California Grapes: A Survey for 1972[1/]

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The California grape and wine industry has held the national spotlight for two years. Dramatic shifts in consumer taste patterns--and improved capabilities for satisfying these tastes--have supported an explosive increase in wine consumption. This, in turn, has focused attention on the allegedly unlimited joys of viticulture. Large blocks of acreage are being planted with wine grapes, and vast acreages are being considered for development. New wineries are planned, and new labels introduced to the market place.

The situation in the California wine and grape industry is changing so rapidly that our picture is becoming clouded. The purpose of this report is to clarify the picture and to draw some implications from what is seen. Because the rate of new plantings seems to be the key to balancing grape supply with demand, principal attention is given to the new planting situation.

The basis for our view of 1972 plantings is the judgments of University of California farm advisors in 16 California producing counties. Their opinions, relating to their own counties of responsibility, were gathered in January, 1972. The opinions are honest attempts to put into numbers what others refer to as "large," "small," "many," or "tremendous" changes. Vague or impracticable planting plans have been discounted where apparent. The acreage estimates are not based on sampling or survey techniques, but represent farm advisor interpretations of what they see and hear.

The startling estimate of new California grape plantings in 1972 is 53,350 acres. Of this total, wine varieties will account for 52,580 acres, almost double

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1/ Presented at the Vineyard Development Meeting, Fresno, California, January 11, 1972.

the new plantings reported in 1971. After accounting for estimated pullouts, the net increase in total wine variety acreage will approximate 50,820 acres.

The availability of nursery stock to support such an expansion is an uncertain constraint. Based on developing planting practices and on opinions of a nursery specialist, it appears that the estimated acreage level can be achieved. Farm advisors have attempted to consider this constraint in arriving at their estimates.

Little can be said about the reliability of a judgment survey. Wherever a range of estimates was given, the lower figure was used. The final figure, therefore, represents a conservative bias toward the estimates.

Within the constraints of our estimation procedure, let's look at the figures more carefully. Bearing acreage in wine varieties is expected to increase by about 5,000 acres to a total of 137,000 acres in 1972, an increase of 3.6% from the 1971 level. Raisin variety acreage may decline by about 700 acres, an insignificant change. The bearing acreage of table grapes is expected to continue its downward trend, with a small decline to 68,000 acres in 1972. Total bearing acreage devoted to grapes in California in 1972 is expected to be approximately 447,000 acres.

Changes in nonbearing acreage are far more dramatic than those in bearing acreage. In 1972, nonbearing wine variety vines are expected to occupy 93,000 acres, an increase of 46,000 acres from 1971 acreage. Only small changes are expected in nonbearing acreages of raisin and table varieties. These will have little impact on future production.

Because the most significant activity is occurring in wine variety grapes, a closer look at regional variations is warranted. From a percentage standpoint, the most rapid growth appears to be in the South Bay area, that is, the counties of Alameda, Santa Clara, San Benito, Monterey, San Luis Obispo and Santa Barbara. The estimated increase in nonbearing acreage, 15,000 acres, is approximately 230% of 1971 nonbearing acreage. The increase in bearing acreage is less than 10%.

The North Coast, the more noted bastion of the premium wine grape industry, will experience a more modest one-third increase in nonbearing acreage. Bearing acreage should increase by 1,400.

The greatest acreage increase is found in the southern San Joaquin Valley--the counties of Madera, Fresno, Kings, Tulare and Kern. Nonbearing acreage is expected to increase about 25,000 acres to a level somewhat less than 47,000 acres in 1972. This will bring total acreage devoted to wine variety grapes to about 82,000 acres. This level compares with an expected 45,000 acres devoted to table varieties and 234,000 acres devoted to raisin varieties in the area.

In the three-county area of San Joaquin, Stanislaus and Merced, nonbearing acreage of wine varieties is expected to increase about 4,000 acres to a 1972 level of 15,000 acres. Bearing acreage will be an estimated 41,000 acres. Acreages planted to raisin and table varieties will change only negligibly.

