

REPORT OF THE  
OFFICE OF THE AUDITOR GENERAL

235.2

REPORT ON THE CALIFORNIA MILK  
MARKETING PROGRAM AS ADMINISTERED  
BY THE DEPARTMENT OF FOOD AND AGRICULTURE

JANUARY 1975

TO THE  
JOINT LEGISLATIVE AUDIT COMMITTEE

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January 28, 1975

Honorable Bob Wilson  
Chairman, and Members of the  
Joint Legislative Audit Committee  
Room 4126, State Capitol  
Sacramento, California 95814

Dear Mr. Chairman and Members:

Transmitted herewith is our report on the California Milk Marketing Program administered by the Department of Food and Agriculture. Under this program, the director of the department is responsible for establishing minimum producer, wholesale, and retail prices of fluid market milk.

Our statewide survey of 204 retail supermarkets disclosed that the gross profit (retail price less wholesale price) on milk resulting from the state-established minimum retail prices is higher than the gross profit realized on 44 of 47 other basic food items surveyed, including six other refrigerated items surveyed. As a result, retail supermarkets receive higher gross profits for milk than for numerous other basic food items, and the state must employ approximately 70 full-time positions at an annual salary cost of \$1,086,000 to administer both the wholesale and retail minimum pricing program.

Our survey showed that the average retail prices for mayonnaise, flour, sugar, shortening, tuna, and coffee were below the wholesale prices for these items.

This survey, taken on December 17 and 18, 1974, confirmed the results of our previous survey reported in September 1974. However, our updated survey covers 112 more supermarkets and 37 additional items, including refrigerated and frozen items.

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We recommend that legislation be enacted to eliminate state-established minimum retail prices and that the 70 positions utilized for administering the minimum wholesale and retail pricing program be deleted.

State law prohibits the sale of dairy products at less than cost. As a result, California consumers, unlike consumers in some other states, are not offered advertised specials of dairy products at prices below cost.

For example, in December 1974, the same quality of butter was selling at 39 cents per pound in Syracuse, New York as compared to the Los Angeles price of 98 cents per pound.

We recommend that legislation pertaining to sales of dairy products below cost be repealed.

As a result of the exemption of vertically integrated processors (such as Safeway which owns its own milk processing facilities and retail stores) from the state's minimum wholesale milk pricing regulation, and the ability of the joint ventures (combinations of a milk processor and independent retail grocery stores which jointly own and operate a milk processing plant) to, in effect, undersell conventional milk processors at the wholesale level, conventional milk processors are at a competitive disadvantage.

In order to provide conventional milk processors with an opportunity to compete with the other two entities, we recommend that legislation be enacted to eliminate state-established minimum wholesale milk prices.

The most recent five cents per half gallon producer price increase for milk granted by the department on April 1, 1974 and passed on to consumers, was based on a departmental projection which overestimated producers' actual costs. In fact, the department prepared a revised projection which contained significantly higher projected costs than an earlier projection. This revised projection, which was used to justify the five cent increase, was prepared, in part, using techniques provided by milk industry representatives.

As a result, producers have received an estimated additional \$55 million through December 31, 1974, an undetermined amount of which represents an overcharge to consumers.

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The department became aware that their revised projection exceeded actual costs on July 3, 1974, or nearly seven months ago, but has not yet taken corrective action.

We conclude that the department's use of a cost projection technique in part supplied by milk industry representatives, is questionable, particularly when the department has a staff with expertise in such matters.

We recommend that the department compute the exact amount of the resulting overcharge to consumers and lower the minimum producer milk price until the overcharge has been effectively returned to consumers.

The department has not yet obtained complete data on the estimated total of 420,000 gallons of raw skim milk dumped by producers, and has not required producers to provide this data which has an effect on milk supplies and prices.

We recommend that the department require all producers to provide complete data on the quantity of dumped milk within ten days of its occurrence and to impose reasonable penalties for noncompliance.

The panel, including the hearing officer designated to hold state hearings on milk prices and related issues, is comprised only of departmental civil service employees.

We recommend that such panels include consumer and industry representation.

Milk quotas held by 2,403 milk producers, which, under the Gonsalves Milk Pooling Act, were originally allocated by the department at no cost to producers, now have an aggregate market value of \$499 million. As of October 1974, quota had a market value of \$938 for an average cow's milk production. Sales by producers of quota originally allocated by the state at no cost result in windfall gains to the producers.

While the Gonsalves Milk Pooling Act makes provision for preventing excessive value being assigned to quota, there has never been a determination as to whether the amount of the selling price is "excessive".

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We conclude that a \$938 selling price for quota equivalent to an average cow's milk production might be determined excessive within the meaning of Section 62707 of the Food and Agriculture Code.

Respectfully submitted,



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INTRODUCTION

In response to a legislative request, we have reviewed the California Milk Marketing Program administered by the Department of Food and Agriculture.

Particular emphasis was placed on the pricing structure of milk at the producer (dairyman), processor (wholesaler), and retail levels and the effect of state established minimum prices at all three levels.

The report includes an updated review of those areas covered in our preliminary report on milk pricing released in September 1974.

The production and distribution of dairy products constitutes a major industry in California. As of January 1, 1974 there were an estimated 810,000 milk cows and heifers on California farms which produced 10.3 billion pounds of milk in 1973. Of the 10.3 billion pounds, 9.4 billion pounds were market milk, known commonly as grade A, and the balance was manufacturing milk, commonly known as grade B. Grade A milk is produced under more sanitary and regulated conditions than grade B.

The average annual production of milk per cow in California is 13,066 pounds which is approximately 30 percent greater than the national average and is reputed to be the result of superior herd management techniques and favorable weather conditions. Milk production in California is concentrated largely in three geographical areas which are San Joaquin Valley, 52 percent; southern California, 30 percent; and the central coast counties, 10 percent.

No data is available which relates directly to per capita consumption of dairy products in California; it can be assumed that the quantities of dairy products produced and sold represent reasonably well the quantities consumed. The 1973 per capita figures for sales and production in California are as follows:

Milk, half & half and cream	128.27 quarts
Cottage cheese	7.87 pounds
Buttermilk	2.78 quarts
Ice cream and other frozen products	22.72 quarts

Based on 1973 data, the volume of milk produced and sold is so great that a five cent increase in the retail price of a half gallon of milk results in a \$66.5 million annual increase in cost to California consumers.

The Director of the Department of Food and Agriculture is responsible for establishing minimum producer, wholesale, and retail prices of fluid market milk under the Milk Marketing Program.

Minimum fluid milk prices have been fixed at the producer level since 1935. Minimum wholesale and retail milk pricing was established in 1937. Other dairy items, such as yogurt, cottage cheese, and butter, are regulated at the wholesale and retail level only to the extent that the selling price may not be below cost.



The California Milk Marketing Program does not regulate production. However, it does set quotas which affect the prices received by a dairyman. A dairyman may produce as much milk as his business judgment and his resources dictate. However, in accordance with law, milk produced in excess of his quota must be sold for a lower price than milk produced within the quota.

Minimum prices to the producers are established by the department for each class of grade A milk based on statewide usage:

- Class 1 comprises fluid milk and any dairy product which by law must be made from grade A milk. This classification is comprised mainly of whole and low fat milk and yogurt.
- Class 2 comprises all fluid milk, fluid skim milk, or fluid cream used in the manufacture of a dairy product not included in class 1, class 3 or class 4. Examples are cream, cottage cheese and buttermilk.
- Class 3 comprises all fluid milk, fluid skim milk, or fluid cream which is used in the manufacture of frozen dairy products, such as ice cream.
- Class 4 comprises all fluid milk, fluid skim milk, or fluid cream which is used in the manufacture of butter, hard cheese, dried milk and evaporated milk.

Following are the state-established minimum price histories at the wholesale and retail price levels for half-gallon containers of whole milk in the Los Angeles area over the past three years:

State-Established Minimum Wholesale And  
Retail Prices of Whole Milk  
Southern Metropolitan Marketing Area  
(Los Angeles)

<u>From</u>	<u>Through</u>	<u>Wholesale Prices*</u>	<u>Retail Prices</u>
Jun. 6, 1971	Jan. 31, 1973	\$ .399	\$.54
Feb. 1, 1973	Aug. 8, 1973	.418	.56
Aug. 9, 1973	Oct. 13, 1973	.446	.59
Oct. 14, 1973	Oct. 31, 1973	.437	.59
Nov. 1, 1973	Mar. 31, 1974	.481	.64
Apr. 1, 1974	May 4, 1974	.534	.69
May 5, 1974	Dec. 31, 1974	.556	.71

\* At maximum order-size discount to retailer (as of May 5, 1974 this discount applied to orders of at least \$1,100.01 or more).

