
Fight Fusarium! Integrated management of Fusarium basal rot of onion and garlic Jan 2023 – ongoing	Collaborator, lead of onion biology subgroup	co-PIs: C. Swett, UC Davis and A. Smart, U. Maine, and collaborators at Univ of Guelph, Wash. State Univ., Oregon State Univ., Cornell, NMSU. CA team includes T. Turini and R. Wilson, UCCE.		Planning grant from USDA SCRI to national team (2023-24), plus CaGORAB awards to CA team lead by Swett ($68,462 - 2024) Grant proposal to USDA SCRI currently in preparation
Co-management of Fusarium stem rot and resistance-breaking root knot nematode in processing tomato Jan 2024 - ongoing	PI	C. Swett, A. Hodson, UC Davis	$18,000 over one year, 2024	Chemical manufacturers, in-kind support of cooperating growers
Basil downy mildew fungicide efficacy and crop safety 2022 - 2024	PI		$23,333 over two years 2022 & 2024	IR-4 Project, in-kind support of cooperating growers

			Financial support	
Project title/Duration	**My role**	**Collaborators**	**Amount to my program Duration**	**Source**
Integrated disease management for potato in California Jan 2018 - ongoing	Collaborator, I conducted two field trials and have led other field-based aspects of the project	co-PIs: C. Swett, M. McCaghey, UC Davis, J. Sidhu, UCCE		Ca Potato Advisory Board awards to Swett & McCaghey, in-kind support of cooperating growers
Investigating potential biological control agents to prepare for the invasion of South American tomato leafminer into California Jun 2021 – Oct 2024	Collaborator, I identified six study sites	PI: I. Grettenberger, UC Davis along with researchers B. Lee and B. Mullin, UC Davis		CDFA and USDA APHIS awards to I. Grettenberger, in-kind support of cooperating growers
Alternatives to Fumigants Extension Project Oct 2023 - ongoing	Collaborator	J. Farrar, UC IPM and a group of UCCE advisors and specialists		
Blackmold fungicide efficacy 2023	PI		\$7,500 (2023)	Chemical manufacturers, in-kind support of cooperating growers

Theme: Efficiency and Sustainability of Vegetable Farming

			Financial support	
Project title/Duration	**My role**	**Collaborators**	**Amount to my program/ Duration**	**Source**
Evaluation of tomato rootstocks bred for abiotic stress tolerance and disease resistance Jan 2015 – Dec 2023	PI of local project, Collaborator on multi-state USDA project	G. Miyao, M. Lloyd, UCCE, numerous co-PIs w/ USDA and eight Land-grant Universities Mark Tester, private breeder with the company iyris	$15,000 over 2 years for local project (2022-2023)	USDA Specialty Crop Research Initiative Coordinated Agricultural Project $6.3 M to lead PD Louws at NCSU, iyris, a start-up company affiliated with King Abdullah University of Science and Technology, Saudi Arabia, in-kind support of cooperating growers
Evaluation of SK-100 for abiotic stress tolerance in processing tomato April 2024 - ongoing	PI		$1,500 in one year, 2024	Ac-Planta, a Japanese company, in-kind support of cooperating growers
Northern San Joaquin Valley Future Feedstocks Sep 2023 - ongoing	Collaborator; I locate agricultural by-products for testing and provide technical advice to the team	Large team including UC Berkeley, UC Merced, Lawrence Berkeley Laboratories, Beam Circular, and UCCE (Youtsey, Holtz, Chen, and others)		Virtual Institute on Feedstocks of the Future (VIFF) funded by Schmidt Futures
Development and adoption of a decision support tool for processing tomato irrigation and fertilization in the Central Valley 2015 - 2023	Collaborator; I located study sites, and served as liaison between UCD & growers	D. Geisseler, UC Davis M. Cahn, G. Miyao, T. Turini, & Z. Wang, UCCE		CFDA Fertilizer Research and Education Program awards to Cahn and Geisseler, California Institute for Water Resources award to Geisseler, in-kind support of cooperating growers
Multisite demonstration of conservation management practices for soil health and GHG emissions reduction 2018 – 2021	co-PI, co-led research at one of the project sites w/ M. Leinfelder-Miles	co-PIs: J. Mitchell & W. Horwath, UC Davis, M. Leinfelder-Miles, S. Stoddard, A. Vinchesi & S. Light, UCCE		CDFA Healthy Soils Program award to group (total award $249,257) UC ANR Grants Program providing matching funds for year 3 ($125,000), in-kind support of cooperating growers

