



# Pest Control Notes



Yolo-Solano-Sacramento Counties

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**Rainfall to date:**

18.08 inches

Average: 17.5 inches

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

Wednesday, May 7, 2003 —8:30a.m.-4:00p.m.

UC Davis Agronomy Field Headquarters

*No fee, no pre-registration, 6 PCA credits applied for*

### **8:30 Registration-Remarks**

Welcome

Foundation Seed and Certification Services

California Wheat Commission

### **9:00-Noon Small Grains Field Day**

FGIS Demonstration

Wheat Breeding and Genetics

Barley Breeding and Genetics

Oat Breeding and Genetics

Regional Wheat, Durum, Barley, Triticale and Oat Germplasm Evaluation

Stripe Rust Screening: Wheat and Barley

Evaluation of Seed Treatment Fungicides

**Noon—Barbeque Lunch** (Sponsored by California Crop Improvement Association)

### **1-4-Alfalfa & Forage Field Day** (topics)

Hay Sampling Certification

Stem Nematode and Resistance of Varieties

Weed Control Options for Alfalfa

Alfalfa Weevil Control

Alfalfa Varieties, Cutting Schedules, and Traffic Patterns

Alternative Perennial Grasses and Ryegrass

Preventing Offsite Pesticide Movement in Alfalfa

Poisonous Weeds

Vertebrate Pests

**Directions:** From Hwy 113, exit at Hutchison Drive in Davis and travel west on Hutchison Drive for about 1 mile. The UC Davis Agronomy Field Headquarters is on the south side of Hutchison Drive next to the Foundation Seed Warehouse.

### **Poisonous weeds:**

Fiddleneck and groundsel are abundant this year in our rangeland, pastures, and forages. Our wet December (11" rain) and dry January (2" rain) may have favored these weeds. In one alfalfa field where there was no control of groundsel despite a Velpar application, we suspect that the 6 inches of rain in mid-December after application pushed the Velpar below the germinating seedlings so that this application was not effective.

Beware of high levels of these poisonous plants in your forage crops. This year, 3 horses died at UC Davis from groundsel or fiddleneck poisoning from Yolo County forage. Both groundsel and fiddleneck contain the liver toxin, pyrrolizidine alkaloid (PA), which kills livestock (and people too from poisonous seeds in grain crops).

There is presumably a no effect level for PA containing plants (groundsel and fiddleneck) in forage and it is probably less than 5% of the total feed ration. However, PA poisoning is cumulative; livestock that eat fiddleneck and groundsel may be fine for several years, then one day drop dead when a lethal dose is reached (such as 1% of the body weight for horses).

Livestock will selectively graze and avoid groundsel and fiddleneck in pastures, but do not sort the good from bad plants when dried because these weeds lose their bitterness (but not their toxins). Before cutting and baling your hay, note areas with high groundsel and fiddleneck levels (particularly field borders) and remove these bales from feed.

### **Slugs in alfalfa**

During wet years (such as last Dec. with 11" rain) slugs can build up to high populations and severely defoliate plants. Slugs are most active at night and hide in the soil during the day. Ammonium sulfate at 500 lb/A will provide some control of slugs. This material must contact the slugs to be effective. Although this rate is not cost effective, spot treatments may be made. Furadan and Sevin 5% baits do not control slugs.

### **Striped ladybird beetles in alfalfa**

This year the striped ladybird beetle was abundant in some alfalfa fields. This insect looks just like a ladybug, but has black stripes instead of spots. It is native to California (though more often found in the southern part of the state) and feeds almost exclusively on aphids. Perhaps our wet December favored this insect as it is generally found in moist areas.

### **Dry Beans**

Dry beans are grown on 100,000 acres in California with a value of \$56.5 million; more than 90% goes for our domestic market. Sygenta is in the process of registering the insecticide lambda-cyhalothrin (also known as Warrior) for use in dry beans (a federal tolerance level for lambda-cyhalothrin was just received for dry beans). This season I'll be conducting some insecticide trials with this material for *Lygus* bug control in dry beans; hopefully this insecticide will be registered for use next year. For more information on dry bean production, see our new University of California Cooperative Extension website at <http://beans.ucanr.org/>.

