



# Pest Control Notes

Yolo-Solano-Sacramento Counties

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## Meeting Announcements

### ❖ UC-ANR Water Resources Coordinating Conference and Surface Water Quality Workshop

**Where:** Heidrick Ag History Center in Woodland, CA

**When:** April 26 - 27, 2006

**Why:** The purpose of the water resources coordinating conference is to provide a "big picture" view of water issues facing California. The Surface Water Quality Workshop will provide more specific information on what is being done to address specific water quality issues facing the state. Topics to be addressed will include:

- Statewide water issues
- TMDLs
- Irrigated Lands and Agricultural Discharge Waivers
- Pesticide Runoff and Mitigation
- Nutrient Runoff and Mitigation
- Pathogen Runoff and Mitigation

**More information:** The conference agenda and registration form are available online at: <http://lib.berkeley.edu/WRCA/WRC/wrcc06.html>

### ❖ UC Davis Alfalfa and Small Grains Field Day

**Where:** UC Davis Agronomy Field Headquarters

**When:** May 9, 2006 8 a.m. – 4:45 p.m

**Bonus:** 6 CE hours offered

The University of California Cooperative Extension and Department of Plant Sciences, UC Davis, is pleased to announce the Small Grains Alfalfa and Forage Field Day to be held on the Agronomy Farm, UC Davis Agronomy Field Headquarters, Hutchison Road, Davis, CA (*directions: take Hutchison Rd. 1/3 mile West from 113 in Davis-headquarters on left*).

8:00 am: Registration

8:30 am - Noon: Small Grains Field Day

Noon - 1 pm: Barbeque Lunch (sponsored by California Crop Improvement Association)

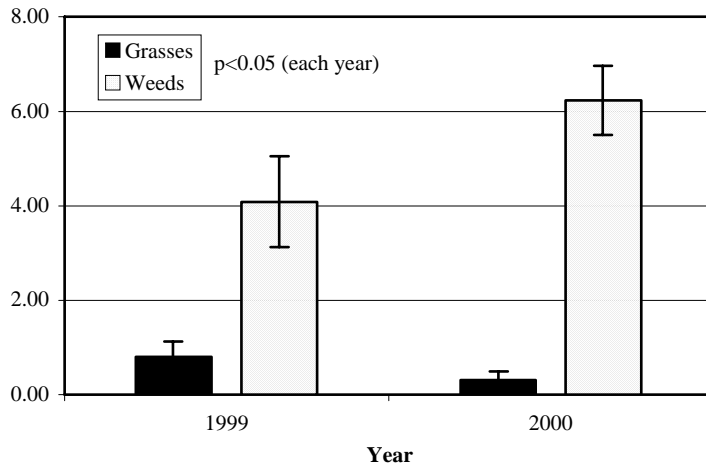
1 - 4:45 pm: Alfalfa and Forages Field Day

## Farmscaping with Native Perennial Grasses

A two-year study in Yolo County by R. Long and C. Pease indicates that widespread restoration with native perennial grasses around farms could have an impact on several field-crop pests in the Sacramento Valley. Our work compared the abundance of pest and beneficial insects in native perennial grass stands versus weed infested areas (primarily mustard, radish, and knotweed) on four field-crop farms. Our data showed that the pest population (*Lygus*, cucumber beetles, stinkbugs, flea beetles, armyworms, and cutworms) was significantly lower in the native grasses than in the weeds for both years of our study. There were no differences in the numbers of beneficial insects in the native grass and weed plots where both sites provided good habitat for these insects. Wintertime monitoring documented that few pests over-wintered in the native perennial grasses, with the exception of creeping wildrye and deergrass. There we found some consperse stinkbug, a major pest of tomatoes. However, we also found aggregations of ladybird beetles using the deergrass as a winter refuge as well.

Figure 1. Mean number of *pest insects* in field borders with native perennial grasses or weeds in Yolo Co. There were significantly more pests in the weeds than the grasses in both years ( $P < 0.05$ ). Pests sampled included stinkbug (primarily consperse, but also red-shouldered, and southern green) cucumber beetles, *Lygus* bug, flea beetles, armyworms, and cutworms.

