

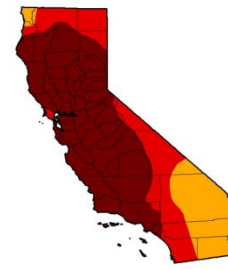
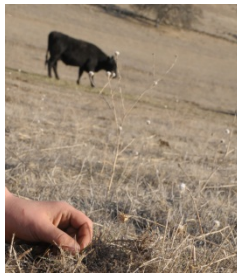
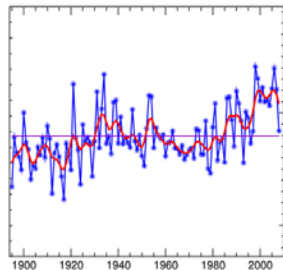
Sustaining Working Rangelands: Insights from Statewide Rancher Surveys & Interviews



Leslie Roche

Rangeland Watershed Lab • UC Davis

rangelandwatersheds.ucdavis.edu



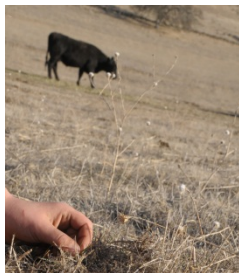
The Role of California Rangelands in Adapting to Climate Change

2014 California Adaptation Forum

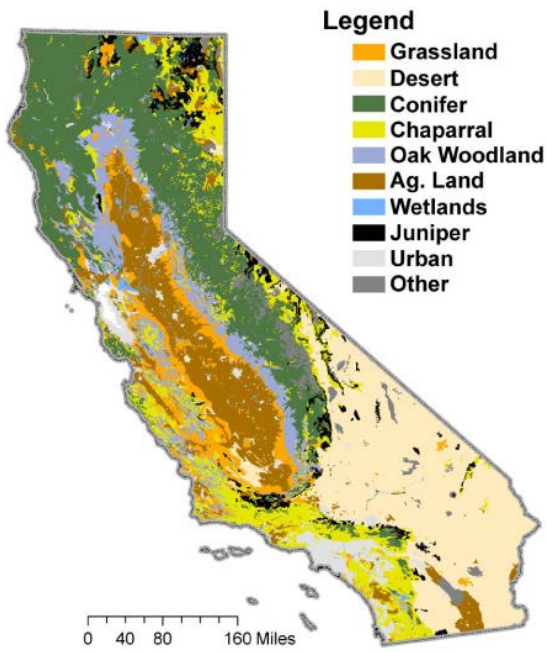
Sacramento, CA • 20 August 2014

Today's roadmap

- **Rangeland ecosystems**
- **Adaptive rangeland decision-making**
 - Mail survey and interviews
 - Rancher decision-making
 - Drought adaptation
- **Ongoing work**