An important factor in the economic success of the California grape industry is the balance between the supply of and the demand for grapes for crushing. Projected acreages of wine varieties can give us one part of expected supply. If removals and mortalities are assumed to continue at a relatively modest level, then the 1975 level of wine variety bearing acreage should approximate 223,000 acres, some 91,000 acres above current levels. The increase, however, will not occur at a uniform rate. We can expect annual bearing acreage increases of 4%, 9%, 16% and 28% over the next four years. As a comparison, bearing acreage between 1970 and 1971 increased only one half of one percent.

Using a yield of 5.25 tons per acre, equal to the average of the past ten years, wine grape production during the next four harvests would approximate 3.6 million tons. During the past four years, ending in 1971, production was 2.7 million tons, or an average of 676,000 tons annually.

In the past four years, raisin and table variety grapes were used for over two-thirds of the total grape crush. Use of raisin varieties averaged 50%, with a high of 55% reached in 1971. The use of these grapes for crush is influenced

by the mix of wine and brandy demand, the alternative blending opportunities, and the availability of wine variety grapes. Assuming that raisin variety bearing acreage averages 241,000 acres, and table varieties average 67,000 acres, and yields are equal to the past ten year-average, then raisin grape production will total 8.1 million tons, and table grape production 1.8 million tons, during the next four years, beginning in 1972.

Thus, over the four-year period, 1972-75, the production of grapes may total 13.5 million tons. Production in the period 1968-71 was 13.1 million tons. If 1971 usage patterns prevail during the next four years, then close to nine million tons will be available for crush. This compares to a total of 7.2 million tons crushed in the prior four-year period.

To derive some implications of projected acreage increases, we should compare potential crush supply with potential requirements. The range of potential crush supply can be determined, although it is subject to a number of uncertainties such as yield, competitive demand and substitution capabilities. Requirements are much more difficult to estimate because they depend on the complexities of consumer demand as well as the intricacies of corporate product strategy. For our purposes in this paper, we will compare the range of potential increases in shipments with the range of potential increases in crush supply. The underlying assumption, of course, is that increases in shipments over the four-year period should be roughly equivalent with increases in crush.

To project potential crush, we assumed that the percent of each major varietal class (wine, raisin and table) that was crushed in 1971 will remain the same over the next four years. These percentages are generally higher than in previous years. Production was computed for both low yields and high yields. The yields used were the average of the four annual low yields and the average of the four annual high yields occurring in the preceding ten years for each class. Using 1971 as a base figure, the potential crush figures for each year were expressed as an index number.

Under assumptions of low yield, crushes in the succeeding four years were .81, .83, .94 and .98 of the 1971 crush. Using the high yields, the index numbers were 1.03, 1.06, 1.12 and 1.24. Of course, it is quite likely that crush in any one year will fall within the range of the high and low figures.

A number of projections have been made about changes in wine demand. All projections tend to look for continued demand growth. The questions which arise concern the rate of growth. To permit a comparison with the projected range of grape crush, shipment projections were made utilizing several alternative rates of demand growth. The annual growth rates utilized were 5%, 7%, 10% and 14%. The annual shipment index numbers under assumption of 5% rate of growth were 1.05, 1.10, 1.16 and 1.22. Index numbers obtained using a 14% rate of growth were 1.14, 1.30, 1.48 and 1.69.

Comparing crush and shipment index figures shows that the rate of growth for the highest yield assumptions follows fairly well the shipment figures obtained using the lowest demand rate of growth. Because it is more likely that the achieved results will fall somewhere within the range of high and low figures, it is likely the crush growth will be lower than shipment growth over the period 1972 through 1975. If the current rate of new plantings should continue for two years in the future, the probability of potential oversupply increases, particularly at more moderate demand growth rates.

The implications for individual growers and processors cannot be derived in detail. It would appear, however, that conditions are favorable for relatively strong average price levels. They may vary between specific varieties as more desirable varieties come into more abundant supply. Conditions also seem to favor contractural arrangements to assure sources of raw product for crushing. The key implication is that growers and processors must pay close attention to the rate of new plantings, and to indications of change in wine demand. They hold the secret of profitability for the grape and wine industry.

