

Building Bridges: Enhancing Health and Nutrition Through Partnerships with UC Agriculture and Natural Resources (UC ANR)

October 16, 2025

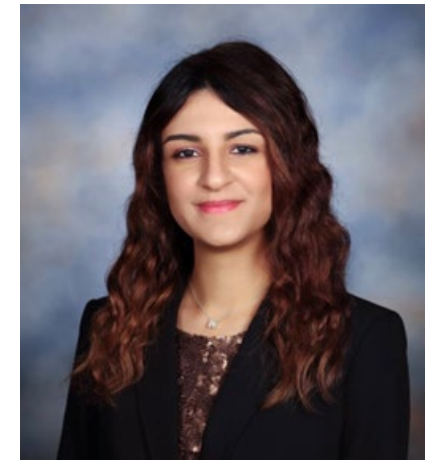
Our Speakers



Amira Resnick, MPA,
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Community Nutrition
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Claire Gibson, MD,
Assistant Clinical
Professor of
Pediatrics at UCSF



Setareh
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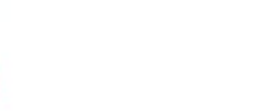


Raul Gutierrez, MD,
Associate Clinical
Professor



Ariel Franks, MD,
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Family Community
Medicine

Community Nutrition and Health



Learning Objectives

1. **Describe** the history, mission, and impact of UC Agriculture and Natural Resources (UC ANR).
2. **Summarize** the growing collaboration between UC ANR and UCSF and the potential benefits of this partnership.
3. **Explore** opportunities for future collaboration between UCSF and UC ANR.



Introducing UC ANR:
Bringing UC information and
practices to local communities
to improve their lives and
livelihoods

Land Acknowledgement

We acknowledge that this event is taking place throughout the unceded territory of California home to nearly 200 tribal nations. As we begin this event, we acknowledge and honor the original inhabitants of our various regions. A land acknowledgement is a critical step towards working with native communities to secure meaningful partnership and inclusion in the stewardship and protection of their cultural resources and homelands. Let's take a moment to honor these ancestral grounds that we are collectively gathered upon and support the resilience and strength that all Indigenous people have shown worldwide.