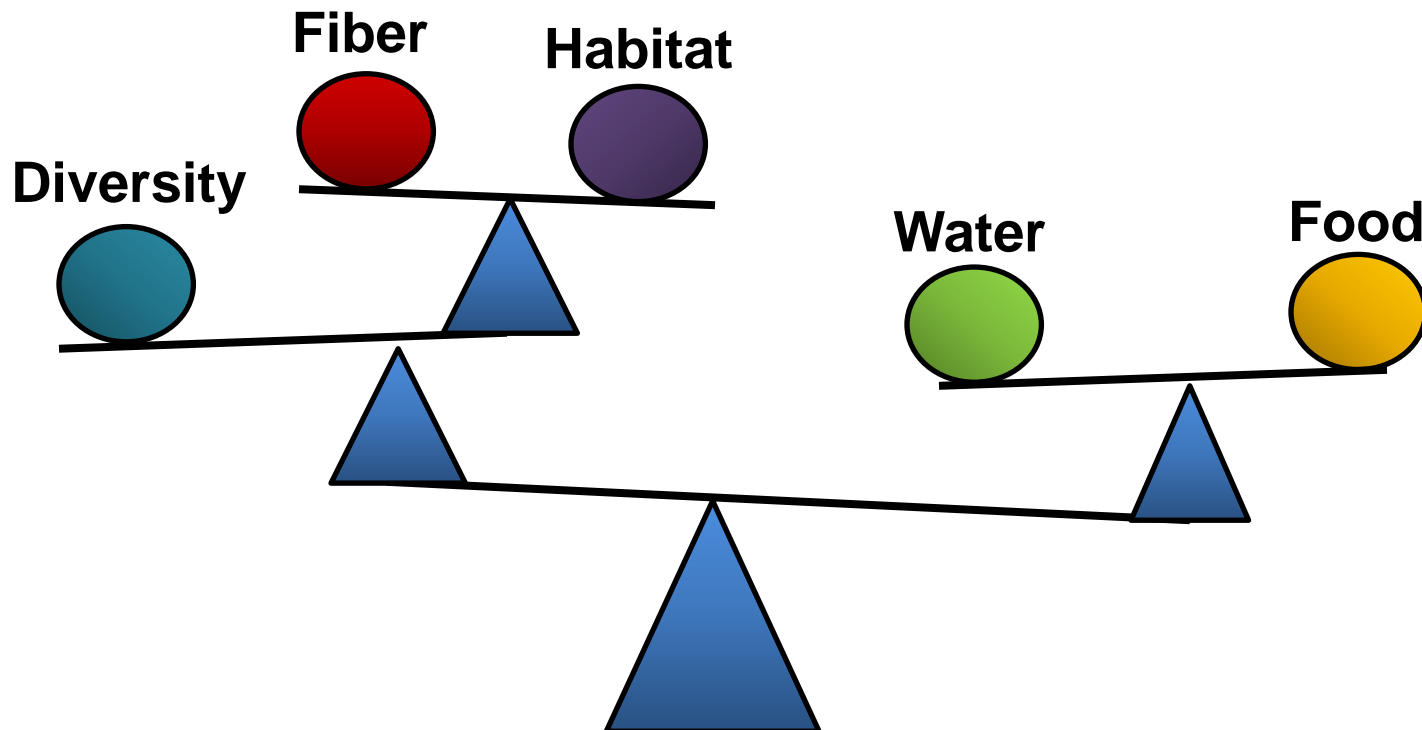


California's Rangelands

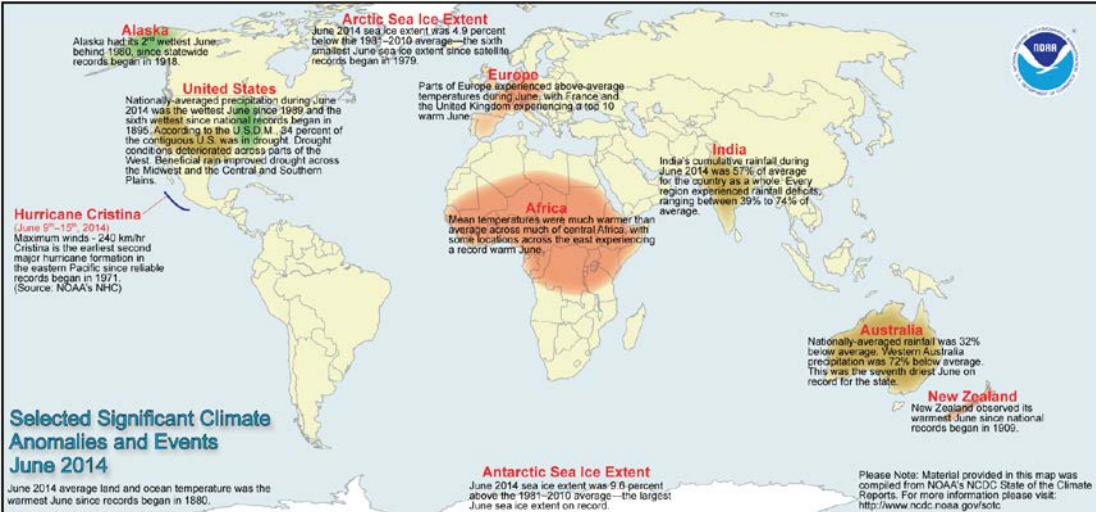


Sustaining ecosystem services on rangelands...

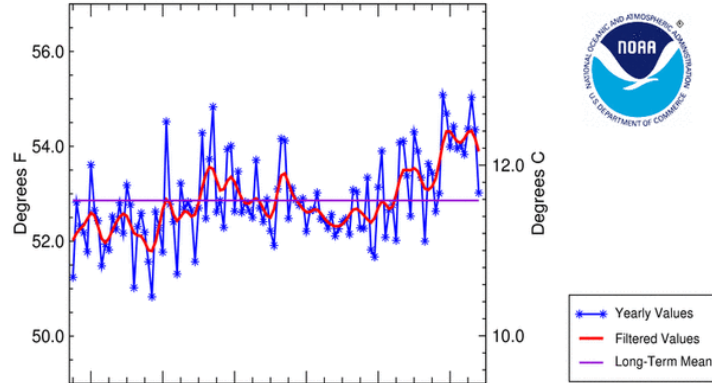
We must innovate to balance ever growing population demands for food, water, habitat, open space...



...in an increasingly variable environment.

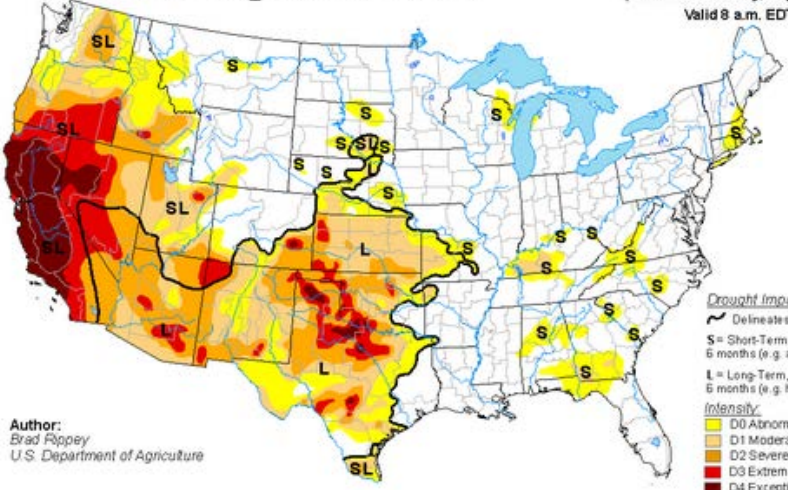


National (Contiguous U.S.) Temperature 1895 - 2008



U.S. Drought Monitor

August 5, 2014
(Released Thursday, Aug. 7, 2014)
Valid 8 a.m. EDT

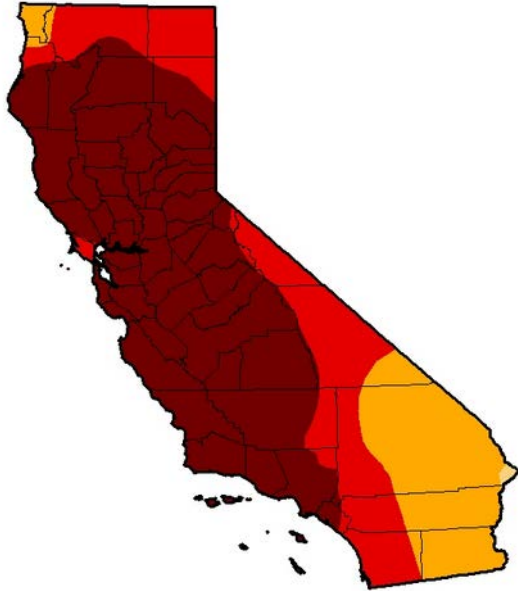


Author:
Brad Rippey
U.S. Department of Agriculture

Drought Impact Types:
~ Delineates dominant impacts
S= Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L= Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



