percent, which is consistent with recent sugar price trends. Per capita consumption of dextrose corn syrup and minor caloric sweeteners is projected to continue at recent levels. Adoption of HFCS is projected to be rapid between 1978 and 1984 and would be essentially completed by 1990. The actual rate of adoption will be a direct function of the price of sugar and the maximum potential market share.

Substitution of HFCS for sugar will have a significant impact on sugar consumption. Using a 20 percent ceiling market share for HFCS, projected 1985 demand for sugar shows a 13.7 percent decrease in per capita terms and a 7.4 percent decrease in total demand from levels existing in 1977. Projected total sugar consumption in 1990 (10.20 million tons) would still be below 1977 consumption (10.29 million tons).

Conclusions

Technical considerations will probably establish HFCS' maximum market share at about 50 percent of the industrial sweetener market or approximately 35 percent of the total caloric sweetener market. Most industry experts project that HFCS will capture 20 to 30 percent of the caloric sweetener market. Even though total sweetener consumption will likely grow as a result of increased population, substitution of HFCS

will probably result in reduced sugar consumption through 1990. However, the rate and extent of substitution and its impact will be largely determined by U.S. sugar policy. Continuation of sugar price supports will encourage substitution of HFCS for sugar, primarily imported sugar. Other policies could have a quite different impact. Support of domestic sugar production through direct payments rather than prices, for example, could retard or even reduce the substitution of HFCS for sugar.

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Wine imports and policy issues

Stepped-up imports of wines into the U.S. are causing concern among domestic growers and vintners.

Kirby S. Moulton

he table wine market in the United States more than tripled over the past decade, reaching 301 million gallons in 1978. Imported table wines, which benefited enormously from this expansion, have become the principal target for proposed policy action. Their market share grew from 13.7 percent in 1968 to 26.1 percent in 1978 when imports reached 79 million gallons (table 1). Most of this gain was at the expense of producing states outside of California whose share dropped from 15 to 6 percent during the same ten-year period. California's portion of total shipments declined from 71 to 68 percent.

Imports in 1978 were equivalent to the table wine production which could be obtained from 89,000 acres of California vineyards (based on 160 gallons of table wine per ton of grapes and 5.5 tons of grapes per acre of vineyard). There is no assurance, however, that all of this acreage would have been utilized in the absence of imported table wines.

Shipments of dessert and other wines have changed significantly since 1968; however, shifts in import shares have had less total impact than in the table wine market. Therefore, this report focuses only on the table wine segment of the U.S. wine market.

The future

Barring a recession or severe inflation, wine consumption in the United States is likely to increase in response to higher income levels, continued advertising and promotion, and competitive pricing. Imported wines will share in this expansion, competing with California wines. The following factors are significant:

1. France and Italy are producing a sur-

plus of ordinary wines in the face of declining domestic consumption. A few of these wines are of acceptable export quality and, undoubtedly, will be pushed into export markets by state and private agencies seeking relief from sagging domestic markets. The marketing capabilities of these organizations have improved sufficiently to overcome past quality and distribution problems.

- 2. Importers are highly competitive and are marketing oriented. The top 10 importers share about 60 percent of the U.S. imported table wine market. Each importer is a subsidiary of a major distillery or other major distribution organization, or is a large independent marketer.
- 3. The future growth rate of domestic production is uncertain. Currently, marketings of California grape crush products (wine, brandy, spirits, concentrate and juice) are

expanding by about 100,000 tons of grapes per year or at a rate of 4 percent. The bearing acreage of wine grapes in 1982 is expected to be 10,000 to 13,000 acres higher than in 1979, an average increase of 1 percent per year. Whether a shortage of grapes occurs depends on the rate of market expansion and the rate of grape utilization (ignoring weather-induced yield variations). Uncertainties about these rates make vineyard investment risky. On the other hand, available foreign supplies appear sufficient to meet future growth with the exception of certain highly regarded premium wines.

The issues

Two important issues are raised by the growing market share of imported wines. One is the economic issue of assuring profits for domestic producers and processors. The other is the equity issue of assuring "fair play" among contestants in the world wine market. The following discussion of these issues is in the context of U.S.—European Community (EC) trade.

To measure the impact of imported table wines on domestic prices and profits requires an estimation of market changes if imports were restricted. On the simple assumption that current table wine demand would not change while the total supply was reduced, domestic producers would gain higher prices and presumably higher profits. The amount of price change would depend, among other things, on the price elasticity of demand. M. K. Wohlgenant, in a 1978 Ph.D dissertation at U.C., Davis, calculated the long run mean price elasticity of demand for table wine to be -0.62. If true, then a total supply reduction of 10 percent would cause prices to increase 16 percent. The incremental profits generated by this change would be a measure of the domestic producer loss caused by current imports.

