

**2010 Alfalfa & Forage Symposium
will be in Visalia this year!
December 1 and 2, 2010**

**Alfalfa IPM Workshop
November 30, 2010**

Take advantage of this opportunity to hear more than 30 presentations on alfalfa and forage management from speakers from California as well as national experts. This year, one afternoon session is entirely focused on corn and winter forage production and silage.

The Symposium will be preceded on **November 30th** by an **Intensive Workshop on IPM Practices in Alfalfa**. It will be held at the UC Kearney Research and Extension center near Reedley. Registration for this workshop is separate from the symposium—you may register for either or both. Six PCA hours and 6.5 CCA hours for this IPM workshop are approved. See the agenda at http://ucanr.org/sites/Alfalfa_Forages/agenda/.

Register for the Symposium on or before November 3 to get the “early bird” special! A complete agenda and registration form is included with this newsletter, or you may choose to register on-line at <http://alfalfa.ucdavis.edu> using your credit card!

Wednesday, December 1

Morning Session:

Dairy Issues and Market Trends
Environmental Issues and Trends

Afternoon Breakout Sessions:

Session I – Corn and Small Grain Silage and Forage Crops
Session II – Producing Quality Alfalfa: Alfalfa Quality/Irrigation/Soils/Pest Management

PCA hours 1.5 CCA hours: 6

Thursday, December 2

Genetic Innovations in Corn and Alfalfa
Forage Production, Water, and Economics

CCA hours: 3

Managing Sclerotinia Stem and Crown Rot in Alfalfa

Sclerotinia stem and crown rot, also called “white mold” due to the white fungal growth visible on infected stems and crowns, can be important in Tulare County during wet, foggy winters. There are two fungi species that can cause this disease: *Sclerotinia trifoliorum* and *Sclerotinia sclerotiorum*. For all practical purposes, as far as we know, it doesn’t matter which one is in a particular field. Both fungi infect alfalfa plants by either growing directly to the plant as mycelium (white, threadlike fungal growth) or by airborne spores. The fungus is active primarily above ground and high humidity is a requirement for infection and growth. Cool temperatures are also needed. Given both these requirements, it is easy to see why foggy months in winter are ideal.

In established stands, infected stems die, but plants are killed only when conditions are extremely favorable—and even then it is usually only a few plants. The best way to manage this disease in an established stand is to take a cutting in late November or early December (weather permitting) so that there is little canopy through December and January when the disease is most likely to be present. Good weed control is also essential to having an open canopy. With little foliage and weeds, the stand has a chance to dry after rain or when the sun burns through the mist on a foggy day.

Seedling stands are more of a problem. They are usually dense and, depending on when they were planted, may have a well-developed canopy which holds the moisture and makes conditions very favorable for the fungus. Young plants with small crowns have a better chance of being killed from infection than established plants. It would be ideal for minimizing this disease if we could mow and harvest any growth more than 2 inches high, but that is not recommended in stands so young.

In a field study during the 2004/2005 winter, two fungicides, as yet unregistered, and Gramoxone Max were evaluated for managing Sclerotinia. Also included were treatments with two foliar fertilizers: Formula 1 and Protect Ag. The weather that winter was excellent for disease and the field had high disease pressure. The materials were applied on December 10, 2004. The first cutting was delayed due to wet weather until April 19, 2010.

Disease ratings indicated the least amount of disease was in the fungicide treatments. The untreated plots and the plots with foliar fertilizers by themselves had the most disease. The Gramoxone plots, with or without foliar fertilizers, had an intermediate level of disease.

Yield data are shown in Table 1. In the first cutting, the best fungicide had the highest yield of all treatments and less than 5% of the weight was weeds. The next highest yields were the untreated and foliar fertilizer treatments, but they also had the highest amount of weeds (12.8% and 23.0% by weight respectively). Treatments that included Gramoxone Max had the lowest total yield and also the least amount of weeds. When considering just the yield of alfalfa (not counting the weeds), the Gramoxone plots produced as well as the untreated or the foliar fertilizer treatments.