August 5, 2014
(Released Thursday, Aug. 7, 2014)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	0.00	100.00	100.00	99.80	97.92	98.41
Last Week (2014-08-01)	0.00	100.00	100.00	100.00	91.89	98.41
3 Months Ago (2014-05-01)	0.00	100.00	100.00	95.93	76.60	24.77
Start of Calendar Year (2014-01-01)	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year (2013-10-01)	2.63	97.37	95.95	84.12	11.36	0.00
One Year Ago (2013-08-01)	0.00	100.00	98.23	93.86	0.00	0.00

Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

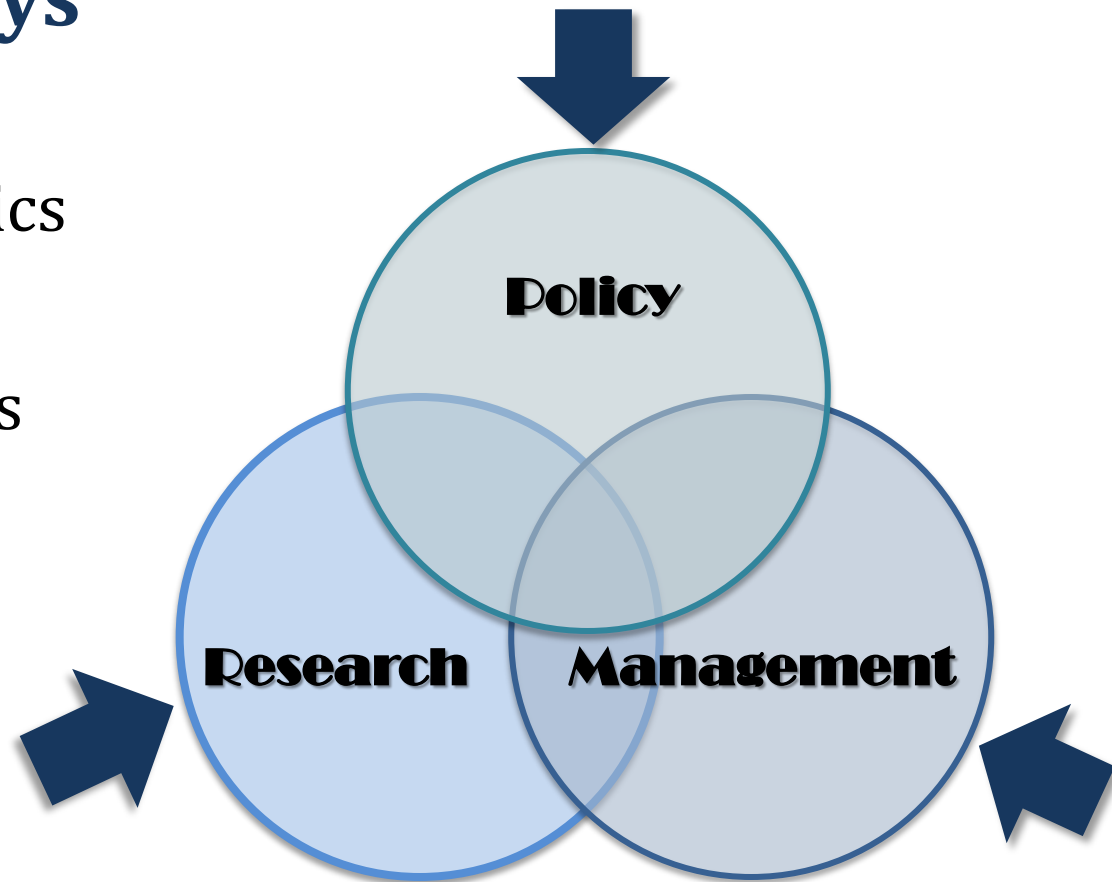
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Brad Rippey
U.S. Department of Agriculture

Adaptive Rangeland Decision-Making

Rancher Mail Surveys & Interviews

- 1) Operation demographics
- 2) Goals, values, beliefs
- 3) Management strategies
- 4) Information networks