A more reasonable assumption is that demand will decline also because domestic and imported wines are not perfect substitutes. The resulting market size would be smaller and the price lower than under the first assumption.

An estimation of the economic impacts is beyond the scope of this report, but it is safe to say that a restriction of imports probably would raise grape prices in the short run by increasing the demand for domestic wines. In the longer run, supply adjustments would probably eliminate any excess profits arising from an import restriction.

In one sense, however, the argument for import restrictions flies in the face of trading reality. Total U.S. agricultural exports to the EC earn such large revenues (\$7.3 billion in 1978) that import protection for

domestic producers can be considered only with an eye to potential retaliation against profitable U.S. exports. For example, in 1977, U.S. exports of fruits, nuts, and vegetables to the EC (California was a primary shipper) exceeded the value of wine imports by more than \$100 million. This suggests that there is little likelihood that major barriers will be raised against wine imports in order to protect domestic profits.

Wine trade is tremendously one-sided. U.S. wine imports from the EC were valued at \$482 million in 1978, while U.S. wine exports to all countries, mostly to Canada and the Caribbean, amounted to only \$10 million. Part of this imbalance stems from inequities in the wine trading system which have hindered U.S. exports. If restrictions on production and marketing were equalized for U.S. and foreign producers, then the competitive position of U.S. producers would improve. The differences in these restrictions can be classified broadly according to tariffs and taxes, and production practices.

Tariffs

The U.S. tariff on table wines is 37.5 cents per gallon, while the EC external tariff is approximately 63 cents per gallon. Both tariffs are low relative to the retail price of table wines imported from the EC or the U.S. The EC also collects a surcharge on imported wines priced below an established reference price. The reference price for standard red table wines during 1978 was approximately 31 cents per fifth.

Internal taxes and duties within the EC, as well as a host of nontariff barriers, create more of a problem, by the EC's own admission, than do external barriers. A liter of EC-produced wine, which sells for 70 cents in Italy and Germany with all taxes paid, must sell for \$2.35 in Denmark or the United Kingdom. Additionally, individual member-states have various licensing arrangements which allow them to effectively control wine trade.

Equalization of wine tariff rates is a legitimate objective of trade policy, although the "Tokyo Round" of trade negotiations achieved nothing. Marketing strategies and institutional arrangements are probably more important than these tariff levels in determining trade levels. Within this context, however, projections of the impact of tariff equalization can be made.

Based on rather tentative estimates of price elasticities of demand for table wines. it is projected that a reduction of EC tariffs to U.S. levels would increase EC wine imports by 1 or 2 percent. U.S. imports might decline 3 to 7 percent, if U.S. tariffs were

increased to EC levels. More significant changes could be initiated in both markets by significant reductions in internal taxes.

The important point about tariff equalization is that results are likely to be small compared with changes likely to arise from other market and political factors.

Production

Production standards are stringent in both the U.S. and the EC, although various technical differences exist. These differences are the basis for requiring that U.S. exports to the EC be certified by the federal government as in compliance with stipulated EC production requirements. This certification procedure is cumbersome and tends to discourage U.S. exporters. The certification scheme, as applied to EC exports to the U.S., is relatively simple and has not created problems for EC exporters.

An important difference between the U.S. and the EC exists concerning standards of fill. New U.S. regulations concerning metric sizes stipulate that the metric size must indicate the volume of wine contained and not the total bottle capacity, as is usual in the EC. These regulations apply to all domestic and imported wines bottled on or after January 1, 1979. It is questionable that most EC producers will be able to meet this deadline. The EC has a policy to standardize on similar fill requirements by the end of 1980, but member states have been slow in changing. Producers of some highly demanded premium wines may choose to switch from the U.S. market to other markets, where demand is equally high, rather than comply with this regulation.

The nature and impact of differences in production standards, except for standards of fill, is a wine-making question. Evaluating equalization of standards is difficult. However, if current negotiations break the certification bottleneck, U.S. exports will be facilitated.

The issue of subsidies for EC agriculture was raised during the Tokyo Round of the GATT negotiations. These subsidies provide competitive trade advantages for several major EC agricultural commodities. The Common Agricultural Policy (CAP) for wine provides price supports through payments for the storage and/or distillation of wine when wine prices fall below a predetermined level. Additionally, the CAP provides funds for structural improvements to vineyards, wine-making facilities and winery organizations. The purpose of these investments is to improve efficiency and long-run competition. No direct payments have been made to subsidize the price of EC wine exports to the U.S.

Wine imports Continued from page 16

However, the greater efficiency and the improved management organization encouraged by CAP policies should result in more effective domestic and export sales strategies.