PROFESSIONAL DEVELOPMENT AND TRAINING

Dates	Location	Name and/or Description of Activity
10/22/2021	online	**UC ANR training on Civil Rights Compliance**, “Improving All Reasonable Efforts to Diverse Audiences”
11/2/2021	online	**Tomato Disease Workshop** A national-level 3-hour mini conference with presentations from academics and industry about tomato diseases
11/4/2021 12/13/2021 12/14/2021 4/26/2023 12/12-13/2023	online online online Fresno, CA Salinas, CA	**UC ANR Vegetable Crops Program Team Meeting** An opportunity to hear research updates from UC colleagues and network with people in my program area.
11/5/2021 4/24/2023 6/3/2024	online Fresno, CA Davis, CA	**UC ANR Pest Management Program Team Meeting** Scientific talks, program and position planning, and networking with colleagues
2/22/2022 2/25/2022 3/8/2022 3/22/2022 4/5/2022	online	**Statistics Workshops and Introduction to R.** This 7-part workshop series was organized by UC ANR and taught by experts. Because of conflicts with my schedule, I was only able to attend the two sessions on the software program R and three of the statistics sessions.
2/28/2022 1/5/2023 11/30/2023-12/1/2023 3/5/2024	Denver, CO Savannah, GA San Antonio, TX Mt. Vernon, WA	**National Allium Research Conference (NARC) & W-3008/W-4008 Onion Multistate Project Annual Meeting** I have combined these national-level garlic and onion mini conferences because in some years they are held jointly. Both serve to connect researchers working in these crops to share our research results with each other.
3/28/2022 - 4/1/2022	online	**International Society for Horticultural Science (ISHS) Symposium on the Processing Tomato** Researchers from around the world sharing results on topics around tomato production, sustainability and processing.
8/17/2022	Davis, CA	**Vegetable Disease Research** field day, organized by UC Davis Plant Pathology Department researchers. In 2023 this

Dates	Location	Name and/or Description of Activity
8/28/2023 8/20/2024		was organized as an in-service training for UC advisors. In 2022 and 2024, this was an extension field day.
2/15/2023	Lodi, CA	**Campbells Tomato Sustainability Summit** Half-day meeting with updates on research projects in soil health and tomato sustainability topics.
4/24/2023 - 4/27/2023	Fresno, CA	**ANR Statewide Conference.** Professional development sessions, research sessions, networking with colleagues.
9/20/2023	online	**UC Ag Experts Talk** “Decision Thresholds: The Fatal Attraction at the Heat of IPM” Dr. Neil McRoberts, UCD
11/12/2023 - 11/14/2023	Napa, CA	**California Tomato Conference** A 2-day industry-organized conference with presentations on all aspects of processing tomato production in the state (research, production, varieties)
5/17/2024	Clarksburg, CA	**Automated Transplanter Field Day** An extension event organized by UCCE Capital Corridor
6/10/2024 - 6/12/2024	Budapest, Hungary	**International Society for Horticultural Science (ISHS) Symposium on the Processing Tomato,** joint meeting with the **World Tomato Congress.** Researchers from around the world sharing results on topics around tomato production, sustainability and processing.
9/13/2024	Chico, CA	**UC ANR Academic Regional Meeting** Professional development and networking with UC colleagues.

Disciplinary Professional Society Memberships and Activities

- American Phytopathological Society (APS), Member since 1995.I was a co-author on a poster presentation for the 2022 Annual Meeting.
- American Society for Horticultural Science (ASHS), Member since 2005
- International Society for Horticultural Science (ISHS), Member since 2015, current member of the Scientific Committee for the ISHS Symposium on Processing Tomato. During the review period I helped organize and attended two international meetings in 2022 (online) and 2024 (Hungary)- see below.