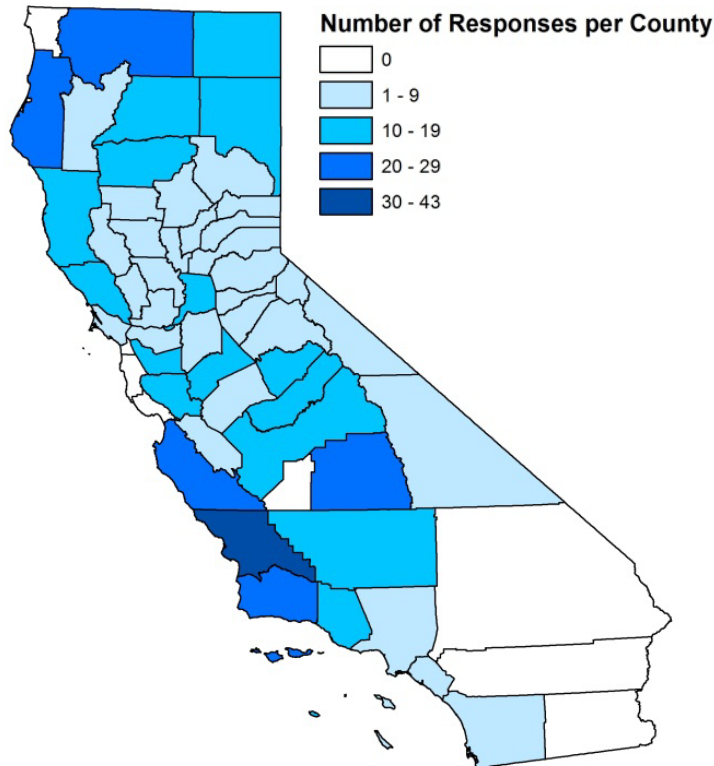
Adaptive Rangeland Decision-Making

Rancher mail survey: March-June 2011

- 509 producer members, CA Cattleman's Association

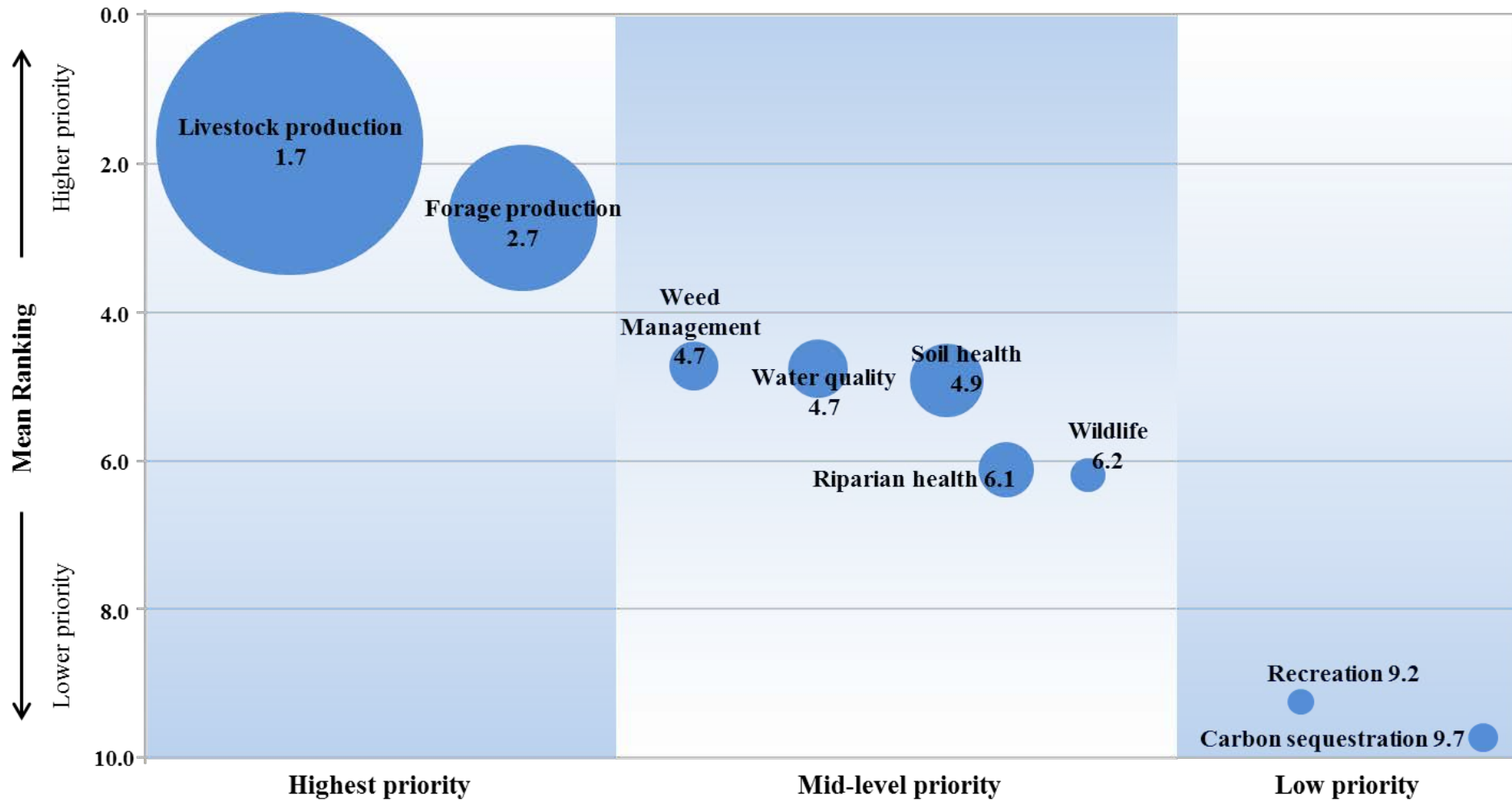
Semi-structured rancher interviews: May 2013-August 2014

- 100 ranching families across CA



- **Median ranch size: 2400 acres total**
- **>50%** include multiple land ownership types
- **Median cow-calf herd: 145**
- **Median age: 62**
- **70%** \geq 3rd generation ranching
- **20%** 1st generation ranching

