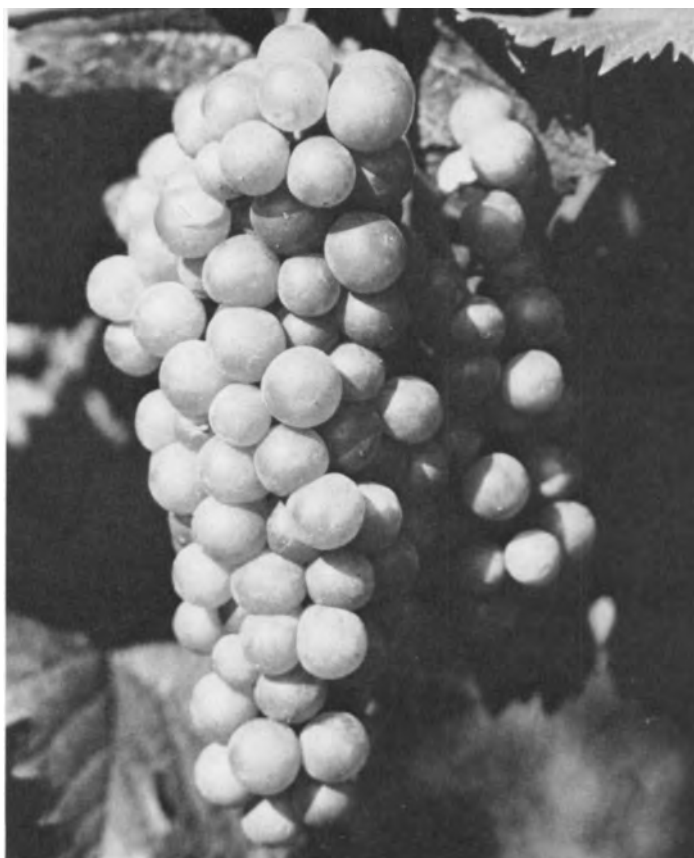


California grapes: the situation in 1979

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California grape acreage remains relatively constant as growers and investors ponder the uncertainties of future markets. While 1979 plantings of wine and raisin variety grapes are expected to be higher than in several years, total acreage—hence productive capacity—will change little. This situation should bring over-all wine grape supply into better balance with future crush market demands, but will not significantly alter the proportion of black grapes to white grapes.

The purposes of this report are to describe the emerging grape supply situation and to discuss uncertainties about the future. The estimates of plantings and removals are based on observations by University of California advisors in grape producing counties and others in the industry, and some subjective adjustments of past trends. These estimates, as always, are subject to errors in observation and interpretation and to changes in grower intentions. Although these estimates should not be used as precise measurements, they do provide a reasonable sense of the emerging situation. (The annual grape acreage report of the California Crop and Livestock Reporting Service, to be released during the spring of 1979, will provide exact figures.)

The acreage situation

Estimated grape plantings and removals for 1977-78 and 1978-79 and the resulting acreage situation are presented in the table. Removals for 1977-78 are as reported by the California Crop and Livestock Reporting Service, but allocations to producing re-

gions are our own.

New plantings of wine variety grapes are expected on 9,750 acres in 1979—the highest level since 1974. Almost one half of the new plantings are expected in the south San Joaquin Valley. Plantings in the central coast region will continue at relatively low levels. Most plantings are in the popular white varieties. The farm advisors estimated top grafting (from black to white varieties) affected less than 1 percent of California's acreage (probably about 2,000 acres).

Removals of wine variety grapes appear to have diminished from earlier levels. We estimate they will be close to 6,000 acres in 1978-79 with 63 percent occurring in the San Joaquin Valley.

New planting activity is apparent in raisin variety vineyards, with 8,400 acres of new plantings expected with relatively few acres of removals. The high prices reported for good raisin vineyards suggests the intense interest in this sector.

Table variety acreage is not changing a great deal currently; the long-term acreage decline appears to have been arrested. Plantings are believed to have exceeded removals by about 600 acres in 1979 and 900 acres in 1978.