Wholesale prices increased 39.3 percent between 1971 and 1974 while the retail prices increased 31.5 percent during the same period.

A brief analysis of the price per half-gallon of whole milk in the Los Angeles area, as of January 31, 1974 is as follows:

Office of the Auditor General

A brief analysis of the price per half gallon of whole milk in the Los Angeles area, as of December 31, 1974 is as follows:

	<u>Share Retail Price</u>	<u>Percentage Of Retail Price</u>
Producer	\$ .422	59.4%
Processor/distributor (wholesaler)	.134	18.9%
Retailer	<u>.154*</u>	<u>21.7%</u>
Total retail price	\$ <u>.710</u>	<u>100.0%</u>

\* At maximum order-size discount to retailer (as of May 5, 1974 this discount applied to orders of at least \$1,100.01 or more).

On January 1, 1975, the wholesale price minimum was suspended in the Los Angeles area and the retail price was reduced to \$.70.

FINDINGS

A STATEWIDE SURVEY OF 204 RETAIL SUPERMARKETS DISCLOSED THAT THE GROSS PROFIT ON MILK RESULTING FROM THE STATE-ESTABLISHED MINIMUM RETAIL PRICES IS HIGHER THAN THE GROSS PROFIT REALIZED ON 44 OF 47 OTHER BASIC FOOD ITEMS SURVEYED INCLUDING SIX OTHER REFRIGERATED ITEMS SURVEYED. AS A RESULT, RETAIL SUPERMARKETS RECEIVE HIGHER GROSS PROFITS FOR MILK THAN FOR NUMEROUS OTHER BASIC FOOD ITEMS, AND THE STATE MUST EMPLOY APPROXIMATELY 70 FULL-TIME POSITIONS AT AN ANNUAL SALARY COST OF \$1,086,000 TO ADMINISTER BOTH THE WHOLESALE AND RETAIL MINIMUM PRICING PROGRAM.

Market Survey

As a part of this review, a major brand and common size of 47 basic foods in addition to two regulated milk items were selected to be the basis of a market survey. Prices of each item at 204 randomly selected retail supermarkets in the ten largest counties within the state were recorded on December 17 and 18, 1974, and compared to the wholesale prices in effect in those areas.

The market survey disclosed that the gross profit (retail price less wholesale price) realized by the supermarkets from sales of milk at state regulated minimum prices is higher statewide than the gross profit realized from sales of 44 of the 47 basic food items which were surveyed. In fact, our survey showed that the average retail prices for mayonnaise, flour, sugar, shortening, tuna and coffee were below the wholesale prices for these items.

As a result of such state-established minimums, retail supermarkets receive higher gross profits for milk than for numerous other basic food items.

The areas and items surveyed are shown in Appendix pages 30 through 38.

This survey confirms the results of our previous survey reported in our preliminary report of September 1974. However, this updated survey covers 112 more supermarkets and 37 additional items including refrigerated and frozen items.

Military sales are exempt from state minimum pricing regulations. Retail milk sales on military bases in the Sacramento area were surveyed on December 10, 1974 and found to be:

Whole Milk	51¢ half gallon
Low Fat Milk	51¢ half gallon
Non-Fat Milk	46¢ half gallon

The sales prices at military commissaries are at cost and therefore include no retail markup for profit or the cost of handling. It is unlikely that, even with the elimination of state minimum pricing, California consumers would enjoy such prices except on featured specials or other promotions.

The cost of refrigeration has been suggested as the justification for higher retail markups on milk as opposed to nonrefrigerated items. In Los Angeles, using the least cost-efficient situation which is an open unit dairy case, the cost of refrigeration of milk to retail supermarkets has been calculated to be 2.832 cents, or less than three cents per half gallon. Under ideal conditions, the cost would be .984 cents, or less than one cent. Further, our survey disclosed that the gross profit on milk is higher than the gross

profit on all six other refrigerated items surveyed. A complete analysis of the refrigeration costs are included in the Appendix pages 39 through 43.

Margarine (made from vegetable oils) is an unregulated product which was refrigerated in all but one supermarket in the survey. Costs for refrigerating this product should be comparable to dairy items. In many stores margarine was used as an advertised special and was sold below the wholesale price.

Wholesale grocers normally require payment from retail stores for food purchases within seven days. Effective December 1, 1974, state regulations allowed processors (wholesalers) of milk to extend credit to retail stores between 42 to 60 days, or at the minimum of 35 days more than they are allowed for other food items. The Department of Food and Agriculture does not now consider the value of the use of this interest-free money to retail stores. When the interest-free extension of credit is considered, the retail store's profit on milk is even greater than that reflected in the survey. It should be noted that such credit extensions are being reduced under the regulations from 60 to 42 days.

#### Suspension of Wholesale Minimum Prices

The Department of Food and Agriculture recently suspended wholesale minimum prices for milk in some areas. In those marketing areas where wholesale minimums are suspended, retailers are sometimes able to purchase their milk at reduced prices but are unable to pass their savings along to consumers due to state-established minimum retail prices. To remedy this situation the Department of Food and Agriculture has, on several occasions, reduced the minimum retail prices in those areas where minimum wholesale prices have been

suspended, but this action has not been uniformly applied. In areas where the minimum retail price has not been reduced, the suspension of wholesale minimums could result in increased retail profits.

#### Cost of Handling Milk at Retail Level

In addition to other factors for consideration when establishing minimum retail prices, the Department of Food and Agriculture is required to determine retail stores' overall cost of doing business, with the assumption that the cost of handling milk is the same as for other commodities. The department is allowed to produce satisfactory evidence to the contrary to rebut that presumption, but has been unable to do so. Instead, they have, since the inception of the Milk Marketing Program, used the industry's overall cost of doing business to determine retail markups.

On page 5 of the November 25-26, 1974 Southern Metropolitan area hearing report, the Department of Food and Agriculture stated, "Preliminary findings from these studies strongly indicate that the cost of handling controlled dairy products is significantly below the general cost of doing business in retail stores."

#### Positions for Administering Minimum Prices

Approximately 70 full-time positions at an annual salary cost of \$1,086,000 must be employed in the Department of Food and Agriculture to administer the minimum pricing program at both the wholesale and retail price levels. Such administration includes the determination and enforcement of minimum pricing policies at the wholesale and retail level for milk and other dairy products. These salaries are financed by a state tax on producers and processors which is passed on to consumers.

CONCLUSION

State-established minimum retail milk prices result in retail supermarkets receiving higher gross profits than they receive for numerous other basic foods, including refrigerated items. Further, the elimination of state-established minimum wholesale and retail pricing policies for milk and other dairy products would enable the state to delete the positions used to administer this minimum pricing program.

RECOMMENDATIONS

We recommend that legislation be enacted to eliminate state-established minimum retail milk prices.

We recommend the deletion of the 70 full-time positions utilized in the Department of Food and Agriculture for administering the state-established minimum wholesale and retail prices for milk and other dairy products.

SAVINGS AND BENEFITS

Implementation of these recommendations will result in reduced salary expenditures by the state of \$1,086,000 annually, and could result in lower milk and other dairy product prices to the public.



STATE LAW PROHIBITS THE SALE OF DAIRY PRODUCTS AT LESS THAN COST. AS A RESULT, CALIFORNIA CONSUMERS, UNLIKE CONSUMERS IN SOME OTHER STATES, ARE NOT OFFERED ADVERTISED SPECIALS OF DAIRY PRODUCTS AT PRICES BELOW COST.

It is practice in some states for retail supermarkets to frequently sell dairy products, including such items as low fat milk, yogurt, cottage cheese and butter, at less than cost. However, in California, pursuant to Section 61384 of the Food and Agriculture Code, these dairy products cannot be sold at less than cost. As a result, unlike consumers of some other states, California consumers are not offered advertised specials of dairy products at prices below cost.