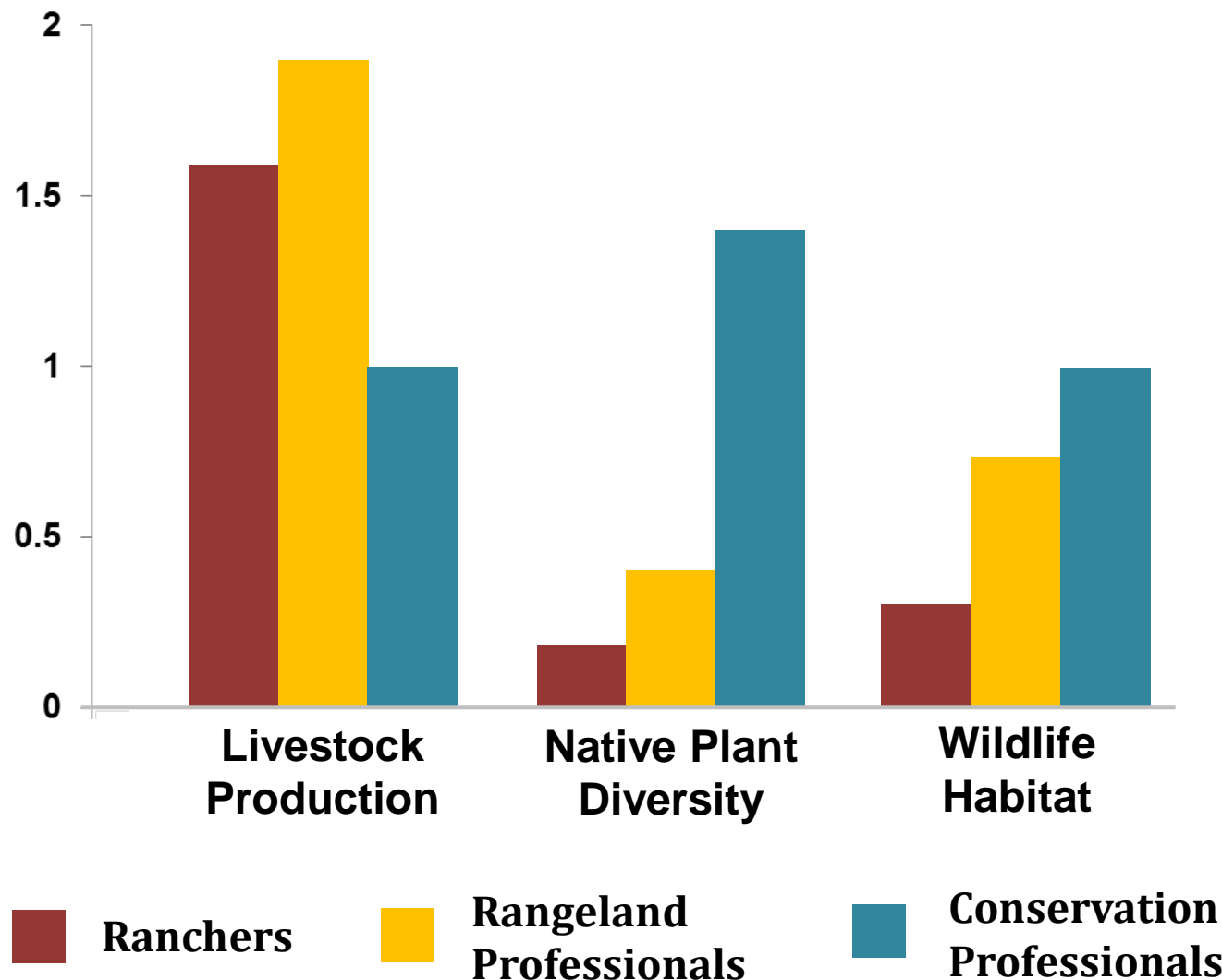
Agricultural and Natural Resources Goals



