

REPORT OF THE COMMITTEE OF THE CALIFORNIA AVOCADO ASSOCIATION ON REGISTRATION AND CLASSIFICATION OF VARIETIES

The unusual weather conditions in California during the winter 1921-22 caused the avocado crop, for the present season, to be a small one, which in turn gives us less opportunity for observation and information than a large crop would have done, but still we have had some new seedlings to consider and some new developments of interest in varieties already well known.

The parent Dorothea tree matured a good crop, but all small, averaging a scant half pound. A smaller average than reported for previous crops, due, perhaps, to a poor condition of the tree, which has become tilted over at an acute angle. A fruit picked December 16, 1922, maintained its previous high reputation for fine flavor and small seed, with a weight of fruit of seven ounces and $\frac{5}{8}$ of an ounce for the seed. It buds readily, the buds make an extraordinarily vigorous growth and prove very hardy.

The Dickey "A" appears not to hold its fruit well and has dropped it badly in a number of places.

Buds from the Prince are reported to take readily and to produce a vigorous growth.

A seedling fruit exhibited at our last annual meeting by Chas. F. Wagner tested well, except for the unfortunate size of the seed. Size of fruit 15 ounces with a very rich, buttery flavor, seed $4\frac{1}{2}$ ounces.

C. W. Paine of San Fernando sent four samples of the Banner Avocado, at intervals of fifteen days each, the first one coming early in January. All were mature and all uniform in size and otherwise. The average weight was 8 ounces and of seed $1\frac{1}{2}$ ounces. Fruit pyriform, green in color, with yellow flesh and no fiber. Flavor agreeable but not rich or nutty.

A sample of the "Mission Bell" grown by Charles Lange of West Anaheim was received February 11th, tree reported very hardy, believed to be a Guatemalan and Mexican hybrid and grown from a seed planted nine years ago. Crop this year thirty fruit. Maturity in January. Weight $13\frac{5}{8}$ ounces of a sample received on February 11th, seed 3 ounces, flavor pleasant, but not rich.

The Butternut grown at North Whittier Heights. A four year old budded tree. Fruit picked January 10, 1923, was oval in shape, weight 12 ounces, seed $\frac{3}{4}$ of an ounce. Skin smooth, red brownish in color, flesh rich yellow, quality good, flavor fair, somewhat unripe. Keeping quality good. Some samples showed considerable dark fiber.

Three Quaker fruit picked August 14, 1922, weighed respectively 20, 23 and 27 ounces, seed of the 23 ounce fruit $2\frac{3}{4}$ ounces. Skin dark green, smooth, $\frac{1}{16}$ of an inch thick, flesh a good yellow color, very good quality and no fiber. Flavor good in two samples, poor in one. This seems to be an early bearer. Trees three years old bloom and set fruit.

The Verde, one of the varieties introduced by the West India Gardens, has come into abundant bearing this year on the property of the Murphy Oil Company at East Whittier. Trees are rank growers and at seven or eight years of age, stand fifteen feet high. During the blooming period from March to June they lose all their leaves, but later on they come back again as good as ever, with fine vigorous leaves. A sample fruit received April 14 weighed 17½ ounces, seed 2¾ ounces, shape pyriform, color light green with many small yellow dots, flesh yellow, quality smooth, flavor good.

The Thompson tree has recovered from the freeze of a year ago and is now blooming. Small trees budded from it in the summer of 1921 came in good shape through the winter. They are strong, upright growers and one of them is now blooming. The Thompson tree commences to bloom in April, sets its fruit in June and ripens it in February and March. The weight of the fruit varies from 14 to 24 ounces and the seed averages an ounce to a pound of the fruit. Mr. Bosche, who procured the seed in Atlixco, Mexico, pronounces the fruit an exact reproduction of that from which the seed was taken. The variety has excited much interest on account of its exceedingly small seed and other good qualities and we may hope to more thoroughly test its merits when the next crop matures. The flavor of fruit so far tested was only fair, owing to damage from frost.

The Ward is a vigorous tree with handsome foliage. It is reasonably hardy and shows no injury from the freeze of 1921. It is believed to be a natural hybrid from Guatemalan and Mexican parentage. The seed was brought from the Jericho Ranch, State of Chiapas, Mexico, 60 miles from Guatemala, 8 miles from the Coast and 200 feet above sea level. Its blooming season is April, and season for maturing of its fruit, December, January and February. The fruit varies in weight from 12 to 20 ounces. The seed, tight in the cavity, weighs in a 12 ounce fruit 1¾ ounces and in a 20 ounce fruit 2¾ ounces. The skin turns to dark purple with light brown spots, nearly smooth and $\frac{1}{32}$ to $\frac{1}{16}$ inches thick. Color of the flesh rich yellow to medium green, quality rich, flavor rich. An analysis gave oil 24.39 per cent; protein 1.73 per cent. Two of the committee tested two samples of the fruit early in January. They found some fiber in one and none at all in the other and they noticed a number of cracked fruit on the tree when visiting it. The owner states that this is the first time any fiber has been found in a Ward fruit and that cracking of the fruit has only occurred twice in the history of the tree, both times during long rain storms and after the fruit had turned very dark and been left on the trees past the proper time at which it should have been picked.

