

CHANDLER/HOWARD YIELD AND QUALITY EVALUATION

Bill Olson, Ron Snyder

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ABSTRACT

Eighth leaf Howard walnut trees outyielded ninth leaf Chandler walnut trees on a yield per trunk area basis. In terms of actual yield the year older Chandlers provided 40 percent more yield than Howards. In 1987 Howards were ready for harvest 20 days before Chandler. In 1988 Howards were ready for harvest 14 days before Chandler. Nut quality evaluations in 1987 revealed comparable quality for the two varieties when harvested at their proper timing. Although the Chandler averaged 123 dry pounds/tree, two trees only averaged 30 lbs. per tree. The reason for this low production is not known.

OBJECTIVE

To compare yield and quality of Chandlers and Howards in the same orchard under the same cultural practices over a number of years.

PROCEDURE

Collect yield and quality data from 40 individual Chandler and Howard walnut trees, each planted adjacent to one another in an orchard in Durham, California.

RESULTS

In 1988 the ninth leaf Chandler trees averaged 123 dry pounds per tree on 2.95 tons/acre at 48 trees/A. The eighth leaf Howard trees averaged 88 dry pounds per tree on 2.1 tons/acre. The Chandlers are larger than the Howards. The average trunk area of Chandler trees was 530 cm². Howards averaged 291 cm²; this size difference is consistent with the fact that Chandlers were grafted in 1980 and Howards in 1981. Dry yield per cm trunk area was greater in the Howard trees. Howards averaged .30 lbs/cm² trunk area while Chandlers averaged .23 lbs./cm² trunk area. Howards were ready for harvest two weeks earlier than Chandlers in 1988, three weeks earlier in 1987.

Broken or perforated Chandler shells have continued to decrease. 1987 samples indicated 1 percent broken or perforated Chandler shells. 1988 quality data is not available at this time.

Two Chandler trees in this evaluation yielded only 30 lbs. dry walnuts per tree. Other low producing Chandlers were reported by the grower. The reason for this low production is not known.

The poor leaf color previously reported on Howards was only slightly evident this year.

CONCLUSION

From four years' data both Chandler and Howard appear to produce excellent crops in terms of yield and quality. Howards are smaller trees than Chandlers and need to be planted more densely to produce maximum tonnage per acre. Howards are ready for harvest 2-3 weeks before Chandler yet both have a similar late leafing data. This makes a good "slot" for both Chandlers and Howards. Chandler shell quality is improving as the tree gets older.

CHANDLERS GRAFTED 1980
HOWARDS GRAFTED 1981

1988 YIELD

<u>VARIETY</u>	<u>MEAN YIELD/ TREE (LBS.)</u>	<u>MEAN TRUNK AREA (cm)</u>	<u>YIELD EFFICIENCY (LBS./cm)</u>
Howard	87.8	291.3	0.30
Chandler	122.9	529.6	0.23

1987 QUALITY

<u>VARIETY</u>	<u>HARVEST DATE</u>	<u>% LARGE</u>	<u>% LIGHT</u>	<u>% EDIBLE</u>	<u>% KERNEL</u>	<u>% OFF- YIELD</u>	<u>% MOLD</u>	<u>% PERFORAT- ED/SPLIT</u>	<u>RL1</u>
Howard	9/11/87	99	50	52	54	1.8	2.4	0	49.9
Chandler	10/7/87	96	48	50	53	3.2	4.5	1.0	51.1