

Meeting Announcements

**Mark your calendar for the 2012 California Forage & Grains Symposium
December 10-12, 2012 • Doubletree Hotel, Sacramento, CA**

This year we're combining alfalfa and grains for a very full program on current production practices for these crops (over 30 speakers!). There will be a tour of the Sacramento Delta on Dec. 10, followed by the program on Dec. 11-12. Stay tuned for upcoming registration and program information at <http://alfalfa.ucdavis.edu>.

Conservation Agriculture & Controlled Traffic Farming 2012 Locations, dates, and times below. No registration, no cost.

For more information see: <http://ucanr.org/sites/ct/>

Five national and international speakers will be addressing the following topics in an interactive meeting format to encourage discussion of the following:

- What are conservation agriculture and controlled traffic farming systems?
- What are the benefits of these systems?
- Will these systems be important in future systems in California's Central Valley?
- What is the science and practical aspects of these practices?

Speakers include:

Jerry Hatfield, Director of USDA-ARS Soils Tilth Lab; Ames, Iowa

Don Reicosky, Retired USDA-ARS

Clay Mitchell, Farmer; Geneseo, Iowa

Rolf Derpsch, No-Till Expert; Paraguay

John McPhee, Tasmanian Institute of Agriculture; Tasmania, Australia

Your choice of dates & location:

DATE	TIME	CITY	LOCATION	PHONE
August 28	1 – 4 pm	UC Davis	UCD Heidrick Ag Equipment Center Hwy 113 and Hutchinson Drive	Jeff Mitchell (559) 303-9689
August 29	8 – 11 am	Modesto	UCCE Office 3800 Cornucopia Way	(209) 525-6800
August 29	1 - 4 pm	Five Points	UC West Side Field Station 17353 West Oakland	(559) 884- 2416
August 30	8 – 11 am	Bakersfield	UCCE Office 1031 South Mount Vernon Way	(661) 868-6200

UC Davis Dry Bean Field Meeting to View Breeding/Variety Trials
Thursday, September 6, 2012, 10-11:30 am

This trial includes plantings of lima bean: Advanced generations of large bush lima, a core collection from CIAT, nitrogen trials, and a small collection of the Caribbean (the latter two are introductions to start testing for nematode and lygus resistance once seed increases have occurred). Common bean plantings include seed treatment trials, F4 generations of cranberry beans being selected for growth habit, seed type, and absence of shattering. There is also the Cooperative Dry Bean Nursery and a nursery with drought tolerant materials. Dr. Paul Gepts, UC Davis Plant Sciences is looking forward to feedback from growers and industry on these trials and on how commercial fields are looking this year.

This meeting will be followed by a free lunch with tri-tip, beans, salad, fresh fruit, and sodas. Please RSVP with Rachael Long at the UCCE office in Woodland (530) 666-8734 or rflong@ucdavis.edu if you plan to stay for lunch.

Directions: UC Davis Agronomy Farm: From Highway 113, go west on Hutchison Drive about 1.5 miles (turning north at the first round-a-bout and west at the second). Turn south on Hopkins Rd off Hutchison Drive. Turn east just past the Agriculture and Natural Resources building and park along the fence under the olive trees across from Bee Biology (same field as the last several years).

Overseeding Forages in Alfalfa

Fall is the best time to overseed forages into alfalfa to help increase production of older or weakened alfalfa stands. However, mixed alfalfa stands will result, changing the forage quality, so be sure to know your markets for your hay before overseeding. More information on overseeding can be found in the UC ANR publication, "Overseeding and Companion Cropping in Alfalfa," #21594 available at <http://anrcatalog.ucdavis.edu/Alfalfa/21594.aspx> for \$10.00. In the future, we hope to make this publication available online ('view only'). This book is a concise, easy-to-use, 31-page guide that's illustrated with photos and tables, including the following information:

- Factors to consider for overseeding, including selecting the right varieties.
- Seeding dates and rates for various crops used in overseeding.
- Harvest compatibility.
- Pest interactions in mixed alfalfa crops.
- Quality, market and economic considerations of mixed alfalfa crops.

Planting Alfalfa this Year?