Out-of-state retail supermarket advertisements for the week of December 1 through December 7, 1974 were reviewed to determine advertised dairy product prices in states which do not prohibit the sale of these items at prices below cost. The following table illustrates some of the dairy products offered as advertised specials together with the December Los Angeles price:

<u>Location</u>	<u>Item</u>	<u>Out-of-State Price Offered</u>	<u>Los Angeles Price</u>
Syracuse, N.Y.	Butter	39¢ lb.*	98¢ lb.*
Phoenix, Ariz.	Cottage Cheese	45¢ pt.	67¢ pt.
Phoenix, Ariz.	Low Fat Milk	43¢ half gal.	70¢ half gal.
Indianapolis, Ind.	Low Fat Milk	99¢ gal.	\$1.40 gal.
* Same quality			
Indianapolis, Ind.	Low Fat Milk	99¢ gal.	\$1.40 gal.

Sales at the above out-of-state prices would be illegal in California because they represent selling prices which are below cost. Such sales could make a California seller liable for civil penalties up to \$500 for each single sale below cost.

CONCLUSION

State law prohibiting the sale of dairy products below cost denies consumers the opportunity to purchase dairy foods at prices comparable to those appearing in some out-of-state retail supermarket advertisements.

RECOMMENDATION

We recommend that legislation pertaining to sales of dairy products below cost be repealed.

BENEFITS

Implementation of this recommendation could enable consumers to participate in advertised specials of dairy products at prices below cost.

STATE-ESTABLISHED MINIMUM WHOLESAL MILK  
PRICES PLACE CONVENTIONAL MILK PROCESSORS  
AT A COMPETITIVE PRICE DISADVANTAGE WITH  
VERTICALLY INTEGRATED PROCESSORS AND  
JOINT VENTURE OPERATIONS.

Vertical integration of large retail stores into the processing of fluid milk and the advent of joint venture operations have dramatically changed the wholesale milk business in California and have placed conventional milk distributors in serious competitive disadvantage.

Conventional Processors

Conventional milk processors (those not under common ownership with retail stores) are prohibited from selling milk to retailers at less than the state-established minimum wholesale price.

Vertically Integrated Processors

Vertically integrated processors, such as Safeway and Lucky, own their own milk processing facilities and retail stores and have achieved economy through their combined operations. Under the law, these vertically integrated firms are exempt from state-established minimum wholesale milk prices, even though their retail stores are subject to state-established minimum retail prices. As of October 1973, vertically integrated processors accounted for 29 percent of the statewide sales of fluid milk.

Joint Venture

A joint venture is a combination of a milk processor and independent retail grocery stores which jointly own and operate a milk processing plant.

Earnings of this operation are distributed to all members in the form of dividends based on their purchases of milk. These dividends, in effect, reduce the wholesale price of milk.

To compete with joint ventures who were offering the prospect of lower wholesale milk prices through possible dividends and with vertically integrated retailers who are exempt from wholesale minimums, the conventional fluid milk processors asked the Department of Food and Agriculture, Bureau of Milk Stabilization, to conduct hearings that would give consideration to the suspension of the minimum wholesale prices for fluid milk in some areas.

Prior to our preliminary report in September 1974, about 15 percent of the statewide production had been suspended from minimum wholesale prices. As of January 1975 minimum wholesale prices have been suspended in those marketing areas which comprise 98 percent of statewide milk sales.

The current suspension of minimum wholesale milk prices is only temporary relief from the problem and the only permanent means to correct the situation is through the enactment of legislation.

#### CONCLUSION

As a result of the exemption of vertically integrated processors from minimum wholesale milk pricing regulation and the ability of the joint ventures to in effect undersell conventional milk processors at the wholesale level, conventional milk processors are at a competitive disadvantage.

RECOMMENDATION

We recommend that legislation be enacted to eliminate state-established minimum wholesale milk prices.

BENEFITS

Implementation of this recommendation will provide conventional milk processors with an opportunity to compete with vertically integrated processors and joint ventures.

THE MOST RECENT FIVE CENTS PER HALF GALLON PRODUCER PRICE INCREASE FOR MILK GRANTED BY THE DEPARTMENT OF FOOD AND AGRICULTURE ON APRIL 1, 1974 WAS BASED ON A DEPARTMENTAL PROJECTION WHICH OVERESTIMATED PRODUCERS' ACTUAL COSTS. AS A RESULT, PRODUCERS HAVE RECEIVED AN ESTIMATED ADDITIONAL \$55 MILLION, AN UNDETERMINED AMOUNT OF WHICH REPRESENTS AN OVERCHARGE TO CONSUMERS. THE DEPARTMENT BECAME AWARE THAT THEIR PROJECTION EXCEEDED ACTUAL COSTS ON JULY 3, 1974 BUT HAS NOT YET TAKEN CORRECTIVE ACTION.

The Department of Food and Agriculture is responsible for establishing the minimum price which producers are to receive for milk in California. Minimum pricing at the producer level is necessary to assure an adequate supply of milk; however, the minimum prices established should accurately reflect the cost of production and a reasonable return to the dairyman.

The most recent producer price increase of five cents per half gallon for milk was granted by the Department of Food and Agriculture effective April 1, 1974. Producers had requested a price increase of eight cents per half gallon in hearings on the subject held on February and March of 1974. This five cent increase per half gallon of milk at the producer level was passed on at both the wholesale and retail price levels in accordance with the state-established minimum prices for milk set by the Department of Food and Agriculture.

In support of the price increase, in February 1974 milk industry representatives prepared projections of producer costs as did the Department of Food and Agriculture. The industry projections were substantially higher than those prepared by the department. Subsequent to the March 1974 hearing, the Department of Food and Agriculture prepared additional projections in March which

contained significantly higher projected costs than its earlier projections. A revised projection was prepared in part by using techniques provided by milk industry representatives, and it was this projection which was used to support the five cent per half gallon increase granted to producers on April 1, 1974.

On July 3, 1974, the Department of Food and Agriculture published their March-April 1974 "Standard Milk Production Cost Index" which is compiled from actual cost data submitted by producers. This document prepared by the Department of Food and Agriculture clearly shows that the departmental projection overestimated producers' actual costs, as such projected costs used to justify the April increase greatly exceeded the actual cost experienced by the producers.

As a result of the price increase, producers have received an estimated additional \$55 million between April 1 and December 31, 1974. An undetermined amount of the \$55 million represents an overcharge to consumers. However, the determination as to what portion of the \$55 million increase is an overcharge to consumers would require a detailed analysis of the effect of inflation on producer costs since April and other factors such as actual production and usage.

The five cent per half gallon increase on April 1, 1974 was granted in all production areas, some of which were already receiving producer prices in excess of cost.

The Department of Food and Agriculture became aware of their March 1974 incorrect projection on July 3, 1974. However, no action has been taken by the department thus far, or nearly seven months later, to correct the situation.

The Department of Food and Agriculture has been establishing milk prices at the producer level since 1935. In administering the milk program, the department has assembled a staff of 157 full-time personnel. Many of these employees possess considerable expertise in the dairy industry and are trained in developing projection techniques.

#### CONCLUSION

The department's use of cost projection techniques, in part supplied by milk industry representatives to support a milk price increase, is questionable, particularly when the department has its own staff trained in developing projection techniques. The department should have corrected the problem when it became aware of the overcharge to consumers nearly seven months ago on July 3, 1974.



RECOMMENDATION

We recommend that the Department of Food and Agriculture should compute the exact amount of the overcharge to consumers resulting from the April 1, 1974 price increase which it granted, and should lower the minimum producer milk price until the overcharge has been effectively returned to the consumer. As an alternative, any justified future producer price increase should be postponed until the overcharges accruing since April 1, 1974 have been effectively returned to consumers.

BENEFITS

Implementation of this recommendation should result in a return to milk consumers of the computed amount of the overcharge.

THE DEPARTMENT OF FOOD AND AGRICULTURE HAS NOT OBTAINED COMPLETE DATA ON QUANTITIES OF MILK DUMPED BY PRODUCERS AND HAS NOT REQUIRED PRODUCERS TO PROVIDE THIS DATA. SUCH DATA, WHICH AFFECTS MILK SUPPLIES, SHOULD BE CONSIDERED BY THE DEPARTMENT IN ESTABLISHING MINIMUM PRODUCER MILK PRICES.

