

Marketing of Hops Analyzed

influence of the control program on the hop marketing situation in California studied

Sidney Hoos and J. N. Boles

The following article is based on a detailed report, "Hops: Statistical-Economic Analysis of Marketing," No. 139, by the same authors which may be obtained without cost by writing to the Giannini Foundation of Agricultural Economics, University of California, Berkeley 4.

On July 1, 1953, will be terminated the federal marketing order controlling the salable quantity of hops. Stocks held off the market under the order since 1949 will be free to be marketed. Such stocks, on top of currently available commercial stocks, are already depressing the hop market.

General agreement about the order has not existed in the past year or two. Some hop growers wished to eliminate it, and other growers felt the order should be modified. At a growers' referendum—November 17–26, 1952—77% of the total eligible voters—producing 94% of the total crop—cast ballots. Some 52% of the voters—producing 49% of the total crop—favored termination of the order.

Almost all United States hops are grown in California, Oregon, Washington, and Idaho. In 1950–51, there were over 800 growers in these states cultivating almost 39,000 acres and producing over 58 million pounds of hops. The salable quantity for 1950–51—50 million pounds—at the season average farm price of 62.1¢ per pound was valued at approximately 31 million dollars.

Although cost of production figures are not always reliable, a figure of from 35¢ to 55¢ a pound probably would be within the range of the past year or two, for most hop growers.

Favorable returns to many growers in 1949 and 1950 stimulated new production as reflected in an increase of about 5,000 acres planted in 1950, at a time when there was no shortage. The expanded production was also reflected in what hop growers viewed as a surplus in 1951—in an amount of 17 million pounds—and many growers were dissatisfied with the situation.

In 1951–52 the acreage was 41,200 acres compared to 37,138 acres as an average for the period 1940–1949. The increased production since the late 1940's was due more to the increased yields than to increased acreage—the 1951–52 yield reached an all-time high, whereas acreage was about the same as in 1945–46.

Hops are imported from other countries—principally Germany and Czechoslovakia—to supplement domestic pro-

duction. As a result of the variable inflows—domestic production and imports—and outflows—domestic consumption and exports—United States stocks of hops have fluctuated from year to year.

Season Farm Price

The season average farm price also has fluctuated in response to changes in the supply and demand situations. From a low of 9.8¢ per pound in 1935–36, the average price increased irregularly to a postwar peak of 68.4¢ in 1947–48. Thereafter, the price fell to 55.4¢ in 1948–49 and then recovered to 62.1¢ in 1950–51. The fluctuation is tempered by the policy of the processors to maintain fairly large stocks relative to annual utilization—increasing them in years of low prices and decreasing them in years of high prices.

Following World War II, production and supply of hops increased more rapidly than did their consumption. This increase in stocks initiated, in 1948, a price drop for uncontracted hops from about 65¢ to about 30¢ per pound. Growers and handlers responded with an appeal to the United States Department of Agriculture for a Marketing Agreement and Order to control the quantity of hops which could be marketed. This was done, and in July 1949 the hop industry began to operate under a marketing order.

Control Program

Under the terms of the 1949 marketing order, the Secretary of Agriculture designated the physical quantity of the current crop which could be marketed. The administrative agency was the Hop Control Board which arrived at a decision as to the salable quantity to recommend to the Secretary of Agriculture, by forecasts of product consumption, hop exports, and hop imports. Stocks on hand September 1, plus salable quantity, plus imports, less exports, less consumption, indicated the estimated stocks on hand the following September 1.

Research indicates that the principal determinants of the United States season average farm price of hops are reflected by the size of stocks held by growers,

dealers and processors on September 1 and the total United States personal consumption expenditures.

The average relationships of the season average farm price to stocks on hand September 1 and the personal consumption expenditures are included in an equation which measures the relation of the price to the stocks and national expenditures. The equation can be used to calculate an estimated price for each year.

Evidence from Analysis

The evidence obtained from the statistical analysis suggests that the most important price-determining variable subject to control—even though only indirectly—by the Hop Control Board is the stock of hops on hand September 1. Consequently the primary effect, of the Board's control of the salable quantity for one harvest, would be on the price received for the following harvest, especially if the custom of forward-price contracts is continued.

There is no conclusive answer possible to the question of what the season average farm price would have been, the past few years, if there had been no control of the salable quantity—but the statistical price analysis does lend some light on the subject. Assuming the amount produced—with all of it harvested and sold—and consumption, exports, and imports remain the same, the effect of change would be concentrated on the single variable—stocks on hand September 1. The amount withheld in 1949–50 would be added to the stocks on hand September 1, 1950 to give a total of 35.5 instead of 23.7 million pounds. This would have been almost as great as total consumption for 1949–50 and would have been the largest stock ever recorded. If, in addition, the diversion in 1950–51 had not taken place, the stock on hand September 1, 1951 would have been 46.6 million pounds, a figure much larger than consumption for the 1951–52 season.

Under these conditions, the estimated price for 1950–51 could have been about 12¢ to 15¢ under the actually realized average price of about 62¢; for 1951–52

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Spinach at Retail

study of fresh packaged and bulk spinach compared quality and price

Jessie V. Coles

A total of 428 samples of packaged spinach and 346 samples of bulk spinach were examined in a laboratory study to determine extent and character of defects and the relative price of the edible spinach.

