DEPARTMENT OF FOOD AND AGRICULTURE

PROPOSED CHANGES IN THE REGULATIONS

Title 3, California Code of Regulations

Sections 3033.2, 3033.3, and 3033.4, Registration of Avocado Trees

INITIAL STATEMENT OF REASONS/

POLICY STATEMENT OVERVIEW

Description of the Public Problem, Administrative Requirement, or Other Condition or Circumstance the Regulation is Intended to Address

These regulations are intended to address the obligation of the Secretary of Food and Agriculture to maintain a voluntary program for the registration of avocado trees that are determined to be free from the sunblotch viroid.

Specific Purpose and Factual Basis

The specific purpose of Sections 3033.2, 3033.3, and 3033.4 is to establish a voluntary program under which avocado nursery stock may be produced and registered as being free from important diseases (sunblotch viroid).

The factual basis for the determination by the Department that amendment of Sections 3033.2, 3033.3, and 3033.4 is necessary is as follows:

Existing law provides that the Secretary, for the purpose of promoting and protecting the agricultural industry of the state, may, upon request, inspect plants and the premises upon or near which they are growing and the records of their sources and qualities. The Secretary may upon the basis of information thus determined, maintain registries of the plants which are found not to be infested or infected, or liable to become infested or infected, with pests (Food and Agricultural Code, Section 5821). Existing law also provides that the Secretary may establish and enforce regulations that are necessary to carry out the purposes of the registries provisions (Food and Agricultural Code, Section 5823).

Sunblotch viroid can occur anywhere avocados are grown. Symptoms of the sunblotch viroid include narrow yellow, red, or necrotic streaks often associated with shallow lengthwise indentations on the twig. Fruit that remains green at maturity usually have white or yellowish areas present and fruit that turns black usually have whitish areas, fruit may also be deformed. Rectangular cracking and checking of the bark on the trunk and large branches of the infected tree is typical. Trees affected by the disease are often stunted and have sprawling growth and reduced yields.

Transmission of the sunblotch viroid most often occurs through grafting by using infected scionwood or rootstock seedlings. It is also possible to transmit the viroid through wounds caused by contaminated cutting tools, root to root grafts between trees, and by pollen from an infected tree to the flower ovule of a noninfected tree, resulting in infected seed.

The primary control measure used for this disease is the use of registered trees participating in the Department's program for Registration of Avocado Trees that provide disease-free scionwood and seed sources for growers.

Existing Section 3033.2 requires testing to be performed only by indexing, that is, grafting the tissue from the candidate tree onto an avocado seedling indicator plant, or by other approved means.
The proposed amendment of Section 3033.2(b) will delete the phrase "or by other approved means" associated with the definition of "Index." The proposed addition of Section 3033.2(j) will establish a definition of "Test" as meaning any testing procedure using plant material or its extracts to determine the presence or absence of a disease agent in or on the tested plant material.

Existing Section 3033.3(b) requires the Department to determine whether or not the registered trees require indexing if nonregistered avocado trees are located within 300 feet of the established registered avocado trees. The proposed amendment of Section 3033.3(b) will delete the word "indexing" and replace it with the word "testing."

Existing Section 3033.4(a) requires "indexing" procedures to be used. The proposed amendment of Section 3033.4(a) will delete the word "indexing" and replace it with "testing."

Existing Subsection 3033.4(b)(1) requires each candidate tree to be assigned an in-test identification number and indexed for sunblotch viroid in an approved greenhouse under the supervision of the University of California and the Department, including following specified procedures. If no evidence of sunblotch viroid is found, the candidate tree may be registered as a foundation stock tree. It is proposed that the previously existing text of Subsection (b)(1) be redesignated as Section 3033.4(b)(1)(A). It is also proposed to add Section 3033.4(b)(1)(B) to provide for trees to be tested using the approved Polymerase Chain Reaction (PCR) developed to identify the sunblotch viroid. This test shall be performed by the University of California and in accordance with procedures established by the Department. If no evidence of sunblotch viroid is found, the candidate tree may be registered as a foundation stock tree.

The effect of these proposed amendments will be to provide the industry with an additional testing method, PCR, to establish whether or not candidate trees with no evidence of sunblotch viroid may be registered as a foundation tree with the Department.

Registration is based on inspections, including testing. The proposed action will allow for the use of a quick, more readily available test in addition to existing tests for the determination of freedom from the sunblotch viroid.

