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University of California
Agriculture and Natural Resources
Making a Difference for California

UCCE

Field Crop Notes
Tulare & Kings County

Vol. 9, Issue 3, October 2012

2012 California Alfalfa & Grains Symposium

Doubletree Hotel, Sacramento, CA
Monday, December 10 – Wednesday, December 12, 2012

Learn about the latest innovations in alfalfa & grains!

Monday, December 10

8:30 a.m.-5:30 p.m. **Delta Agricultural Tour:** This is a full-day tour of the Sacramento-San Joaquin River Delta region of Northern California, with an emphasis on agriculture, wildlife, natural resources and water issues, especially as related to forage and grain crops. ***Separate registration cost includes box lunch and refreshments. Space is limited, so sign up early.***

7-11 a.m. and 4-6 p.m. **Exhibitor Set-up**

6:00-7:00 p.m. **Welcome Reception** at the Doubletree with light refreshments and a no-host bar

6:00-8:00 p.m. **Early Registration** at the Doubletree Hotel

For full details of program & registration online, go to http://ucanr.edu/sites/Alfalfa/

Tuesday, December 11

6:30 a.m. Registration
7:00 Exhibits Open
8:00 Introductions–Dan Putnam, UC Davis, Conference Chair
8:05 Welcome–Karen Ross, Secretary, California Dept. of Food and Agriculture

Industry Economic Trends—Markets, Global Issues, Dairies
Moderator: Steve Orloff, UCCE Siskiyou County, Yreka, CA

8:10 Current Hay & Forage Market Trends—Seth Hoyt, The Hoyt Report, Ione, CA
8:35 Global Wheat Market Trends—Steve Wirsching, Director, US Wheat Associates West Coast Office, Portland, OR
9:00 Economic Trends for Dairies in California—Bill Van Damm, Alliance of Western Milk Producers, Sacramento, CA
9:25 Discussion
9:35 Break

Megatrends Affecting Alfalfa and Grain
Moderator: Janice Cooper, California Wheat Commission, Woodland, CA

10:10 Megatrends: Fertilizer Supply & Cost Trends—Rob Mikkelsen, International Plant Nutrition Institute, Merced, CA
10:35 Megatrends: What about California Water Prospects?—Sarge Green, CSU, Fresno, CA
11:00 Megatrends: Emerging Water Quality Requirements for Irrigated Lands—Joe Karkoski, Irrigated Lands Program, Central Valley Water Quality Control Board
11:25 Megatrends: What are Strategies for the Future of Water-use Efficient Alfalfa Production Systems?—Dan Putnam, UC Davis
11:50 Discussion
12:00 Banquet Lunch

Breakout Session I. Producing Alfalfa from A to Z: What are the most important things to remember about producing a high yielding, high quality alfalfa crop?

Moderators: Rachael Long, UCCE Yolo County, Woodland, CA and Steve Orloff, UCCE Siskiyou County, Yreka, CA

1:30 Key Issues for Stand Establishment—Dan Putnam, Department of Plant Sciences, UC Davis
1:50 Variety Selection—Carol Frate, UCCE Tulare County, Tulare, CA
2:10 Key Strategies for Weed Management—Mick Canevari, UCCE Emeritus, Stockton, CA
2:30 What are the Most Important Things to Remember about Insect Management?—Larry Godfrey, Department of Entomology and Nematology, UC Davis
2:50 Discussion
3:00 Break
3:30 What are the Most Important Soil Fertility Issues for Alfalfa?—Tim Hays, Wilbur Ellis Co., Lancaster, CA
3:50 Key Irrigation Management Practices for Alfalfa—Blake Sanden, UCCE Kern County, Bakersfield, CA
4:10 Harvest Management Principles—Steve Orloff, UCCE Siskiyou County, Yreka, CA
4:30 What are the Most Important Alfalfa Quality Attributes?—Ed DePeters, Department of Animal Science, UC Davis
4:50 Discussion
5:00 Adjourn

Breakout Session II. Producing Wheat from A to Z: What are the absolutely most important things to remember about producing a high yielding, high quality wheat crop?

Moderators: Janice Cooper, California Wheat Commission and Doug Munier, UCCE Glenn County, Orland, CA

1:30 Wheat Variety Selection—Lee Jackson, CE Specialist Emeritus, UC Davis, CA
1:50 Stand Establishment—Kent Brittan, UCCE Yolo/Solano Counties, Woodland, CA
2:10 Weed Management in Wheat—Steve Wright, UCCE Tulare/Kings Counties, Tulare, CA
2:30 Nitrogen Management—Steve Orloff, UCCE Siskiyou County, Yreka, CA
2:50 Discussion
3:00 Break
3:30 Irrigation Management—Mike Ottman, School of Plant Sciences, University of Arizona, Tucson, AZ
3:50 Fungicides for Stripe Rust—Doug Munier, UCCE Glenn County, Orland, CA
4:10 Understanding Grain Quality—Gene Aksland, Agronomic Services, Visalia, CA
4:30 Marketing Grains—Geoff Schulz, Penny Newman Grain, Elk Grove, CA
4:50 Discussion
5:00 Adjourn

