

## **Report of the Variety Committee — 1941**

Adopted at Annual Meeting — May 10, 1941

### **INTRODUCTION**

The type of horticultural investigation carried on by this Committee is necessarily a slow and painstaking matter and major results and conclusions cannot be expected at such short intervals as those embodied in an annual report. Thus, this becomes largely a progress report as there are no great changes in the status of any of the better known varieties. Most of the material here presented is therefore mainly directed toward a reaffirmation of certain well established objectives and some of the intensified steps in their attainment.

### **ACTIVITIES**

Personnel and organization are little changed from the past few years. There is still a large and growing group of cooperators and correspondents who have regularly increased the fund of general information.

The outstanding individual contribution has been that of Mr. Marvin B. Rounds, now at the Citrus Experiment Station, Riverside. He has organized a basic file of variety information and through his constant travel in all growing areas is able to gather much detailed information and make observations otherwise impossible. The file has been a fundamental need of the Committee for many years. It now provides a calendar for checking registered seedlings and varieties which is supplied to Committee Chairmen and Farm Advisors.

An outgrowth of this study is the action at the annual meeting of the Variety Committee in grouping registered seedlings into A, B, and C lists, designating their relative importance for further study.

Much field work has been done by Mr. Rounds, Mr. H. B. Griswold, and the county committees.

As an aid to the promotion of the work of the Committee, Mr. Griswold has devised a simple, inexpensive form and method for keeping individual tree records which he will present later on this program. Such records are of vital importance in working out the problems attacked by this Committee.

For some time one of the pet projects of the Chairman has been a set of natural color photographs showing fruit of the avocado varieties. By projecting such slides much valuable educational work can be simplified. It may also be possible to run such illustrations in the Yearbooks. During the past year he has interested in this problem two competent photographers in our industry—Mr. C. S. Crawford of Villa Park, and Mr.

Paul Heismann, of Vista. This morning we are presenting samples of their experimental work along this line, hoping that it may enlist sufficient support to obtain the completion of this record. Careful future cooperation between members of the Committee and the photographers in the selection of typical fruits will be very necessary.

## **TEST PLOTS**

The variety test plots handled cooperatively by the Division of Subtropical Horticulture of the University of California at Los Angeles and this Committee are approaching an interesting stage in their development. Now in their third year, many of the varieties selected are blooming or setting fruit. There is a great difference in rate and type of growth between varieties.

The policy established this year in regard to handling these plots recognizes the difficulties involved in volunteer work of this sort. Many of the original trees are in remote spots and their physical condition is not such as to produce good propagation material. This makes distribution to all cooperators expensive and difficult. As this work is largely done by the Chairman at his own expense, the solution seemed to be to establish vigorous progeny at Westwood and then to distribute from there the following year. There are now twenty-three numbered varieties in the University of California at Los Angeles plot.

Dr. J. Eliot Coit has suggested the need of devising new methods for shortening the time and effort now necessary to determine the commercial value of a variety. A sub-committee has been appointed consisting of Dr. Coit and Messrs. A. L. Maddux and K. M. Smoyer, to study the matter and make recommendations.

To have more needed space in the Yearbook, the check list of varieties was eliminated in the 1940 issue and an up to date summary of California varieties actively used was worked out by members of the Committee and substituted for it.

## **COMMENTS ON INDIVIDUAL VARIETIES**

Detailed descriptions of the varieties are available elsewhere and will not be given here.

The problem presented by the Fuerte variety is dealt with in full, later in this Report.

**ANAHEIM**—This variety is unique in that most growers are agreed that it is a poor quality fruit, though profitable. Its light flavor and low oil content apparently appeal to a large group of consumers and its heavy consistent tonnage has brought excellent returns to many growers, who are located in a warm enough spot to grow it. It more than holds its own in the southern coastal area.

**NABAL**—Increased evidence of the undesirability of further plantings of this variety is at hand this year with its very heavy crop. While the fruit has excellent eating qualities, it is usually too large. Tree structure is the crux of the problem as the heavy crops just approaching maturity demonstrate utter inability to carry them. Breakage in some groves leaves the impression of hurricane damage. The tree often takes three years or more to recover from an excessive crop, if it does not collapse immediately thereafter.