Variety Selection The UC Statewide Extension Alfalfa and Forage Specialist, Dan Putnam, oversees a coordinated statewide alfalfa variety testing program. Results are available at: <http://alfalfa.ucdavis.edu/>. This web address will take you to the home page of the UC Alfalfa Workgroup. There is a lot of alfalfa and forage information available on the site. In the brown horizontal bar near the top of the home page, click on "Variety Selection", and it will list several locations. For the Sacramento Valley, use the UC Davis location. Remember not to make decisions on just the first year of a trial because early front runners often fail to continue leading the pack, and slow starters can often increase production during the 2nd and 3rd years of a trial. It is impossible to test all potential varieties so if you can't find the one you are looking for, check other locations and previous years.

Another helpful web site for choosing alfalfa varieties is <http://www.alfalfa.org/>, the home page for the National Alfalfa and Forage Alliance. Click on "Education" in the green horizontal bar near the top of the page for a drop down list that includes the "Alfalfa Variety Leaflet." This leaflet has the list of commercial varieties and who markets them. Varieties are listed by their dormancy class (higher ones are at the end). It also includes how the variety is rated for resistance to various pests and diseases, a useful tool for selecting which one to plant.

Pre-Plant Fertilization The nutrient most commonly deficient in alfalfa production is phosphorus, and the nutrient taken up by alfalfa in the second largest amount is potassium (nitrogen is the nutrient used by alfalfa in the greatest amount). Soil tests are very good indicators for phosphorus and potassium and can be used before planting to determine if applications are needed. Sampling procedures are very important because the samples should represent the field. If some areas of a field are a different soil type or there are areas where the previous crop showed different growth, then sample those areas separately. Consult with your crop consultant, lab, or farm advisor for more information on sampling procedure.

UC guidelines for **phosphorus** (analyzed with the bicarbonate extract) indicate that 5 ppm or less is deficient, 5-10 ppm is marginal, 10-20 ppm is adequate and greater than 20 ppm is high.

For **potassium** (analyzed with ammonium acetate as the extract), less than 40 ppm is deficient, 40-80 ppm is marginal, 80 – 125 ppm is adequate, and more than 125 ppm is high.

When fertilizing with phosphorus prior to planting it is not economical to apply any more than 200 lbs P₂O₅ (or 400 lbs 11-52-0) per acre at any one time (based on plant uptake). It's far more economical to apply annual applications of 75 to 100 lbs P₂O₅/acre in January or February of each year followed by tissue sampling the fourth or fifth cutting to adjust the rate either more, or less, the next year as noted below.

Fertilizing Established Alfalfa Stands

Tissue testing is usually the recommended method for determining the need to fertilize established plantings. Collect 40-60 stems from at least 30 plants in each representative area of the field just before harvest. Different parts of the plants are analyzed for the different nutrients. For phosphorus and potassium, the stems from the middle third of the plant are used. For sulfur, leaves from the middle third of the plant are tested. For boron and molybdenum (seldom deficient in our area), the top third of the plant is analyzed.

Interpretation of test results for alfalfa plant tissue samples taken at one-tenth bloom***

Nutrient	Plant part	Unit	Deficient	Marginal	Adequate	High
Phosphorus (PO ₄ -P)	Middle 1/3 stems	ppm	300-500	500-800	800-1,500	>1,500
Potassium	Middle 1/3 stems	%	0.40-0.65	0.65-0.80	0.80-1.5	>1.5
Sulfur (SO ₄ -S)	Middle 1/3 leaves	ppm	0-400	400-800	800-1,000	>1,000
Boron	Top 1/3	ppm	< 15	15-20	20-40	>200
Molybdenum	Top 1/3	ppm	<0.3	0.3-1.0	1-5	5-10

***Almost all alfalfa is now cut younger than 1/10th bloom. Phosphorus concentrations should be higher if alfalfa is cut at bud stage (1,200 ppm at mid-bud, and even higher 1,600 ppm, if cut at very early bud stage). Other nutrient concentrations should be approximately 10% higher than when sampled at 1/10th bloom growth stage (multiply tabular values by 1.10). From: *Irrigated Alfalfa Management for Mediterranean & Desert Zones*, UC ANR Publication 3512).

Cost of Production Study

At long last, the 2012 sample costs to produce dryland oat hay in the Sacramento Valley is online at <http://coststudies.ucdavis.edu>. Other cost of production studies for a range of crops in California are also available on this website. They are generally updated every five years.

Rachael Long, UCCE Farm Advisor, rflong@ucdavis.edu

