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final report

1965

Progress Report

HYBRID AVOCADO
VARIETIES

VENTURA COUNTY

AGRICULTURAL EXTENSION SERVICE
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PROGRESS REPORT - AVOCADO HYBRID TRIALS - 1965

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January 14, 1966

HYBRID AVOCADO TRIALS

The purpose of this project is to develop new and better varieties of avocado fruits by use of known parentage varieties. Both controlled-parentage hybrids and open-pollenized hybrids were used in this project. Later selfed seedlings of named varieties were added. These trees were furnished by Dr. B. O. Bergh, Associate Specialist from the Citrus Research Center.

The original hybrid trees were set out in plots in all areas of Ventura County in 1951-1952 and 1953. Over 200 trees were in the original plots on 38 cooperators' properties. Most surviving trees have produced fruit and most of those that have not fruited have been removed or grafted over to other varieties. Those trees that have fruited and do not show any commercial possibilities have been discarded.

The original trees were furnished by UCLA.

Approximately 1350 selfed seedling trees were set out in plots, including hedge rows from 1959 to 1961. Approximately 20 per cent of the trees fruited in 1965.

Budwood of the most promising varieties has been furnished farm advisors in other avocado-producing counties as well as to Agricultural Departments in Chile, Argentina, Brazil, Israel, and to the state of Hawaii.

Four of the best hybrids should be tested further. These are the Creelman F x H, Nichols F x M, Camulos D x E, and Las Posas F x H. The Shawn F x M and Martin F x M are good fruits but do not have commercial possibilities. They might be good for backyard plantings.

In due time, some of the selfed seedlings may be added to the group to test for commercial possibilities.

Nurserymen in Ventura County are producing a limited amount of Creelman and Nichols trees for planting in the spring of 1966.

Small acreages of the Creelman variety have been set out and many individual tree plantings have been made of Nichols, Camulos, and Las Posas. To date, approximately six acres of the Creelman variety have been planted in Ventura County.

It is recommended that additional plantings of the Creelman and Nichols varieties be made, so that a sufficient quantity of fruit will be available to determine trade acceptance.

SELFED SEEDING PROJECT

This is a cooperative project between Dr. B. O. Bergh and the Ventura County Farm Advisor. There are approximately 1350 trees in the 12 plots in all climate zones of the county. Selfed seedlings of the following varieties were used: Fuerte, Hass, Zutano, Rincon, Bacon, MacArthur, and Nowels.

These plots are inspected three times a year and tree growth and fruit evaluation is made and recorded for the record. Most trees have been tagged for identification purposes.

The first trees were planted in 1959 and the balance in 1960 and 1961. A special report has been made indicating trees that produced fruit in 1965.

Cooperators in This Project Are:

1959 Planting

1. Mrs. Rose D. Robison, Somis Selfed Zutanos. (Oran Brown place.) 34 trees in plot. Trees vary in size, shape, and vigor; 11 trees produced fruit in 1965. A few fruits look promising but will be evaluated at a later date.
2. David Kleine, Camarillo High School Selfed Fuertes. No fruit on any of the trees. 6 trees in plot. Trees have been badly damaged by livestock. A few trees bloomed in 1965, but produced no fruit.
3. Bob McAfee, Thousand Oaks Selfed Rincos. 48 trees in plot of which 4 trees are Rincon and balance are Rincon seedlings. No fruit set on seedling trees in 1965. Most seedling trees resemble Rincos in their growth habits. These trees are growing in heavy adobe soil and are basin irrigated. Several trees have died due to root rot.
4. Limoneira Company, Plot I. Wheeler Canyon, Santa Paula Selfed Bacons. This very large plot consists of 771 selfed Bacon seedlings. 210 trees produced fruit or cukes in 1965. All trees in this plot were inspected and all fruit evaluated during an inspection on October 27 and 28, 1965. Much of the fruit resembles the Bacon variety. Fruit that shows some promise will be evaluated at a later date and information recorded for the record. A special report is on file at the Farm Advisors Office, evaluating all trees in plot.