Other programs, primarily national, provide extensive assistance for the promotion of European wines in the U.S. market. These efforts supplement the promotion activities of individual importing firms and trade associations.

Labeling

Substantial differences in labeling have existed between the U.S. and the EC. Generally, U.S. standards have been less restrictive as to varietal contents and geographical references. New federal labeling requirements will bring the U.S. closer to EC standards, particularly for quality wines. The requirements forbid the use of certain words, such as "estate bottled," on imported wine labels unless the wine is produced in accordance with U.S. regulations.

lnasmuch as the majority of French and Italian wine labels do not indicate varietal composition, they are not faced with the same adjustment problems as American producers selling varietal wines. EC wines with a varietal designation generally exceed the new U.S. standards for varietal content. These new standards should make U.S. labeling practices "substantially equivalent" to the EC system, thereby easing barriers to U.S. varietal and proprietary wine exports to the EC. Continued resistance is expected for import into the EC of U.S. wines using European place names such as Burgundy, Chablis, Rhine wine or Chianti.

Policy choices

Both growers and vintners have common interest in a "fair market" for wine, a market free from discriminatory trade practices. Toward this goal, they have lobbied state, national and supra-national organizations in attempts to influence trade policy. In choosing what policy mix to advocate, it makes sense to examine the likely environment in which future policy will be carried out.

Several factors discussed earlier will shape the environment of future wine trade policy. Important among these is the expectation of continued market penetration by imported wines because of available supply and the uncertainties about sufficient increases in U.S. grape and wine production. This will maintain continued pressures on prices and profits for both growers and vintners. Wine imports will not just fade away.

Related to this factor is the improbability of U.S. tariff increases, given the overall strength of U.S. agricultural exports and policy commitments to lower, rather than higher tariffs. Even with import restrictions, internal market adjustments would eliminate long-run price and profit advantages gained from the restrictions.

A third factor to consider is the relative ineffectiveness of tariff equalization as a policy tool. The changes in trade resulting from equalization are likely to be extremely small.

These factors suggest the futility of pursuing policies for the increase of U.S. tariff protection. At best, rearguard action can be directed toward maintaining the present

tariff structure unless equalizing wine trade concessions are received.

In a more positive vein, effective policy choices may include any of the following program elements:

- 1. Support of legislation and bilateral negotiation to equalize all wine trade barriers as a matter of principle; recognizing that economic benefits from tariff equalization alone may be minimal. Push current negotiations for equivalence of production and labeling regulations.
- 2. Seek cooperation with the EC in breaking down discriminatory taxes within the EC and the U.S. Both producing areas have strong mutual interests in the reductions of these barriers.
- 3. Support efforts toward the unilateral reduction of discriminatory tariffs and quotas in nonproducing countries such as Japan. These would be decisions taken outside of the GATT.
- 4. Expand the cooperative effort with the Foreign Agricultural Service or other agencies to promote the export of U.S. wines. These programs can be modeled on those carried out in the U.S. by wine exporting countries.
- 5. Develop a joint grower-vintner policy education program directed toward legislators in Sacramento and Washington, D.C. (and toward other agencies) which will help identify and evaluate wine trade policy alternatives.

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in the United States, by Areas Where Produced and Type of Wine 1968 and 1978.*								
WINE TYPE	Amount (Million gallons)	ORNIA Share of type total (percent)	Amount (Million gallons)	S. STATES Share of type total (percent)	Amount (Million gallons)	Share of type total	Amount (Million gallons)	Percent of all wine types (percent)
TABLE	00.0	***			40.4	40.7	05.0	440
1968 1978	68.3 203.2	71.2 67.5	14.5 19.1	15.1 6.4	13.1 78.7	13.7 26.1	95.9 301.0	44.9 69.9
DESSERT 1968	64.3	80.5	13.6	17.1	1.9	2.3	79.8	37.3
1978 VERMOUTH	34.4	64.4	15.7	29.4	3.3	6.2	53.5	12.4
1968	3.1	31.7	1.8	18.0	5.0	50.3	10.0	4.7
1978 SPARKLING	3.7	38.6	1.6	17.2	4.2	44.2	9.5	2.2
1968	5.9	46.9	4.4	35.3	2.2	17.8	12.5	5.8
1978 OTHER SPEC. NAT.	18.3	71.3	3.1	12.0	4.3	16.8	25.7	6.0
1968	14.5	93.1	1.1	6.0	-	-	15.5	7.3
ALL WINE	35.4	86.3	2.1	5.1	3.5	8.6	41.0	9.5
1968	151.0	73.0	35.4	16.1	22.2	10.4	213.7	100.0
1978	295.0	68.5	41.7	9.7	94.1	21.8	430.7	100.0