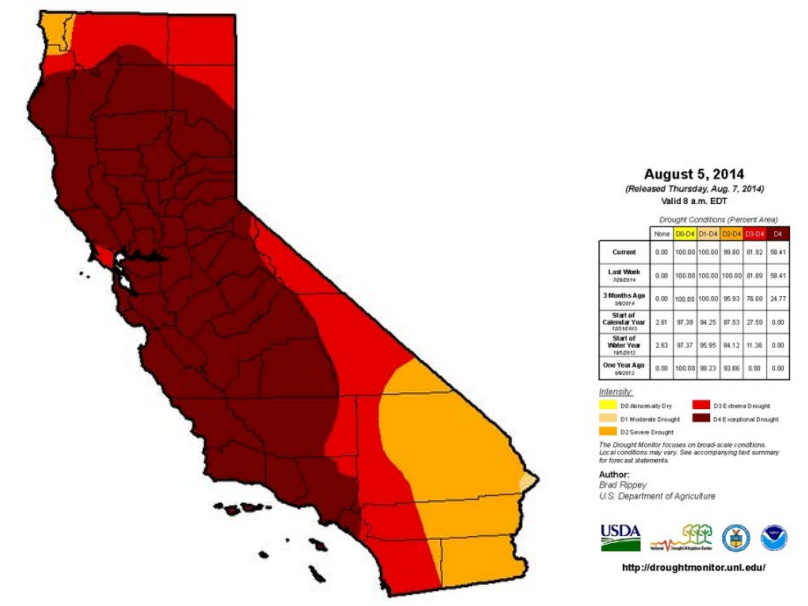
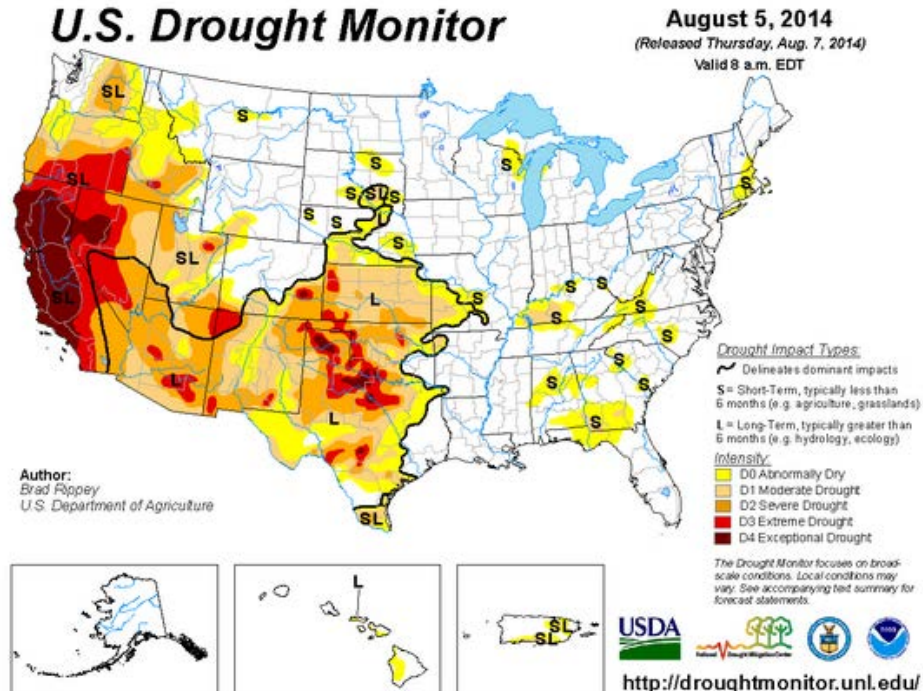
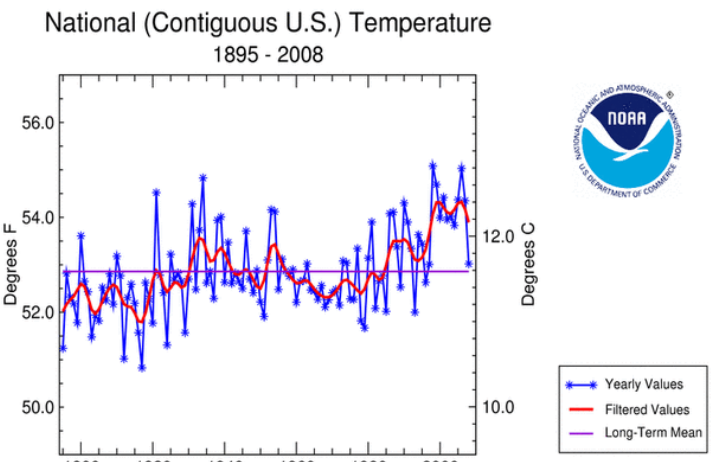
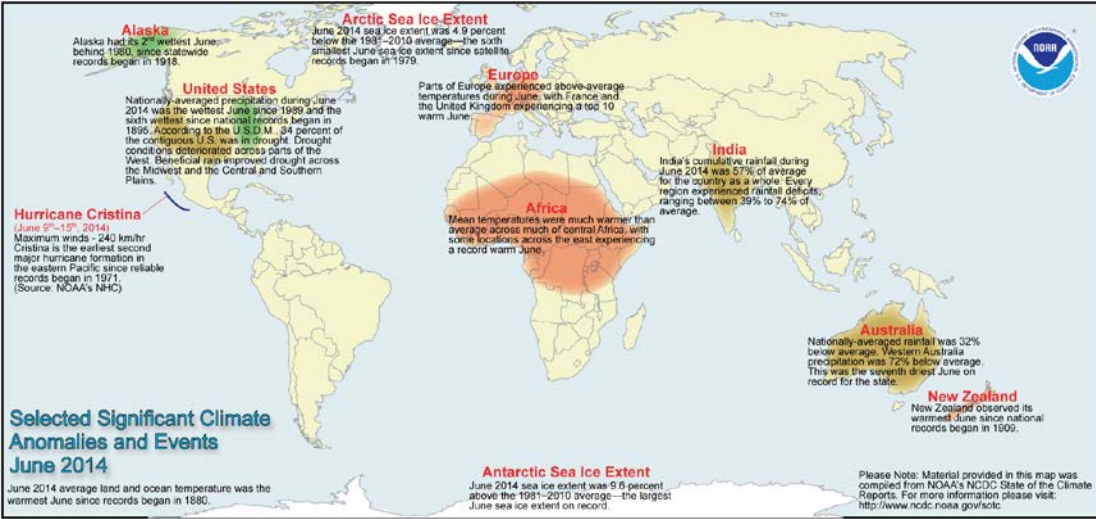
Bubble size corresponds to number of respondents indicating goal is #1 priority.
Value is average ranking for all respondents.

****Managing for Diverse Stakeholder Goals****

Participatory Adaptive Grazing Management Experiment, May 2012



Tackling multiple goals in the face of climate change



Drought Adaptation Strategies

% (n = 490)