1960 Planting

1. Charles Farnsworth, Ojai Selfed Fuertes. Several trees in this plot are affected with lime-induced chlorosis. Trees vary in size, shape, and growth habits. There are 111 trees in plot and all have been labeled with metal tags. 5 trees produced fruit in 1965. Fruit will be evaluated at a later date.

2. C. K. Rogers, Piru Selfed Fuertes. Trees were planted along highway as a windbreak. Trees vary in size, shape, and growth habits and for most part have made a good growth. No fruit set.
3. B. H. Anderson, Ojai Selfed Fuertes. 3 trees left in plot. Fair growth. No fruit.
4. Limoneira Company, Plot II, Santa Paula Selfed Fuertes. Trees in this plot have made good growth. A few trees damaged by wind. There are 169 trees in this plot. 7 trees bore fruit and 2 bore cukes in 1965. Fruit will be evaluated upon maturity.

1961 Planting

1. Ralph Hartung, Ojai Selfed Bacons. All 65 trees in this plot were inspected. There is considerable variation in tree growth, although many of the trees resemble Bacons. 12 trees produced fruit or cukes in 1965. This fruit will be evaluated at a later date. Trees have made good recovery from severe freeze of 1962.
2. A. G. Hamerski, Camarillo Heights Selfed MacArthurs. Trees in this plot have made good growth in spite of severe weed competition. Many of the trees are vigorous. One fruit found on one tree. Trees should be labeled for identification purposes.
3. John Harris, Carpinteria Selfed Hass. 5 trees behind barn have made excellent, vigorous growth. T4 has a few green pear-shaped fruit. T1 was severely damaged by wind. 12 smaller trees have made good growth after being severely damaged by severe freeze of 1962.
4. Evans Ward, Fillmore Selfed Nowels. The trees in this plot were planted along barranca for windbreak purposes. Trees vary somewhat in appearance and growth habits, but for most part resemble the Nowels variety. No fruit in 1965.

AGRICULTURAL EXTENSION SERVICE PLOTS

All plots were inspected at least once during the year and information recorded. Fruit has been tested and evaluated and all have been eliminated except Creelman, Nichols, Camulos, and Las Posas 45-1-42. The Shawn and Martin do not show commercial possibilities. Other hybrids have been eliminated by removal or grafting to better varieties. Several additional plots have been established with Creelman and Nichols by grafting old trees or planted as nursery trees. Several old trees have been grafted to Camulos and Las Posas varieties. There appears to be a difference in production habits in the different climatic zones. Budwood of promising hybrid varieties has been furnished to those who have requested it.

The following symbols are used to indicate the names of the parent varieties:

A - Anaheim
B - Blake
Ba - Bacon
C - Clifton
D - Duke

E - Edranol
Em - Emerald
F - Fuerte
H - Hass
Jal - Jalna

L - Lyon
M - Mexicola
Mayo - Mayo
N - Nabal
No - Nowels
Z - Zutano

COOPERATORS

Trees on many cooperators' properties have been eliminated and only those trees that have shown some promise are left in the plots. In some instances the best hybrid varieties have been grafted to trees for the purpose of testing these varieties under different conditions.

Cooperator No.:

1. Camulos Ranch (Ed Burger and Harry Forbes), Piru

This is the home of the original Camulos tree. This D x E cross is the only tree left in a large plot established in 1951. The tree is very vigorous and produces a green, pear-shaped fruit, ripening in Piru in October and Santa Paula about one month later. Good quality and has produced fairly consistent crops. Appears to be best adapted to the warm interior areas. Production records are as follows: (40-pound Field Boxes)

1954 -- 22 fruits	1960 -- 7.0 boxes
1955 -- 1.5 boxes	1961 -- 6.0 "
1956 -- .8 "	1962 -- 11.0 "
1957 -- 5.0 "	1963 -- 4.0 "
1958 -- 0.0 "	1964 -- 3.0 "
1959 -- 12.5 "	1965 -- 10.3 "

1965 crop was picked November 1, 1965. Tested 9 per cent oil on October 26, 1965.

