Cooperative Extension University of California Ventura County

Landscape Notes

By James Downer, Farm Advisor

669 County Square Dr., Suite 100, Ventura, CA 93003-5401 - 805-645-1458

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Landscape Disease Symposium

Its fall and that is the time of year for the annual Landscape Disease Symposium. We have a few changes this year. The meeting will be held in Santa Paula at the historic Faulkner Farm and the site of the Hansen Trust Agricultural Learning Center. The Hansen Trust is a large endowment held by the University of California to benefit Agriculture and Cooperative Extension in Ventura County. They have become an important part of UCCE over the last ten years. With recent renovation of the small barn, we can now host indoor style meetings there. It is a fantastic setting on a working farm where we will be conducting extensive agricultural research projects. Our space is limited so sign up early (see attached flyer). We have applied for 4.5 and 5.5 arborist and Pest control operator/ advisor hours respectively. We have a tremendous handout set this year, fantastic food and a great program. Please join us for this informative meeting on **Friday, November 14, 2003** at the Faulkner Farm.

PRUNING TO CONTROL DIAMOND SCALE (*Sphaerodothis neowashingtoniae*) in *Washingtonia filifera*. Jim Downer and Donald Hodel, UCCE Ventura County and Los Angeles County

As noted in the last issue of *Landscape Notes* (Vol 17., no. 3), diamond scale is a destructive disease of California fan palms, that has little possibility for control when these palms are grown in coastal landscapes. Since inoculum for the fungus resides in fruiting bodies that form on the oldest leaves, I have long speculated that leaf removal might help to control the disease. There has however, been no research on this until very recently. I am just now getting some interesting results on the effects of pruning on diamond scale development in landscapes.

On July 25 of this year Don Hodel (UCCE Advisor: Los Angeles County) and I started a pruning study on young California Fan palms in Long Beach, CA. We are interested in the effects of pruning (leaf removal) on palm growth rates. We established a trial there with eighteen palms. There were three pruning treatments applied to these palms in a randomized complete block experimental design. Treatment one was to do nothing, i.e. remove no leaves from the palm. Treatment two removed all the leaves except three of the most recently expanded new leaves. Treatment 3 removed all the leaves from the palm. Of the palms with leaves remaining the youngest leaf was tagged with flagging tape so that new leaves that grow out later can be identified and counted. On September 30, only two months after imposing pruning treatments, the palms have responded to the treatments with an astounding amount of regrowth. We counted new leaves, the number of leaves with diamond scale fruiting bodies, and rated the severity of diamond scale on the oldest leaf that had grown out since the treatments were imposed.

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Several bits of valuable information have come from this simple study. In only two months time *Washingtonia* averaged 6 new leaves per plant regardless of pruning treatment. Pruning dramatically and significantly reduced the number of leaves with diamond scale signs (table 1) but had no effect on the number of leaves without (healthy leaves) diamond scale fruiting bodies (data not shown). We can be pretty sure that diamond scale is active and infective in the warm summer months. We can also infer that the disease can infect and begin ascostroma formation in only two months time, since leaves that were completely in the bud were out and infected with the fungus only two months later. It appears that although *Washingtonia* are fast growing, diamond scale is also fast infecting. Unfortunately, the severity of disease on the oldest newly formed leaves was not influenced by the pruning treatment. We can conclude though that pruning does remove inoculum and reduced the number of leaves with fruiting bodies significantly for at least two months.

This is just a start and is a glimpse of what we are doing. We will be rating this study four times per year and will impose pruning treatments twice per year. Hopefully we will learn more about the biology of diamond scale and the effects of leaf removal on disease development.

Table 1. Effect of pruning on new leaf production and diamond scale signs on *Washingtonia robusta*.

Treatment	New Leaves[1]	Diamond Scale lvs.[2]	D. scale rating[3]
No removal	6.2	9.8a	2.5
Remove all but 3 lvs	6.2	5.0b	2.3
Remove all leaves	6.7	2.6c	2.3

1. New leaves is the number of new leaves formed after the treatments were imposed. Treatments were made on 7/25 and leaves counted on 9/30/03.
2. Diamond Scale leaves are the number of leaves that have diamond scale, Numbers followed by different letters are significantly different according to ANOVA and LSD at P<0.001.
3. D. scale rating is the severity of diamond scale on the oldest leaf formed after treatments were imposed.

Disease severity scale for diamond scale on *Washingtonia filifera*

TRUNK INJECTION WITH TRIFLOXYSTROBIN AND MYCLOBUTANIL TOCONTROL POWDERY MILDEW OF COAST LIVE OAK

Steve Tjosvold, University of California Cooperative Extension
Santa Cruz and Monterey Counties

Powdery mildew is a common disease on Coast live oak along the central California Coast. The disease is particularly severe in irrigated and fertilized landscapes. Infected spring growth can become covered with mycelium and spores. Eventually the young shoots and leaves become distorted, necrotic, and can be unsightly.

Foliar application of preventative sprays might control the disease but would be difficult because of the generally large size of trees and the probable need for multiple applications. Trunk Injection of fungicides is a potentially practical method of application if fungicide activity is achieved.

Experimental Methods

Eighteen Coast live oak (*Quercus agrifolia*) trees were selected for uniformity in a landscaped residential area in Aptos California in April , 2003. Tree height averaged twenty feet and trunk diameter averaged 6 inches at breast height. The pathogen, *Sphaerotheca lanestris* , was causing infection in all trees at the time of selection. The diseased shoots were pruned out on May 1, 2003.