The samples of fresh spinach were purchased in Berkeley retail stores at weekly intervals for a period of one year.

Bulk spinach studied was, on the basis of the annual average, better in quality than the packaged spinach. Approximately 39% of the bulk and 28% of the packaged spinach were classed as sound—usable—product. The packaged spinach contained about 27% waste whereas the unusable portion of the bulk spinach was about 18%. Almost 40% of the packaged spinach was unusable but not to the extent that it was unusable and about 36% of the bulk spinach was of this nature. Altogether 67% of the packaged spinach and 53% of the bulk spinach were judged to be defective.

The quality of both the bulk and the packaged spinach varied from month to month during the year. The greatest difference between the two types was in August when the proportion of unusable product in the packaged spinach was 39.4% while in the bulk spinach it was 20.5%. The smallest difference was in November when 19.6% of the packaged spinach and 18.7% of the bulk spinach were unusable.

The average proportion of sound spinach without any defects was higher in bulk than in packaged spinach in all months except in November when the proportion was 38% for packaged and 33% for the bulk spinach.

The size and type of store in which the spinach was purchased seemed to affect somewhat but not greatly the quality of both bulk and packaged spinach. Although the differences were very small the proportions of sound product were somewhat smaller in the small stores than in the medium ones and smaller in the medium than in the large stores.

The defects of the spinach—bulk or packaged—were broken down into five groups: 1, crushed and broken leaves and stems; 2, wilted leaves; 3, yellow leaves; 4, insect damaged leaves and stems; and 5, decayed and moldy leaves and stems. Degrees in all these defects except decayed and moldy parts were indicated by

classing them as unusable or as defective but usable.

Crushed and broken stems and leaves were the most common defects in both packaged and bulk spinach. Yellow leaves were the next most important in the portion which was unusable. Insect damaged parts were next most important in the defective but usable portion. Insect damaged and decayed parts were also important in the unusable portion.

Character of Defects in Unusable and Usable Defective Bulk and Packaged Spinach

Defects	Annual Averages			
	Percent Unusable		Percent Defective but Usable	
	Packaged	Bulk	Packaged	Bulk
Total	26.9	17.7	39.9	35.6
Crushed and broken leaves and stems	12.3	7.3	18.4	15.6
Wilted leaves	2.1	0.5	4.3	2.0
Yellow leaves	4.8	3.9	5.3	5.3
Decayed leaves	3.7	2.9
Insect damaged leaves and stems	4.0	3.1	11.9	12.7

The average retail price per pound of the packaged spinach as it was purchased was 30.6¢ and that of the bulk was 16.1¢. The latter price was determined after the roots were removed to make the character of the bulk spinach more comparable to the packaged spinach.

Since a portion of the spinach was not usable as purchased the real price was affected by the unusable portion. Therefore the price per pound was determined on the portion which was edible.

The average price per pound of the edible spinach purchased in packaged form in this study was over twice that of the bulk; the former was 41.9¢ per pound and the latter was 19.6¢.

The average price of the edible spinach purchased in bulk was 3.5¢ higher per pound than the average price as purchased. The average price of the edible spinach purchased in packages was 11.3¢ higher than the price per pound as purchased.

The average retail price of the bulk spinach varied from month to month a great deal more than that of the packaged spinach. The variation of bulk spinach was over three times that of the packaged

spinach. The former varied from 13.1¢ per pound in September to 24.8¢ in February while the latter varied from 28.8¢ in April to 32.2¢ in February.

The average monthly price of the edible packaged spinach ranged from a low of 36.6¢ in December to a high of 50.3¢ in August. The lowest average monthly price of the edible spinach purchased in bulk was 16.0¢ reached in September while the highest price was 29.3¢ reached in February.

Per Cent and Price Per Pound

	Annual Averages	
	Packaged spinach*	Bulk spinach*
Sound	27.9%	39.4%
Defective Usable	39.9%	35.6%
Unusable	26.9%	17.7%
Price per pound as purchased	30.6¢	16.1¢
Price per pound of edible portion	41.9¢	19.6¢

* Loss of 5.3% in packaged spinach and 7.3% in bulk from evaporation and handling in the laboratory.

The season during which the greatest difference between the prices of edible spinach purchased in packages and in bulk began with March and continued through October. August and September showed the greatest differences. The smallest differences in prices were from November through February.

Jessie V. Coles is Professor of Home Economics, University of California, Berkeley.

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the average price could have been 20¢ less than the realized average of 68¢.

The order at least made the price higher in some seasons than it would have been without the control program. However, there is evidence that the higher prices have induced some growers to expand acreage and production and have induced other growers to begin producing hops. This had led to an expansion of production which, in combination with a static or decreasing consumption, has resulted in continuation of a problem for whose solution the control program was originally introduced.

For those years when yields are extremely large, some control over salable quantity may be desirable to avoid superabundant stocks forcing down the price erratically for the following season. These seasons where control of salable quantity is required, however, should be the exception rather than the rule.

Sidney Hoos is Professor of Agricultural Economics, University of California, Berkeley.

J. N. Boles is Assistant Specialist in Agricultural Economics, University of California, Berkeley.