5:00-6:30 p.m. Exhibitor's Reception at the Doubletree with light refreshments and no-host bar
Dinner (on your own)

Wednesday, December 12

6:15 a.m. CAFA Breakfast—See CAFA table for tickets

Crop Biology and Innovations in Genetics: Wheat and Alfalfa

Moderator: Dan Putnam, UC Davis

8:00 Introductions
8:05 Understanding Wheat Growth Development to Maximize Yield Potential—Mike Flowers, Oregon State University, Corvallis, OR
8:30 Current Advances in Genetic Improvement in Wheat—Jorge Dubcovsky, Department of Plant Sciences, UC Davis
8:55 Understanding Growth and Development of Alfalfa to Enhance Management for Forage Yield and Quality—Larry R. Teuber, Department of Plant Sciences, UC Davis
9:20 Envisioning the Future of Genetic Improvement in Alfalfa—Dan Gardener, Dairyland Seeds, Sloughhouse, CA
9:40 Envisioning the Future of Genetic Improvement in Alfalfa—Mark McCaslin, Forage Genetics International, Minneapolis, MI
10:00 Discussion
10:10 Break

Current Trends in Markets and Technology

Moderator: TBA

10:35 Hay Export Situation and Prospects—World Demand for Forages–John Szczepanski, US Forage Export Council, Portland, OR
11:00 Innovations in Forage and Grain Harvesting Technology—Matthew Digman, USDA-ARS Dairy Forage Center, Madison, WI
11:25 Observations on Conservation Tillage with Forages and Grains and Promoting Change in Agriculture—Dino Giacomazzi, Dairy Farmer, Hanford, CA
11:50 Discussion
12:10 Adjourn

Additional Information on Blackeye CB46 with Fusarium Wilt Symptoms

Carol Frate, UCCE Farm Advisor, Tulare County

In the last issue of Field Crop Notes, there was a report of a Tulare field of CB 46 with symptoms of Fusarium Wilt. This is cause for concern because CB 46 is resistant to the most common strain of blackeye Fusarium Wilt, Race 3. One lab has confirmed that *Fusarium oxysporum* was isolated from the infected plants. This is most likely Race 4 of the Blackeye Fusarium Wilt, which can overcome the resistance gene in CB 46.

In the last issue it was also mentioned that CB 27, which has resistance to Race 4, is an alternative variety to plant. However, CB 50 was not mentioned, and it should have been! CB 50 is a newer variety than CB 27; it also has resistance to Race 4, and it is probably a better choice to plant.

Remember this is Race 4 of the Fusarium Wilt fungus that infects blackeyes, and it is different from the Fusarium Wilt fungus that infects cotton.

Fall is the Time to Fertilize

Shannon Mueller, UCCE Farm Advisor, Fresno County

I visited a grower recently who noticed his alfalfa wasn't coming back as quickly after cutting this summer. He had taken plant tissue and soil tests which both indicated that phosphorus was deficient in the field. Since other management practices appeared to be in line, it looked like phosphorus might indeed be the culprit. Now he was trying to decide which phosphorus fertilizer to use, how much to apply, and when to apply it.

A high-analysis phosphorus fertilizer, such as 11-52-0, or liquid 10-34-0 is usually the most economical source of phosphorus, and both of these sources will result in the same yield response per pound of P_2O_5 applied. I cautioned that if choosing a fertilizer that also contains some nitrogen, like these do, he would need to pay attention to weed control because the added nitrogen could stimulate weed growth.

This grower expects to produce around 10 tons/acre/year of alfalfa in that field. Given that yield expectation, the crop will remove 52 pounds of phosphorus each year (119 pounds of P_2O_5). Since this is a two-year old field and the grower would like to keep it in for two more years, he will need to provide approximately 240 lb/A of P_2O_5. Since his test results indicated current phosphorus levels are in the *deficient* range, reference tables recommend applying 120-180 lb/A of phosphorus for an 8 ton yield or 180-270 lb/A of phosphorus for a 12 ton yield level.

It was good that this grower had all of his information collected when he called this week because fall is the time to fertilize! It is recommended that phosphorus applications are scheduled sometime between October and February because it takes 60-90 days for alfalfa to fully respond to the fertilizer application. Mid-season applications of phosphorus can be injected into the irrigation water if there is good water distribution and tailwater is controlled. Phosphorus can also be applied to the soil surface as either dry granular or a liquid fertilizer before the initiation of much regrowth. Blake Sanden in Kern County has had great success with a winter application of biosolids compost with 2.5% P_2O_5 on a 68% dry matter basis (32% moisture). The per unit cost based on P_2O_5 is extremely reasonable. Keep an eye out for more information from Blake on this topic.

I recommended that next spring the grower return to the same areas in the field he sampled this year and re-sample the alfalfa at about 10% bloom to re-evaluate the fertility status. I understand that most growers don't wait until 10% bloom to harvest, but current reference tables are calibrated with alfalfa at this stage of maturity. Dan Putnam and Steve Orloff are working on a project that will soon provide better information on how fertility levels correlate with different growth stages (early bud, late bud, 10% bloom).

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