8. E. R. Nichols (Thorpe Place), Las Posas, West of Somis

T6 - F x M - 51002

This is the original Nichols tree. Has been a fairly consistent bearer of green, pear-shaped fruit. Vigorous tree. Good quality. Looks promising. Should be frost resistant since one parent is Mexicola, a very frost-resistant variety. Heavy set of fruit for 1965-66.

Recommended for experimental planting.

All other trees in this plot are not of commercial importance.

10. Joe Maulhardt, 190 Anacapa Street, Camarillo Heights

Two trees in this plot. One tree produced fruit in 1965 for the first time.

T1 - F x A - 52-23. Tree has made good growth and produced a few green, pear-shaped fruit that had tendency to be corky. Does not look promising.

T2 - H x B - 52-18. Low, spreading tree. Severe leaf burn. No fruit.

13. Mrs. I. Norman, 780 W. Loop Drive, Camarillo Heights

2 trees in plot. Both trees have been grafted to Creelman. One-half of 1 tree is original hybrid, but no fruit on original. Good to excellent set of Creelman fruit on both trees.

14. George Steelman, 509 North Loop Drive, Camarillo Heights

3 trees in original plot.

T2 - F x H - 51007. Produces a fairly consistent crop of purple, pear-shaped fruit of good quality. Good set for 1965-66. T2 has been discarded, and T1 has been grafted to Daily No. 11.

6 Creelman trees in the plot have a fair to good set of fruit for 1965-66, and have made good growth. Several new Creelman trees were set out in 1965.

15. L. Bower (Creelman Place), 3191 Las Posas Road, Camarillo Heights

T 1 - F x H - 51007. This is the original Creelman tree. Has produced a fairly consistent crop of green, pear-shaped fruit of excellent quality. An excellent crop of fruit on tree for 1965-66. This fruit ripens from March to July. Best quality is obtained in the earlier picks. This fruit shows considerable promise as a new commercial fruit and is recommended for experimental planting. Budwood from this tree has been used to establish trees in other areas of the county.

17. Roland Shawn, Mission Drive, Camarillo Heights

All trees in Plots I and II showed no promise and should be discarded or grafted over to named varieties. T3 F x M - 52-23 in Plot II may have some use as a backyard tree, but does not have commercial possibilities. The original tree died, but test trees were established at the B. I. Company, Somis, by using budwood from original tree. Green, pear-shaped fruit of good quality. Has tendency to alternate in its bearing habits.

23. George Bowker, East Telegraph Road, Santa Paula

This plot consisted of 19 trees in the original planting. All but 2 trees were grafted over to other varieties as they showed no commercial possibilities. The grafts did not grow on several trees.

R42 - T1 - F x M - 51002. Vigorous tree. Good set green, pear-shaped fruit with severe end spot. Good quality.

R42 - T8 - F x M - 51001. Dwarf tree. Produces some small, purple, pear-shaped fruit. Budwood is being used from this tree to see if it would have a dwarfing effect on scions grafted to it. Tests have been set up using Topa Topa rootstock, the dwarf interstock, with Hass and Bacon grafted to it. No results to date.

24. Reuben Martin, Ojai Road, Santa Paula

5 trees in original plot. All have been grafted to other varieties except T3. T4 and T5 have been grafted to T3. Produces a consistent crop of purple, pear-shaped fruit of fair quality. Ripens in November and December. Was not picked as of December 21, 1965. These trees are F x M - 52-16. May have use as backyard trees.

T1 Grafted to Las Posas 43049 (5). Excellent growth with a light set of fruit. Large seed. Not commercial.