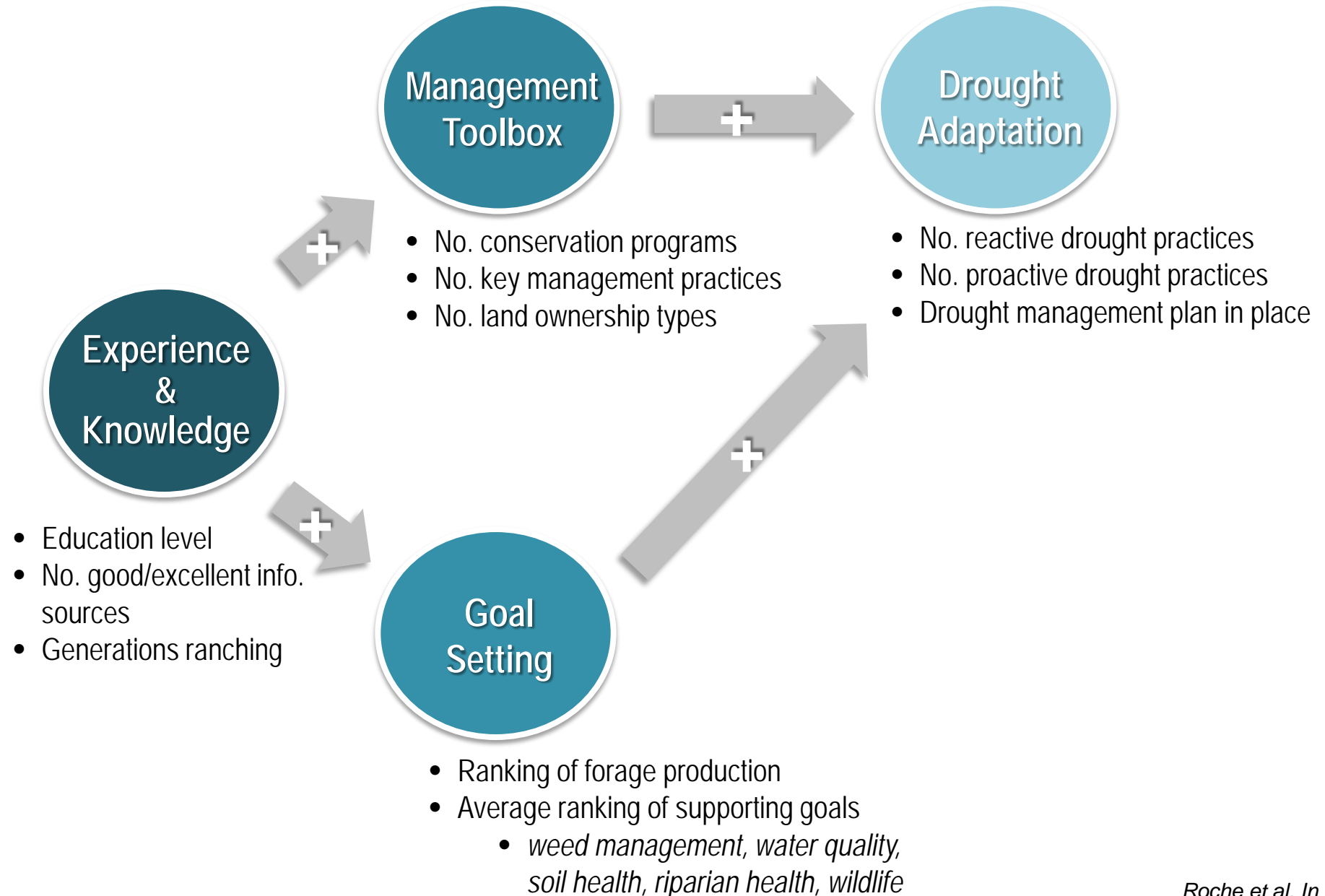
Proactive

Employ conservative stocking rates	34
Incorporate pasture rest into grazing system	23
Incorporate both cow-calf and stockers for flexibility	21
Grass bank/Stockpile forage	12
Use 1-3 month weather predictions to adjust stocking	11
Add other livestock types for flexibility	3

Reactive

Reduce herd size	70
Purchase feed	69
Apply for government assistance programs	39
Wean early	39
Rent additional pasture	26
Move livestock to another location	24
Earn off-ranch income	23
Sell retained yearlings	22
Place livestock in a feedlot	8
Allow livestock condition to decline	7
Add alternative on-ranch enterprise	4

Drought Adaptation



Sustaining Working Rangelands

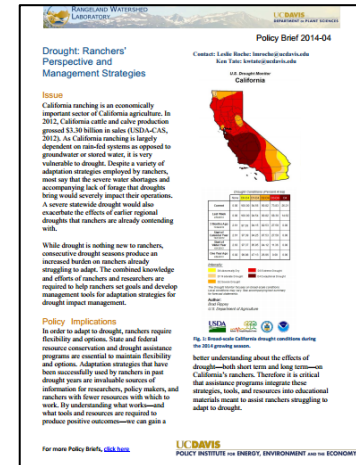
Outreach and education efforts

- Participatory approaches to increase trust and participation
- Research-management collaborations

Management flexibility

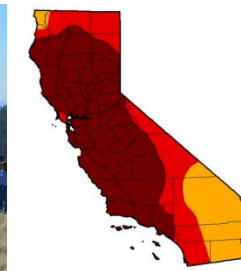
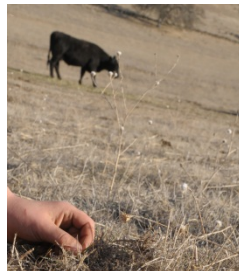
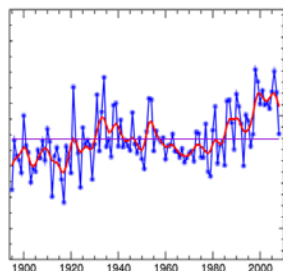
- Large toolbox
- Diversity of response options

Do you consider yourself to be an adaptive manager?