Evidence of Professional Competence

Dates	Description
1/27/2019 - ongoing	Invited to be a member of the **Scientific Committee** for the International Society for Horticultural Science 16th Symposium on Processing Tomato (2022, online), and 17th Symposium on Processing Tomato (2024, Budapest, Hungary). This is a scientific society meeting attended by researchers from around the world. My responsibilities included assisting in selecting abstracts and drafting the program, chairing a symposium session, and reviewing papers for publication of the proceedings in Acta Horticulturae.
Feb 2020 - ongoing	**Advisory Committee, UC Davis**. Because of my expertise on Fusarium diseases of tomato, I was asked to serve on the advisory committee for two graduate students in the Department of Plant Pathology.
Regularly, ongoing	Invited to conduct **refereed peer review** of manuscripts for the editors of: • Plant Disease: two disease notes and one full-length manuscript • Crop Protection: one manuscript • Plant Health Progress: one manuscript • UC ANR Publications: one manuscript
7/1/2014 - ongoing	**Associate Editor for UC ANR Publications**. In this role, I manage the peer review process for publications submitted in my area of pest management (and sometimes for other subject areas as needed), I oversee the peer review process for many of the UC IPM Pest Management Guidelines, and I occasionally advise the ANR Communications Advisory Board regarding proposals for books.

Dates	Description
Annually, Ongoing	Invited to critically review grant proposals in the area of Plant Pathology for the **California Garlic & Onion Research Advisory Board;** proposals reviewed annually in October. As an appointed member for the **California Leafy Greens Research Board's Research Advisory Committee**, I critically review two to four grant proposals in the area of Plant Pathology each year in December and January.
10/16/2022 - 10/30/2022	**Volunteer, Farmer-2-Farmer, funded by U.S. Agency for International Development (US AID).** I volunteered my expertise on Integrated Disease Management for White Rot of Garlic and Onion. I made a 15-day trip to the Western Highlands of Guatemala where I visited farms and research stations, developed recommendations that were relevant to their scale and resource limitations, extended that information to farmers and technical service providers, and submitted a written report with my recommendations for follow-up.
2/25/2022	Interviewed by Cambells Tomato Sustainability Program as an **expert on sustainable tomato production**, to inform their plans for their incentive program to increase adoption of soil health practices among their growers.
Sep 2023 - ongoing	I was invited to serve on the **Technical Advisory Committee** for a USDA SCRI funded research project 'Ensuring Future Economic Viability of US Short-day Onion Production Through Mechanical Harvesting' This project involves researchers in multiple states and is led by Dr. Subas Malla of Texas A&M University. They sought my expertise on onions and my experience with machine harvest of onion cops.

INVITED TALKS

Date	Event name	Topic	Location	No. of attendees
12/6/2021	**Santa Clara County Specialty Crops Production**	Disease management in tomatoes and peppers	online	62
2/23/2022	**UC IPM Ag Experts Webinar**	Management of fungal diseases of processing tomato (link to recording on YouTube)	online	158
4/7/2022	**70th Annual Muck Vegetable Growers Conference.** An extension meeting organized by University of Guelph, Ontario, Canada.	Update on research on bacterial bulb rot of onion	online	
3/2/2023	**Ontario Tomato Day**. in-person extension meeting organized by The Ministry of Agriculture, Food and Rural Affairs (OMAFRA)	Fusarium falciforme – Devastation in California	Chatham, Ontario, Canada, I presented remotely	102
10/28/2023	**Bayer Vegetable Crops Symposium**	Managing Fusarium diseases in tomato and onion	Monterey, CA	40
1/31/2024	**CA Assn of Pest Control Advisors (CAPCA) Spring Summit**	Management of fungal diseases of tomato	Napa, CA	100
2/21/2024 2/22/2024	**Ontario Fruit and Vegetable Convention.** organized by The Ministry of Agriculture, Food and Rural Affairs (OMAFRA, Ontario's Extension Service).	Talks in 2 sessions: Cucurbit Casualties – soil borne pathogens and how to manage them Frequent Felons of Fruiting Vegetables	Niagara Falls, Ontario, Canada	90 65