Anticipated planting and removal activity will have little impact on California's grape acreage in 1979. Bearing acreage of wine varieties is likely to be 314,000 acres, almost the same as in 1977. Non-bearing acreage will be about 2,500 acres higher as a result of planting in 1979. Estimates show that bearing acreage in the north coastal counties is likely to increase by 4,000 acres over

1977, while small declines will be experienced in the other producing areas. Total wine variety acreage has been constant since 1974, ranging between 322,000 and 330,000 acres.

Total raisin variety acreage is estimated to be 260,000 acres—the highest level in California since the mid-sixties. If planting intentions are realized in 1979, non-bearing acreage will be at its highest level since 1962.

The uncertainties

An estimate of future grape supply potential can be derived from our planting estimates. By grape supply potential, we mean the quantity of grapes produced from the projected acreage if assumed "normal" yields per acre are achieved.

A projection of grape supply potential is subject to numerous uncertainties which should be emphasized:

1. **The errors in our estimates of plantings and removals.** Since the estimates are small relative to existing acreage (645,000 acres in 1977), this source of error is likely to influence total production projection by less than 2 percent.

2. **Uncertainties concerning the accuracy of acreage reports.** While reporting agencies have gained considerable experience since the extensive annual reports were initiated, the possibility for reporting error still exists. Such error is probably less than 1 percent.

3. **Uncertainties concerning yields.** Our projections are based on calculations of "normal" yields determined primarily by past averages. Over the period 1968-77, wine variety yields averaged 5.5 tons per acre. Actual yields ranged between 4.0 tons and 6.8 tons per acre. Based on

this experience, we can estimate that in two of three years actual wine variety yields will range between 5 tons and 6 tons per acre. This translates to a range in wine variety crush between 1.6 and 1.9 million tons.

4. Uncertainties concerning vineyard characteristics. These result from limited production experience in the important central coast region, varying maturity rates for new vineyards, and grafting from one variety to another. These could influence projections by 1 or 2 percent.

5. Uncertainties about the utilization of raisin and table varieties for crush purposes. This utilization is the result of complex price, weather, and institutional relationships. We assume a utilization based on market trends. The tonnage of raisin varieties crushed varied between 0.6 million tons and 1.2 million tons (25 percent to 50 percent of the crush) and table variety crush varied from 143,000 tons to 429,000 tons since 1965. Based on past allocation results, we estimate that two years in three the actual crush of table and raisin varieties from our estimated acreage will vary between 0.8 and 1.2 million tons.

If we accept past yield and allocation experience as a guide, we might expect our estimated 1979 acreage to have a "normal" crush potential of 2.8 million tons, with a "reasonable" range of 2.4 to 3.2 million tons. Of course, extreme years will occur as they have in the past, bringing a low crush of perhaps 2.0 million tons and a high crush of 3.5 million tons.

The uncertainties relating to demand changes are difficult to deal with. We project a trend line of crush products shipments developed by the Wine Institute. This assumes that current factors influencing shipments will not change much and crush demand will continue to increase at about 100,000 tons per year. This trend line is useful because it accounts for all crush products shipments; it is not restricted to wine and brandy only. However, the uncertainties involved with this projection are considerable.

The following are important sources of uncertainty in projecting demand:

1. The productivity of grapes. The sugar content of grapes is an important determinant of the quantity of grapes required for making a specific volume of wine. Changes in sugar levels from year to year will create some variations in demand which are neglected in our projection. The projection is based on obtaining 44-proof gallons of crush products from one ton of grapes.

2. Variations in product mix. This can have a profound effect on crush demand. A demand change of 1,000 gallons equals the production from about one acre for table wine; 1.4 acres for dessert wine; and 2.8 acres for brandy. Accordingly, the increase in U.S. table wine shipments for the first 10 months of 1978 was equivalent to the production from 14,000 acres while the decline in dessert and "pop" wine shipments equalled the production from 11,000 acres.

While these conversions do not allow for non-grape wines, the important point is that contrary trends have been influencing grape demand. Major uncertainties surround future shipments of dessert wines and "pop" wines. If shipments continue to decline, then the growth in crush demand will continue to be restrained. Past experience is not particularly helpful in evaluating this risk. Changes in varietal content and the relative proportion of standard and premium wines also will change the level of crush demand, but not significantly in the near future.