There were no statistical differences among the treatments in the second cutting, but the best fungicide treatment had the best remaining stand followed by the two treatments that included Gramoxone Max. Based on these results, Gramoxone Max applied shortly after the first sign of disease (at the rate appropriate for the size of the alfalfa) may be helpful in minimizing disease and the impact on stand.

Table 1. Dry Matter yield results and stand rating for the Sclerotinia trial in alfalfa, 2004-2005, Tulare County.

	Rate/Acre	First Cutting – April 19, 2005				2nd Cut May 20	May 26
		Total Yield T/A	% Weeds by Weight	Weeds T/A	Alfalfa T/A	Yield Tons/A	Remaining Stand %
Untreated		2.43 bc	14.8 ab	0.36	2.07	2.35	47.5 bc
Gramoxone Max	21.3 fl oz	2.22 c	2.8 a	0.06	2.16	2.33	55.9 ab
Formula 1 + ProtectAg	1 qt each	2.55 b	23.0 b	0.59	1.96	2.34	41.2 c
Gramoxone Max + Formula 1 + Protect Ag	21.3 fl oz + 1 qt each of foliar fert.	2.24 c	2.6 a	0.06	2.18	2.29	56.6 ab
Best Fungicide	18.5 oz	2.78 a	4.9 a	0.14	2.64	2.46	61.7 a

*Values within a column followed by a common letter do not differ significantly at the 5% level.

Summary: Gramoxone Max herbicide reduced disease symptoms (presumably due to opening up the canopy for drying) but was not as good as the best fungicide. Gramoxone Max reduced the total yield compared to the untreated because it reduced the amount of weeds harvested. However, it produced as much alfalfa as the untreated check. In addition Gramoxone Max reduced stand loss compared to the untreated or the foliar fertilizers.

In short, a timely application of a burn back herbicide such as Gramoxone at the first sign of Sclerotinia may help reduce disease, reduce weeds, increase alfalfa yield and reduce stand loss. However, hopefully in the future one or more effective fungicides will get registered. One fungicide, Quadris, is registered on alfalfa in California, but Sclerotinia is not on the label, and its effectiveness for controlling this disease has not been well studied.

(Photos of Sclerotinia crown and stem rot and a detailed report of this study can be found at the Tulare County UCCE website: <http://cetulare.ucdavis.edu/>)



2010 California Alfalfa & Forage Symposium Corn/Cereal Silage Mini-Symposium

December 1 & 2 - Visalia Convention Center, 303 East Acequia Avenue, Visalia, CA

Alfalfa IPM Intensive Pre-Symposium Workshop

November 30 - Kearney Ag Center, 9240 S. Riverbend Ave., Parlier, CA 93648

Organized by: UC Alfalfa Workgroup and the University of California Cooperative Extension

Website: <http://alfalfa.ucdavis.edu> PCA and CCA Credits Available

Tuesday, November 30 - Alfalfa IPM Intensive Workshop: Managing Pests while Protecting the Environment

8:30 am Registration, Refreshments & Informal Discussion

Introduction, Pretest
Principles, Tools for IPM
Pesticide Properties and Impacts for Protecting Air and Water Quality
Mitigation Measures to Protect Air and Water Quality
Strategies for Economically Viable Weed Management

12:00 pm Lunch & Field Tour - Weed Plots, Insect Plots, Disease Plots, Alfalfa Varieties

Strategies for Economically Viable Insect Management
Diseases and Nematode Diagnostics and Management
Case Studies – Challenge Yourself to Solve Real Life Problems
Tying it all Together – A Year Round IPM Approach
Evaluations/Post Test

5:30 Adjourn

6:00-8:00 Registration Open (at Visalia Convention Center)

Wednesday, December 1 - California Alfalfa Symposium and Corn/Cereal Silage Mini-Symposium

6:30 am Registration

7:00 Exhibits Open
8:00 Welcome and Introductions

Dairy Issues and Trends

Alfalfa Market Production and Price Trends - *Seth Hoyt, The Hoyt Report, Lone, CA*
Dairy Conditions and Trends - *Eric Erba, California Dairies, Inc., Visalia, CA*
Global Economic Trends: Forage, Feeds and Milk - *Leslie (Bees) Butler, Dept. of Ag. & Resource Economics, UC Davis, CA*
Impacts of Dairies and Silages on Air Quality - *Frank Mitloehner, Dept. of Animal Science, UC Davis, CA*