UNIVERSITY SERVICE

Dates	Activity	My contribution
Jul 2020 – July 2024	**UC ANR Academic Assembly Council Personnel Committee Chair**	I served for four years on this committee and was chair for 2021-2022. The Personnel Committee reviews criteria and policies concerning appointments and the academic advancement process and appoints and trains ad hoc committees dealing with the advancement process. Chairing this committee is a significant commitment.
Oct 2021 – ongoing	**UC ANR Vegetable Crops Program Team co-chair**	Session chair/program planning for annual team meetings in Dec 2021 and Dec 2023. I became co-chair of the Program Team at Dec 2023 meeting.
Aug-Dec 2021	**UC ANR Search Committee**	I was a member of a successful search committee for Plant Pathology Advisor serving Santa Cruz, Monterey & San Benito counties
2021 – ongoing	**Mentoring** new CE advisors	I provided significant mentoring to new Vegetable Crops Farm Advisor Patricia Lazicki. I also participated in the formal UC ANR mentorship program in 2021, mentoring Small Farms Advisor Hung Doan.
2022 – 2023	**Project Board user testing**	I volunteered to help with User Testing with changes to Project Board and the new WFA system
4/12/2022 & 4/16/2024	**Master Gardener Plant Pathology Training, San Joaquin County**	I was the lead instructor for the Plant Pathology class for the Master Gardner training in San Joaquin County (co-taught with B. Holtz, UCCE).
4/29/2022 & 5/9/2024	**UC Davis class** PLP 205 – Field Plant Pathology	I took the lead in organizing and leading field trips on vegetable diseases in two different years
Mar-June 2022	**UC ANR Search Committee**	I was a member of a successful search committee for a Food Systems Advisor serving Yolo, Solano and Sacramento counties. I provided the chair with a significant level of assistance beyond the expectation for a committee member.
Summer 2022	**UC ANR Search Committee Chair**	I chaired this successful search committee, resulting in the hire of Vegetable Crops Advisor, Yolo, Solano and Sacramento counties. I facilitated committee discussions, arranged interviews with candidates,

Dates	Activity	My contribution
		organized the logistics of conducting interviews, and took the lead in documenting our committee's work.
June 2022-ongoing	**UC Liaison to the processing tomato commodity board**	I serve as UC's liaison to the California Tomato Research Institute. I attend Board meetings and assist the Board by obtaining and summarizing external technical reviews for research proposals. I also serve as a communication link between UC ANR administration and the Board.
Spring 2023 Spring 2024	**UC ANR Ad Hoc Review Committee Chair**	I chaired Ad hoc Review Committees for the UC ANR merit and promotion process in two years: 2022-23 and 2023-24.
April 2023	**UC ANR Statewide Conference volunteer**	I volunteered to help moderate a session at the Statewide Conference.
Nov-Dec 2023	**Lorenz Award Selection Committee**, UC	I served on the committee tasked with selecting the 2023 awardee of this UC Vegetable Crops research award.
Regularly, ongoing	**Interview panels for UCCE San Joaquin County**	I served multiple times on interview panels for county staff serving our office (two office assistant positions and one office manager position during the review period)
2024	**UC Riverside**	I served as an evaluator for a UC Riverside faculty promotion case.
Regularly, ongoing	**International visitors**	I have received international visitors from Botswana (Oct 2023) and Australia (Sept 2022 and July 2023) and discussed my program with them.
Regularly, ongoing	**UC Davis**	I have assisted several UC Davis researchers to obtain soil or plant samples or locate sites for their research (Professors/PIs: J. Del Castillo, S. Siddique, and J. Rodrigues)

PUBLIC SERVICE

Dates	Activity	My Contribution and Leadership Role
Apr 2016 - ongoing	**CA Department of Pesticide Regulation, Pest Management Advisory Committee**	Appointed to **California Department of Pesticide Regulation's (DPR)** **Pest Management Advisory Committee**. This group advises and assists the Department in identifying, facilitating, and promoting sound pest management practices and pest management systems. A major responsibility is annually reviewing proposals for their Pest Management Alliance and Pest Management Research grant programs. I reviewed and provided comments on 70 proposals during the review period and attended at least two meetings each year. In addition to proposal review, we also provided input on the Sustainable Pest Management Roadmap and the Mill Fee Increase.
Dec 2019 - ongoing	**San Joaquin County Spray Safe Workshop**	I am a member of the San Joaquin County Spray Safe planning committee that develops the workshop content. This annual workshop is designed for growers and pesticide applicators. Attendees rotate through five different educational topics designed to promote safe farming, drift control and protection of workers as well as public health. (Event dates: 3/28/23 and 2/9/2024)
Oct 2021 – ongoing	**County Agricultural Commissioners** in my region	Significant activities with the Agricultural Commissioners (AC) have included: - Meeting with a regional group of ACs about the invasive parasitic weed branched broomrape - Advising my county AC on beet leafhopper emergency proclamation in 2024 - Serving on an interview panel for a Biologist in San Joaquin County (three successful hires from this panel)
2022 – ongoing	**Fish-friendly Farming**	Technical advisory committee member. I provided technical advice to this non-profit which is working to improve water quality in the Delta. I attended meetings to assess proposed agricultural projects that aimed to reduce water use or reduce runoff.