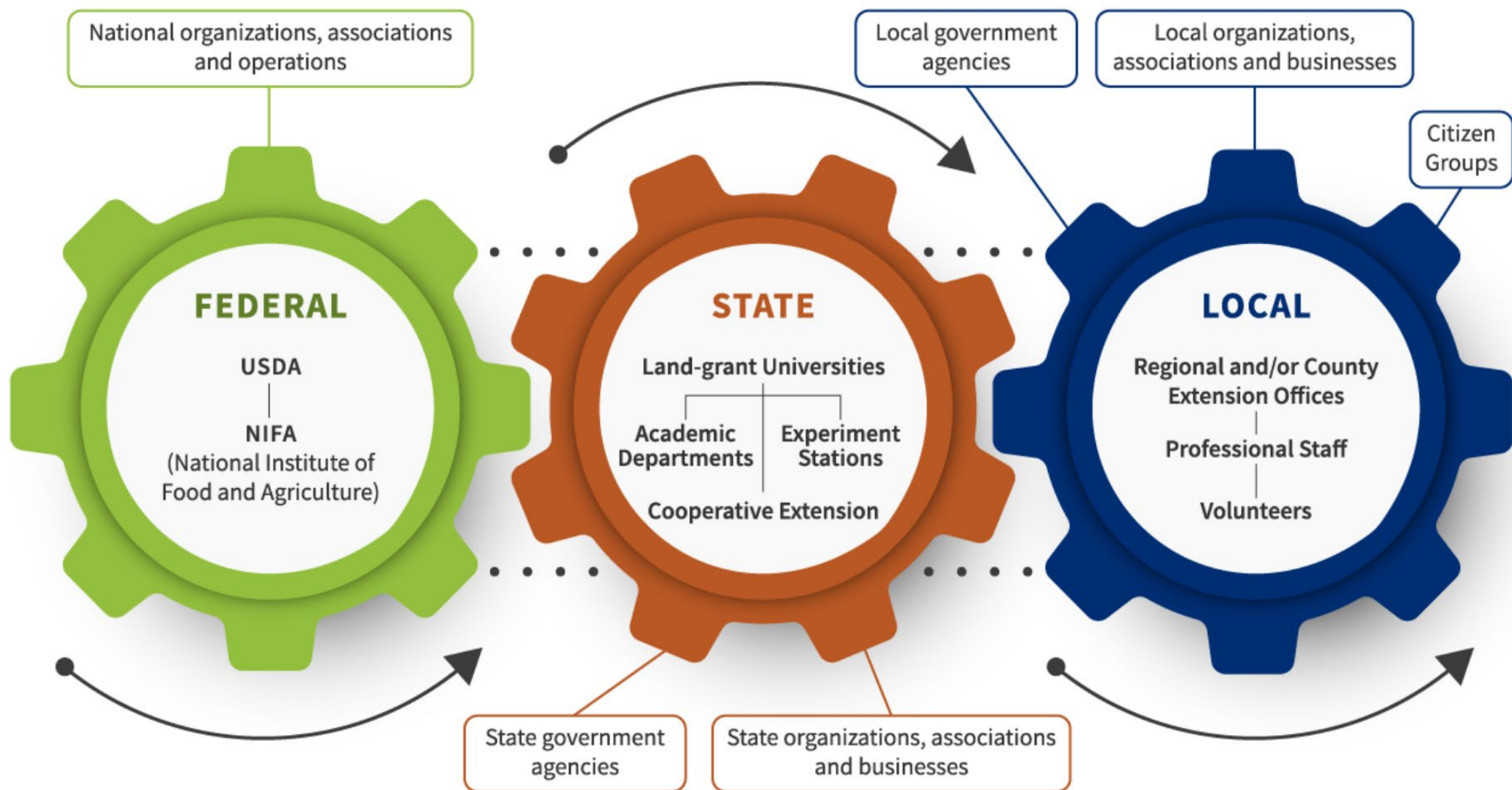


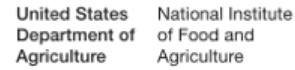
*Art: Darby Raymond-Overstreet, Diné,
UCSF Office of
Diversity and Outreach*

UC ANR Delivers California's Land Grant Mission



- Land Grant Universities established by Congress in 1862
- The University of California created in 1868
- Congress authorizes Agricultural Experiment Stations (AES) at Land Grants in 1887
- Cooperative Extension established by Congress in 1914





1862
1890
1994

PACIFIC BASIN

NORTHERN MARIANAS
 Northern Marianas College

GUAM
 University of Guam

FEDERAL STATES OF MICRONESIA

AMERICAN SAMOA
 American Samoa Community College

ALASKA
 University of Alaska

PUERTO RICO / U.S. VIRGIN ISLANDS
 University of Puerto Rico

* Central State University (CSU) in Ohio, has been designated as an 1890 LGU. Under the law, CSU will be eligible to receive certain capacity funds in October 2014 and others in fiscal year 2016.

** College of the Muscogee Nation and Keweenaw Bay Ojibwa Community College are designated as 1994 LGUs and will be eligible to receive capacity funds in October 2014.

Bringing UC to Californians

UC ANR research & education programs support the following in all 58 counties:

- Sustainable, safe, and nutritious food production and delivery
- Economic success in a global economy
- A sustainable, healthy, and productive environment
- Science literacy and youth development



UC Cooperative Extension

- 188 Advisors conduct research in local communities
- 311 Community Educators delivering programs
- 109 campus/county-based Specialists

Research and Extension Facilities

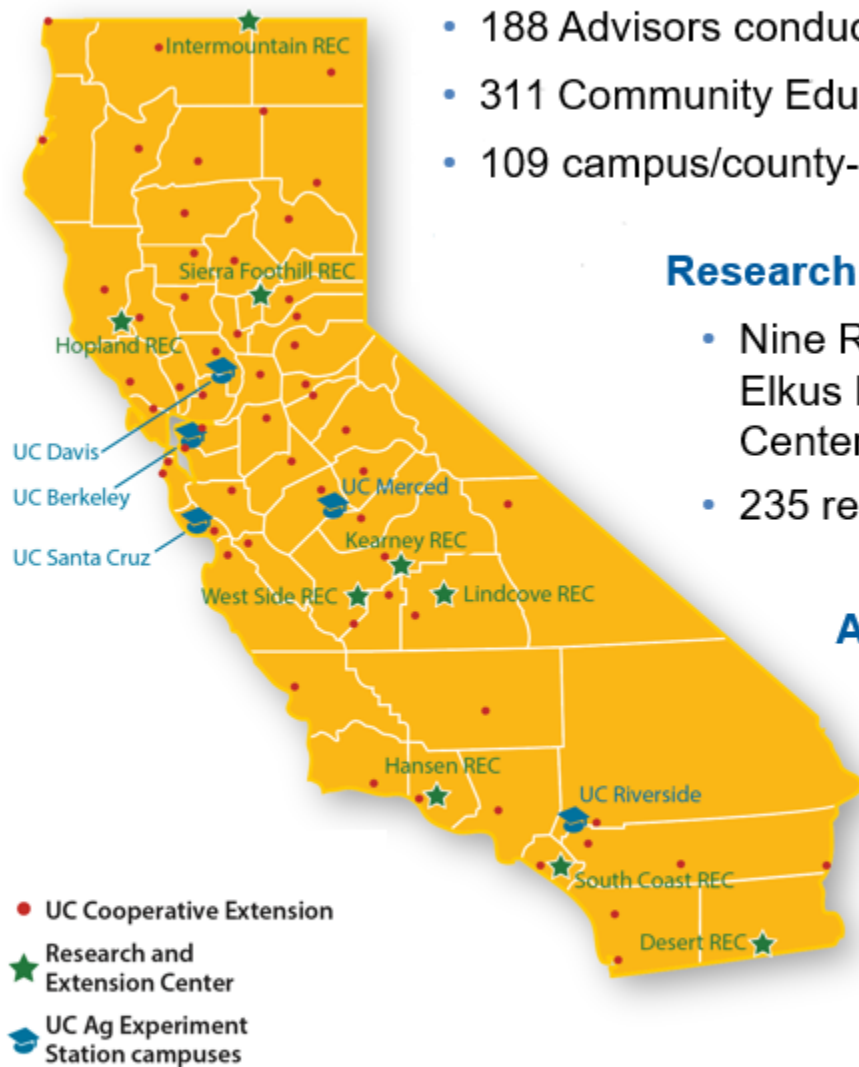
- Nine Research and Extension Centers and Elkus Ranch Environmental Education Center: 12,500+ acres
- 235 research projects