Table 1. January 1972 Estimates of 1972 California Grape Acreage Characteristics

AREA	Estimated Bearing Acreage 1971	Estimated Bearing Acreage 1972	Estimated Bearing Acreage Change	Estimated Nonbearing Acreage 1971	Estimated Nonbearing Acreage 1972	Estimated Nonbearing Acreage Change
Wine Varieties						
North Coast	30,754	32,200	1,446	6,096	8,120	2,024
South Bay	10,005	10,867	862	6,722	21,980	15,258
North San Joaquin	39,785	41,019	1,234	11,548	15,364	3,816
South San Joaquin	34,354	35,711	1,357	21,783	46,686	24,903
Remainder California	17,508	17,389	119	1,299	1,338	39
State Total	132,406	137,186	4,780	47,448	93,488	46,040
Raisin Varieties						
North Coast	11	11	0	0	0	0
South Bay	1	1	0	0	0	0
North San Joaquin	10,120	9,217	-903	53	16	-37
South San Joaquin	228,906	229,078	172	5,057	4,555	-502
Remainder California	3,230	3,284	54	135	44	-91
State Total	242,268	241,591	-677	5,245	4,615	-630
Table Varieties						
North Coast	18	18	0	0	0	0
South Bay	5	5	0	0	0	0
North San Joaquin	20,775	20,575	-200	185	155	-30
South San Joaquin	43,863	42,864	-999	1,622	1,821	199
Remainder California	4,533	4,527	-6	113	62	-51
State Total	69,194	67,989	-1,205	1,920	2,038	118

Source: 1972 values calculated from countywide estimates of Farm Advisors, January, 1972.
1971 values from California Crop and Livestock Reporting Service, California Grape Acreage 1971, November, 1971.

Table 2. Summary of Anticipated Wine Grape Plantings, California, 1972

Area	Total Nonbearing Acreage 1971	Nonbearing Acreage Re-classified as Bearing in 1972	Acreage of New Plantings Anticipated 1972	Estimated Nonbearing Acreage 1972
North Coast	6,096	1,576	3,600	8,120
South Bay	6,722	942	16,200	21,980
North San Joaquin	11,548	1,984	5,800	15,364
South San Joaquin	21,783	1,697	26,600	46,686
Remainder California	1,299	341	380	1,338
California Total	47,448	6,540	52,580	93,488

Counties included in areas as follows:

North Coast: Napa, Sonoma, Mendocino, Lake;

South Bay: Alameda, Santa Clara, Monterey, San Benito, San Luis Obispo, Santa Barbara;