T2 Grafted to Las Posas 45-1- (42). Tall, upright tree with heavy set of green, pear-shaped fruit. May have some commercial promise.

T-A-Nichols - T6 - F x M - 51002. Tall, upright tree with heavy set green, pear-shaped fruit.

T-B - Nichols - T10 - F x H - 51-5. Vigorous tree. No fruit. Very poor producer.

25. J. N. Thille Estate (Mr. Walker and John Kelley Thille), Sta. Paula

All trees in the plot were grafted over to other varieties in the spring of 1963-64 with the exception of:

R8 T1 - S53 - H4 Tall, upright tree. Good set of green pear-shaped fruit. May have some promise.

R8 T28 - A x Z Upright spreading tree. No set of fruit for 1966. Alternates. Not of commercial possibilities and should be grafted.

R8 T16 - Fujii - F x H - 51007 Tall, vigorous tree. Light set of fruit. Purple, pear-shaped fruit of fair to poor quality. Should be grafted.

R6 T3 - Creelman - T1 - F x H 51007 Tree has made excellent growth. Grafted in 1959 and has set fairly consistent crops. Produced 5 1/2 boxes of fruit in June 1965 and has heavy set of fruit for 1966. Graft wood has been taken from this tree to produce other trees in plot.

R10 T1 - Nichols - T1 F x M - 51002 Has heavy crop every other year. Produced 10 40-lb. field boxes for 1965. Picked in June. No crop for 1966. Very vigorous, tall, upright tree. Green, pear-shaped fruit of good quality.

R3 - 4 - 5-6-7 30 Creelman trees. Produced 12 boxes of fruit in 1965. Heavy set on all trees for 1966 season.

100 large MacArthur trees were grafted to Creelman in spring of 1965.

Creelman and Nichols fruits were picked in June 1965, and

J. N. Thille Estate (Continued)

delivered to Calavo. According to Calavo reports, a considerable amount of fibre was indicated. Fruit should be picked earlier than the June date.

38. Las Posas Orchard Company (Jack Hackney & Duwayne Hunnicutt), Somis

- A. Las Posas - F x H - 45-1 - (42) Original Las Posas tree. Tall, upright tree with excellent set of green, pear-shaped fruit for 1965-66. This fruit looks promising and is being tested in several places. May have commercial possibilities. Fairly consistent bearer. Ripens in summer.
- B. Las Posas - F x H - 43049 (5) Tall, upright tree. Produces green, pear-shaped fruit with exceptionally large seed. Ripens in summer. Not considered to be of commercial importance.
- C. Creelman - F x H - 51007 An excellent crop on all 5 trees for 1965-66. Vigorous, spreading trees. Produces excellent quality green, pear-shaped fruit which ripens about March. Fine appearing fruit.
- D. Lypps - Ba x F Very vigorous spreading tree. Heavy crop of green, pear-shaped fruit, usually ripening in December or January. Has been a fairly consistent bearer. Should be tested in other areas of county.
- E. Several older trees have been grafted to Creelman and Nichols, but these have not been evaluated.

39. Berylwood Investment Company (Bob Mills, Manager), Somis

This plot is composed of some of the best hybrids taken from all the plots and grafted to seedling trees planted in place. The trees were grafted in 1959 and others were added at a later date. All trees have produced fruit. Trees in this plot have been damaged by wind on several occasions.

Plot:

- 1. Vanoni - F x M Out.
- 2. Fujii - F x H - 51007 Good crop of fruit. Has heavy fibre content in fruit. Purple, pear-shaped. Not commercial and should not be propagated further.
- 3. Camulos - D x E Very vigorous spreading trees. Has fair set of green, pear-shaped fruit. Ripe in December. This variety produces better crops in warm interior.
- 4. Fujii Out.
- 5. Nichols - T10 - F x H Very vigorous tree. Poor producer.

Berylwood Investment Company (Continued)

Has a few fruits of high quality for 1965. Not recommended because of its poor bearing habits.

