Glenn

INFORMATION SHEET

RE: LEGISLATIVE ANALYST'S REPORT

"The Legislative Analyst's report on Producer Milk Pricing in California when considered in its entirety is stated objectively and constructively and is a significant contribution toward understanding the milk pricing system", L. T. Wallace, Director of Food and Agriculture said today.

"All California citizens should benefit from its description and evaluation."

Wallace noted that the report does not contain any recommendations for change but describes the milk pricing system and identifies problem areas. Many of these same areas have been previously pointed out to the legislature by the Department.

Wallace stated that the department has supported bills that would have tended to correct these problems and is working on proposals for legislative consideration during the 1976 session. He indicated this matter is one of the department's high priority goals.

10-27-75

PLEASE RETURN

PRODUCER MILK PRICING

IN CALIFORNIA

OCTOBER 1975

LEGISLATIVE ANALYST

STATE OF CALIFORNIA

925 L STREET, SUITE 650

SACRAMENTO, CALIFORNIA 95814

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SUMMARY

The Legislature has charged the Department of Food and Agriculture with the regulation and control of certain aspects of the milk industry. This report covers minimum pricing of milk by the Bureau of Milk Stabilization at the producer level, and pooling or producer revenue distribution by the Bureau of Milk Pooling.

In 1935 the Legislature passed the Young Act which is still the basic state legislation on milk pricing. The act authorized the Director of the state Department of Agriculture (now Food and Agriculture) to establish (stabilize) the minimum price that processors must pay producers for drinking milk. The stated premise and legal basis was to assure an adequate supply of wholesome drinking milk in the public interest. The Legislature accepted the producer's contention that continued low prices to producers of drinking milk would force many producers out of business, would reduce drinking milk supplies, and that such shortage would be followed by excessive increases in the consumer price of the remaining supply of drinking milk. The theory has never been tested because a shortage of milk has not occurred.

In the 1930's there was a relatively clear distinction in California between dairies producing milk for drinking purposes and dairies producing milk for manufacturing purposes because most of the production was manufacturing milk. In 1937 the Young Act was expanded to require processors to pay state established minimum prices for all milk produced to drinking milk sanitary requirements even though used for manufacturing purposes. Today, about 95 percent of production is drinking

milk quality. Therefore state price controls presently extend to virtually all milk production, even though only about 60 percent of drinking milk production is sold for that purpose while the remaining 40 percent is used for manufactured milk products.

A Standard Production Cost Index is compiled by the department to represent the average cost of producing Class-1-to-4 milk. The cost index serves as a guide for the department in setting the Class 1 price based on average production costs of all classes of milk. The department also considers other statutorily enumerated factors such as supply and demand and the impact of price increases upon demand for various milk products. Several important deficiencies in the index were found such as lack of statistical reliability and high allowances for producer profits and depreciation.

In order to control the price a processor must pay a producer for the milk he uses, the department has divided milk products into four classes pursuant to statutory guidelines. The Class 1 price (for all drinking milk and yogurt) is established after a public hearing. The prices for Classes 2, 3 and 4 are established by the department according to formulas.

The Class 4 formula (powdered milk, hard cheeses, and butter) is currently based on the federal support price of the Chicago Mercantile Exchange price for butter, or the f.o.b. California plant price for nonfat powdered milk, whichever price is higher. The federal support price tends to be a floor under Class 4 milk and therefore indirectly helps to sustain the pricing system used in California. The formulas

for Class 2 (cream and cottage cheese) and 3 (ice cream) are presently based on the price of Class 4 plus specific dollar amounts which spread Class 2 and 3 prices between Class 1 and Class 4. As of May, 1974 the class prices ranged from $9.35 to $9.86 for Class 1, $8.20 to $8.83 for Class 2, $7.93 to $8.04 for Class 3 and $6.68 to $7.04 for Class 4. (The range of prices is due to differences in marketing areas).

