

**Producing Healthy Forage Systems
2018 California Alfalfa & Forage Symposium
& Soil Health and Fertility Workshop**

*November 27-29, 2018
Grand Sierra Resort, Reno Nevada*

Organized by:

University of California Cooperative Extension, UC ANR and UC Davis

Hosted by:

*California Alfalfa & Forage Association
...representing thousands of California forage growers*

For Symposium information, registration, sponsorship and exhibitor opportunities,
please visit our website: www.calhay.org/symposium/

SCHEDULE OF EVENTS

Day One – Tuesday, November 27th

6:30am-7:00pm	SYMPOSIUM AND EXHIBITOR REGISTRATION
7:30am	CONTINENTAL BREAKFAST (workshop participants only)
8:00am-4:00pm	EXHIBITOR SETUP
8:15am-4:55pm	SOIL HEALTH AND FERTILITY WORKSHOP

Overview: Top-level forage production begins with the health of the soil and understanding soil fertility and nutrient management. It's well known that forages (especially legumes) contribute to healthy soils, but soils can still degrade in forage systems. This workshop reviews the principles of soil fertility and soil health and provide hands-on training for soil fertility management for forage crops. These crops include alfalfa, other legumes, and grass hay. The objective is to develop better skill sets to manage soils, cropping systems, and nutrients to maximize yields, quality, and soil health, and meet water quality regulations.

- 8:15 Introduction: Why is Soil Health Important?
Dan Putnam, Forage Specialist, University of California, Davis, CA

Session I: What are the Principles of Soil Health and Nutrient Management?

- 8:30 Principles of Soil Science, Soil Health, and Soil Fertility
Daniel Geisseler, Cooperative Extension Specialist, University of California, Davis, CA
- 9:00 Plant Nutrients: Their Role in Sustainability
Rob Mikkelsen, IPNI, Sacramento, CA
- 9:30 Building Soil Health on Your Farm
Michelle Leinfelder-Miles, UCCE, San Joaquin County, Stockton, CA
- 10:00 Discussion
- 10:15 Break

Session II. Methods for Understanding Soil Fertility & CA Soil Health Program

- 10:30 Methods for Soil Sampling and Plant Sampling for Alfalfa and Forage Crops
Nick Clark, UCCE Farm Advisor, Hanford, CA
- 10:50 Methods of Lab Analysis and Interpretation of Data
Danyal Kasapligil, Dellavalle Laboratory, Inc., Fresno, CA
- 11:30 Soil Amendments and Water and its Importance for Soil Fertility
Jim Gregory, Verdegaal Brothers, Hanford, CA
- 11:55 Discussion
- 12:00 Workshop Lunch – Healthy Soils Program
Geetika Joshi, California Department of Food and Agriculture

Session III. Economics and Policy

- 1:00 Grower Responses to Emerging Regulations on Groundwater Management in California Related to Nutrients and Salinity
John Dickey, Southern San Joaquin Valley Water Quality Coalition
- 1:30 Economics of Fertilizer Management
Mike Ottman, Extension Agronomist, University of Arizona, Tucson, AZ; Dan Putnam, Forage Specialist, University of California, Davis, CA; Tim Hays, PCA, Buttonwillow, CA
- 2:00 Discussion

Session IV: Hands-on Workshop: Putting Soil Fertility and Health into Practice

Rotating Stations with 3 breakout groups

2:15-2:55 Breakout Session 1; 3:00-3:40 Breakout Session 2; 3:45-4:25 Breakout Session 3

- BREAKOUT 1: Nitrogen Management in Grassy Forage Crops
Mike Ottman, Extension Agronomist, University of Arizona, Tucson, AZ; Dan Putnam, Forage Specialist, University of California, Davis, CA
- BREAKOUT 2: Hands-on Soil Health and Interpretation
Sarah Light, UCCE Farm Advisor, Yuba City, CA, and Michelle Leinfelder-Miles, UCCE Farm Advisor, Stockton, CA
- BREAKOUT 3: Case Studies: Interpreting your Fertility Needs from Lab Results—Diagnosing Problems
Rob Mikkelsen, IPNI, Sacramento, CA; Tim Hays, PCA, Buttonwillow, CA

- **4:30 Discussion & Session Summary: Improving Soil Health: Developing Strategies for your Farm**
Panel moderated by Dan Putnam, Forage Specialist, University of California, Davis, CA

- **5:00-7:00 SYMPOSIUM WELCOME RECEPTION WITH EXHIBITORS**
Hors D'oeuvres and No-Host Cocktails

Day Two – Wednesday, November 28th

- **6:30am-7:00pm SYMPOSIUM REGISTRATION**
- **7:00am-8:00am CONTINENTAL BREAKFAST**

7:00am-7:00pm **EXHIBITS OPEN**

8:00am-Noon **SYMPOSIUM MAIN SESSION**

- 8:00am Welcome and Announcements

Forage, Dairy Trends and Regulatory Issues (*Moderator Dan Putnam, Forage Specialist, University of California, Davis, CA*)