6. Shawn - Plot II - T6 - H x B Vigorous trees. Has set of fruit. Purple, pear-shaped. Fair quality. Not commercial.
7. Nichols F x M 2 trees in plots. Trees were severely wind damaged. A fair set of fruit on one tree. Has tendency to alternate. Good quality, green, pear-shaped fruit ripening about March 1. Should be tested in several places.
8. Shawn - Plot II - T3 F x M Produces green, pear-shaped fruit. 2 trees in plot. No set on 1 tree, and a fair set in top of other. Alternates. Good quality fruit, but not considered to be of commercial importance.
9. Shawn - Plot I - T3 F x A Out.
10. Creelman - F x H Good set of fruit in top of trees. 4 trees in plot. Green, pear-shaped fruit of excellent quality. Ripens March 15. The best fruit in the entire plot. Trees slightly wind damaged.
11. Las Posas - 45-1 - (42) F x H Good set of fruit, especially in top of tree. Green, pear-shaped of good quality. Ripens in summer months. May have commercial possibilities.
12. Las Posas - 43049 (5) F x H Good set green, pear-shaped fruit, especially in top of tree. Two trees in plot. One tree poor set. Large seed. Not considered to be of commercial importance.
14. Decem This variety is considered to be a Fuerte seedling. Has characteristic blotchy leaf. Produces fairly consistently. Green, pear-shaped fruit resembling Fuerte. May have commercial possibilities.
40. Syd Johnson (Burnett property), D. L. Flowers, Mgr., W. Broadway, Mrpk.

This plot was established by Mr. and Mrs. W. A. Burnett from budwood furnished by the Agricultural Extension Service and budded into seedlings interplanted in a lemon grove.

The trees need fertilization and apparently were in need of water prior to the heavy rains of November and December 1965.

The following hybrids are included in this plot:

1. Creelman Trees have made a fair growth. A few fruits on some trees. 39 trees in this plot.
2. Nichols A good set of fruit on most trees. Looks good. 16 trees in plot.

Syd Johnson (Burnett property) (Continued)

3. Las Posas - 45-1- (42) Trees have made good growth. No fruit. 25 trees in plot.
4. Las Posas - 43049- (5) Trees have made good growth. Good set of fruit on most trees. 27 trees in plot.
5. Thille (Hass #4) Fair set of fruit on most trees. Good growth. 32 trees in plot.

41. Limoneira Company, Foothill Road, Santa Paula

Hybrid avocado trees in this plot were planted in the field in July 1962. Nursery trees were produced by the cooperator from budwood furnished by Ventura County AES and selected hybrid varieties furnished by Dr. B. O. Bergh from CRC. The trees have made an excellent growth and most varieties produced fruit in 1965. A large percentage of the fruit was evaluated in December 1965, and this information is recorded in the table attached to this report. Some of the fruit was too immature to evaluate and this will be done at a later date.

LIM. NO.:

- 124 Las Posas 45-1- (42) F x H Upright vigorous tree. No fruit.
- 125 Las Posas 43049- (5) F x H Spreading tree. A few green, pear-shaped fruit. Summer fruit. Too immature to sample.
- 126 Creelman - 51007 - F x H Spreading tree. Fairly vigorous. Got set of green, pear-shaped fruit. Tested 8.2 per cent oil on December 10.
- 127 Martin - F x M Compact, low growing trees. 4 trees in plot. 1 fruit.
- 128 Vanoni - F x M Tall, upright trees. Blooming. Green, pear-shaped fruit with small end spot. One tree chlorotic. Vigorous trees.
- 129 Nichols - F x M Heavy set of green, pear-shaped fruit. Vigorous trees. Fruit very immature at time of sampling on December 10.
- 130 Camulos - D x E Vigorous, spreading tree. Good set of green, pear-shaped fruit. Fruit tested 17.3 per cent oil on December 10.
- 131 1-1CRC-JAL x F Vigorous, spreading tree. Good set of fruit. Fruit corky.
- 132 11-4-CRC-E x F Tall upright tree. Vigorous. A few fruit. Fruit has tendency toward rustiness.
- 133 11-6-CRC-EM x F Vigorous spreading tree. Fair set of fruit. Green, pear-shaped fruit. Tested 14 per cent oil on December 10.
- 134 14-10-CRC-D x F Fairly vigorous, spreading tree. A few oval-shaped fruit. Has end spot and very large seed.
- 135 14-11-CRC-D x F Large, spreading tree. Green, pear-to oval-shaped fruit. Large seed.
- 136 14-16-CRC-D x F Vigorous, spreading tree. No fruit.

