

REPORT OF THE AVOCADO RESEARCH COMMITTEE

Since the annual meeting of the California Avocado Society in June, 1951, the Research Committee has held two meetings in conjunction with representatives of the College of Agriculture, University of California. The meetings were held at Riverside, on October 6, 1951, and April 28, 1952. University personnel engaged in avocado research reported on their activities at these two sessions, and Committee members made known the research needs of the industry.

As the outgrowth of these conferences, the Research Committee prepared a statement, listing desired research and work on the avocado, which was presented to the University of California at a meeting in Riverside, sponsored by the Agricultural Council of California, on May 12, 1952.

The statement presented by the Committee follows, and constitutes the remainder of the report.

A Statement on Behalf of the California Avocado Industry Presented May 12, 1952, at Riverside

This statement is made by the California Avocado Research Committee of the California Avocado Society. The Committee is a permanent one, composed of the President, immediate past-President, and Secretary of the California Avocado Society, the Chairman of the Avocado Section of the California Farm Bureau Federation, and the several Chairmen of the Farm Bureau County Avocado Departments. Through overlapping membership of these individuals in other organizations interested in the avocado (including the major marketing organizations), it appears that this Committee is truly representative of at least the great majority of the avocado industry. In preparing the requests that are a part of this statement, the Committee has consulted with avocado growers and other persons who are not identified with the Committee.

At various times in recent years, the research needs of the California avocado industry have been outlined and made public. The statements made on those occasions included a suggested program of research and work which was comprehensive, and needs no great revision at this time. We are again submitting that suggested program with the necessary revision and with some addition.

The major addition now being made to the suggested avocado research program is a request that the University of California promptly acquire a sizable plot of land in Orange County for horticultural research purposes. This request is of special significance to the avocado industry, and requires comment.

The experimental grove plots at Westwood and Riverside are not ideally situated for avocados and certain other crops. Of still greater importance, the land on which these plots are located is rapidly disappearing under buildings, with consequent loss, not only

of space for future experimental plots, but also of continuity in existing long-term experiments.

This situation became a matter of concern to the California Avocado Society several years ago. Much time was spent by the Directors of the Society in consideration of the serious problem. It was their original plan to acquire, with the Society's funds, an adequate plot of land on which to establish field plots of various kinds with assurance that they could be maintained as long as needed. This plan was discussed with representatives of the University, to which it was intended to turn over the land. This plan proved to be beyond the limited financial means of the Society. Alternatively, the Society's representatives discussed with University representatives the possibility of the acquisition of off-campus land by the University, toward the purchase of which the Society would make a financial contribution. It was suggested that suitable land might be obtained from the Irvine Ranch, in Orange County. The project was discussed on various occasions with Westwood and Riverside personnel, with Director of Experiment Stations Paul F. Sharp, and with Albert J. Thille, formerly Chairman of the Governor's Agricultural Research Committee.

We have recently learned that the University is considering purchase of a block of land on the Irvine Ranch. It is our understanding that the purchase of 100 acres was originally contemplated, but that a committee of University personnel has recommended that 200 acres be acquired. We have also learned that other industries will unquestionably want use of part of this land, if acquired, which is entirely proper. Our concern is that the avocado industry may find itself without the experimental land it has been seeking for many years, or with less of that land than will be needed to carry on adequate avocado research, as the cries of other agricultural groups are sympathetically heard.

Our position, therefore, is this: That the University be urged to acquire the full 209 acres of Irvine Ranch property recommended by the University committee, and that a significant and adequate part of that acreage be specifically and permanently allocated to the avocado industry. We feel this plea for reservation of land for avocado research plots is fair and proper, in view of the Society's activities over a period of years to find a place for its field plots and its willingness to contribute toward the purchase of such land.

With respect to another item in our statement of research needs, the California Avocado Research Committee is grateful for the work so far done on our major problem, Avocado Root Rot. As evidence of gratitude, and in frank self-interest, the California Avocado Society has made several financial contributions to the University to assist in the conduct of this work. The latest of these contributions has been tendered within the past few days. We do wonder, however, if the importance of this problem to the avocado industry is fully appreciated by those in the University who are not close to it, and whether it is receiving the full attention it deserves. We feel that it is not. Avocado Root Rot has already caused the loss of several thousand acres of avocado groves, and is a threat to many thousands more. It is our belief that the work on this problem can be greatly expedited by the assignment of additional personnel to the study of it, particularly in the pathological phases. We believe it is especially important that at least one new Technical Assistant be attached to the Division of Pathology at Riverside.