North San Joaquin: San Joaquin, Stanislaus, Merced,

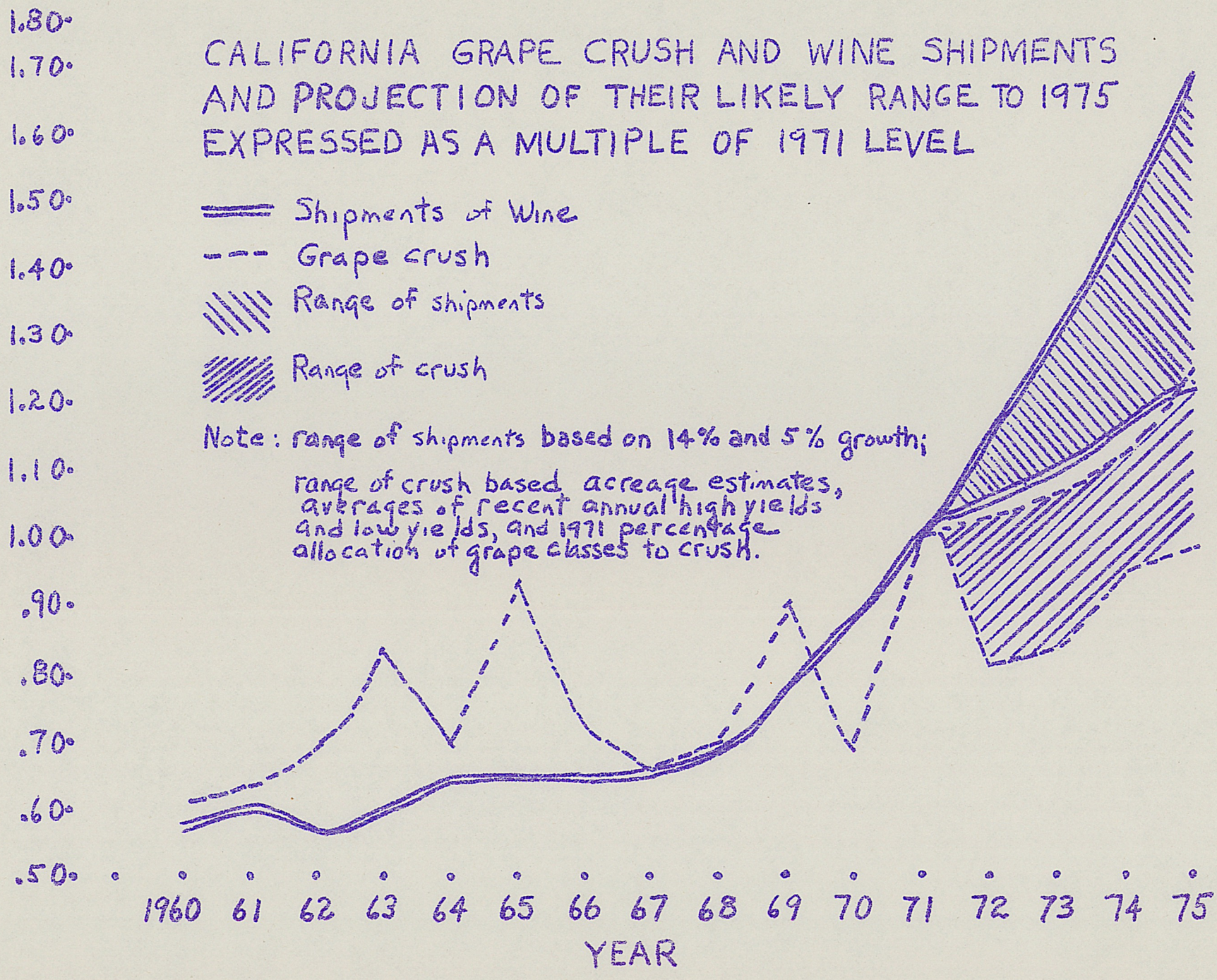
South San Joaquin: Madera, Fresno, Kings, Tulare, Kern.

Source: 1972 values calculated from countywide estimates of Farm Advisors, January, 1972.
1971 values from California Crop and Livestock Reporting Service, California Grape Acreage, November, 1971.

Table 3. Potential Increases in California Wine Variety Grape Bearing Acreage 1971-1975

Year	1971	1972	1973	1974	1975
Net Addition to Bearing Acreage	--	4,780	12,700	24,000	49,000
Total Wine Variety Bearing Acreage	132,406	137,186	149,886	173,886	222,886
Percent Change in Acreage Over Previous Year	0.5	3.6	9.3	16.0	28.2

Source: Based on Farm Advisor estimates of new plantings, January, 1972; California Crop and Livestock Reporting Service, California Grape Acreage 1971, November 1971; estimates of net additions are based on removals of about 1,000 acres per year, plus a small loss of acreage prior to maturity.


CALIFORNIA GRAPE CRUSH AND WINE SHIPMENTS
AND PROJECTION OF THEIR LIKELY RANGE TO 1975
EXPRESSED AS A MULTIPLE OF 1971 LEVEL
Shipments of Wine
Grape crush
Range of shipments
Range of crush
Note: range of shipments based on 14% and 5% growth;
range of crush based acreage estimates, averages of recent annual high yields and low yields, and 1971 percentage allocation of grape classes to crush.
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
.90
.80
.70
.60
.50
1960 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
YEAR