### Number of pests/10 sweeps

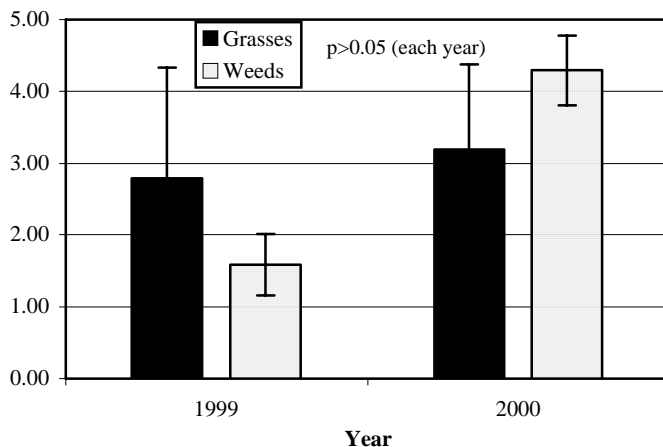


### Native Grasses Sampled

- *Purple needlegrass*
- *California onion grass*
- *Nodding needlegrass*
- *Blue wildrye*
- *One-sided bluegrass*

Figure 2. Mean number of *beneficial insects* in field borders with native perennial grasses or weeds in Yolo Co. There were no differences in numbers of beneficial insects between the grasses and weeds for either year ( $P > 0.05$ ). Beneficial insects included the minute pirate, assassin, big-eyed, and damsel bugs, soldier beetles, lacewings, lady beetles, hoverflies, and predatory wasps.

### Number of Beneficial Insects/10 sweeps



## Frost

With the cold temperatures we've been having this winter, I've noticed some frost damage in garbanzo fields (wilted leaves that later turned brown) but the plants should grow out of this damage. Please contact me if you see either of the following diseases in your garbanzo or alfalfa fields as we're trying to get more information on the status of these diseases in the Sacramento Valley:

- 1) Sclerotinia (white mold) in alfalfa and garbanzos:** The nearly 5 inches of rain we've had during the last week make perfect disease conditions for sclerotinia in both garbanzos and alfalfa. This fungal disease can be identified by the white mycelial growth (usually starting at the base of the plant) and brown lesions on the stems and leaves that cause plant dieback. Sclerotinia has a wide host range including sow thistle, groundsel, mustard, radish, and legumes. The same species that affect alfalfa will also affect garbanzos. Currently there are no fungicides registered for sclerotinia control in either alfalfa or garbanzos, but several appear promising such as Pristine, a foliar fungicide by BASF. In alfalfa, established fields usually grow out of this disease but seedling fields will show some stand loss. In garbanzos, UC research trials indicate several varieties that show some tolerance to sclerotinia that hopefully will be available in the near future. We'll also be looking at the fungicidal seed treatment Dynasty (by Syngenta) to determine the impact of this product on sclerotinia control in garbanzos.
- 2) Ascochyta in garbanzos:** Ascochyta is another fungal disease that will be favored by the wet weather we've been having. Symptoms include circular lesions and brown spots on the pods, leaves and stems that can girdle and kill plants. Seed treatment with Merctect is the best way to control this disease. Foliar applications with fungicides Headline and/or Quadris will also control ascochyta in garbanzos.

For frost prevention in orchards, Wilbur Reil passed along information that I thought would be helpful:

Although we normally don't want to think about problems such as frost that occur during the spring, there are a few cultural practices that can help minimize damage. Sometimes one or two degrees difference in temperature can mean whether a crop is lost or saved. Tall vegetation or weed growth is the coldest condition possible but very loosely disked soil is not too much warmer. The following chart shows approximate temperature differences that can be expected under various orchard floor management practices.

<u>Ground Preparation</u>	<u>Temperature Change*</u>
Bare, Firm, Moist Ground	Warmest
Shredded Cover crop, Moist Ground	½°F cooler
Low Growing Cover crop, Moist Ground	1 to 3°F colder
Dry, Firm Ground	2°F colder
Freshly Disked, Fluffy Ground	2 to 3°F colder
High Cover crop	2 to 4°F colder
High Cover crop Restricted Air	6 to 8°F colder

\*All conditions are compared to bare, firm, moist ground. Strip weed control down the tree row will provide warm conditions in proportion to the area without vegetation, i.e. if 25 percent of the total is bare and 75 percent has a high cover crop, the orchard will be 1½ to 3° colder than bare, firm, moist ground.

## **Publication and Web Site Information of Interest:**

- ANR Catalog with 2006 update now available at our office or on-line at <http://anrcatalog.ucdavis.edu>
- \*New publication: Pesticide Choice: Best Management Practices for Protecting Surface Water Quality in Agriculture, publication #8161 available through our office or as free publication download on-line at <http://anrcatalog.ucdavis.edu>
- Integrated Pest Management Guidelines and Water Quality information available on-line at <http://ipm.ucdavis.edu/>
- Alfalfa information available on-line at <http://alfalfa.ucdavis.edu/>
- Crop Production cost information available on-line at <http://coststudies.ucdavis.edu>

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**March 10, 2006**