Dates	Activity	My Contribution and Leadership Role
Events: 11/4/2021 3/3/2022 3/2/2023	**AgVenture**, an agricultural education event for San Joaquin County 3rd graders, held at various locations throughout the year and with about 3,000 students attending each event	I developed age-appropriate curriculum on production and harvest of three different vegetable crops (tomatoes, pumpkins and asparagus) and gave my presentation eight times per event and participated in three in-person events during the review period. In 2020, we recorded a video about pumpkin production to allow remote presentations (see our pumpkin video at https://www.sjcagventure.com/). I also assisted the program with virtual field trips to vegetable farming operations.
Regularly, ongoing	**Ag Education in San Joaquin County**	I spent a half-day with a high school ag teacher that was seeking input on their program and engaging with our programs. I spent a half-day with a Stagg High-School Future Farmers of America (FFA) student who job shadowed me for one morning as I visited my field trials. I have been mentoring a new professor of agriculture at San Joaquin Delta College, giving input on curriculum and on producing vegetables at the Mustang Acres farm on the Stockton campus.

EXTENSION MEETINGS ORGANIZED

Date	Meeting Name	Topic	Role	Location	No. of Attendees
2/3/2022	Northern San Joaquin Valley Processing Tomato Production Meeting	Seminar type meeting with various topics covering the production of processing tomatoes in the northern San Joaquin Valley	I was one of three co-organizers.	online	80
2/8/2023	Northern San Joaquin Valley Processing Tomato Production Meeting	Seminar type meeting with various topics covering the production of processing tomatoes in the northern San Joaquin Valley	I was one of three co-organizers and took the lead for on-site logistics.	Stockton, CA	105
2/7/2024	Northern San Joaquin Valley Processing Tomato Production Meeting	Seminar type meeting with various topics covering the production of processing tomatoes in the northern San Joaquin Valley	I was one of three co-organizers and took the lead role this year.	Modesto, CA	90

EDUCATIONAL PRESENTATIONS FOR CLIENTELE

Date	Meeting name	Topic	Location	No. of Attendees
10/26/2021	Merced County Pest Management Continuing Education Seminar	Disease update for vegetable crops	Merced, CA	50
12/2/2021	California Tomato Research Institute Annual Meeting	Control strategies for Fusarium falciforme vine decline	online	20
12/7/2021	San Joaquin County Agricultural Commissioner Grower Meeting	Vegetable Pest Management Update	Stockton, CA	145
2/7/2022	California Garlic and Onion Research Symposium	Management of bacterial bulb rot diseases of onion	online	97

Date	Meeting name	Topic	Location	No. of Attendees
4/28/2022	CAPCA Fresno Continuing Education Meeting	Managing Fusarium diseases of tomato	Fresno, CA	95
8/17/2022	Vegetable Crops Plant Pathology Field Day	Commercial cultivar management tools for Fusarium vine decline in tomato	Davis, CA	64
10/11/2022	UCCE Merced County Continuing Education for Pest Management Professionals	Disease update for field and vegetable crops	Merced, CA	37
12/6/2022	San Joaquin County Agricultural Commissioner Grower Meeting	Vegetable Pest Management Update	Lodi, CA	89
12/8/2022	San Joaquin County Agricultural Commissioner Grower Meeting	Vegetable Pest Management Update	Stockton, CA	172
12/15/2022	San Joaquin County Agricultural Commissioner Grower Meeting	Vegetable Pest Management Update	Stockton, CA	100
1/13/2023	California Assn of Pest Control Advisors	Management of soilborne diseases of tomato	Modesto, CA	32
1/17/2023	South Sacramento Valley Processing Tomato Production Meeting	Evaluation of variety tolerance and chemical control of Fusarium vine decline	Woodland, CA	140
1/25/2023	WSREC Vegetable Research Update	Chemical control and variety evaluation for Fusarium diseases of tomato	Five Points, CA	55
2/8/2023	Northern San Joaquin Valley Processing Tomato Production	Evaluation of chemigation and drip fumigation for control of Fusarium diseases	Modesto, CA	100
2/13/2023	California Garlic and Onion Research Symposium	Onion bacterial bulb rot research results	Tulare, CA	85
5/23/2023	Morning Star – Current Agronomic Issues	In-season management of fungal diseases of processing tomato	Santa Nella, CA	27