The public interest in milk pricing is stated in the statutes as intended to assure an adequate supply of milk to the consumer at a reasonable price. Under standard economic theory a price will be established at the point where supply and demand will tend to balance. If the minimum price for milk, i.e., the protective floor, is established below the price at which supply and demand are in balance, the selling price will be set by supply and demand and will be unaffected by the minimum price. If, on the other hand, the minimum price is imposed at a level above the balance of supply and demand, the selling price will be the minimum price.

In California, producer prices for Classes 1, 2 and 3 milk (representing about 80 percent of total milk production) are not higher than the established minimum producer prices. Therefore the minimum prices are at or above those at which demand will take the entire supply of existing production. It is probable that a free market for drinking milk at the existing high production level would depress prices to the Class 4 price.

It can be inferred as a consequence that the public is being required to pay for a Class-1-to-4 supply which is larger than it needs, at least for drinking milk purposes. In early 1975 the department

declined to grant a producer request for a further price increase. Whether this action will significantly effect the supply remains to be determined by future events.

Any specific milk price is difficult to evaluate in terms of supply and demand without some element of free market pricing for comparison purposes. Since passage of the Young Act there has been virtually no free market in California for the sale of Class-1-to-4 milk by producers. Consequently, there is today no basis to compare California's producer prices with prices established under traditional market pricing. Data are not available to indicate the price that would produce a balance between supply and demand, whether that balancing price would provide an adequate long-term supply of milk, or whether it would lead to monopoly pricing of milk.

The Gonsalves Milk Pooling Act provides for the department to pool revenues paid by processors for each class of milk used each month and to distribute all the class revenues in each marketing area to individual producers according to a three-tiered priority system. The three tiers are called "quota", "base", and "overbase".

In most respects quota may be viewed as the right of a producer to receive Class 1 prices for a specified amount of milk production. The amount of an individual producer's quota was established by law as 110 percent of the quantity of milk the producer sold as Class 1 in 1966-67. "Base" milk is the producer's total production in 1966-67 less his quota. If a producer has increased his production over his 1966-67 level, the increase is called "overbase" production. As a result of this method

of determination, many changes in the amount of production by individual farmers, and the sale of quota; individual producers have differing amounts of quota, base and overbase. Quota has the highest revenue priority, base is second, and overbase is last.

The quota, base and overbase pool price is determined by allocating the quantities of Class 1, 2, 3 and 4 milk usage in that order first to the total amount of quota in the pool, second to the total base and third to the total overbase in the pool. The average value of all milk in quota, base and overbase is then calculated using the class prices. The money which is actually paid to an individual producer consists of the average price for the quota milk in the pool times his individual quota quantity, plus the average price for base milk in the pool times his individual base quantity, plus the average price for overbase milk times his overbase quantity.

All Class-1-to-4 milk is essentially of the same quality but a producer with high quota can be paid substantially more (about $9.50 per hundredweight) for the same quality and quantity of milk than a producer who has no quota and no base (a low of about $7.00 per hundredweight). The amount of revenue received and, in part, the key to profits for a Class-1-to-4 milk producer is significantly dependent on the amount of quota possessed.

The calculation of an individual producer's revenue based on class prices, quota, base and overbase is so complex that according to the department, many producers do not comprehend how pooling works. They do not appreciate how pooling controls the extent their income can be

expected to change if they increase or decrease their production. If each producer knew how much revenue he could earn for each unit of production, the producer should be able to determine what production level he should seek, based on his cost of producing each increment of milk. According to the department, producers who are unable to unravel the complex pooling system usually produce at capacity.

A major weakness in the class pricing-pooling relationship is that the department itself does not have adequate information on pricing and pooling to permit decisionmaking on the effect of pooling on producer revenues when the department is considering a price increase. The difficulty arises because the law states that producer prices (Class 1 prices) are to be set on average production costs. However, because of pooling, producers do not directly receive such revenues but instead receive a combination or blend of prices as determined by the pooling calculations.