Due primarily to the effect of temperature on cows, the production of milk in California annually peaks during the months of May, June and July. To compound this problem of peak production, the consumption of milk declines during this period reportedly due to vacations and the increased use of alternative drinks such as iced tea and soft drinks. To handle this seasonal problem of peak production and reduced consumption, surplus milk is normally processed into powder or condensed milk. When facilities for providing powder or condensation are not available, other disposal techniques such as dumping are used.

In June and July of 1974 one Los Angeles area milk producer, the California Milk Producers (CMP), dumped an estimated 420,000 gallons of raw skim milk into local sewage treatment facilities. The estimate was provided to the sanitation district involved by CMP. Another 16 milk producers and processors hold industrial wastewater discharge permits from the same sanitation district; however, no estimate of their dumping, if any, is available.

In October 1974, at least three months after this major dumping occurred, the Department of Food and Agriculture was still attempting to obtain data in order to verify the exact amount of milk dumped. The department does not require producers to furnish this data.

Milk processors are required by Section 61441 of the Food and Agriculture Code to maintain records of wastage or loss but no such regulation applies to producers.

Section 62212 of the Food and Agriculture Code stipulates that the Department of Food and Agriculture, in setting minimum producer prices of milk, shall take into consideration "current and prospective supplies of fluid milk in relation to current and prospective demands...".

A complete analysis of the supply and demand for fluid milk should include timely and accurate figures on all dumping, whatever the reason.

The Auditor General's staff has determined that the reason for the 420,000 gallon milk dumping in June and July of 1974 was the seasonal surplus coupled with the unavailability of powder or condensation facilities.

In an attempt to correct the problem, on November 7, 1974 CMP obtained a building permit for a milk evaporator/condensor facility with an expected completion date of February 15, 1975. CMP estimates its investment in the plant will approximate \$750,000.

Legislative Counsel Opinion No. 18599 "Destruction of Milk" concludes in effect that dumping of raw skim milk is only a violation of law when and if it can be proven it was done in restraint of trade.

CONCLUSION

The Department of Food and Agriculture's inadequate data concerning the milk dumped or destroyed reduces the accuracy of the compilation of milk supplies which is a necessary input to price setting at the producer level.

RECOMMENDATION

We recommend that the Department of Food and Agriculture require all producers to provide the department with complete data on the quantities of dumped milk within ten days of the occurrence, and to impose reasonable penalties for noncompliance.

BENEFITS

Increased accuracy of milk supply data will improve the reliability of the minimum producer prices for milk established by the Department of Food and Agriculture.

THE PANEL, INCLUDING THE HEARING OFFICER, DESIGNATED TO HOLD STATE HEARINGS ON MILK PRICING AND RELATED ISSUES IS COMPRISED OF DEPARTMENT OF FOOD AND AGRICULTURE CIVIL SERVICE EMPLOYEES AND INCLUDES NO CONSUMER OR INDUSTRY REPRESENTATIVES.

The Food and Agriculture Code requires the Director of the Department of Food and Agriculture to hold public hearings when gathering evidence used to set the minimum wholesale and retail prices of milk and for discussing other related issues.

The Hearing Officer is a civil service employee of the Bureau of Milk Marketing Enforcement. During the hearing, exhibits may be submitted and testimony presented. Witnesses are questioned by other civil service employees of the department who make up the "hearing panel". These civil service employees have daily contact with representatives of the dairy industry.

Members of most state boards and commissions include individuals who represent consumers and who represent the industry being regulated. The milk price hearing panel includes no consumer and industry representatives.

#### CONCLUSION

Composition of a panel which conducts public hearings pertaining to the establishment of milk prices and related issues warrants consumer and industry representation to ensure that the views of all sides are adequately considered.

RECOMMENDATION

We recommend that the panel which conducts public hearings pertaining to the establishment of milk prices and related issues include consumer and industry representation.

BENEFITS

The inclusion of consumer and industry representation on milk price hearing panels would ensure that decisions affecting milk pricing would be based on the conclusions of all concerned groups.

MILK QUOTAS HELD BY 2,403 MILK PRODUCERS,  
WHICH UNDER THE GONSALVES MILK POOLING ACT,  
WERE ORIGINALLY ALLOCATED BY THE DEPARTMENT  
OF FOOD AND AGRICULTURE AT NO COST TO THE  
PRODUCERS, NOW HAVE AN AGGREGATE MARKET  
VALUE OF \$499 MILLION.

On November 8, 1967 the Gonsalves Milk Pooling Act (Sec. 62700 et seq. F. & A. C.) became law. The act established the framework for a milk pooling plan which was eventually approved in a referendum by milk producers that concluded on November 8, 1968. The pooling plan established a production base and pool quota for each eligible producer based on the producer's actual production or contract amounts during a selected base period in 1966 or 1967 most favorable to the producer.

A producer's pool quota allocation entitles him to share in the highest priced usage which is based on pool milk usage throughout the state. Under the pooling plan, producers were initially allocated pool quota equivalent to 110 percent of their class 1 milk usage during the selected base period.

Quota is assigned by the Department of Food and Agriculture to a producer at no charge. He is free to sell or otherwise transfer it to other producers. However, Section 62707 of the Food and Agriculture Code requires the pooling plan to contain provisions that:

"The transfer of production bases and pool quotas from one fluid milk producer to another [should be] under conditions so designed as to prevent abuses in such transfer and to avoid the development of excessive values for such bases and quotas."

The sale, by the producer, of quota originally allocated to him by the state at no cost provides the producers with a windfall gain. However, there has never been a determination as to whether the amount of the selling price is "excessive" within the meaning of Section 62707 of the Food and Agriculture Code.

One of the declared purposes of the Gonsalves Act was the allocation of new pool quota through the growth in class 1 milk usage. In this way, eventually all producers were to attain "equalization". Equalization is defined as that point at which a producer has quota equal to 95 percent of his grade A production during the 1966-67 selected base period.

There have been additional quotas allocated to producers since pooling began; however, the market value of such additional quotas amounts to only four percent of their current market value.

Because new quota allocations from the state are minimal, the market price for existing quota has increased from \$448 in October 1969 to \$938 in October 1974 for an average cow's milk production.

The increased use of class 1 milk has not materialized as anticipated and in fact class 1 usage is declining.

Existing market value of the pool quotas initially allocated by the state to producers at no cost to the producers has reached an aggregate of \$499 million, or a \$281 million increase over the 1969 value of \$218 million. As of April 29, 1974, 2,403 producers had quota with an



average market value of \$208,000. Approximately 32 percent of the total quota was held by 469 producers with an average market value of \$339,000.

The advantage of a dairyman in having quota is readily apparent considering the premium price received for quota milk. For example, in accordance with the state-established minimum producer prices, as of October 1974, non-quota milk was worth \$6.97 per hundred pounds whereas quota milk received a price of \$9.47, or a premium of \$2.50 per hundred pounds.

#### CONCLUSION

A \$938 selling price for quota equivalent to an average cow's milk production might be determined excessive within the meaning of Section 62707 of the Food and Agriculture Code.

SUMMARY OF COMMENTS OF THE  
DIRECTOR OF THE DEPARTMENT OF  
FOOD AND AGRICULTURE AND HIS STAFF

1. The Auditor General's statewide survey of basic food items is biased toward food items which realize low gross profits. The survey should have included fresh meat and vegetables because the gross markups on these items, as opposed to numerous items which the Auditor General selected, is generally higher than the gross markups realized on milk.
2. With regard to the finding pertaining to the sale of dairy products at less than cost, it is not fair to quote Phoenix, Arizona's prices because of the ongoing daily product price wars in that area. Also, the Los Angeles price of 98 cents per pound quoted for a name brand of butter should not be used but rather the house brand prices, which were approximately 80 cents per pound, should have been used.
3. As economists, we believe it would not be in the public interest to sell dairy products below cost since consumers would eventually have to pay higher prices for such dairy items as well as other food items.
4. While we concur with the Auditor General's recommendation for enacting legislation to eliminate the present state-established minimum wholesale milk prices, an alternative minimum wholesale milk pricing structure should be explored.