- 137 14-43-CRC-D x F Very vigorous, spreading tree. A few fruits. Too immature to test.
- 138 14-72-CRC-D x F Spreading, weeping-type tree. A few fruits. Green, oval-shaped fruit. Fruit has end spot.
- 139 15-1-CRC-Z x Mayo Fairly vigorous tree. A few oval, green fruits. Tested 13.8 per cent oil on December 10, but did not soften properly.
- 140 17-17-CRC-H x C Very vigorous, spreading tree. Purple, oval fruit with very large seed.
- 141 17-18-CRC-H x C Vigorous, upright tree. Long narrow leaves. Fair set of purple, pear-shaped fruit. Tested 9.4 per cent oil on December 10.
- 142 17-21-CRC-H x C Vigorous, spreading tree. Fair to good set of fruit. Green, pear-shaped fruit.
- 143 17-41-CRC-H x C Fair growth. Light set of fruit. Green, oval fruit, somewhat corky.
- 144 17-43-CRC-H x C Very vigorous tree. A few fruits. Green, pear-shaped fruit with large seed. Very immature on December 10.
- 145 17-49-CRC-H x C Large, upright tree. A few green, pear-shaped fruit. Very large seed.
- 146 17-51-CRC-H x C Upright, spreading tree. Fair set of purple, pear-shaped fruit. Heavy fibre. Fruit over-ripe on December 10.
- 147 120-2-CRC-B x E Good set fruit on 2 trees. Too immature to sample fruit. Tree upright and vigorous.
- 148 Shepard Open tree, fairly vigorous. Good set green, pear-shaped fruit. Tree is Edranol seeding.