Agricultural Experiment Station

- 513 researchers on 5 campuses
- 800+ research projects in partnership with land-grant partner USDA NIFA (2023)

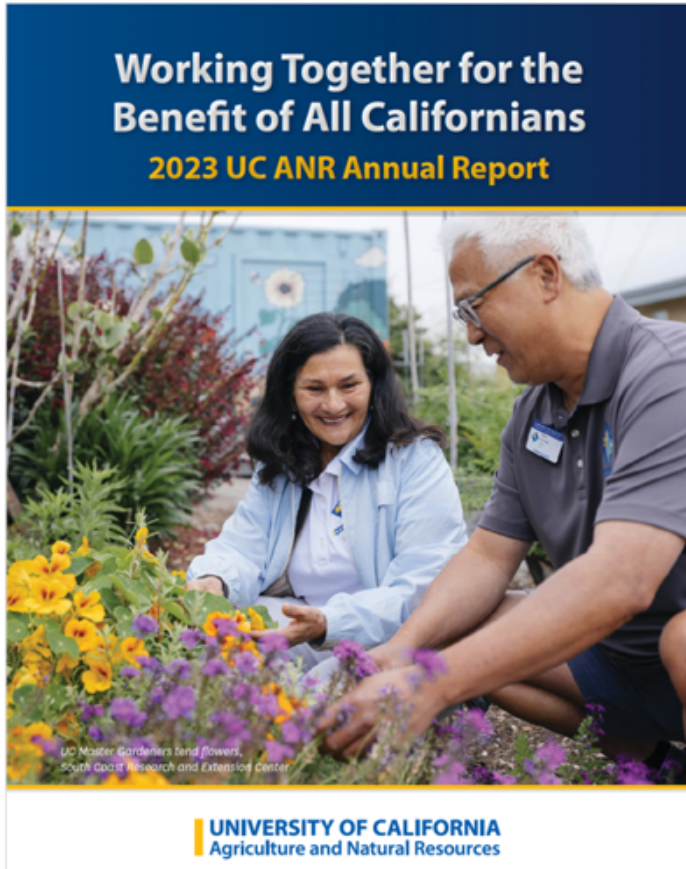
17 Statewide Programs and Institutes

- 4-H Youth Development
- CalFresh Healthy Living, UC
- California Institute for Water Resources
- Community Nutrition and Health
- Expanded Food and Nutrition Education
- Informatics and GIS
- Nutrition Policy Institute
- UC ANR Fire Network
- UC ANR Innovate
- UC ANR Policy Institute
- UC ANR Small Farms Network
- UC Environmental Stewards (California Naturalists & Climate Stewards)
- UC Master Food Preserver
- UC Master Gardener
- UC Organic Agriculture Institute
- UC Statewide Integrated Pest Management
- UC Sustainable Agriculture Research and Education



**Over 16,000 volunteers contribute 1.2M hours
in donated public service**

UC ANR Snapshot: 2023 Program Highlights



9 novel ideas led to patents issued



16,647 trained volunteers delivered 1.2 million hours of public service



\$2M collectively saved on groceries by Expanded Food and Nutrition Education Program (EFNEP) graduates



1,500 policy engagement activities



1,255,990 adult and youth direct contacts/ educational exchanges



29,280 workshops, field days, courses & program meetings



1,880 publications and new educational materials produced

Supporting State Agency Missions through Partnerships

- ✓ Joint research projects and subject matter experts
- ✓ Training in pesticide safety, vegetation management, fire suppression, irrigation and more
- ✓ Developing educational materials and programs
- ✓ Mapping future fire probability under climate change scenarios to address public safety
- ✓ Promoting use of agricultural lands for groundwater recharge and drought management
- ✓ Providing evidence-based programs and teaching for SNAP-Ed and Women, Infants and Children (WIC)



CALIFORNIA DEPARTMENT OF
FOOD AND AGRICULTURE



Challenges to be Addressed in 2025-2040 Strategic Plan

- Agriculture and Food Systems
- Natural Ecosystems and Working Landscapes
- Thriving People and Communities
- Climate Change
- Innovation
- Regulations, Policy, and Compliance
- Systemic Inequities

Seven Challenges: Where We Make a Difference

As a long-trusted source for practical tools and information, UC ANR is uniquely positioned to cultivate, co-create, and share science-based solutions on a wide range of local to global issues. Based on extensive input from diverse sources, seven distinct California challenges have been identified as priority areas in which UC ANR can make a significant impact over the next 15 years.

The following pages outline just a few examples of actions UC ANR can take to drive positive outcomes under each of the challenge areas. Related goals, objectives, and metrics are developed and refreshed separately every five years.

All of the challenges are complex and interrelated, demanding interdisciplinary approaches to drive equitable, appropriate, and practical solutions. These challenges are all critically important and are listed alphabetically, not in any order of priority.