The "Dutton" has borne five consecutive crops, setting the largest one in its history after the freeze of January, 1922. Budded trees make very vigorous healthy growth and everyone so far known has shown some bloom if one year or more old at blooming time. In no case has blooming so early adversely affected the growth. Three top worked trees at Yorba Linda this year matured crops at two to two and a half years from budding and some fifty nursery trees the same age are blooming heavily and give every indication of setting a good crop. The same is true of other sections in Orange County as well as at Carlsbad and Chula Vista. The young trees show an unusual number of short fruit spurs and never make long, unbranched growths.

The fruit on the parent tree has varied in weight from ¾ to 1½ pounds, averaging about 1 pound. The seed over several years has averaged 16 per cent. Shape of the fruit

pyriform, color maroon, becoming when very ripe dark purple or nearly black. The fruit has the rich nutty taste characteristic of the Mexican race. At Anaheim it commences to ripen as early as January first, less than eight months from the blossom and has been picked February 15 with the seed sprouted and tap root an inch long.

In normal seasons the entire crop can be picked ripe in the Anaheim district before the tree comes into bloom and earlier still in warmer sections. It also requires a longer time to soften up after picking than many others, which make it an extra good picker and shipper.

At the Fall meeting of the Association a plate of five fruit, new to, our members, attracted much attention by reason of the almost exact uniformity in the nearly round shape and purplish black color of the handsome one pound fruit displayed on the plate. It is called the Linscott and is grown by E. C. Dutton at West Anaheim. The owner states this uniformity has been true of all the crops and that so far practically no variation has occurred among the different fruits in size or shape. He also finds that the fruit keeps for an extraordinarily long time after being picked. The tree blooms in the spring and requires about 18 months to mature its crop.

It comes from a seed planted in 1910, the same planting producing the Dutton and Anaheim varieties. The first crop was three fruits, the next seven hundred and while this was still on the tree, it set the next following crop of three hundred, which was caught in the freeze of 1921-22 and only a part of it saved. At present the tree is carrying a very heavy bloom and promises a large crop.

We found the seed medium small, the flesh yellow in color, of good flavor, dry and mealy in quality with no fiber in two samples and a trace in the third. Also in two the seed coat was not adherent; to the seed, and the seed had sprouted and was making roots.

The Anaheim. The original tree grew straight up with light drooping side branches. On two occasions twelve feet was cut out of the top, resulting in the crown forming about eighteen or twenty feet from the ground. The tree has borne satisfactory crops for five consecutive years, two of which were especially heavy. After the big freeze the tree set a heavy crop and, although warned to wire the branches together, the owner neglected to do so, with the result that they all came down the same night, losing 460 fine large fruit. There are a number of fruit still on some of the light side branches. Only three budded trees of the Anaheim are known. These were top-worked by L. D. Oliver of Yorba Linda and are maturing fruit 2½ years from the insertion of the buds, 12 fruit on the smallest and 30 each on the other two, the fruit large and of fine appearance, running up to 1¾ pounds in weight. All the budded trees show the same tall upright growth exhibited by the original tree, they have doubled in size while maturing their crops, and are again blooming heavily and putting out strong new growth, which makes the variety appear interesting as an interplanting proposition.

The fruit is large, averaging considerably over a pound, nearly elliptical in shape, smooth and green in color, with a medium to small seed. In cutting and eating quality it is excellent, and has received nothing but praise from all who have tested it.

The season in Anaheim is late spring and summer, somewhat earlier at Yorba Linda,

where fruit tested in April was pronounced by some as "the best avocado they had yet eaten."

The Lyon is under observation in regard to its behaviour as a tree on certain stock and in various locations. The Victory will also have to be observed closely in sections other than the Hollywood Hills.

The Guatemalan varieties sent in by Wilson Popenoe are under the same observation as the Lyon.

One of these, the Mayapan, proved at Upland more hardy than any of the others in January, 1922, fully as hardy as the Fuerte or more so. None of the young buds, only a few inches long in top worked trees, were hurt by the cold. Another locality reports a less favorable experience. One year old buds of the Mayapan are now blooming and Mr. Shedden's tree is maturing a large crop. Every indication points to an early and prolific bearer. The fruit tested last year was excellent in quality and flavor. Weight about one pound, seed medium small, color green turning purple immediately after picking, or just before.

Mr. Shedden states "you are right about the fruit being ready to pick before showing color. My tree set a wonderful crop, the largest of any tree in my place, part of which dropped during some very hot weather in September. I am hoping to keep some long enough to exhibit at this meeting. The quality and flavor are excellent, dry and mealy, answering Mr. Wilson Popenoe's description, and the skin thick and granular."

A great many new seedlings are setting fruit this year, perhaps something really fine will develop from them during the coming season and we are learning so much and so fast about values in existing varieties that we think all will agree that this year is not yet the time to make a new recommended list of varieties for commercial planting.

CHARLES D. ADAMS, *Chairman,*

WM. HERTRICH,

T. U. BARBER,

The Committee.

Approved by the Board of Directors on May 4 and adopted at the Annual Meeting of the Association on May 12, 1923.