Fungicide treatments were applied one week after pruning by a commercial pest control applicator using an Arborsystems tree injection system (http://www.arborsystems.com/).
Treatments consisted of two fungicides that were known to be generally effective against powdery mildews and systemically active, Compass (trifloxystrobin and Systhane (myclobutanil) and a water check. One milliliter of product was applied every 4 inches around the trunk circumference just above the root collar. Treatments were applied to trees in a randomized block design; each treatment was applied to six trees.

On July 9, 2003 the treatments were evaluated for: (1) approximate % shoots on the entire tree with some infection and (2) 5 shoots were randomly selected and evaluated on a scale of 0-10 for the severity of powdery mildew (10 being most severe).

Results

Effect of fungicide injection on powdery mildew of California live oak

	Percent shoot infection	**Severity**
Trifloxystrobin (30% ai)	93.3	8.0
Myclobutanil, (30% ai)	86.7	5.8
Water Check	78.3	6.3

There were no statistical differences between treatments. Disease incidence and severity were considered severe. Apparently the fungicides were not active under the conditions of this experiment.

Landscape Disease Symposium

November 14, 2003
Hansen Agricultural Learning Center (Faulkner Farm)
14292 W. Telegraph Road., Santa Paula, CA

Directions: Use the Briggs street off ramp from Hwy 126 just west of Santa Paula and use the same street entrance for the farm. Park in the Briggs Street parking lot, and walk towards the red barns.

REGISTRATION
The Landscape Disease Symposium registration fee is $50.00. Make checks payable to UC REGENTS. We cannot accept credit cards or purchase orders. Due to the change of location and limited seating, THERE WILL BE NO WALK-IN REGISTRATIONS and REGISTRATION IS STRICTLY LIMITED TO 75 PEOPLE ON A FIRST-COME FIRST-SERVED BASIS. We cannot refund registration fees due to catering, and printing costs.

CEU's
Four and three quarters hours of continuing education units (CEU'S) have been applied for, for arborists and tree workers. Five and three quarters hours have been applied for toward continuing education of pest control operators/applicators and advisors.

Schedule

7:30 – 8:00am **Registration** (Jim's coffee)

8:00 **Sheri Klittich; Introduction-Welcome to the Faulkner Farm**

8:15 – 9:00 **Dr. James Downer; Snake Oil: Horticultural Myths, Urban Horticulture Legends, Frauds and Carpetbaggers in our Industry.** Snake oil is the pedaling of ineffective products or services with grandiose claims of efficacy not supported by corroborating third party (University) research. Snake oil and horticultural myths or ineffective practices have long been a problem as they propagate throughout the industry. This presentation will expose an array of bogus practices and products.

9:00 - 10:00 **Dr. Frank Wong, University of California, Riverside**; **Turfgrass Diseases.** This year has been an epidemic year for turfgrass diseases. Dr. Wong will cover new and existing turfgrass diseases and their control. He will also speak on fungicides, their mode of action and use in landscape pathology.

10:00 - 10:30 **Break**

10:30 – 11:30 **Dr. John Menge, University of California, Riverside; Principles of Plant Pathology for Disease Control in the Landscape.** An understanding of the basic concepts that help plant pathologists control diseases will be covered.

11:30- 12:30 **Plenary question and answer session**

12:00 – 1:00pm **Lunch by Marshal's Bodacious Bar-B-Q**

1:00 – 2:00 **Dr. James Downer, University of California Cooperative Extension (UCCE); Abiotic disorders of landscape Plants.** Disorders caused by non living agents are abiotic diseases and represent one of the largest groups of problems plaguing landscape plants. Abiotic disorders are often important in the cause of biotic diseases and tree disease declines.

2:00pm -3:00 **Dr. Ben Faber, UCCE Analyze This!!! Understanding Soil Reports, Soil Mineral Nutrients, Tissue Analysis and Soil Chemistry.** Learn how to read that soils report you just paid a lab to so carefully produce. How can soil and plant tissue analysis be used to understand plant health and performance capabilities. What do you need analyzed?

3:00 – 3:30pm **Break**

3:30 – 4:30pm **Dr. James Downer, UCCE, Diseases of Palm Trees: Some New Some Old.** Diagnosing palm diseases by symptoms alone can be confusing. We will cover some of the most recently encountered palm diseases and some well established diseases and their control.

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669 County Square Dr., #100
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University of California Cooperative Extension Ventura County

LANDSCAPE DISEASE SYMPOSIUM

Friday, November 14, 2003
Hansen Agricultural Learning Center
14292 W. Telegraph Rd.,
Santa Paula, California

A. James Downer
(805) 645-1458, Fax: 805) 645-1474
669 County Square Dr., Suite 100,

E-Mail: ajdowner@ucdavis.edu
Website: ceventura.ucdavis.edu
Ventura, CA 93003-5401

Farm Advisor

Landscape Disease Symposium Registration Form

REGISTRATION: $50.00 PER PERSON Make checks payable to **UC REGENTS**.
Please Print Clearly

Name_____ Must have Vegetarian Meal [ ]

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_____

Contact Information: Phone:_____ Email_____

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U.C. Cooperative Extension
669 County Square Dr., Suite 100