Our Priorities

These first three challenges specifically relate to UC ANR's research and programming core:

Agriculture and Food Systems

California's agriculture and food systems face barriers to productivity, sustainability, profitability, and equitable distribution of healthy foods.

Natural Ecosystems and Working Landscapes

California's diverse ecosystems are impacted by multiple stressors, threatening ecosystem services, biodiversity, and resilience.

Thriving People and Communities

California's people and communities face barriers to physical, nutritional, social, and economic well-being, coupled with inequitable opportunities for development and civic engagement.

These next four challenges are overarching and impact all areas of UC ANR research and programmatic activity:

Climate Change

Climate change fundamentally threatens California's communities, ecosystems, agriculture, and other working landscapes, creating urgent demand for scalable strategies to mitigate causes and build resilience.

Innovation

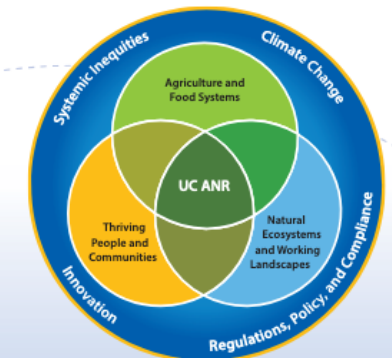
Rapidly changing information, technology, materials, and public demands necessitate the development, evaluation, and adoption of secure, innovative tools and solutions.

Regulations, Policy, and Compliance

California faces a complex, ever-changing regulatory environment in which science-based input and community engagement are needed to inform policy decisions and implementation.

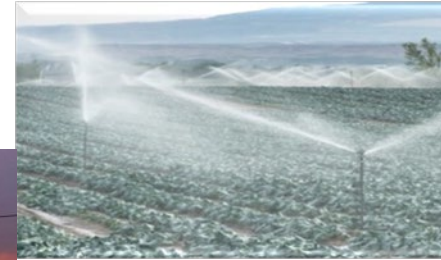
Systemic Inequities

Inequitable access to critical resources stresses many segments of California's population, causing significant disparities in well-being.



UC ANR Research & Extension Needed More than Ever

- New technologies, crops and tools required
- Food and nutrition systems are fragile
- Climate change impacts
- Economic disconnects
- Disaster response



Need Solutions for:

- Worker and community well-being
- Industry recovery, resiliency and compliance
- Market competitiveness, growth and profitability

UC ANR Growing and Thriving in our Second Century

- ✓ Develop new partners, non-traditional resources, improved visibility
- ✓ Reach more Californians – expand number and diversity of audiences
- ✓ Ensure delivery & services are relevant
- ✓ Leverage new technology and methods; retool, recapitalize, reinvest in facilities and infrastructure
- ✓ Deliver our mission – be a catalyst for positive change





Community Nutrition and Health Unit

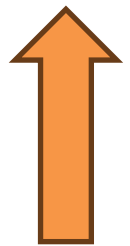
We are a statewide network of researchers and educators advancing integrated approaches that promote holistic health and equitable communities for all Californians.

We envision an inclusive, thriving society where the people of California enjoy holistic health and well-being within equitable communities, free from chronic disease, and with benefits of social connection and belonging.

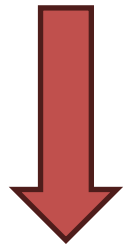
Issues: Four Domains of Health



Future Vision: Emerging Initiatives



Increase
quality of
life and
health/life
span



Decrease
chronic
and
preventabl
e disease



MEDIUM TERM OUTCOMES

- Increase physical activity
- Increase fruits & vegetables
- Improve food security
- Improve financial security
- Decrease ultra-processed foods

- Increase time in nature
- Increase social connection (social and cultural capital)
- Increase positive mood
- Improve equity and equality
- Decrease screen time