Date	Meeting name	Topic	Location	No. of Attendees
5/24/2023	Morning Star – Current Agronomic Issues	In-season management of fungal diseases of processing tomato	Woodland, CA	29
7/11/2023	Tomato Spotted Wilt Virus Update	Observations of TSWV in the Northern San Joaquin Valley	Woodland, CA	26
9/27/2023	California Potato Research Advisory Board	Management of southern blight in potatoes	online	20
10/17/2023	Merced Pest Management Continuing Education Seminar	Vegetable disease update	Merced, CA	31
11/13/2023	California Tomato Conference	Soilborne threats to processing tomato production	Napa, CA	60
12/20/2023	AgSeeds and California Transplant team meeting	Resistance-breaking root knot nematodes in tomato	Newman, CA	12
1/9/2024	S. Sacramento Valley Processing Tomato Production	Variety selection and chemical control for Fusarium diseases	Woodland, CA	132
2/7/2024	Northern San Joaquin Valley Processing Tomato Production	Evaluation of chemical control	Modesto, CA	100
2/12/2024	Allium Research Symposium	Bacterial bulb rot management in onion	Tulare, CA	90
8/20/2024	Vegetable Crops Plant Pathology Field Day	Cultivar management tools for Fusarium stem rot and decline in tomato	Davis, CA	40

ONE-ON-ONE CONSULTATIONS WITH CLIENTELE

Date	Description	No. of instances
10/1/2021-9/30/2024	Farm calls: Met with clientele at their request to assess production problems and answer questions at their farm	102
10/1/2021-9/30/2024	Clientele contacts and requests for information (office consultations, phone, text and email)	431

WEBSITES MAINTAINED

Date	Description	No. of instances
2006 - ongoing	Maintenance and updating of my website: [UCCE San Joaquin County vegetable crops]	During the three-year review period, my website received over 5,000 page views from 1,280 unique users.

NEWSPAPER AND TRADE MAGAZINE INTERVIEWS

Date	Interviewed by	Topic	Media/Publication
July 2022	Vicky Boyd	Grafted Vegetables	Vegetable Growers News 7/14/22
March 2023	Vicky Boyd	Fusarium disease problems in tomato	Ag Alert
May 2023	Nancy Vigran	California asparagus production	Ag Alert 5/3/23
July 2023	Bob Johnson	Processing tomato costs of production	Ag Alert 8/2/23
September 2023	Vicky Boyd	Invasive parasitic weed Broomrape in tomato	Ag Alert 10/11/23
July 2024	Vicky Boyd	Impact of high temperatures on local tomato crop	San Joaquin County Farm Bureau News 8/6/24

BIBLIOGRAPHY

	Period of review (Oct 2021 – Sept 2024	Career total to present
Peer-reviewed		
B - Scholarly journals	1	31
C - Other peer-reviewed publications	8	29
subcategory total	9	60
Non-peer reviewed		
A- Popular press articles and newsletters	10	85
D - Technical reports	4	73
E – Published abstracts	5	23
subcategory total	19	181

For my full career peer-reviewed publications, see my ANR profile: https://ucanr.edu/?facultyid=11

Peer-reviewed publications from period of review

C	Paugh, K.R., Swett, C.L., Aegerter, B.J., and Koivunen, M. 2022. Evaluation of drip-applied fungicides and fumigant against Fusarium wilt in California processing tomato, 2019. Plant Disease Management Reports 16:V177. https://doi.org/10.1094/PDMR16 (My role: I contributed to trial design, provided technical assistance and edited the manuscript)
C	Sidhu, J., and Aegerter, B.J. 2022. Evaluation of fungicides for management of southern blight in potatoes in CA, 2021. Plant Disease Management Reports 16:V127. https://doi.org/10.1094/PDMR16 (My role: I collaborated on trial design and treatment list and I edited the manuscript)
C	Sidhu, J., Dubose, J.F., Fernberg, J. and Aegerter, B.J. 2022. Evaluation of bactericides for management of bacterial leaf blight and bacterial bulb rot in onions, 2021. Plant Disease Management Reports 16:V026. https://doi.org/10.1094/PDMR16 (My role: I collaborated on trial design, provided the bacterial inoculum used and edited the manuscript)
C	Wilson, R., Nicholson, K. and Aegerter, B. 2022. The influence of irrigation method on bacterial diseases of onion in northeast California, 2021. Plant Disease Management Reports 16:V154.