- 8:10 Western Dairy Trends
Anja Raudabaugh, Western United Dairymen, Modesto, CA
- 8:35 Status of the Western Hay Markets
Seth Hoyt, The Hoyt Report, Lone, CA
- 9:00 California Regulatory Trends
Jim Houston, California Farm Bureau Federation, Sacramento, CA
- 9:25 California Groundwater Situation and Groundwater Sustainability Act
Thomas Harter, Cooperative Extension Specialist, University of California, Davis, CA
- 9:50 Discussion

- 10:00 Break

Water Management and Productivity (*Moderator Shannon Mueller, UCCE Farm Advisor, Fresno County, CA*)

- 10:30 ET-based Irrigation of Alfalfa: Principles and Practical Implementations
Daniele Zaccaria, Irrigation Specialist, University of California, Davis, CA
- 10:55 Opportunities for Automation of Surface Irrigation
Khaled Bali, UC Cooperative Extension, Kearney Agricultural Center, Parlier, CA
- 11:20 Opportunities for Management of Alfalfa under High Salinity
Sharon Benes, California State University, Fresno, CA
- 11:45 Discussion

12:00NOON **SYMPOSIUM LUNCH**

- Jim Kuhn Award
Presented by Rachael Long on behalf of CAFA
- California Alfalfa & Forage Association: Update on Activities
Brandon Fawaz, Fawaz Farming, CAFA Board Member

1:30pm-5:00pm **SYMPOSIUM MAIN SESSION**

Pest Management I (*Moderator Michelle Leinfelder-Miles, UCCE Farm Advisor, San Joaquin Co., Stockton, CA*)

- 1:30 Fear No Weevil: How to Manage Weevils in Alfalfa
Rachael Long, UCCE Farm Advisor, Woodland, CA
- 1:50 Alfalfa Aphids, Caterpillars, Insecticides and IPM: What did we see in 2018 and Implications for 2019
Michael Rethwisch, UCCE Farm Advisor, Blythe, CA
- 2:10 Importance of IPM Practices for Pesticide Resistance Management
Ian Grettenberger, Extension Entomologist, University of California, Davis
- 2:30 Management of Diseases and Nematodes in Alfalfa
Don Miller, Plant Breeder, Alforex Seeds, Nampa, ID
- 2:50 Discussion

- 3:00 Break

Pest Management II (*Moderator Lynn Sosnoskie, UCCE Farm Advisor, Merced, CA*)

- 3:30 Managing Weeds in Organic and Conventional Seedling Alfalfa
Mariano Galla, UCCE Farm Advisor, Orland, CA

- 3:50 Tools of the Trade: Approaches for Weed Management in Established Alfalfa
Tom Getts, UCCE Farm Advisor, Susanville, CA
- 4:10 Poisonous Weeds have Problematic Impacts on Animals
Larry Forero, UCCE Farm Advisor, Redding, CA
- 4:30 Agronomic Practices and Impacts on Pest Management: Varieties, Cropping Systems
Dan Putnam, Forage Specialist, University of California, Davis, CA

5:00pm-7:00pm EXHIBITOR RECEPTION AND CAFA AUCTION

Hors D'oeuvres and No-host Cocktails

Day Three – Thursday, November 29th

8:00am-12:30pm SYMPOSIUM MAIN SESSION

Exports, Environment, and Forage Quality (*Moderator Rachael Long, UCCE Farm Advisor, Woodland, CA*)

- 8:00 Introduction
- 8:05 Hay Export Trends
John Szczepanski, US Forage Export Council, Portland, OR
- 8:30 US Farm Bill, International Trade and Potential Impacts on Forage Crops
Dan Sumner, Ag Issues Center, University of California, Davis, CA
- 8:55 Alfalfa & Wildlife – Why is it important?
Khara Strum, Audubon California, Sacramento, CA
- 9:20 Discussion
- 9:30 Break

Alfalfa Quality & Genetics (*Moderator Charlie Brummer, University of California, Davis, CA*)

- 10:00 Recent Changes in California Dairy Ration Formulation Strategies that Impact the Future of Alfalfa Hay as a Dairy Feed
Peter Robinson, Dairy Nutritionist, University of California, Davis, CA
- 10:25 Evolution of Laboratory Measurements – Current and Future Opportunities
Ralph Ward, Cumberland Valley Analytical Labs, Waynesboro, PA
- 10:50 Reduced Lignin Trait in Alfalfa Results from Multi-State Trials
Kim Cassida, Michigan State University, Lansing, MI
- 11:15 Innovations in Alfalfa Genetics – Presentations and Round Table Discussion
 - *University of California – Charlie Brummer, Plant Sciences Department, University of California, Davis, CA*
 - *Dupont Pioneer – Daniel Wiersma, Grimes, IA*
 - *Forage Genetics Int'l – Jake Blauer, Nampa, ID*
 - *S&W Seed Company – Mark Smith, Nampa, ID*

12:15pm ADJOURN