5. At various times in the past several years, producers were producing milk at a loss and, as a result, consumers had an advantage over producers. Therefore, it would not be equitable to return any overcharges, if they exist, to consumers at this time. If the Auditor General recommends that any overcharges should be returned to consumers, then producers should be compensated for any prior losses also.
6. It is our belief that, in any event, the additional \$55 million which has been received by producers as a result of the latest producer price increase for milk has now been completely justified through inflation.
7. Any milk industry input used by the Department of Food and Agriculture regarding its projection, which justified the latest producer price increase for milk, was minor.

MARKET SURVEY

The supermarkets surveyed were randomly selected from the ten most populated counties within the state. These counties contain 75.4 percent of the state's total population.

<u>San Diego Area</u>	<u>Los Angeles Area</u>	<u>San Francisco Bay Area</u>	<u>Sacramento Area</u>
San Diego	Los Angeles Orange County San Bernardino	San Francisco San Mateo Santa Clara Alameda Contra Costa	Sacramento

Cooperating wholesale grocers within each of the four areas provided wholesale catalogues for the survey. The sample size will statistically yield results at a 95 percent confidence level and a reliability of  $\pm 2$  percent.

The results of our statewide survey of 204 retail supermarkets disclosed that the gross profit on milk resulting from the state-established minimum retail prices is higher than the gross profit realized on 44 of 47 other basic food items surveyed including six other refrigerated items surveyed. This determination was based on a statewide weighted average.

RESULTS OF MARKET SURVEY AT 204 RETAIL SUPERMARKETS  
 DECEMBER 17 AND 18, 1974  
 SAN DIEGO AREA

Item 1/	Retail Price 2/		Wholesale Price 2/	Average Percent Markup	Remarks
	Low	High			
Whole Milk, 1/2 gal.	.71	.71	.56	21.0%	State-established minimum prices
Low Fat Milk, 1/2 gal.	.71	.71	.56	20.9%	State-established minimum prices
Non-Fat Milk, 1/2 gal.	.61	.61	.48	20.9%	State-established minimum prices
Nucoa Margarine, 1 lb. 3/	.68	.79	.65	7.1%	
Fleischman Margarine, 1 lb. 3/	.76	.86	.73	7.6%	
Imperial Margarine, 1 lb. 3/	.65	.85	.75	-2.7%	Sold below cost by many stores
Knudsen Cottage Cheese, 1 pt. 3/	.67	.69	.59	12.7%	
Kraft Velveeta Cheese, 2 lb. 3/	1.52	1.57	1.54	.6%	
Oscar Meyer Weiners, 1 lb. 3/	.87	1.09	.91	9.9%	
Birds Eye Frozen Sweet Peas, 10 oz.	.28	.46	.26	16.1%	
Birds Eye Frozen Broccoli Spears, 10 oz.	.31	.41	.28	26.3%	
Green Giant Frozen Early Peas, 10 oz.	.48	.54	.45	13.5%	
Green Giant Frozen Broccoli Spears, 10 oz.	.48	.54	.45	13.5%	
Banquet Frozen Chicken Pie, 8 oz.	.28	.29	.25	10.7%	
Minutemaide Frozen Orange Juice, 6 oz.	.32	.34	.27	15.6%	
Carnation Evaporated Milk, 13 oz.	.26	.28	.27	zero	
Carnation Powdered Milk, 14 qt.	3.05	3.89	2.88	7.7%	
Gerbers Strained Squash, 4-1/2 oz.	.15	.16	.15	zero	
Cambell's Chicken Noodle Soup, 10-1/2 oz.	.19	.26	.19	17.4%	
Swanson Chicken Broth, 14 oz.	.21	.25	.17	22.7%	
Starkist Light Chunk Tuna, 6-1/2 oz.	.45	.51	.50	-2.0%	Sold below cost by many stores
Underwood Deviled Ham, 4-1/2 oz.	.55	.65	.51	16.4%	
Van Camps Pork and Beans, 2-1/2 can	.53	.55	.51	3.8%	
Del Monte Catsup, 14 oz.	.36	.42	.35	7.9%	
Kraft French Salad Dressing, 8 oz.	.51	.54	.46	11.5%	
Best Foods Mayonnaise, 1 qt.	1.38	1.41	1.43	-3.6%	All stores sold below cost
Gold Medal Enriched Flour, 5 lb.	.79	1.03	1.00	-13.6%	Sold below cost by many stores
Bisquick, 40 oz.	.86	.88	.89	-3.5%	All stores sold below cost
C & H Granulated Sugar, 5 lb.	2.51	2.69	2.90	-14.2%	All stores sold below cost

1/ 47 basic foods, including non-fat milk which is subject to minimum price regulations in only approximately half the state, and 2 milk items, namely whole milk and low fat milk whose prices are subject to state-established minimums throughout the state.

2/ Rounded to the nearest whole penny.

3/ 6 refrigerated items.

RESULTS OF MARKET SURVEY AT 204 RETAIL SUPERMARKETS  
 DECEMBER 17 AND 18, 1974  
 SAN DIEGO AREA (cont.)

Item	Retail Price		Wholesale Price	Average Percent Markup	Remarks
	Low	High			
Crisco Shortening, 3 lb.	1.99	2.07	2.02	-1.0%	Sold below cost by many stores
Wesson Salad Oil, 24 oz.	1.09	1.27	1.17	6.0%	
Morton Iodized Salt, 26 oz.	.17	.17	.17	5.9%	
Schilling Ground Chili Powder, 4 oz.	.75	.87	.82	29.3%	
Folgers Regular Ground Coffee, 1 lb.	1.12	1.12	1.12	-3.6%	All stores sold below cost
Taster's Choice Freeze Dried Coffee, 8 oz.	2.65	2.82	2.78	2.5%	
Lipton Tea Bags, 48 ea.	.65	.84	.76	3.9%	
Kelloggs Corn Flakes, 18 oz.	.64	.73	.66	6.1%	
Minute Rice, 28 oz.	1.34	1.40	1.37	12.4%	
Del Monte Fruit Cocktail, 303 can	.40	.43	.41	9.8%	
Dole Crushed Pineapple, 303 can	.47	.49	.48	10.4%	
Del Monte Sliced Peaches, 2-1/2 can	.49	.54	.52	7.7%	
Del Monte Cut Green Beans, 303 can	.33	.39	.35	8.6%	
Hunts Whole Tomatoes, 2-1/2 can	.48	.56	.51	13.7%	
Del Monte Tomato Sauce, 8 oz.	.15	.17	.16	18.8%	
Libbys Tomato Juice, 46 oz.	.53	.59	.56	1.8%	
Del Monte Pineapple Juice, 46 oz.	.57	.61	.59	13.6%	
Welch's Grape Juice, 24 oz.	.69	.75	.72	9.7%	
Skippy Creamy Peanut Butter, 28 oz.	1.29	1.38	1.32	3.8%	
Log Cabin Pancake Syrup, 24 oz.	.99	1.40	1.25	7.2%	