UCD Policy Brief, May 2014

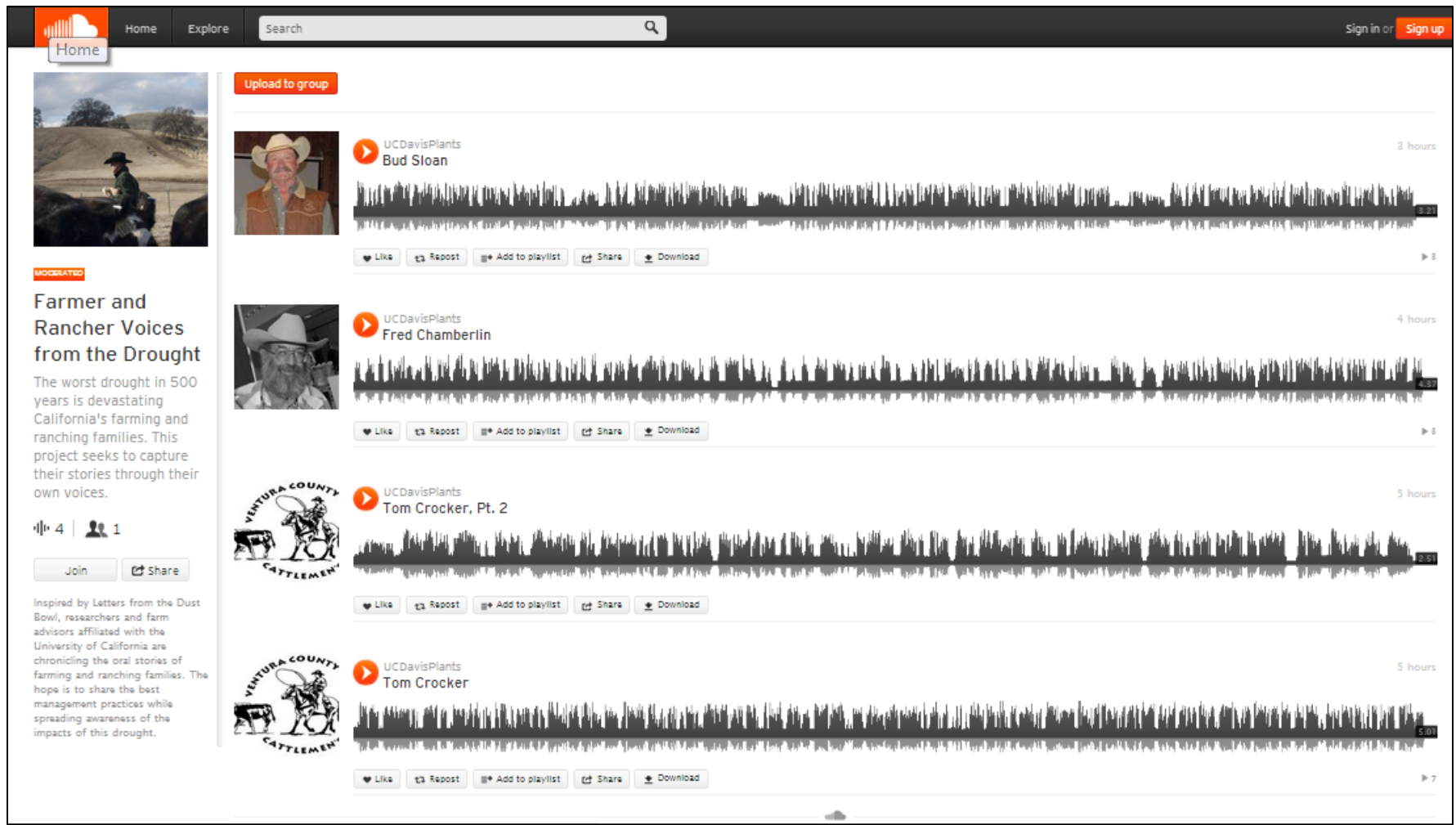
“YOU HAVE TO BE.”



Farmer and Rancher Voices from the Drought

A chronicle of oral stories of farming and ranching families.

<https://soundcloud.com/groups/farmer-and-rancher-voices-from-the-drought>



The screenshot shows a SoundCloud group page with a dark header. The header includes a 'Home' button, a search bar, and 'Sign in or Sign up' links. The main content area is divided into a left sidebar and a right main section. The sidebar features a 'Home' button, a 'Moderated' tag, a group photo of a person on a horse, a group title 'Farmer and Rancher Voices from the Drought', a descriptive paragraph about the project, a 'Join' button, a 'Share' button, and a '4' icon with a '1' icon below it. The main section displays a list of audio tracks, each with a profile picture, a name, a play button, a waveform, and interaction buttons (Like, Repost, Add to playlist, Share, Download). The tracks are: 'Bud Sloan' (3 hours), 'Fred Chamberlin' (4 hours), 'Tom Crocker, Pt. 2' (5 hours), and 'Tom Crocker' (5 hours). Each track is associated with the 'UCDavisPlants' profile. A 'Ventura County Cattlemen' logo is visible next to the 'Tom Crocker' tracks.

Home Explore Search

Sign in or Sign up

Home

Upload to group

MODERATED

Farmer and Rancher Voices from the Drought

The worst drought in 500 years is devastating California's farming and ranching families. This project seeks to capture their stories through their own voices.

4 | 1

Join Share

Inspired by Letters from the Dust Bowl, researchers and farm advisors affiliated with the University of California are chronicling the oral stories of farming and ranching families. The hope is to share the best management practices while spreading awareness of the impacts of this drought.

UCDavisPlants
Bud Sloan 3 hours

UCDavisPlants
Fred Chamberlin 4 hours

UCDavisPlants
Tom Crocker, Pt. 2 5 hours

UCDavisPlants
Tom Crocker 5 hours

VENTURA COUNTY CATTLEMEN

VENTURA COUNTY CATTLEMEN

Collaborators and Partners

Collaborators: Tracy Schohr, Justin Derner, Mark Lubell, Bethany Cutts, Emily Kachergis, Rick Standiford, Lynn Huntsinger, Mel George, Toby O'Geen Valerie Eviner, Ken Tate.

UCCE Partners: Sheila Barry, Theresa Becchetti, Josh Davy, Morgan Doran, Julie Fenzel, John Harper, Roger Ingram, Royce Larsen, David Lewis, David Lile, Glenn Nader, Scott Oneto.



Stakeholder Focus Groups