LIMONEIRA COMPANY HYBRID PLOT PLANTED JULY 1962

DATE PICKED FOR TESTING	TREE No.	PARENT CROSS	WT. FRUIT OZ.	WT. SEED OZ.	SEED % WT. OF FRUIT	FRUIT COLOR	FRUIT SHAPE	% OIL	AMT. FIBRE	FLAVOR QUALITY	COLOR FLESH	DATE FRUIT PICKED	NO TREES PER PLOT	PRO- DUCTION	REMARKS
12-10-65	126	Creelman F x H	7 5/8	1.0	13.1	Green	Pear	8.2	L	G	Creamy	N.P.	7	2 Fruit	Not Picked
	127	Martin F x M	11	1.5	13.5	Purple	Pear	11.0	L	F	Yellowish Green	12-16	4	2 Fruit	
	128	Vanoni F x M	7	1 1/4	18.0	Green	Pear	19.6	L	E	Greenish Yellow	12-16	2	0.1 Bx	End Spot
	129	Nichols F x M	7 1/8	1 1/8	15.7	Green	Pear	4.2	L	P	Greenish Yellow	N.P.	4		Rubbery Immature
	130	Camulos D x E	9 1/2	1 5/8	17.1	Green	Pear	17.3	L	F	Creamy	12-16	4	6.0 Bx	
	131	Jal x F	10 1/8	1 3/8	13.5	Green	Pear to Oval	12.6	M	F	Creamy Yellow	12-16	3	6.2 Bx	Cokry and Rough
	132	E x F	7 1/2	1 1/4	16.6	Green	Pear	15.1	L	G	Yellow	12-16	3	0.3 Bx	Corky
	133	EM x F	6 5/8	1 1/8	16.9	Green	Pear	14.0	M	F	Greenish	12-16	3	2.2 Bx	Discolored
	134	D x F	7 3/8	1.5	20.3	Green	Oval	16.7	Medium	Good	Creamy	12-16	2	4 Fruit	End Spot Over-ripe Large seed
	135	EM x F	8 1/8	1 5/8	20.0	Green	Pear to Oval	11.9	L	F	Yellow	12-16	3	0.4 Bx	Large seed
	138	D x F	8 7/8	1 3/8	15.4	Green	Oval	15.9	H	G	Yellowish Green	12-16	3	0.1 Bx	End spot
	139	Z x Mayo	10 5/8	1 1/2	14.1	Green	Oval	13.8	L	F	Creamy Yellow	12-16	3	1.6 Bx	Rubbery Immature
	140	H x C	8 1/2	1 3/4	20.5	Purple	Oval	16.9	M	G	Yellow	12-16	3	0.5 Bx	Large seed
	141	H x C	10 1/2	1 5/8	15.5	Purple	Pear	9.4	H	P	Creamy	12-16	2	1.2 Bx	
	142	H x C	7 1/8	1 1/4	17.5	Green	Pear	14.8	M	G	Creamy	12-16	3	3.2 Bx	
	143	H x C	7 3/8	1 3/8	17.3	Green	Oval	14.4	L	G	Greenish Cream	12-16	3	3 Fruit	Corky
	144	H x C	10 3/8	2.0	19.2	Green	Pear	7.3	L	F	Creamy Yellow	N.P.	3		Rubbery Immature Large seed
	145	H x C	7 1/2	1 1/2	20.0	Green	Pear	12.2	M	F	Greenish Yellow	12-16	3	1 Fruit	Large seed
	146	B x E	8 3/8	1.25	14.8	Purple	Pear	16.0	Heavy	Good	Greenish Yellow	12-16	3	1.0 Bx	Over-ripe
11.	148	Shepard E Seed	6	1.0	16.7	Green	Pear	13.1	L	F	Greenish	12-16	9	9.0 Bx	

42. Lawrence Gerry, Santa Rosa Valley, Camarillo

88 Creelman trees were planted in this plot in 1961 as tip-graft nursery trees. Approximately 1 acre in plot. Trees have made very good growth and have a fair set of fruit for 1965-66.

43. Howard Sheldon, North Hall Road, Santa Paula

The older plantings in this plot consisted of 225 Creelman, 13 Nichols, and 3 Camulos trees. Most of these trees were established by grafting to seedlings growing in place. The set of fruit on the Creelman trees varies from light to heavy. The Nichols trees were heavily laden with fruit which are immature as of this date (January). The Camulos trees produced a good crop of fruit for 1965 and were picked in December. During 1965, 120 additional trees were added to the plot by grafting seedling trees. Included in this addition were 30 Camulos, 30 Nichols, and 60 Creelman trees.

44. Dick Maulhardt, Rose and Colonia, Oxnard

52 Creelman trees were planted in this plot in April 1961 as tip-grafted nursery trees interset in a lemon grove. The trees have made a vigorous growth, with a poor set of fruit for 1965-66. Also included in this planting are the Shepard, Thille (Hass #4), and Decem. Production of these varieties was poor also.

45. Paul Leavens, Jr., 9780 Telegraph Road, Saticoy

250 Creelman trees were planted in this plot in 1963. Most trees have made fair growth. They are interplanted in a lemon grove and growth of young trees has been influenced by shading. Some leaf burn. A few small trees have died out and should be replaced. No fruit.

46. Dr. Chess, Foothill Road, Saticoy

Approximately 1/2 acre of 50 trees of Creelman were planted on this hillside planting in 1963. Trees have made good growth. No fruit.