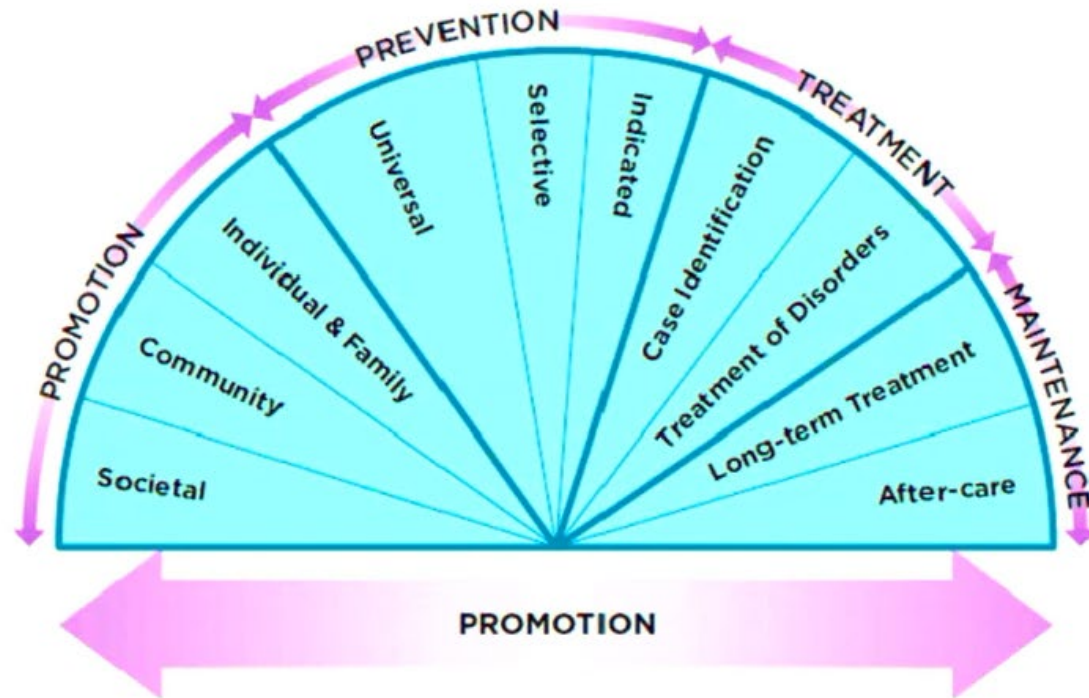
LONG TERM OUTCOMES

- Achieve optimum fitness levels for aerobic, strength, flexibility and balance
- Achieve optimum nutritional and metabolic status
- Achieve optimum stress levels
- Achieve optimum sleep duration and quality
- Achieve optimum social interactions

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Agriculture and Natural Resources

Community Nutrition and Health

Collaborating Across the Care Continuum

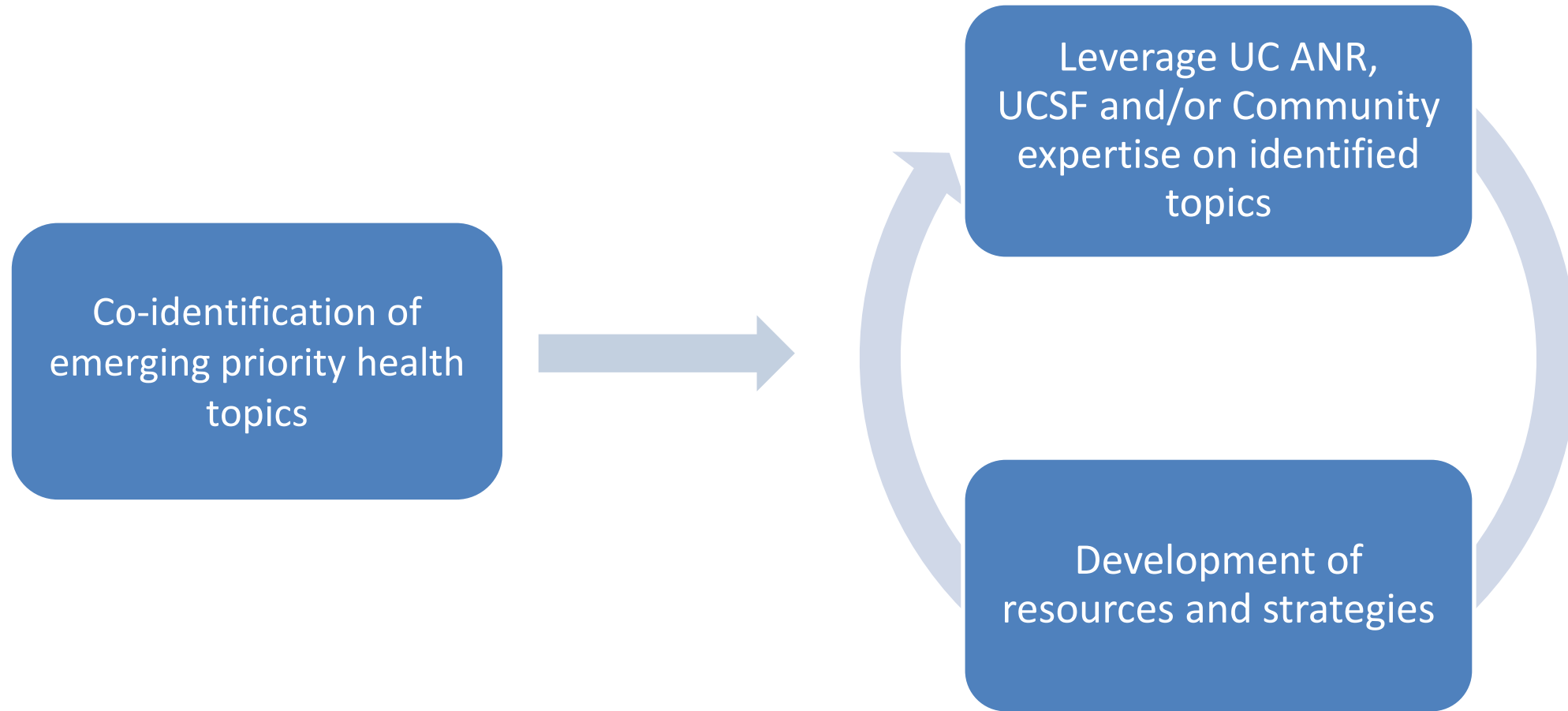


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UC ANR/UCSF: A powerful collaboration

In **2021**, UC ANR and UCSF launched a **multi-year collaboration** that supported a team of UCSF academics to join with leaders at UC ANR. The partnership aimed to enhance UC ANR's Cooperative Extension efforts to **deliver evidence-based health information to communities statewide**, with a shared commitment to **advancing health equity**.

