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A STUDY OF THE COLD STORAGE OF AVOCADOS

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I. Reasons for the Investigations.

The California Avocado Association has found that it appears desirable to retain a portion of the crop of certain varieties in storage to delay their being placed upon the markets, in order to facilitate their disposal and in order to obtain better prices. The Association is, therefore, desirous of ascertaining the relative keeping qualities of the different varieties of Avocados in cold storage and has requested the Division of Pomology of the University of California to make an exhaustive study of the cold storage of avocados.

While some preliminary work has been conducted by the Division of Pomology, it was difficult and expensive to obtain fruit for experimental use and the work was discontinued until a more opportune time. At present, with the cooperation of the Association, it appears such work can be very advantageously undertaken.

II. Points to be Investigated.

1. The most favorable or satisfactory storage temperature.

a. Temperatures suggested:

a' 36° F.

a" 40° F.

a"' 45° F.

b. Periods to be determined at each temperature:

b' *Optimum storage* or the latest time of removal, which would give best results regarding quality and time of holding up after removal from storage.

b" Maximum storage or the time beyond which it would be unsafe to keep the fruit in storage, though it may still appear to be in good condition, because of the loss of quality, softening of texture, discoloration of flesh, susceptibility to rot organism, tendency to wilting and rapidity of breakdown after removal.

2. A careful study of the relative keeping quality, under what may be determined as the most desirable cold storage conditions, of all the varieties that may be of interest to the Association.

3. The effect of maturity at the time of harvest upon the keeping quality in cold storage, and subsequent flavor developed.

a' Determine tests if possible which will indicate the degree of maturity.

4. To study the effect of keeping avocados in vacuum, or in nitrogen gas in low temperatures as further aid to their retention.

5. Observation of storage fungus, bacterial and physiological diseases for the purpose of their prevention.

III. Methods of Procedure.

1. Fruits to be furnished by California Avocado Association.

2. Specimens to be shipped, express collect, to Division of Pomology, Berkeley, California, care E. L. Overholser.

3. Observations to be made in the laboratories and cold storage plant of the Division of Pomology and copies of data which may be helpful furnished to California Avocado Association.

The above project as outlined by Professor Overholser is now being carried out.