Environmental Issues and Trends

Understanding the Biology of Silage Preservation to Maximize Quality and Protect the Environment – *Limin Kung, Jr., University of Delaware, Newark, DE*
Why We Need to Prevent Off-site Movement of Pesticides in Alfalfa and Corn - *Terry Prichard, Dept. of Land, Air, Water Resources, UC Davis, CA*
Importance of Alfalfa and Forages for Wildlife Habitat - *Alex Hartman, Audubon California, Sacramento, CA*
An Environmental Balance Sheet for the Dairy-Forage System - *Dan Putnam, Dept. of Plant Sciences, UC Davis, CA*

12:00 NOON BANQUET LUNCH

AFTERNOON BREAKOUT SESSIONS I & II

Breakout Session I. Corn and Small Grain Silage and Forage Crops

1:30 pm Overview of Corn and Grain Forages in US and California - *Jennifer Heguy, UCCE, Modesto, CA*
Anaerobic Stability of Silage - *Limin Kung, Jr., University of Delaware, Newark, DE*
Best Management Practices for Corn Silage - *Noelia Silva-del Rio, UCCE, Tulare, CA*
Impacts and Prevention of Mycotoxins in Silage - *John Doerr, Agrarian Marketing, Inc., Middlebury, IN*
Safety of Silage Operations – *Keith Bolsen, Professor Emeritus, Kansas State University, Manhattan, KS*
Tips for Growing, Harvesting, and Feeding High Quality Cereal Silage - *Gene Aksland, Syngenta Seeds, Visalia, CA*
Silage Quality: How is it Defined and Measured? - *Karl Nestor, Senior Nutritionist, Dow Agrosciences, Wooster, OH*
Making Silage in Custom Operations: Trials and Tribulations - *Carol Collar, UCCE, Hanford, CA*

5:00 Adjourn

Breakout Session II. Production and Pest Management for Quality Alfalfa

1:30 pm Developing an IPM Program for Controlling Gophers in Alfalfa – Roger Baldwin, UC IPM Program, Kearney Ag Ctr., Parlier, CA
 Controlling Grasses and Other Summer Annual Weeds in Established Alfalfa - Barry Tickes, University of Arizona, Yuma, AZ
 Stem Nematode Problems – What are the Solutions? - Rachael Long, UCCE, Woodland, CA
 Alfalfa Nutrient Requirements, Deficiency Symptoms, and Fertilizer Application - Mike Ottman, University of Arizona, Tucson, AZ
 Improving Flood Irrigation Management in Alfalfa - Khaled Bali, UCCE, El Centro, CA
 Economic Value of Variety Selection - Andre Biscaro, UCCE, Lancaster, CA
 Adjusting Cutting Schedules for Economic Conditions - Steve Orloff, UCCE, Yreka, CA
 Forage Quality Testing, Past, Present and Future - Dan Putnam, Dept. of Plant Sciences, UC Davis, CA

5:00-6:00 EXHIBITORS' RECEPTION

Thursday, December 2

6:15 am California Alfalfa & Forage Association (CAFA) Breakfast (see CAFA booth for tickets).
 7:00 Registration

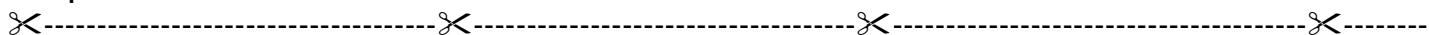
Genetic Innovations in Corn and Alfalfa

8:05 Current and Future Genetic Innovations for Corn Silage - Dennis Craig, Mycogen Seeds Co., Fresno, CA
 Adapting Alfalfa Varieties to a Water-Challenged Future - Ian Ray, New Mexico State University, Las Cruces, NM
 Genetic Innovations for Alfalfa in the Near and Long-term Future - Mark McCaslin, Forage Genetics Int'l., Minneapolis, MN
 The Necessity for Respecting Diverse Systems with the Advent of GMOs - Allen Van Deynze, Seed Biotechnology Ctr., UC Davis, CA

