



County of Santa Cruz 0051

OFFICE OF THE AGRICULTURAL COMMISSIONER

DAVID W. MOELLER
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS AND MEASURES
DIRECTOR, MOSQUITO AND VECTOR CONTROL

April 25, 2000

Agenda Date: May 2, 2000

BOARD OF SUPERVISORS

County of Santa Cruz
701 Ocean Street
Santa Cruz, CA 95060

Progress Report from the Scientific Task Force on Oak Decline

Dear Members of the Board:

On December 14, 1999, your Board accepted the Report of the Scientific Task Force on Oak Decline and directed the Agricultural Commissioner and County Fire Chief to carry out recommendations of the Task Force. One of those recommendations was that the Scientific Task Force would prepare a status report in April 2000 for your Board.

The Task Force has completed their review of work to date on oak decline and has prepared the attached Progress Report on the Recent Activities Toward Understanding the Cause and Control of Oak Decline in the Central Coast. The highlight of the report is that a plant pathologist from UC Cooperative Extension, Salinas, has isolated an as yet unidentified fungus from diseased tan and live oaks which may be the primary factor in oak decline. Field and laboratory work with this fungus continues and an identification of the fungus is underway by plant pathologists at UC Davis.

It is therefore RECOMMENDED that your Board accept and file the attached progress report prepared by the Scientific Task Force on Oak Decline.

Sincerely,

David W. Moeller
Agricultural Commissioner

APPROVED:

SUSAN A. MAURIELLO
COUNTY ADMINISTRATIVE OFFICER

Attachment

cc: County Fire Chief
UC Cooperative Extension

PROGRESS REPORT ON RECENT ACTIVITIES TOWARD UNDERSTANDING
THE CAUSE & CONTROL
OF OAK DECLINE IN THE CENTRAL COAST

By James A. Nee, Co-Chair, Scientific Task Force on Oak Decline in Santa Cruz County
April 24, 2000

Introduction

Over this past winter the public's concern about oak decline in Santa Cruz County greatly subsided compared to what it was last fall, at least judging **from** the few citizen inquiries received by the County Agricultural Commissioner and the County Fire Marshall. If substantial new mortality appears, we expect public interest to rise accordingly.

Research Findings

Since submittal of the Scientific Taskforce's report to the Board of Supervisors in December, researchers have made significant progress in studying the oak decline.

UC Cooperative Extension, Salinas: Probably the most exciting news about the disease is **from** Steve Koike, a UC Cooperative Extension plant pathologist in Salinas. He inoculated healthy tan and live oak seedlings and saplings in his lab with a fungus that was isolated from diseased tan and live oak samples collected in the Santa Cruz Mountains and Big Sur. The healthy specimens developed the disease and exhibited symptoms identical to trees in the wild. This infection could be induced to pass in the lab from tan oaks to live oaks, and vice versa. The fungus' spores are being examined by a UC-Davis plant pathologist and an identification of the pathogen is expected soon.

Further work by Mr. Koike on the disease is seriously hampered by a lack of funds. If a funding source can be found, he hopes to sample diseased oaks from many more areas of the state and to look for the disease spores on wild wood-boring bark beetles.

UC Cooperative Extension, Berkeley: Dr. Rick Standiford, head of the UC Cooperative Extension's IHRMP* Program at Berkeley, received \$48,000 in university funds to develop a field method to quickly **identify** diseased trees and to apply that method in monitoring the disease at field study sites. His ten person research team began work in **Marin** County rather than Santa Cruz County because the northern site is closer to research facilities at UC-Berkeley. They have made quick initial progress using remote sensing and ground-truthing methods. In a few weeks, when the survey technique is more fully developed, he expects to begin testing it in Santa Cruz County. Steve Tjosvold, UC Cooperative Extension, Watsonville, is working closely with Dr. Standiford on this research.

As soon as possible the team will prepare a scientific "Tree Note" describing, in words and

* Integrated Hardwood & Range Management Program

photographs, their latest research on the field identification of diseased live and tan oaks. That should be of great value to arborists, homeowners, and others.

When his team begins research in Santa Cruz County he expects to work with Dr. Greg Gilbert, the UCSC's new plant pathologist, who may help further improve the monitoring technique. He'll also seek help from the Santa Cruz County Chapter of the California Native Plant Society. Fred McPherson, a Scientific Task Force member representing the Plant Society and UCSC, wants chapter members to apply the "Tree Note" identification criteria to tan and live oaks here and so to document the local incidence and spread of the disease.

When Dr. Standiford is confident of his **team's** preliminary findings, he will propose two articles for the UC Cooperative Extension program's **California Agriculture**, a periodical written for the general public.

His team's literature review found scientific papers about similar oak diseases in Mexico and Japan. The tree species and disease history in those countries are very similar to what we see in California.

His team has established a **website** containing current information on their study results and other oak decline developments. Its URL is <http://danr.ucop.edu/ihrmp>. Click on "Elevated Mortality of Tan Oak"

U.S. Forest Service: Susan Frankel of the U.S. Forest Service's Pacific Southwest Regional Office in Vallejo has obtained \$50,000 from her Washington, D.C., office and \$20,000 from the California Department of Forestry & Fire Protection for research on oak decline. She will use the funds to adapt the UC Cooperative Extension monitoring technique to hardwood forests in northern and central California. She will supplement the results with a roadside survey of trees in the same hardwood forests.

Other Developments

Marin County, using private funding, has hired a full-time educational coordinator to prepare a public interest **website** on oak decline in that county and to field questions from the public on the topic.

Sonoma County is concerned about the decline and recently had their first public meeting to help gather information on the subject.