The program established by these regulations helps to assure the availability of high quality nursery stock for avocado producers and the public while protecting the agricultural industry from harm from the avocado sunblotch viroid. In 1996, the value of California avocado fruit was over $261 million, with over 56,000 acres of avocado trees harvested. Trees infected with the avocado sunblotch viroid are less productive.

The losses in fruit production vary with the variety of avocado tree and can be as high as an 82%-95% reduction in yield. The average annual yield reduction for one of the commonly grown commercial avocado varieties during a three-year period was 14%. A

14% reduction in yield would result in a loss of over $36 million per year for California's avocado industry.

Estimated Cost or Savings to Public Agencies or Affected Private Individuals or Entities

The Department of Food and Agriculture has determined that the changes in Sections 3033.2, 3033.3, and 3033.4 do not impose a mandate on local agencies or school districts. The Department also has determined that no savings or increased costs to any state agency, no reimbursable costs or savings under Part 7 (commencing with Section 17500) of Division 4 of the Government Code to local agencies or school districts, no nondiscretionary costs or savings to local agencies or school districts, and no costs or savings in federal funding to the State will result from the proposed action.

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

The Department has determined that the proposed action will not have a significant adverse economic impact on housing costs or California businesses, including the ability of California businesses to compete with businesses in other states. The Department's determination that this action will not have a significant adverse economic impact on businesses was based on the following:

These regulations establish an alternative method of testing for an already established voluntary program. There is no economic impact on businesses that choose not to enter the program. Fees paid by program participants for services fund the program costs. Nursery stock meeting requirements of the program may be sold as registered which should be more desirable to purchasers and greater profits may result. The proposed changes in the regulations will allow for the use of faster, more readily available test in addition to existing tests for the determination of freedom from the viroid. This change should benefit avocado nursery

stock producers in providing for greater flexibility and faster test results. Avocado fruit producers also benefit through the availability of registered avocado sunblotch viroid-free nursery stock that enables them to plant known viroid-free trees and avoid significant losses in fruit production.

Assessment

The Department has made an assessment that this amendment to the regulations would not (1) create or eliminate jobs within California, (2) create new business or eliminate existing businesses within California, or (3) affect the expansion of businesses currently doing business within California.

Alternatives Considered

The Department of Food and Agriculture must determine that no alternative considered would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

Information Relied Upon

The Department is relying upon the following studies, reports, and documents in proposing the amendment of Sections 3033.2, 3033.3, and 3033.4:

Letter of December 19, 1997 to H. W. Brokaw from Barbara J. Hass with attached E-mail of December 4, 1997 to Conrad Krass from J. Allan Dodds.

Memorandum of December 16, 1997 to Barbara Hass from Kathleen Harvey.

Memorandum of December 8, 1997 to Barbara Hass from Conrad J. Krass with attachment.

Letter of November 12, 1997 to Barbara Hass from W. H. Brokaw with attached report AAvocado Sunblotch Viroid Testing, Summary of Results - 10/97" by J. A. Dodds, *et al*., University of California, Riverside.

Memorandum of November 10, 1997 to Conrad Krass, *et al*., from Allan Dodds.

Letter of April 3, 1997 to W. H. Brokaw from Barbara J. Hass.

Letter of January 28, 1997 to Barbara J. Hass from W. H. Brokaw.

Letter of January 10, 1997 to W. H. Brokaw from Barbara J. Hass.

E-mail of January 3, 1997 to B. Hass and K. Harvey from Conrad Krass.

FAX of December 19, 1996 to Barbara Hass from Hank Brokaw.

Letter of December 4, 1996 to Barbara Hass from W. H. Brokaw with attached report "Detection of Avocado Sunblotch Viroid using RT-PCR" by R. J. Schnell, *et al*., USDA-ARS, Miami, Florida.

"1996 County Agricultural Commissioners' Data," California Agricultural Statistics Service, United States Department of Agriculture and California Department of Food and Agriculture, page 7.

"Avocado Sunblotch," Paul R. Desjardins, from "The Viroids," Ed. T. O. Diener, Plenum Press, 1987, pages 299-313.

"The Sun-Blotch Disease of Avocado," J. M. Wallace, 1958 Journal of the Rio Grande Horticultural Society, Volume 12, pages 69-74.