Forage Production, Water, and Economics

Optimizing Different Hay Types for Horses: What Have We Learned? - Anne Rodiek, California State University, Fresno, CA
 Assessing Nitrogen Uptake of Corn, Winter Forages and Alfalfa - Marsha Campbell Mathews, UCCE, Modesto, CA
 Key Water Issues Affecting Alfalfa, Forage Crops and the Dairy Industry - Danny Merkely, California Farm Bureau Federation, Sacramento, CA
 'What is the Future of Alfalfa in a World of High Costs, High-Value Crops and Globalization?' - Steve Blank, Dept. of Ag & Resource Economics, UC Davis, CA

12:20pm ADJOURN



Save Time! Register on-line by check or credit card <http://alfalfa.ucdavis.edu>

General Registration Form	
2010 California Alfalfa & Forage Symposium and Corn/Cereal Silage Mini-Symposium (one form per person)	
Name	Business/Affiliation
Address	City, State, Zip Code
Phone	E-mail - important because confirmation is by e-mail only
<input type="checkbox"/> Dec 1 & 2 Early Bird Registration: received by 11/3 \$125	<input type="checkbox"/> IPM Intensive Pre-Symposium Workshop: \$65
<input type="checkbox"/> Dec 1 & 2 Regular Registration: received by 11/23 \$155 After 11/23 and/or at the door: \$185	<input type="checkbox"/> Extra Guest Banquet Lunch Ticket: \$25 Guest name:
<input type="checkbox"/> Single Day Registration – December 1 : (includes lunch) \$90 by 11/3 or \$110 received by 11/23; On-site: \$125	
<input type="checkbox"/> Single Day Registration – December 2: \$60 by 11/3 or \$80 received by 11/23; On-site: \$95	
<input type="checkbox"/> Printed Copies of Proceedings @ \$10.00 ea. (Proceedings on CD included with registration)	
I am a (__ Hay Grower), (__ Hay Industry), (__ Seed Grower), (__ Seed Industry), (__ Other) (Check one)	
Save time! Register on-line and send check or use credit card. See http://alfalfa.ucdavis.edu.	
Total Enclosed \$ _____ (payable to "UC Regents")	
Mail to: Alfalfa Symposium, UC Ag Field Station Building, One Shields Ave., Davis, CA 95616-8593	
FedEx Address: 301 Orchard Park Drive, Davis, CA 95616	
Questions? Contact Janelle Kohl, 530-752-6996, jmkohl@ucdavis.edu , or Sherry Cooper, 530-752-1581, slcooper@ucdavis.edu	
ANR Program Support Unit. Note: All registration fees will be higher for on-site registration.	

For lodging information, see <http://alfalfa.ucdavis.edu> or [http://ucanr.org/sites/Alfalfa_Forages/Hotel_Information/Hotel contact information](http://ucanr.org/sites/Alfalfa_Forages/Hotel_Information/Hotel_contact_information) (Be sure to tell them you are with the Alfalfa Symposium): Comfort Suites, 559-738-1700 • Marriott, 559-636-1111 • Fairfield Inn, 559-636-7600 Hampton Inn, 559-732-3900 • Holiday Inn, 559-651-5000 • Lamp Liter Inn, 559-732-4511

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Field Crop Notes

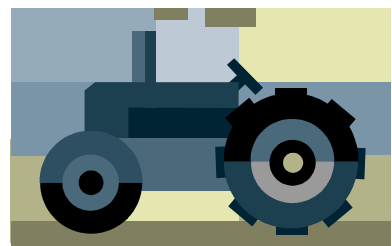
October 2010

Register Now!!

2010 California Alfalfa &
Forage Symposium

November 30, December 1-2, 2010
Agenda & Registration Forms Inside

Carol Frate, Farm Advisor



Inside this Issue: Managing Sclerotinia in Alfalfa

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