	https://doi.org/10.1094/PDMR16 (My role: I collaborated on trial design, provided the bacterial inoculum used and edited the manuscript)
C	Aegerter, B.J. and Swett, C.L. 2024. Evaluation of processing tomato varieties for susceptibility to Fusarium stem rot and decline, 2023. Plant Disease Management Reports 18:V061. https://www.plantmanagementnetwork.org/pub/trial/pdmr/volume18/abstracts/V061.asp (My role: I was the lead on this trial and the lead on writing the manuscript)
C	Sidhu, J., Dubose, J.F., Fernberg, J. and Aegerter, B.J. 2024. Evaluation of variety susceptibility to bacterial foliar disease and bacterial bulb rot in onions, 2022. Plant Disease Management Reports 18:V063. https://www.plantmanagementnetwork.org/pub/trial/pdmr/volume18/abstracts/V063.asp (My role: I collaborated on trial design, provided the bacterial inoculum used, contributed to the statistical analysis and edited the manuscript)
C	Sidhu, J., Dubose, J.F., Fernberg, J. and Aegerter, B.J. 2024. Evaluation of bactericides for management of bacterial leaf blight and bacterial bulb rot in onions, 2023. Plant Disease Management Reports 18:V064. https://www.plantmanagementnetwork.org/pub/trial/pdmr/volume18/abstracts/V064.asp (My role: I collaborated on trial design, provided the bacterial inoculum used and edited the manuscript)
C	Swett, C.L., Putman, A.I., Turini, T.A., and Aegerter, B.J. 2024 UC IPM Pest Management Guidelines: Onion/Garlic. Disease section. University of California Agriculture and Natural Resources Publication 3453. (February 2024 revision) https://ipm.ucanr.edu/agriculture/onion-and-garlic/ (My role: I rewrote the bacterial bulb rot section and contributed new photographs)
B	Wilson, R.G., Aegerter, B.J., and LaHue, G. 2024. The influence of sprinkler and drip irrigation on the incidence and severity of bacterial disease in onions grown in northeast California. Plant Health Progress 25:293-298 https://doi.org/10.1094/PHP-01-24-0002-RS (My role: I collaborated on trial design, provided the bacterial inoculum used, and wrote a portion of the manuscript)

Non-peer reviewed publications from period of review

D	Swett, C., Collinson, M., Lazicki, P., and Aegerter, B. 2021, 2022 and 2023. Developing an integrated management strategy for *F. falciforme* vine decline in processing tomato, including co-management with Fusarium wilt. In: Annual Report of the California Tomato Research Institute for 2021, 2022, and 2023 (see our latest report in CTRI 2023 Annual Report Booklet) (My role: I was a co-PI on this project, involved in study planning, execution and analysis and I wrote a portion of these three reports)
A	**Aegerter, B**. 2021 Processing Tomato Update: Deficit irrigation, tomato spotted wilt virus and curly top virus. San Joaquin County Field Notes newsletter November 2021. (link to pdf)
A	**Aegerter, B.** 2022. Local field trials evaluating management options for Fusarium diseases of processing tomato. San Joaquin County Field Notes newsletter February 2022 (link to pdf)
A	**Aegerter, B.** 2022. Vegetable disease update. San Joaquin County Field Notes newsletter August 2022. (link to pdf)
A	**Aegerter, B.** 2022. Local processing tomato variety evaluation. San Joaquin County Field Notes newsletter November 2022. (link to pdf)
D	Aegerter, B. 2022. Efficacy and crop safety of Zampro fungicide for the control of downy mildew in basil, 2022. Report to IR-4 Program.
E	du Toit, L.J., MacKay Brown, H., Shin, G.Y., Kvitko B.H., **Aegerter, B.J.**, Cramer, C., Gugino B.K., Hoepting, C.A, Malla , S. Nischwitz, C., Reitz, S., Uchanski , M., Woodhall, J., and Dutta, B. 2022. Distribution and pathogenicity of bacteria collected in surveys of onion crops across production regions in the U.S. in 2020 and 2021. Abstracts of Presentations at Plant Health 2022, Pittsburg, PA Aug 6-10, 2022. Phytopathology 112:11S, S3.97. https://doi.org/10.1094/PHYTO-112-11-S3.1 (My role: I was co-PI on this project and I was the lead on the California portion of this study, I isolated bacteria from diseased onions from across California)
E	MacKay, H., du Toit, L., **Aegerter, B.**, Colson, G., Coutinho, T., Dutta, B., Gugino, B., Hoepting, C., Kvitko, B., LaHue, G., Malla, S., Nischwitz, C., Reitz, S., Sidhu, J., Uchanksi, M., Waters, T., Wilson, R., Woodhall, J., Asma, M. (presenting author). 2022. Combating onion bacterial diseases with pathogenomics tools and enhanced management strategies: research objectives and progress towards reducing crop losses. Poster presentation at the 14th International Conference on Plant Pathogenic Bacteria, July 3-8, 2022, Assisi, Italy. (Poster link) (My role: I was co-PI on this project and very involved in multiple project research objectives)
A	**Aegerter, B.** 2023. Evaluation of processing tomato varieties for tolerance of vine decline due to *Fusarium falciforme.* San Joaquin County Field Notes newsletter February 2023 (link to pdf)