Our Collaborative Process for Improving Health



Priority Areas

| Project Team | Objective |
|---|--|
|  Project Team |  Objective |
|  Dietary Guidelines |  Create nutrition handouts based on CDC's top chronic diseases. |
|  Lactation Support |  Identify breastfeeding barriers for farmworker parents. |
|  Lactation Support |  Review proven strategies for breastfeeding support. |
|  CA Elders Health Equity |  Build a statewide plan to promote elder health equity. |
|  CA Elders Health Equity |  Use nutrition to reduce health disparities. |
|  CA Elders Health Equity |  Improve access to senior-friendly health tools. |
|  Mental Health |  Link mental and physical health with nutrition. |
|  Mental Health |   Identify mental health needs of UCANR educators. |
|  Medicaid |  Teach communities about Medi-Cal eligibility and benefits. |
|  Medicaid |  Remove access barriers for undocumented individuals. |

UC ANR – UCSF Priority Areas Examples

Making the connection between mental health, physical activity and nutrition



Resource Database: Connecting Mental Health, Nutrition, and Physical Activity



Practical Resources Connecting Mental Health and Nutrition or Physical Activity

File Edit View Insert Format Data Tools Extensions Help

Search Menus 100% View only

A1 Filter by Column:

| | A | B | C | D | E | F | G | H |
|---|---|--|---|---|--|---|----------------------------|---|
| 1 | Filter by Column: | | | | | | | |
| 2 | This resource database summarizes evidence-based resources that connect mental wellness to nutrition or physical activity, and its purpose is to provide easy access to practical tools, academic studies, and educational material for UCANR advisors to use and/or inform their community work. | | | | | | | |
| 3 | Name of Resource | Source/Sponsor | Link | Type of Resource (e.g., video, patient material, journal article) | Physical Activity, Nutrition, or Both? | Mental Health Topic (e.g., stress, ACEs/trauma, positive childhood experiences) | 2nd Mental Health Topic | Notes |
| 4 | Stressbusters | ACEs Aware | https://training.acesaware.org/aa/alt/detail?id=2115 | Online Training | Both | ACEs | Trauma | CME credit is available. To complete all 8 modules takes eight hours. |
| 5 | Food and Mood Project | SAMHSA | https://www.samhsa.gov/about-us/who-we-are/regional-offices/food-and-mood | Resource Website | Nutrition | Youth Emotional Wellbeing | Behavioral Health Problems | No |
| 6 | Food and Mood: Understanding Science, Evaluating Evidence, and Implementing Best Practices | Mental Health Technology Transfer Center Network | https://vimeo.com/622626372 | Video | Nutrition | Behavioral Health for School-Age Kids | | Prc wit |
| 7 | Leah's Pantry | Leah's Pantry | https://leahspantry.org | Trainings, Curriculum | Nutrition | Trauma-informed | Resilience-building | Prc |
| 8 | Mindful Eating | North Central Farm and Ranch Stress Assistance Center and U. of Illinois Extension | https://www.youtube.com/watch?v=Nz3v0ikXJHE | Video | Nutrition | Mindfulness | | Cli |

UC ANR – UCSF Priority Areas Examples Cont.

Understanding Farmworkers' Barriers to Breastfeeding

Myrka Macedo BS BA, Claire Gibson MD, Carly Hyland MS PhD, Ariel Franks MD, Lenna Ontai PhD, Natalie Price MPH, Jennifer Smilowitz PhD, Dafne Cruz Rodriguez, Monserrat Hernandez



UCSF School of
Medicine



Purpose

This study aims to explore farmworkers' breastfeeding perceptions, practices, and the facilitators and barriers they encounter before and after returning to work.

Background

There is broad consensus that exclusive breastfeeding for the first 6 months of life is the optimal nutrition for infants (WHO, CDC, AAP). California law requires employers to make reasonable accommodations for breastfeeding parents. However, employees who work in agriculture may face unique barriers to continuing breastfeeding after returning to work such as lack of private spaces in the fields and insufficient facilities for safe milk storage. There is a paucity of research exploring the specific facilitators and barriers to breastfeeding among farmworkers. Understanding these factors is crucial to inform clinical practice, guide workplace interventions, and ensure effective implementation and enforcement of lactation accommodation laws in diverse occupational settings.

Methods

- Conducted a cross-sectional survey among adults aged 18 years or older who had given birth since 2023 and worked in agricultural settings in California during pregnancy and/or postpartum.
- Conducted informed consent and survey in Spanish, Mixteco, or Triqui with interpretation for indigenous languages.
- The survey assessed:
 - Participants' breastfeeding intentions, practices, and challenges.
 - Workplace accommodations, access to breastfeeding resources, prenatal and postpartum care, and demographic and occupational characteristics.
- Descriptive statistics were used to characterize demographic and breastfeeding data.
- Thematic coding was used to elicit themes from respondents' free-response answers.

