A Report on the Workshop on Integrating Climate Change in California Extension

February 6-7, 2018 Kearney Research and Extension Center, Parlier, California

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The full report is posted at: http://ucanr.edu/ucceclimatechange

Executive Summary

Overview: The UCANR Climate Change Program Team was established in 2015 and began a process of investigating how climate change is integrated into Cooperative Extension in California. In 2017 we sent an online survey to over 1000 UC ANR faculty, specialists, advisors, and staff which showed that though there is overwhelming agreement on the importance of addressing climate change, fewer than half of the respondents currently incorporate it in their extension programming in some way. Perceived barriers included lack of access to climate information relevant to their extension programs and clientele, limited familiarity with climate science fundamentals, and fear of alienating clientele by talking about a contentious topic. These results (published in California Agriculture) led to a pilot professional development workshop held February 6 & 7, 2018 at Kearney Agricultural Research and Extension Center in Parlier, CA funded by Renewable Resources Extension Act (RREA) and the California Institute for Water Resources.

Workshop participants heard presentations on climate science and communication as well as examples of how UCANR and others are conducting climate informed research, extension and outreach across many disciplines. Attendees participated in discussion groups around needs for improving practices. Participants identified the following needs to improve climate change extension within UCANR:

Professional Development: Across disciplines, participants identified the need for on-going climate related professional development for UCANR academics, staff and volunteers. Specific training needs included:

Communicating climate change science and research results to stakeholders.
- How and when to talk about adaptation and mitigation with clientele,
- How to be an honest broker of information/ be transparent about research funding sources, and
- Communicating with and supporting other academics with controversial results.

Training in existing UCANR tools: We already have some great tools developed especially Cal-Adapt (http://cal-adapt.org/). Making additional trainings in Cal-Adapt tools available would be helpful across UCANR disciplines.

Train the Trainer programs for volunteers: Master gardeners, food preservers, 4h club leaders and California naturalists would benefit from climate change training opportunities. This could be accomplished through a train the trainer approach with a core set of trainers including academics, statewide programs, the environmental education workgroup, the Cal Nat climate stewards and Project Learning Tree.

Delivering Climate Change Extension: Suggestions to foster climate change extension included development of information and resources to be shared with clientele. These included:

Climate change toolkits: Resources should be developed for/by extension staff that are customized by specific programs. Specific suggestions included:

- Curated climate change curricula and educational materials (presentations, websites, videos)
- Cal-Adapt tool kits on pest, trees/ species for climate change scenarios
- How to assisting your community after a disaster including how to serve those affected by trauma
- Fact sheets that help explain climate weather data lingo/ averages / how projections work/ data.
- Case studies written for the layman such on drought tips, approaches/ tools

- Effective climate change digital and radio messaging for low-income communities developed in accessible, user friendly, culturally relevant, linguistically appropriate ways

Translation of climate data for various users: Participants felt unsure about exactly what kind of climate data was needed by various users. They suggested conducting a needs assessment with various stakeholders to talk about weather and climate resources and decision making strategies. Raw weather and climate data could be translated into decision support tools for clientele decision-making.

Climate research needs: Discussion groups stressed that additional research is needed across disciplines to help localize information on both mitigation and adaptation to climate change and to help clientele with decision making. Several also discussed how to allocate scarce research resources by considering whose interests are served by research projects and how to incorporate social justice. Specific research needs discussed included:

- *Historical research follow up:* There is a lot of opportunity within ANR to follow up on past research. There is follow up data that could be easily collected and synthesized to inform on climate change.
- *Climate change impacts on food security* including food access, availability, and utilization, the increased cost of specialty crops and the potential for healthier diets to mitigate climate change.
- *Disaster preparedness and recovery*: Research into information needs and effectiveness of dissemination before, during and after disasters as well as policy effectiveness.
- *Climate mitigation practices certification*: Exploration of the need for a body/group that certifies climate change practices by producers that could be used to reduce impacts and help market products.
- *Research/demonstration best practices*: How to identify enlightened leaders within stakeholder groups to work with.

Next steps: Workshop participants discussed the next steps for moving forward on climate change within UC Cooperative Extension. They suggested the climate change program team:

- *Continue to communicate:* Participants said that talking about climate change within this interdisciplinary context was very useful and should be continued.
- *Coordinate disaster responses*: Participants suggested we continue to share information, possibly by developing a work group on disaster response as an ANR collaboration.
- *Identify climate change work more consistently*: Another suggestion was to develop a way to tag extension activities as climate change related even when we don't call them that.
- *Strive for carbon neutrality*: Some participants suggested that UCANR could do a better job of walking our talk for carbon neutrality. UC has a policy on making meetings carbon neutral that is not fully adopted by UCANR. The program team could advocate for the implementation of the policy.
- *Pursue collaborative funding*: Suggested activities for the program team meeting at the April 2018 statewide conference included identifying funding for some of the described goals through ANR Opportunity Grants, RREA proposals or other sources.

Evaluation: Participants said they appreciated that the workshop was cross disciplinary and incorporated flexible discussions along with excellent speakers. 97% rated presenters as knowledgeable with practical information to share, 90% rated presentations as excellent or very good and 75% agreed that they have a better idea of how to integrate climate change into their programs as a result of the workshop. Many suggestions for follow up workshops were given.