3. Utilization of fruits other than grapes. Use of apples, pears, and other fruits has been important in recent years. Wines produced from these fruits are classified principally as other special natural wines or as table wines. Their volume is not separately reflected in wine shipment statistics, thus weakening the correlation between wine shipments and grape demand. This adds uncertainty to the interpretation of industry performance.

4. Changes in market share. Changes in the market share of imported and other non-California produced wines can significantly alter projections based on past experience. Import shares escalated rapidly between 1975 and 1978 for table wines, while the share of other producing states declined. Table wine imports held 26.4 percent of U.S. market in 1978 (based on January through September shipments) and were equivalent to the production from over 70,000 acres of vineyard (this estimate will vary according to productivity assumptions). A decline of only 1 percent in California's table wine market share is equivalent to a reduction to 13,000 tons in crush demand. The existence of a "wine lake" resulting from surplus production in Europe is only one indication of the uncertain competitive climate facing California producers.

5. Changes in the economic health of the U.S. Wine demand has continued to grow in the face of inflation. But we are highly uncertain about future growth if current inflation rates are sus-

tained. We remember that the table wine growth rate dropped sharply during the last recession which began in 1974. The possibility of a recurrence (as forecast by some economists) certainly creates additional uncertainties about crush demand.

Conclusion

Optimism exists about future industry growth, but little has been said about the uncertainties facing growers and vintners. The wide range of our "reasonable" crush projection for 1982, 2.4 to 3.2 million tons, suggests the sort of supply uncertainty that exists. If the "normal" crush potential of 2.8 million tons is achieved from our estimated acreage in 1982, then crush demand must increase by 300,000 tons from 1978's level. Such an increase follows the trend of crush product shipments, which have increased by about the equivalent of 100,000 tons of grapes per year.

The uncertainty facing California's wine and grape industry suggests the need for stable buying and selling arrangements, such as the development of a simple, equitable pricing system aimed at reducing uncertainties and providing incentives for quality grape and wine production. However, by adopting such a system, both growers and wineries will forego the speculative opportunities of the current pricing system.

The social cost of cyclic investment and production is too high. We should make a real effort to avoid it in the future, while assuring that California's wineries and growers continue to meet the expanding needs of U.S. and foreign wine consumers.

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1979 California Grape Estimates:
Estimate of Acreage Activity, 1977-78 and 1978-79

Grape class and area*	Estimated activity 1977-78		Estimated activity 1978-79†		Estimated acreage 1979‡	
	Planting†	Removals‡	Planting	Removals	Bearing	Non-Bearing
—Acres—						
Wine Varieties						
North Coast	1,600	700	1,800	850	57,323	4,777
Central Coast	400	1,000	350	900	50,552	1,304
N. San Joaquin	350	1,300	2,800	1,500	62,282	3,691
S. San Joaquin	1,150	2,972	4,600	2,300	120,767	6,327
Other Areas	140	350	200	400	22,831	439
State Total	3,640	6,322	9,750	5,950	313,755	16,538
Raisin Varieties						
N. San Joaquin	—0—	20	—0—	—0—	6,469	—0—
S. San Joaquin	4,200	750	8,300	800	235,837	14,531
Other Areas	100	20	100	50	2,936	383
State Total	4,300	790	8,400	850	245,242	14,894
Table Varieties						
N. San Joaquin	—0—	40	40	170	19,016	85
S. San Joaquin	1,090	400	1,600	1,000	39,921	3,435
Other States	300	20	200	30	5,407	873
State Total	1,390	460	1,840	1,200	63,344	4,393

* Area definition by counties: North Coast—Lake, Mendocino, Napa, Sonoma; Central Coast—Alameda, Santa Clara, San Benito, Monterey, San Luis Obispo, Santa Barbara; North San Joaquin Valley—San Joaquin, Stanislaus, Merced; South San Joaquin Valley—Madera, Fresno, Kings, Tulare, Kern.
† Estimates based on observations of University of California farm advisors, others in the industry, and trends.
‡ Totals from *California Grape Acreage, 1977*; California Crop and Livestock Reporting Service, Sacramento March 1978; allocation to area based on estimates.