RESULTS OF MARKET SURVEY AT 204 RETAIL SUPERMARKETS  
 DECEMBER 17 AND 18, 1974  
 LOS ANGELES AREA

Item	Retail Price		Wholesale Price	Average Percent Markup	Remarks
	Low	High			
Whole Milk, 1/2 gal.	.71	.75	.56	21.7%	State-established minimum prices
Low Fat Milk, 1/2 gal.	.70	.75	.55	21.7%	State-established minimum prices
Non-Fat Milk, 1/2 gal.	.61	.73	.48	21.8%	State-established minimum prices
Nucoa Margarine, 1 lb.	.63	.89	.65	5.8%	
Fleischman Margarine, 1 lb.	.69	.93	.73	5.2%	
Imperial Margarine, 1 lb.	.64	.99	.75	-1.4%	
Knudsen Cottage Cheese, 1 pt.	.59	.79	.59	12.7%	Sold below cost by many stores
Kraft Velveeta Cheese, 2 lb.	1.45	1.99	1.51	1.3%	
Oscar Meyer Weiners, 1 lb.	.65	1.43	.89	12.7%	
Birds Eye Frozen Sweet Peas, 10 oz.	.29	.49	.26	16.1%	
Birds Eye Frozen Broccoli Spears, 10 oz.	.30	.87	.28	30.0%	
Green Giant Frozen Early Peas, 10 oz.	.39	.60	.42	19.2%	
Green Giant Frozen Broccoli Spears, 10 oz.	.39	.59	.42	20.8%	
Banquet Frozen Chicken Pie, 8 oz.	.28	.35	.23	20.7%	
Minutemaids Frozen Orange Juice, 6 oz.	.30	.57	.27	18.2%	
Carnation Evaporated Milk, 13 oz.	.17	.33	.24	14.3%	
Carnation Powdered Milk, 14 qt.	2.91	3.57	2.89	5.9%	
Gerbers Strained Squash, 4-1/2 oz.	.15	.18	.15	zero	
Campbell's Chicken Noodle Soup, 10-1/2 oz.	.18	.29	.19	9.5%	
Swanson Chicken Broth, 14 oz.	.21	.25	.17	26.1%	
Starkist Light Chunk Tuna, 6-1/2 oz.	.43	.59	.50	-4.2%	Sold below cost by many stores
Underwood Deviled Ham, 4-1/2 oz.	.58	.89	.52	17.5%	
Van Camps Pork and Beans, 2-1/2 can	.31	.69	.52	1.9%	
Del Monte Catsup, 14 oz.	.37	.45	.35	12.5%	
Kraft French Salad Dressing, 8 oz.	.45	.63	.46	14.8%	
Best Foods Mayonnaise, 1 qt.	1.37	1.49	1.43	-3.6%	Sold below cost by many stores
Gold Medal Enriched Flour, 5 lb.	.48	1.97	1.00	-8.7%	Sold below cost by many stores
Bisquick, 40 oz.	.81	1.68	.89	-1.1%	Sold below cost by many stores
C & H Granulated Sugar, 5 lb.	2.49	3.29	2.90	-12.8%	Sold below cost by many stores

RESULTS OF MARKET SURVEY AT 204 RETAIL SUPERMARKETS  
 DECEMBER 17 AND 18, 1974  
 LOS ANGELES AREA (cont.)

Item	Retail Price		Wholesale Price	Average Percent Markup	Remarks
	Low	High			
Crisco Shortening, 3 lb.	1.89	2.43	2.02	-2.0%	Sold below cost by many stores
Wesson Salad Oil, 24 oz.	.98	1.49	1.16	5.2%	
Morton Iodized Salt, 26 oz.	.14	.20	.17	11.8%	
Schilling Ground Chili Powder, 4 oz.	.69	.89	.79	26.6%	
Folgers Regular Ground Coffee, 1 lb.	.97	1.27	1.12	-3.6%	Sold below cost by many stores
Taster's Choice Freeze Dried Coffee, 8 oz.	2.65	3.09	2.77	1.8%	
Lipton Tea Bags, 48 ea.	.56	.95	.79	19.0%	
Kelloggs Corn Flakes, 18 oz.	.48	.75	.66	6.1%	
Minute Rice, 28 oz.	.69	1.59	1.36	11.8%	
Del Monte Fruit Cocktail, 303 can	.26	.51	.41	9.8%	
Doie Crushed Pineapple, 303 can	.43	.59	.49	14.3%	
Del Monte Sliced Peaches, 2-1/2 can	.34	.77	.51	5.9%	
Del Monte Cut Green Beans, 303 can	.29	.41	.35	8.6%	
Hunts Whole Tomatoes, 2-1/2 can	.37	.65	.52	15.4%	
Del Monte Tomato Sauce, 8 oz.	.08	.19	.16	18.8%	
Libbys Tomato Juice, 46 oz.	.49	.69	.57	12.3%	
Del Monte Pineapple Juice, 46 oz.	.56	.65	.58	10.3%	
Welch's Grape Juice, 24 oz.	.69	.89	.73	11.0%	
Skippy Creamy Peanut Butter, 28 oz.	1.19	1.88	1.35	9.6%	
Log Cabin Pancake Syrup, 24 oz.	.99	1.55	1.28	8.6%	



RESULTS OF MARKET SURVEY AT 204 RETAIL SUPERMARKETS  
 DECEMBER 17 AND 18, 1974  
 SAN FRANCISCO BAY AREA

Item	Retail Price		Wholesale Price	Average Percent Markup	Remarks
	Low	High			
Whole Milk, 1/2 gal.	.71	.71	.58 <sup>4/4</sup>	17.6%	State-estab. min. retail prices
Low Fat Milk, 1/2 gal.	.70	.71	.58 <sup>4/4</sup>	17.6%	State-estab. min. retail prices
Non-Fat Milk, 1/2 gal.	.62	.63	.51 <sup>4/4</sup>	17.7%	State-estab. min. retail prices
Nucoa Margarine, 1 lb.	.66	.79	.65	9.7%	
Fleischman Margarine, 1 lb.	.75	.89	.67	14.1%	
Imperial Margarine, 1 lb.	.65	.89	.71	6.6%	
Knudsen Cottage Cheese, 1 pt.	.69	.75	.59	16.4%	
Kraft Velveeta Cheese, 2 lb.	1.69	1.99	1.55	13.4%	
Oscar Meyer Weiners, 1 lb.	1.09	1.33	.92	20.0%	
Birds Eye Frozen Sweet Peas, 10 oz.	.33	.38	.27	20.6%	
Birds Eye Frozen Broccoli Spears, 10 oz.	.34	.89	.30	31.8%	
Green Giant Frozen Early Peas, 10 oz.	.43	.63	.45	13.5%	
Green Giant Frozen Broccoli Spears, 10 oz.	.45	.59	.45	13.5%	
Banquet Frozen Chicken Pie, 8 oz.	.29	.34	.24	22.6%	
Minutemaids Frozen Orange Juice, 6 oz.	.33	.37	.27	20.6%	
Carnation Evaporated Milk, 13 oz.	.27	.33	.28	6.7%	
Carnation Powdered Milk, 14 qt.	3.05	3.53	2.92	11.0%	
Gerbers Strained Squash, 4-1/2 oz.	.16	.18	.14	12.5%	
Campbell's Chicken Noodle Soup, 10-1/2 oz.	.20	.29	.19	13.6%	
Swanson Chicken Broth, 13-1/2 oz.	.22	.36	.17	29.2%	
Starkist Light Chunk Tuna, 6-1/2 oz.	.49	.66	.50	5.7%	
Underwood Deviled Ham, 4-1/2 oz.	.59	.79	.56	16.4%	
Van Camps Pork and Beans, 2-1/2 can	.32	.67	.52	7.1%	
Del Monte Catsup, 14 oz.	.35	.45	.28	26.3%	
Kraft French Salad Dressing, 8 oz.	.48	.61	.46	17.9%	
Best Foods Mayonnaise, 1 qt.	1.28	1.49	1.44	zero	Sold below cost by many stores
Gold Medal Enriched Flour, 5 lb.	.69	1.15	1.00	-19.0%	Sold below cost by many stores
Bisquick, 40 oz.	.84	1.39	.86	8.5%	
C & H Granulated Sugar, 5 lb.	2.65	3.39	2.58	7.9%	

<sup>4/</sup> State-established minimum wholesale prices suspended.

RESULTS OF MARKET SURVEY AT 204 RETAIL SUPERMARKETS  
 DECEMBER 17 AND 18, 1974  
 SAN FRANCISCO BAY AREA (cont.)