This variety is very subject to frost damage.

## **THINSKINS**

**DUKE**—Maintains its position as one of the more satisfactory thinskins for severe interior climatic conditions.

**ELEVADO**—Several buyers indicate that small plantings of Elevado, a large green thinskin, have been satisfactory and profitable, under much the same conditions as the Duke.

**GANTER, TOPA TOPA** and **MEXICOLA** are still among the best sources of root stocks.

**JALNA**—This fruit has some merit for home plantings in cold locations.

**ZUTANO**—This is a green thinskin fruit maturing in late fall and early winter and of attractive appearance. It is very hardy and a heavy consistent bearer at Fallbrook. Eating qualities have been rated low, but it apparently meets with the approval of sufficient consumers to insure profitable sales. Opinion as to its merits are widely divergent among Fallbrook growers. Some are extending their Zutano plantings; others topworking their trees.

**VARIETIES OF PROMISE STILL IN EXPERIMENTAL STAGE EDRANOL**—This variety is increasing in favor in the coastal areas of Ventura and Santa Barbara Counties, where it is excellent in all respects. Volume production should soon give conclusive evidence of its worth. While not a first grade fruit in exterior appearance in the La Habra area, its high consistent production on a slender type of tree seems to justify its greater use under certain conditions. It is not too popular at Vista and in the south coastal area.

**HASS**—Is still showing excellent results in the La Habra area where it originated, and also at Rivera. This fruit is becoming increasingly popular in south coastal areas. There is considerable criticism of its rough black exterior, but such supplies as reached the market during the past season were favorably accepted by consumers. A large tonnage in the season now beginning should go far to demonstrate whether it has market acceptability.

**HELLEN**—Has a good record in the Santa Monica coastal area and shows considerable promise under similar conditions. Fruit from an old planting between Escondido and Vista received good rating from tests made by the San Diego County Agricultural Commissioner's office. Fruit now maturing on two and one-half year old nursery trees in the La Habra area is larger than from old trees at Santa Monica, and indicates earlier maturity for this section. Large topworked trees now setting fruit at La Habra should give a truer impression of its value next season. A much faster, heavier grower than the Fuerte.

**HENRY'S SELECT**—There has not yet been a sufficient production in areas outside Escondido to allow any determination of its eventual merits elsewhere or any conclusions as to what its maturity season is.

**JUAN**—This fruit should be more extensively tried under coastal conditions.

**MacARTHUR**—The only value of this variety lies in certain north coastal areas where its high consistent production and resistance to adverse conditions offset its mediocre quality.

**MacPHERSON**—Has been patented. Nursery trees are now being produced. The fruit is nearly identical in appearance to the Fuerte but is even more attractive when cut. The parent tree is growing under very difficult conditions along a street row. Grafted tops in the University trial plots are showing exceptional vigor and are now setting fruit. Next season should provide a better basis for a more accurate estimate of its worth. It may be an alternate bearer.

**RYAN**—Very general criticism of the shy bearing habits of this variety, particularly in the La Habra area, calls for warning against greatly extending its planting. Some growers are already topworking it. The seed is quite large, on the average, and eating qualities have been very much debated over a number of years. It is in favor at Goleta as a producer.

## **THE IMPORTANCE OF VARIETIES ON THE FUTURE OF THE INDUSTRY**

Due to the small change in the standing of those avocado varieties which have present or possible future commercial value, it is possible to devote much of the space and time usually given to reports on individual varieties, to the discussion of broader aspects of the avocado variety situation.

We are in the midst of soul-stirring events, which are changing the course of history and affecting our individual lives more rapidly than we can easily comprehend. That these events are having a vital bearing on the development of avocado growing, there can be no doubt.

California's great fruit industries are gravely affected by many of the elements entering into the national crisis. Export markets practically do not exist. There are changes in the food habits of the population, and domestic markets are shifting. Citrus growing seems to be in serious difficulties and faces constantly increasing competition on both the domestic and foreign markets.

It seems inevitable that the only sound solution will be found in transferring considerable citrus acreage to other crops, which have a chance to prove more profitable on land of high value due to climatic advantage. The keen interest of many citrus growers in avocados has been shown by their serious study of avocado growing during the past year and the developing plans of many to participate in this industry.