Results

Table 1. Respondent Demographics (n = 40)

| Category | Sub-Category | No. (%) |
|---|-------------------------------------|-----------|
| Location | Domestic | 10 (43.8) |
| | Foreign | 16 (69.8) |
| Age | 18-20 | 27 (87.4) |
| | 21-25 | 13 (32.8) |
| Primary Language Spoken at Home | English | 6 |
| | Spanish | 9 |
| | English and another language | 9 (22.2) |
| | Multiple | 2 (5.0) |
| | Disputed | 0 |
| | Total | 2 (5.0) |
| Highschool Level of Education Completed | None | 2 (9.1) |
| | Primary/Elementary | 13 (33.2) |
| | Matric School | 20 (50.5) |
| | Elementary/High School | 6 (15.0) |
| | University/College | 3 (7.4) |
| | Other | 0 |
| What kind of agricultural work do you do? | Farm work in the fields | 12 (30.2) |
| | Farm work and community facility | 1 (2.4) |
| | Packaging fruit work | 1 (2.4) |
| | Work in one of their markets | 3 (7.4) |
| | Processing of agricultural products | 1 (2.4) |



Figure 1. Breastfeeding Data (n = 40)

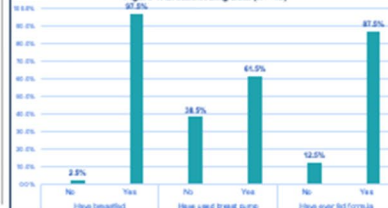


Figure 2. How have you fed your child since returning to work?
(n = 40)

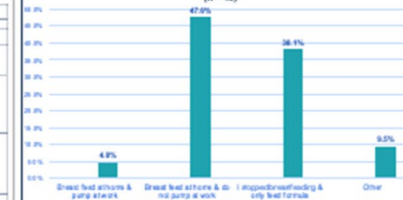
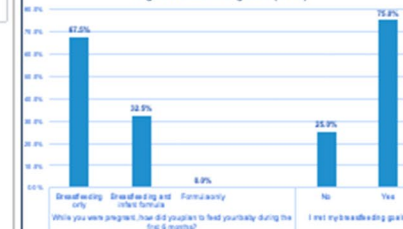


Figure 3. Breastfeeding Goals (n = 40)



Qualitative Analysis

Table 2. Themes From Farmworker Free-Response Questions

| Theme | Key Findings/Themes | Key Findings/Themes |
|-------------------------|-----------------------------------|--|
| Utilization Rates | No plans for any spring season | There was no interest in design and since, only winter coats |
| | Low penetration | There were coats that you found for shopping |
| | High design interest | It was really hard for the kids to be shopping |
| | Physical stores | There were having a lot more going and with all the coats |
| Personal & Physical | Each child is adding in their own | That was really it |
| | Plan adding unique | They are a good mix of both |
| Emotional & Behavioral | There is no time to think about | The most interesting bit was coats |
| Perceptions | | There was no time to go into |
| Geographic Distinctions | It was interesting | It was interesting about the coats |
| | Geographic interest | There was a lot of interest in the coats |
| | Many kids in addition to brand | There was a lot of interest in the coats |
| | | There was a lot of interest in the coats |
| Supports identified | Key elements | There was a lot of interest in the coats |

Key Findings

- There was high motivation for breastfeeding, but many barriers exist once they return to work.
- While many participants reported continuing breastfeeding after returning to work, only one reported pumping at work. Most mothers breastfed only at home, without expressing milk during the workday.
- Going long periods without breastfeeding or pumping can lead to decreased milk supply, painful breast engorgement, clogged ducts, mastitis, and increased risk of early breastfeeding cessation.
- Overall, 25% of participants could not meet their breastfeeding goals.

Next Steps

We have collected approximately 40 surveys thus far. We plan to continue data collection in the Salinas and Central Valleys of California, currently pending our UCSF reliance agreement. We anticipate that findings from this study will inform clinical practice, guide public health initiatives, and support policymakers in strengthening workplace protections and accommodations for lactating individuals in agricultural settings.