47. John Friedrich, Santa Clara Avenue, Oxnard

Grafted Creelman trees have a poor set of fruit. Trees have made good growth. Trees grafted in 1960. Good set of fruit on Decems in the same plot, but poor set on Mesa.

COMMENTS

Of all the hybrids tested in this project only 4 remain that may have commercial possibilities. These are the Creelman, Nichols, Camulos, and Las Posas. The Creelman and Nichols have produced sufficient fruit

Comments (Continued)

to date to get a good evaluation of the fruit and the bearing habits of the trees. Trade acceptance of the fruit is very important and this will be determined when sufficient fruit reaches the market. Approximately 6 acres of Creelman trees are in existence in Ventura, and a lesser amount of the other 3 varieties.

Budwood of these 4 varieties has been furnished Farm Advisors in other avocado counties for testing in their areas. Also budwood has been sent to the state of Hawaii and several foreign countries.

Nursery trees of some of the hybrids are available from Ventura County nurseries, and some nurseries will raise hybrid trees on order.

There are several interesting hybrids in the Limoneira plot which bore fruit in 1965-66 in sufficient quantities for testing.

Approximately 20 per cent of the trees in Dr. D. O. Bergh's selfed seedling plots bore fruit in 1965-66. These fruits have been evaluated in the field, but have not been checked in the lab. This will be done during the year as they mature.

A description of the best hybrids is indicated in the following table.

BEST VARIETIES OF HYBRID AVOCADOS TO DATE

January 15, 1966

Hybrid Varieties	Parent Cross	Wt. Fruit Ounces	Wt. Seed Ounces	Seed %	Fruit Color	% Oil	Shape	Fibre	Flavor Quality	Color Flesh	Ripening Dates	Remarks
D-Duke	E-Edranol	F-Fuerte	H-Hass	M-Mexicola	E-Excellent	G-Good	F-Fair					
Greelman T1-51007	F x H	9 3/4	1 3/4	17.8	Green	16.3	Pear	Normal	E	Creamy Yellow	3-15 to 7-15	Good fruit. Best found to date.
Nichols T6-51002	F x M	11 5/8	1 1/2	13.4	Green	14.5	Pear	Light	G-E	Light Cream	3-15 to 5-1	Heavy, consistent bearer. Looks good.
Camulos R7 T15 44082-1	D x E	9 1/2	1 3/4	18.4	Green	12.9	Pear	Normal	G	Greenish Yellow	10-25 to 1-1	Early fruit at Pitu. Jan. at Somis.
Las Posas 45-1-42	F x H	7 1/4	1 1/8	15.6	Green	19.1	Pear	None	E	Creamy	5-1 to 8-1	Good fruit.

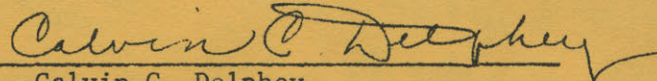
I wish to express my thanks and appreciation to all the cooperators who have made these hybrid tests possible and to assist in the development of new varieties which may be of economic importance to the avocado industry. Testing varieties in different locations assists in the development of information to growers who may wish to try out new varieties.

I wish to thank Calavo Growers of California and especially Bob Chapman, Fieldman, Retired; George Bowker; Dick Birnie; and F. W. Hertel, Jr., Calavo Fieldman; and to Jerry Jackson, Manager of Calavo at Santa Paula for evaluating the fruit and running oil tests on experimental fruits and to others on the Agricultural Extension Service staff who helped in the evaluation of the fruits.

It is my sincere desire that this progress report will be helpful to growers and to the Avocado Industry.

January 14, 1966

Date



Calvin C. Delphey

County Director and Farm Advisor

Co-operative Extension work in Agriculture and Home Economics, College of Agriculture, University of California, and United State Department of Agriculture co-operating. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. George B. Alcorn, Director, California Agricultural Extension Service.

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