With respect to other items of avocado research, it is apparent to us that quicker results can be obtained and more efficient expenditure of research funds will occur if the number of Technical Assistants can be increased in several of the Divisions. We urge that they be provided wherever this is found to be true.

The pleas of agriculture for more research, including our own, tend to increase the expenditure of public funds. This we recognize. We therefore urge that the University make every effort to confine its research activities to the matters of greatest importance and first urgency, even at the expense of desirable but less essential activities, so that these important problems can be solved within the present funds available. We further urge that the University be not reluctant to ask for financial assistance from the petitioning industries where such assistance will speed the solution of the problems being studied.

RESEARCH AND WORK

Requested on Behalf of the

CALIFORNIA AVOCADO INDUSTRY

- I. Acquisition of adequate and suitably situated acreage to be continuously allocated to avocado research and experimental plots.

(On April 28, 1952, the California Avocado Research Committee formally adopted a resolution urging acquisition by the University of California of a 200-acre property in Orange County recommended by representatives of the College of Agriculture.)

- II. Appointment of an Extension Specialist in Subtropical Fruits, to major in avocados, for the purpose of correlating and expediting research and field work.

(On April 28, 1952, the California Avocado Research Committee formally adopted a resolution requesting the Director of Agricultural Extension to appoint a Specialist in Subtropical Fruits as soon as possible.)

- III. Enlargement and acceleration of research and work on the industry's grave problem of Avocado Root Rot, in pathological and orchard management phases.

(In view of the importance of this problem, the California Avocado Research Committee specifically requests the addition of at least one new Technical Assistant, to be attached to the Division of Plant Pathology, Riverside.)

- IV. Special emphasis, by expanded or new research, on:

- A. The problem of better avocado varieties

1. By selection of desirable seedlings.
2. By avocado breeding.
3. By selection of improved strains of good existing varieties.

- B. The problem of avocado rootstocks

1. By expansion of field plots.

2. By investigation of other avocado rootstocks than now used in California.
3. By investigation of relatives of the avocado as possible rootstocks.
- C. Studies of the chemistry of soil as related to growth and productivity of avocados.
- V. Continuation to completion and expedition of all existing programs of research pertaining to the avocado, with particular reference to:
 - A. Dothiorella Rot of avocados.
 1. By control in the field.
 2. By treatment in the packinghouses.
 - B. Insect pests of the avocado tree and fruit.
 - C. Problems relating to the storage of harvested avocados.
- VI. Provision for expanded or new research and work as soon as possible on the items following:
 - A. Avocado Sun Blotch disease.
 1. A reliable method of determining its presence.
 2. Studies of possible transmission through the seed.
 - B. Other avocado diseases.
 - C. Avocado products and by-products, with particular stress on improved techniques in the commercial extraction of avocado oil.
 - D. Orchard management.
 1. Irrigation.
 2. Cultivation.
 3. Nitrogen-Phosphorus-Potash fertilization.
 4. Micro-nutrients.
 5. Tree training and pruning.
 6. Grove thinning.
 7. Horticultural physiology.
 8. Fruiting habits.
 - E. General soil studies, with particular reference to soil physics and soil microbiology (as well as soil chemistry, as noted under item IV-C).
 - F. Human nutritive and dietetic values of the avocado.
 - G. Physiology of avocado fruits.
 - H. Water requirements of avocado trees.
 - I. Effects and possibilities of hormone applications to avocado trees, with reference to fruit setting and fruit holding.

- J. Other and better ways to determine maturity of harvested avocados, not necessarily using oil content as the measure of maturity.
 - K. Determination of avocado maturity in the field, as a guide to picking.
 - L. Development of new and improved avocado harvesting equipment. M. Efficiency of avocado harvesting methods.
- VII. Provision for adequate personnel, facilities and equipment, and funds to permit travel where required, to assure productive development of research projects undertaken. The importance of availability of field assistants and travel funds is emphasized.