Item	Retail Price			Wholesale Price	Average Percent Markup	Remarks
	Low	High	Average			
Crisco Shortening, 3 lb.	1.79	2.29	2.04	2.06	-1.0%	Sold below cost by many stores
Wesson Salad Oil, 24 oz.	1.09	1.29	1.15	1.11	3.5%	
Morton Iodized Salt, 26 oz.	.17	.20	.17	.14	17.6%	
Schilling Ground Chili Powder, 4 oz.	.39	.87	.80	.59	26.3%	
Folgers Regular Ground Coffee, 1 lb.	1.24	1.24	1.24	1.16	6.5%	
Taster's Choice Freeze Dried Coffee, 8 oz.	2.69	3.07	2.83	2.67	5.7%	
Lipton Tea Bags, 48 ea.	.67	.93	.80	.74	7.5%	
Kelloggs Corn Flakes, 18 oz.	.65	.79	.69	.63	8.7%	
Minute Rice, 28 oz.	1.46	1.61	1.47	1.22	17.0%	
Del Monte Fruit Cocktail, 303 can	.35	.49	.41	.33	19.5%	
Dole Crushed Pineapple, 303 can	.49	.55	.50	.40	20.0%	
Del Monte Sliced Peaches, 2-1/2 can	.53	.63	.55	.48	12.7%	
Del Monte Cut Green Beans, 303 can	.32	.57	.37	.32	13.5%	
Hunts Whole Tomatoes, 2-1/2 can	.41	.63	.54	.45	16.7%	
Del Monte Tomato Sauce, 8 oz.	.13	.18	.15	.13	13.3%	
Libbys Tomato Juice, 46 oz.	.39	.75	.58	.49	15.5%	
Del Monte Pineapple Juice, 46 oz.	.55	.65	.59	.47	20.3%	
Welch's Grape Juice, 24 oz.	.78	1.18	.80	.66	17.5%	
Skippy Creamy Peanut Butter, 28 oz.	1.31	1.59	1.38	1.24	10.1%	
Log Cabin Pancake Syrup, 24 oz.	1.03	1.55	1.26	1.17	7.1%	

RESULTS OF MARKET SURVEY AT 204 RETAIL SUPERMARKETS  
 DECEMBER 17 AND 18, 1974  
 SACRAMENTO AREA

Item	Retail Price		Wholesale Price	Average Percent Markup	Remarks
	Low	High			
Whole Milk, 1/2 gal.	.68	.71	.54 <sup>4/4</sup>	20.3%	State-estab. min. retail prices
Low Fat Milk, 1/2 gal.	.68	.70	.54 <sup>4/4</sup>	20.3%	State-estab. min. retail prices
Non-Fat Milk, 1/2 gal.	.61	.62	.54 <sup>4/4</sup>	10.7%	
Nucoa Margarine, 1 lb.	.69	.79	.65	11.0%	
Fleischman Margarine, 1 lb.	.75	.92	.67	18.3%	
Imperial Margarine, 1 lb.	.65	.89	.71	9.0%	
Knudsen Cottage Cheese, 1 pt.	.67	.69	.59	14.0%	
Kraft Velveeta Cheese, 2 lb.	1.74	1.99	1.55	14.8%	
Oscar Meyer Weiners, 1 lb.	1.12	1.29	.92	22.0%	
Birds Eye Frozen Sweet Peas, 10 oz.	.33	.57	.27	30.8%	
Birds Eye Frozen Broccoli Spears, 10 oz.	.37	.58	.30	31.8%	
Green Giant Frozen Early Peas, 10 oz.	.34	.59	.45	11.8%	
Green Giant Frozen Broccoli Spears, 10 oz.	.49	.55	.45	13.5%	
Banquet Frozen Chicken Pie, 8 oz.	.29	.32	.24	20.0%	
Minutemaids Frozen Orange Juice, 6 oz.	.32	.39	.27	20.6%	
Carnation Evaporated Milk, 13 oz.	.31	.33	.28	9.7%	
Carnation Powdered Milk, 14 qt.	3.25	3.79	2.93	14.1%	
Gerbers Strained Squash, 4-1/2 oz.	.15	.20	.15	6.3%	
Campbell's Chicken Noodle Soup, 10-1/2 oz.	.21	.29	.22	zero	Sold below cost by many stores
Swanson Chicken Broth, 14 oz.	.22	.32	.17	29.2%	
Starkist Light Chunk Tuna, 6-1/2 oz.	.47	.55	.45	13.5%	
Underwood Deviled Ham, 4-1/2 oz.	.59	.75	.57	16.2%	
Van Camps Pork and Beans, 2-1/2 can	.49	.65	.52	8.8%	
Del Monte Catsup, 14 oz.	.37	.43	.35	5.4%	
Kraft French Salad Dressing, 8 oz.	.54	.67	.45	21.1%	
Best Foods Mayonnaise, 1 qt.	1.45	1.69	1.44	2.7%	
Gold Medal Enriched Flour, 5 lb.	.69	1.09	1.00	-13.6%	Sold below cost by many stores
Bisquick, 40 oz.	.89	1.25	.88	11.1%	
C & H Granulated Sugar, 5 lb.	2.65	3.49	2.90	-3%	Sold below cost by many stores

4/ State-established minimum wholesale prices suspended.

RESULTS OF MARKET SURVEY AT 204 RETAIL SUPERMARKETS  
 DECEMBER 17 AND 18, 1974  
 SACRAMENTO AREA (cont.)

Item	Retail Price			Wholesale Price	Average Percent Markup	Remarks
	Low	High	Average			
Crisco Shortening, 3 lb.	2.03	2.49	2.12	2.05	3.3%	
Wesson Salad Oil, 24 oz.	1.09	1.29	1.18	1.11	5.9%	
Morton Iodized Salt, 26 oz.	.17	.19	.17	.15	11.8%	
Schilling Ground Chili Powder, 4 oz.	.75	.87	.82	.58	29.3%	
Folgers Regular Ground Coffee, 1 lb.	1.24	1.24	1.24	1.16	6.5%	
Taster's Choice Freeze Dried Coffee, 8 oz.	2.69	3.19	2.82	2.67	5.3%	
Lipton Tea Bags, 48 ea.	.68	.95	.81	.73	9.9%	
Kelloggs Corn Flakes, 18 oz.	.65	.81	.71	.62	12.7%	
Minute Rice, 28 oz.	1.46	1.59	1.49	1.20	19.5%	
Del Monte Fruit Cocktail, 303 can	.40	.49	.42	.33	21.4%	
Dole Crushed Pineapple, 303 can	.50	.52	.51	.42	17.6%	
Del Monte Sliced Peaches, 2-1/2 can	.39	.59	.53	.47	11.3%	
Del Monte Cut Green Beans, 303 can	.29	.39	.36	.30	16.7%	
Hunts Whole Tomatoes, 2-1/2 can	.45	.60	.53	.44	17.0%	
Del Monte Tomato Sauce, 8 oz.	.15	.18	.15	.13	13.3%	
Libbys Tomato Juice, 46 oz.	.55	.61	.58	.48	17.2%	
Del Monte Pineapple Juice, 46 oz.	.59	.67	.60	.47	21.7%	
Welch's Grape Juice, 24 oz.	.79	.83	.80	.66	17.5%	
Skippy Creamy Peanut Butter, 28 oz.	1.29	1.55	1.40	1.23	12.1%	
Log Cabin Pancake Syrup, 24 oz.	1.09	1.63	1.37	1.16	15.3%	

ANALYSIS OF REFRIGERATION COSTS TO RETAIL SUPERMARKETS

A. TYPE OF UNITS EVALUATED

1. Hill Refrigeration Model 5DR-4D Dairy Case. 5 shelves, 40 foot length. Shelf size = 8 ft. x 22 in. Air curtain type with wide open display.

B. MAJOR ASSUMPTIONS

1. Store ambient temperature = 78° F.
2. Milk temperature = less than 45° F.
3. Prices of equipment based on recent quotes.
4. Electric rates based on data furnished by SMUD for supermarket type of service.
5. Specifications from Hill Refrigeration Service literature and technical personnel from Hill Refrigeration.
6. Electric power cost of \$.0124/kwh based on a typical supermarket in the Sacramento area.