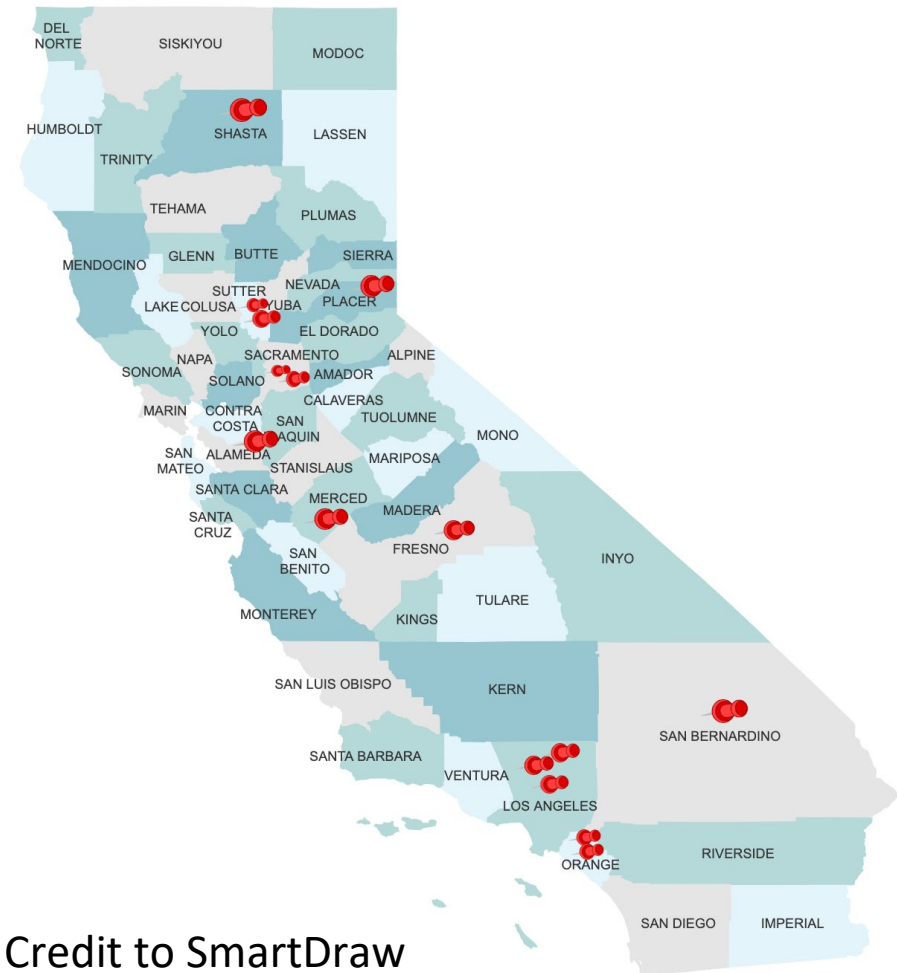
References

3. Yessierli, A. C. (2023). *An exploration of milk consumption in the agricultural marketplace* (Doctor No. 202303076). Arizona State University.
4. O'Halloran, B., Brown, A. C., Tate, M., Hietanen, R. A., & Rojas, R. J. (1987). Isolated feeding practices of migrant farm laborers in two production counties. *Journal of the American Dietetic Association*, 87(1), 108-114.
5. Yessierli, A. C., & Kucuk, M. (2020). *Examining the relationship of a migrant health worker*. *American Journal of Public Health*, 110(5), 823-828. <https://doi.org/10.2196/ajph.2019.016009>
6. U.S. Department of Health and Human Services. (2020). *Report for HHS-2020-0016*. In (ed.). *Supporting working women and children: Solutions for agriculture and rural communities*. <https://www.hhs.gov/healthcare/2020/03/23/20-0016>



Community Nutrition and Health Community Advisory Committee (CAC)

- Composed of **14 community members** from 10 counties across CA, with a special focus on individuals who are current or former participants in, or community partners of EFNEP or CFHL
- CAC members provide feedback on UC ANR priority area team deliverables as well as ongoing collaboration with Anthem in Fresno, and Sacramento.
- Counties of CAC members: Alameda, Los Angeles, Orange, Placer, Sacramento, San Bernardino, Shasta, Sutter, Merced, Fresno



Credit to SmartDraw

Community Nutrition and Health Community Advisory Committee (CAC) - 2

Version 1.0

Balanced & Thriving:

How Mind, Food, and Movement Work Together

Mental Well Being

A person's mental state directly affects their motivation and energy to exercise, eat well, and make other self-caring choices.



Physical Activity

Physical activity enhances mental well-being by reducing stress and anxiety, improving mood, and boosting cognitive function.

Nutrition

Nutrition benefits mental well-being by providing nutrients that fuel brain function, regulate mood, and support emotional stability.

English Version

Version 2.0 after two rounds of CAC feedback

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Balanced & Thriving:

How Food, Mind, and Movement Work Together



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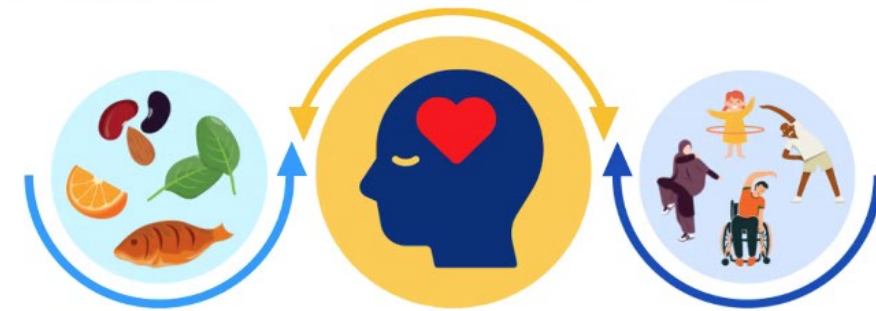
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Agricultura y Recursos Naturales

La Red del Bienestar:

Como la Mente, la Alimentación y movimiento Trabajan Juntos



Nutrición

La nutrición beneficia el bienestar mental al proporcionar nutrientes que impulsan la función cerebral, regulan el estado de ánimo y favorecen la estabilidad emocional.

Bienestar mental

El estado mental de una persona afecta directamente su motivación y energía para hacer ejercicio, comer bien y tomar otras decisiones de autocuidado.

Actividad física

La actividad física mejora el bienestar mental al reducir el estrés y la ansiedad, mejorar el estado de ánimo y estimular la función cognitiva.

UC ANR Collaboration Opportunities with Physicians, Dentists, and Counties

- Collaborate on research opportunities
- City of Hope
- Pilot project- Specialist looking for clinics to refer participants to EFNEP



Photo from PikPng

Questions?

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If you have questions or would like to connect with us regarding this collaboration, please contact us!