

**Producing Healthy Forage Systems**  
**2018 California Alfalfa & Forage Symposium**  
**& Soil Health and Fertility Workshop**  
*November 27-29, 2018*  
*Grand Sierra Hotel, 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/](http://www.calhay.org/symposium/)

**SCHEDULE OF EVENTS**

**Day One – Tuesday, November 27<sup>th</sup>**

<b>6:30am-7:00pm</b>	<b>SYMPOSIUM AND EXHIBITOR REGISTRATION</b>
<b>8:00am-4:00pm</b>	<b>EXHIBITOR SETUP</b>
<b>8:15am-4:45pm</b>	<b>SOIL HEALTH AND FERTILITY WORKSHOP</b>

**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, UC Davis*

**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, UC Davis*
- 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 Verdegaal, Verdegaal Brothers, Fresno, CA*
- 11:55 Discussion
- 12:00 Workshop Lunch – Healthy Soils Program, CDFA

## **Session III. Economics and Policy**

- 1:00 Grower Responses to Emerging Regulations on Groundwater Management in California related to Nutrients and Salinity  
*Parry Klassen*
- 1:30 Economics of Fertilizer Management  
*Dan Putnam, Forage Specialist, UC Davis & 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; 3:40-4:20 Breakout Session 3**

- BREAKOUT 1: Nitrogen Management in Grassy Forage Crops  
*Mike Ottman, University of Arizona, and Tim Hays, PCA, Buttonwillow, 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  
*Daniel Geisseler, Soils Specialist, UC Davis, and Rob Mikkelsen, ICCI, Sacramento, CA.*

**4:20 Discussion & Session Summary: Improving Soil Health: Developing Strategies for your Farm**  
*Panel moderated by Dan Putnam, Forage Specialist UC Davis*

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

## **Day Two – Wednesday, November 28<sup>th</sup>**

**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, UC Davis, CA)

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

**Water Management and Productivity** (Moderator Shannon Mueller, UCCE, 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 CAFA
- Update on California and National Research

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

**Pest Management I** (Moderator Michelle Leinfelder-Miles, UCCE, San Joaquin County, Stockton, CA)

- 1:30 Importance of IPM Practices for Pesticide Resistance Management  
*Ian Grettenberger, Extension Entomologist, University of California, Davis*
- 1:50 Fear No Weevil: How to Manage Alfalfa Weevils  
*Rachael Long, UCCE Farm Advisor, Woodland, CA*
- 2:10 IPM Practices for Managing Aphids and Worms in Alfalfa  
*Mike Rethwisch, UCCE Farm Advisor, Blythe, CA*
- 2:30 Management of Nematodes, Alfalfa Diseases  
*Don Miller, Plant Breeder, Alforex Seeds, Nampa, ID*
- 2:50 Discussion
- 3:00 Break

**Pest Management II** (Moderator Lynn Synsnoski, UCCE, Merced, CA)

- 3:30 Managing Weeds in Organic and Conventional Seedling Alfalfa  
*Mariano Galla, UCCE Farm Advisor, Orland, CA*
- 3:50 Strategies for Difficult-to-Control Weeds  
*Tom Getts, UCCE Farm Advisor, Susanville, CA*
- 4:10 Poisonous Weeds have Important Impacts on Animals  
*Larry Forero, UCCE Farm Advisor, Redding, CA*
- 4:30 Agronomic Practices Impacts on Pest Management: Varieties, Cropping Systems  
*Dan Putnam, Forage Specialist, UC Davis*

**5:00pm-7:00pm EXHIBITOR RECEPTION AND CAFA AUCTION**  
Hors D'oeuvres and No-host Cocktails

**Day Three – Thursday, November 29<sup>th</sup>**

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

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

- 8:00      Introduction
- 8:10      Hay Export Trends  
*John Szczepanski, US Forage Export Council, Portland, OR*
- 8:35      US Farm Bill, International Trade and Potential Impacts on Forage Crops  
*Dan Sumner, UC Davis*
- 9:00      Alfalfa & Wildlife – Why is it important?  
*Khara Strum, Audubon California, Sacramento, CA*
- 9:25      Discussion
  
- 9:30      Break

**Alfalfa Genetics & Quality** (*Moderator Charlie Brummer, UC Davis, CA*)

- 10:00      Western Dairy Rations and Changing Role of Forages  
*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*
- 11:25      Innovations in Alfalfa Genetics – Presentations and Round Table Discussion
  - *University*
  - *Alforex Seeds*
  - *Forage Genetics Int'l*
  - *S&W Seeds*

**12:30pm              ADJOURN**