### **Stink bugs**

Don't forget to control that mustard, radish, and *Malva* around your farm, particularly if you grow tomatoes. These weeds are prime hosts for stink bugs. Conspere stink bugs spend the winter as adults in a non-feeding stage under leaf-litter (such as blackberry) or in woodpiles. They emerge in March and begin to feed, reproduce, and build up on mustard, radish, and Malva. As these weeds dry down, the stink bugs move into tomatoes. I've also seen high numbers of consperse stinkbugs on hollyhock.

## **Water Quality Update**

Following are three options, including benefits and disadvantages for discharging irrigation and storm-water runoff from your farmland, according California Water Code Section 13269 for irrigated land only (currently no restrictions apply for non-irrigated ground). These include:

### **1) Waste discharge permit**

You can apply for a waste discharge permit. This costs \$400 per year and is subject to so many laws, regulations, and restrictions that you don't want to go this route.

### **2) Watershed groups**

You can join a watershed group (contact the Yolo County Farm Bureau for Yolo County and Dixon Resource Conservation District for Solano County). These agencies will be responsible for applying for an "umbrella" waiver for waste discharge (irrigation and storm water runoff) that would be inclusive of all farms that have signed up in these watershed groups.

The watershed agency must be formed by June 30, 2003. The agency overseeing the watershed group would be responsible for submitting yearly reports that would track water quality in the defined area (such as Yolo County). Improvements in water quality (such as pesticide or sediment levels) must be shown or the waiver could be revoked.

The downside to joining a watershed group is that there will likely be an assessment (\$ fee per acre) to join this group because it will be very expensive to administer (reporting, water quality sampling, assessment of management practices on water quality is cumbersome).

### **3) Individuals**

You can apply for your own waiver to discharge irrigation and storm-water from your irrigated lands by September 1, 2004. The process of applying for a waiver and submitting yearly reports would not be difficult and is free. The problem is that under this plan, you would likely be required to take water samples from your irrigation and storm-water runoff to monitor for water quality, which could be prohibitively expensive.

The State Water Resources Control Board has yet to decide how many water samples would be required, and what these would be analyzed for (nutrients, pesticides, sediment). There is some hope that if best management practices are followed in a crop that mitigate water quality problems you might not have to sample for water quality from your farm. For example, documenting that you do not use organophosphates in alfalfa where runoff occurs from your farm (these move with water). Also, there may be some consideration for low impact crops such as wheat and safflower where insecticides are seldom used.

Another thought may be to organize and join a commodity-based watershed group (such as the rice industry). One could be formed for the alfalfa industry through CAFA (California Alfalfa and Forage Association), which would be responsible for grant writing for administrating the program, gathering water quality information, and submitting yearly reports. I'll keep you informed as I get more information on both individual waivers and this option.

In the meantime, I would suggest that you look for ways to reduce runoff from your farm, because if you don't have runoff you won't have to apply for coverage under the waiver. Water quality regulations for farms that discharge water will only get more stringent. One suggestion is to put in tail-water ponds and return systems; check with NRCS for cost share programs to help reduce costs for installing these.

### **Commodity Websites:**

Dry bean production: <http://beans.ucanr.org/>

Cotton production: <http://cottoninfo.ucdavis.edu/>

Alfalfa production: <http://alfalfa.ucdavis.edu/>

Cost of production websites: <http://coststudies.ucdavis.edu/>

For 2003 Cotton Variety Selection, contact <http://ceglenn.ucdavis.edu> for Farm Advisor Doug Munier's March 2003 Field Crops Newsletter, which has a summary of yield results from the testing of 93 different cotton varieties in the Sacramento Valley from 1996-2002.

### **Rachael Long, Pest Management – Farm Advisor**

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