A	**Aegerter, B.** 2023. Processing Tomato Update. San Joaquin County Field Notes newsletter May 2023. (link to pdf)
A	**Aegerter, B.** 2023 Tomatoes and rain – What to do. Newsletter article distributed to clientele in the counties of San Joaquin, Sacramento, Yolo, Solano, Sutter, Yuba, Colusa, Contra Costa, Kern, also distributed via California Tomato Research Institute mailing list. (link to pdf)
A	**Aegerter, B.** 2023. Planting tomatoes following walnut orchard recycling. San Joaquin County Field Notes newsletter November 2023. (link to pdf)
D	**Aegerter, B.**, Lazicki, P., Miyao, G., Stewart, D., Murdock, J. and Goodrich, B. 2023. Sample costs to produce processing tomatoes. Sub-surface, drip irrigated (SDI) in the Sacramento Valley & northern Delta 2023. Cost study link (My role: I collected production costs from growers and suppliers, discussed approach with the team, and edited the report)
E	du Toit, L., **Aegerter, B.**, Colson, G., Coutinho, T., Cramer, C., Dutta, B., Gugino, B., Hoepting, C., Kvitko, B., LaHue, G., MacKay, H., Malla, S., Nischwitz, C., Reitz, S., Shin, G., Uchanski, M., Waters, T., and Woodhall, J. 2023. Combating onion bacterial diseases with pathogenomics tools and enhanced management strategies. Poster and oral flash presentation at the 12th International Congress of Plant Pathology, August 20-25, 2023, Lyon, France. (poster link) (Book of Abstracts) (My role: I was co-PI on this project and very involved in multiple project research objectives)
E	Mnguni, F., Shin, G., du Toit, L., Derie, M., **Aegerter, B.**, Woodhall, J., Dutta, B., Zhao, M., Hoepting, C., , Gugino, B. , Mazzone, J. and Coutinho, T. 2023. The diversity and pathogenicity of *Rahnella* species isolated from diseased onion bulbs in the United States and South Africa. Poster presentation at the 12th International Congress of Plant Pathology, August 20-25, 2023, Lyon, France. (Poster link) (Book of Abstracts) (My role: I isolated the *Rahnella* bacterial isolated from California onions that were studied in South Africa)
A	**Aegerter, B.** 2024. Processing tomato variety evaluation. San Joaquin County Field Notes newsletter February 2024. (link to pdf)
A	**Aegerter, B.** 2024. Symphylans can impact seedlings and transplants. San Joaquin County Field Notes newsletter May 2024. (link to pdf)
E	**Aegerter, B.**, Lazicki, P. and Swett, C. 2024. Evaluation of fungicides and a fumigant for management of Fusarium diseases in the Central Valley of California. Oral presentation at the 17th ISHS Symposium on Processing Tomato, June 9-12, 2024, Budapest, Hungary. Book of Abstracts (My role: I was the lead researcher on this project and wrote this abstract)