The growing of avocados is a potentially sound business. The industry had no export market so it was not affected by reversals there. The fruit does not have the immediate appeal to the average consumer that an orange has, for instance. However, with supplies of good fruit available, consumers are soon educated to appreciate both its flavor appeal and its high food value as contrasted to other fresh fruits. With reasonable prices, its ultimate market can and should be as broad as that of the other major fresh fruits. Recognized agricultural economists have presented such a picture recently.

For the avocado to fulfill its destiny and become one of the major California fruit

industries, three elements in the industry will have to be greatly improved.

Deeper and better drained soils are needed for the growing of the fruit. Shallow, poorly drained soils on hillsides, or very heavy soils, such as many of the present plantings are on today, will not permit heavy tonnage from long lived trees. A large part of the most suitable soils for avocado trees, in sufficiently favorable frost and wind conditions, is now in citrus.

Better handling of the marketing situation within the industry will be necessary.

## **BETTER VARIETY NEEDED**

Most important from the viewpoint of this Report is the need for a more consistent, heavily producing winter variety. California's heaviest production must come in the winter months to be permanently profitable. Summer brings the competition, throughout the east, of Cuban and Florida fruit at prices we cannot compete with. Our summer market is and will be profitable only so long as our volume at that season does not overstep the consuming power of the Pacific Coast.

Three-fourths of present acreage and production is in the Fuerte variety. No one denies that it is nearly ideal for the handler and the consumer, but for the one who must make a living by growing this variety, it is too erratic in its bearing habits in most places to assure security. Only in a few of the most favored spots has it consistently been profitable over the years.

The problem which the Committee has been working on for some years and is now even more highly concentrating upon, is to discover a new variety or varieties which will not destroy the asset gained in the great consumer acceptance of the Fuerte, but which will be consistent enough in tonnage production to make a decent living for its producers at the prices which seem to be indicated for the future. Solution of this problem is the cornerstone of future industry success and is the main reason why the plantings have not been greatly extended recently. Heavy consistent tonnage is definitely required and is not an unreasonable expectation.

The problem is being attacked in three ways—intensive search by the Committee and co-workers for chance seedlings which meet these requirements; hybridizing experiments by the University of California at Los Angeles which have been inaugurated this season by Dr. Walter B. Lammerts, working under the Division of Subtropical Horticulture, and a privately promoted and financed expedition to Mexico to search for such seedlings. The members of this expedition will all be trained members of this Committee, who know what qualities are desirable in commercial fruit.

We have reason to be encouraged in hoping that we may reach our objective. During the past two years, and the past season particularly, eight such variety candidates have been placed in the University plots. Two or three such varieties may eventuate, covering different sections of the present Fuerte season, and thus reduce the pressure which now causes Puertes to be crowded on the market in an immature condition, and to be held so late that their overmaturity injures consumer acceptance.

A fruit meeting the above specifications is considered the paramount need and objective

of the industry, but the Committee is giving careful consideration to all promising seedlings regardless of season.

We have arrived at the conclusion that we as growers have stressed too heavily fine flavor and eating qualities as against heavy production. The consuming public is not nearly as critical as we are. The producer cannot make a living from a few super excellent fruit, where he can do very well with perhaps what we consider a second grade fruit, which produces tonnage consistently.

For example, just two weeks ago, a very promising seedling in the late spring season, originating in La Habra Heights, was brought to the attention of the Committee by Mr. R. B. Luckey, after an unusually favorable laboratory reaction. It is a seedling of the Lyon to which it is similar in type of growth, is gaining in production, easy to propagate and has excellent eating qualities.

## **CONCLUSION**

The avocado industry may be able to relieve much of the pressure of overproduction in the citrus industry, if certain important problems are solved. One of the greatest is a variety problem. Every effort should be made to place all really promising varieties that can be located, under intensive trial as soon as possible. No reasonable avenue of approach should be overlooked and the Committee feels that it is taking steps to explore them all as thoroughly as the means at its disposal will permit.

Respectfully submitted,

THE COMMITTEE ON VARIETIES