C. COST ANALYSIS

1. One-time Costs - Equipment

<u>Unit Considered</u>	<u>5DR-4D</u>
Basic Unit Cost	\$ 6,471
Compressor and Condensor	1,554
Freight	720
Installation	2,000
Plumbing	200
Electrical	2,000
Sales Tax	<u>482</u>
	<u>\$13,427</u>

One-time cost per day - based on a five-year life with no scrap value

Number of days = 5 x 365 + 1 day for leap year = 1,826

Average daily fixed cost =  $\frac{13,427}{1,826} = \$7.3532/\text{day}$

## 2. Variable Costs

### a. Energy Requirements

	<u>No. Req'd</u>	<u>Volts</u>	<u>Amps</u>	<u>Service Factor</u>	<u>Watts After Service Factor</u>
Evaporator Fan Motor	5	115	7.8	.70	630
Anti-Condensate Heater	5	115	3.25	1.00	370
Lights	5	115	32.8	.50	1,900
Defrost Heater	5	208	19.25	1.00	4,000
Compressor - 10 hp	1	208*	90	.70	<u>13,100</u>
					<u>20,000</u>

20,000 watts is the average power requirement based on continuous use  
1,000 watts used for one hour = 1 kilowatt hour (kwh)

$$\text{Daily use of power} = \frac{20,000}{1,000} \times 24 = 480 \text{ kwh/day}$$

$$\text{Daily cost of power} = 480 \times \$0.0124 = \$5.76/\text{day}$$

### 3. Dairy Case Storage Capability

Single shelf, 8 ft. section

Length = 8 x 12 = 96 inches

Depth = 30" first shelf, 24" other shelves

1/2 gal. milk carton base = 3.75" x 3.75"

Rows of milk on shelf =  $\frac{30}{3.75} = 8$ , and  $\frac{24}{3.75} = 6.4$ , use 6

No. of cartons per 8 foot length =  $\frac{96}{3.75} = 25.94$ , use 25

Total milk cartons per shelf = (a) 8 x 25 = 200 first shelf  
(b) 6 x 25 = 150 other shelf

\*\*Total milk cartons per 5 shelf, 40 ft. dairy case =

$$200 \times 5 \text{ shelves} \times 1 \text{ (for the first shelf)} + 150 \times 5 \text{ shelves} \times 4 \text{ (for the 4 other shelves)} = 4,000 \text{ total milk cartons}$$

\* 3-phase power, 3 amps/hp/leg

\*\* It doesn't affect the economics if you assume the entire dairy case contains milk and absorbs the entire cost, or if 1/20 of the dairy case is used for milk and absorbs 1/20 the cost.

4. Cost for Refrigeration of 1/2 Gal. of Milk (over and above normal marketing cost)

Total daily cost for refrigeration:

	Sacramento <u>Rate</u>	<u>L.A. Rate</u>
Fixed (one-time) costs	\$ 7.35	\$ 7.35
Variable (power) costs	<u>5.76</u>	<u>11.52*</u>
	<u>\$13.11</u>	<u>\$18.87</u>

Cost per day for refrigeration of single 1/2 gal. milk =  
 $\frac{\$13.11}{4,000 \text{ milk cartons}} = \$0.00328 \text{ (Sac)}$

<u>Days</u>	<u>No Load Factor Cost - Sac (Shelves Are Full)</u>	<u>50% Load Factor Cost - Sac (Shelves Are Half Full)</u>	<u>50% Load Factor Cost - L.A.* (Shelves Are Half Full)</u>
1	.328¢	.656¢	.944¢
1½	.492¢	.984¢	1.416¢
2½	.820¢	1.640¢	2.360¢
3	.984¢	1.968¢	2.832¢

A 50 percent load factor assumes that the shelves are full immediately after delivery is made and empty just prior to delivery, and so on the average, the shelves are 50 percent full.

D. CONCLUSIONS

The refrigeration costs for 1/2 gallon milk carton at the maximum is 2.832¢, or less than three cents. This analysis is based on very conservative assumptions, the more important of which is outlined below.

1. The type of dairy case selected for analysis produces the highest refrigeration cost. The unit selected is a modular one with open shelves. The modular unit has a dedicated air conditioning unit and as such does not share economies of scale as would occur with a walk-in box. The open shelves lose much of its refrigeration to the surrounding air unlike units with glass doors.
2. The average shelf life of three days was used even though testimony indicates this may be as short as 1-1/2 days.
3. The 50 percent load factor assumes that the shelves average being only half full, which means that inventory drops to zero prior to replenishment.

\* Cost of power in Los Angeles is approximately double that of Sacramento.

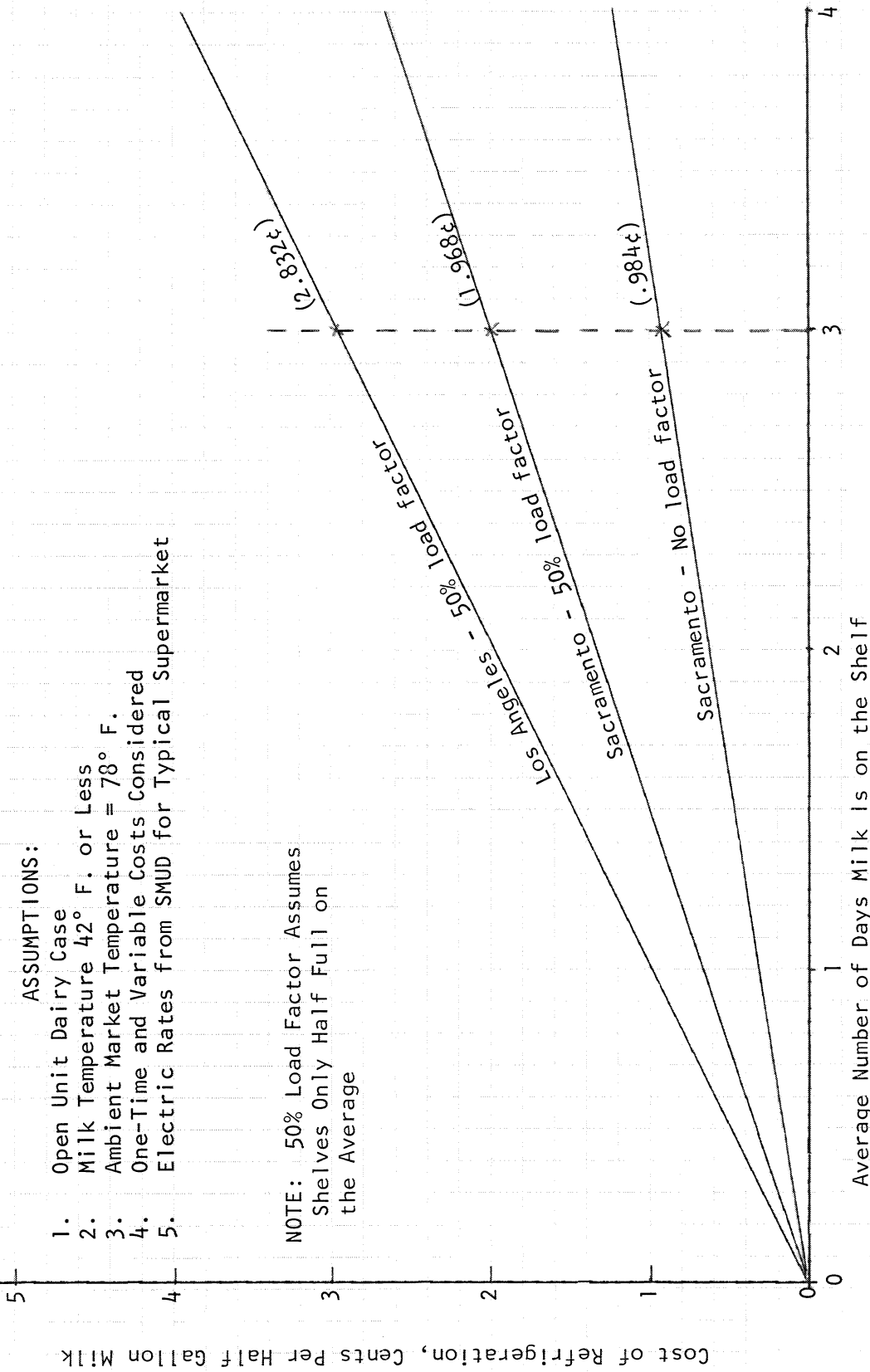
4. The cost of electrical energy in Sacramento is roughly 1/2 that of L.A.
5. A portion of the cost of refrigeration should be allocated to supermarket air conditioning since the open shelf dairy boxes help cool the store.



ASSUMPTIONS:

1. Open Unit Dairy Case
2. Milk Temperature 42° F. or Less
3. Ambient Market Temperature = 78° F.
4. One-Time and Variable Costs Considered
5. Electric Rates from SMUD for Typical Supermarket

NOTE: 50% Load Factor Assumes Shelves Only Half Full on the Average



COST OF MILK REFRIGERATION VERSUS DAYS ON SHELF FOR DIFFERENT LOAD FACTORS AND LOCATIONS