The department collects and computer processes large amounts of precise data on volume of sales in each class and on revenues generated by each class for the purposes of determining individual producer revenue under the pooling system. It also collects but manually processes producer cost data in preparing the production cost index. Neither data system is in such form that information from one can be readily compared for comprehensive milk pricing analysis and decisionmaking. A computerized system could be developed but it will be no more valid as an analysis tool than the production cost data gathered from the farmers for the cost

index. If the production cost index cannot be made demonstrably reliable, computerized manipulation of the data may be of little real benefit.

There is no free market price to guide an evaluation of the California milk pricing system. Therefore a variety of expedients were used in this report to provide the most apparent and most meaningful evaluation using available sources of data.

The department makes a special, more detailed cost study of about 50 of the producers who are included in the production cost index in order to check the accuracy of the index. The principal value of the cost study data is that with adjustment, it can be used to make some semblance of a comparison between producer's actual revenues and "derived" profits (including the effect of pooling) and costs based on the producer's cost records (rather than the department's calculated averages as contained in the production cost index). Using the detailed cost study, we have evaluated three hypotheses.

First, do producers earn more than the cost index indicates? The Standard Production Cost Index includes the department's calculated average cost of producing milk plus a five percent allowance for management and profit. (In addition there are allowances for return on investment, depreciation and family labor). The average producer should earn less than the five percent allowed because the prices of Classes 2 to 4 milk are set lower than the Class 1 price. The data show that most of the 50 producers in the cost study earned significantly more derived profit than five percent in 1971 and 1972 and that a number received more than 20 percent. Similarly, it was also determined that for the

years 1968 through 1973, the average derived profit was 9.2, 8.9, 12.5, 12.2, 11.8 and 6.1 percent respectively.

Second, are large producers more profitable than small ones? It might be expected that large producers are more profitable than small producers because of economies of scale or other related factors. A comparison of the derived profit (expressed as a percentage of the total revenues of each producer) with the amount of production for each of the producers on cost study in 1971 and 1972 shows no significant relationship between this measure of profitability and the amount of production. High and low profits occur at all production levels.

Third, is there a relationship between cost and revenue? Some producers receive significantly higher blend prices and therefore higher revenues from each hundredweight unit of milk sold than other producers. The revenues per hundredweight of high quota producers were plotted against their per-unit costs. An average curve (sketched through the point where costs per hundredweight meet the revenues per hundredweight of production) indicates that a high proportion of producers who have high per-unit revenues also have high per-unit costs, that is, a high proportion of producers appear to be inefficient.

To the extent that there is a lack of efficiency on the part of high revenues producers, there is a lack of benefit to the individual producer, to the industry, or to the consumer. If the state is to provide price protection and stability to the milk industry, the department should assure, in the best interests of all parties, that established minimum prices reflect reasonable efficiency.

Failure of the pooling system to equalize producer revenues has placed the department in a difficult position in setting the price of Class 1 milk. This is because distributions of milk revenues as controlled by pooling distort the actual amount of any class price increase received by any one producer compared to another producer. In effect, a low quota producer who probably needs the Class 1 price increase the most would only get a portion of a price increase.

A standard analysis frequently used is to compare milk prices in California with prices elsewhere. In general, Class 1 California producer milk prices are roughly in line with prices in federal milk marketing areas. However, any comparison of California prices with average federal marketing area prices has limited usefulness because of differences in production costs and markets between California and other states.

The various evaluations made in this report show many problems and difficulties in the milk pricing system. However, the system has worked for four decades. A supply of milk has been furnished and it has been marketed at a price which has in the long run been sufficiently satisfactory to the producers that they have been willing to continue to produce and the consumers have not refused to purchase the milk in any identifiable quantities.

Whenever government controls prices, and indirectly, production of a commodity in the public interest, decisionmaking tends towards favoring selected interests. The department has been responsive to

various interests at different times and it can be speculated that this has been more influential than the large amounts of vague policy and regulatory language in the codes.

Last February the department declined to increase producer prices on the basis that there is currently an excess supply of milk. This decision may provide an opportunity in future months to evaluate whether state pricing can influence the supply of Class-1-to-4 milk or whether the state will continue to seek pricing techniques to market as much milk as is produced.

I. INTRODUCTION

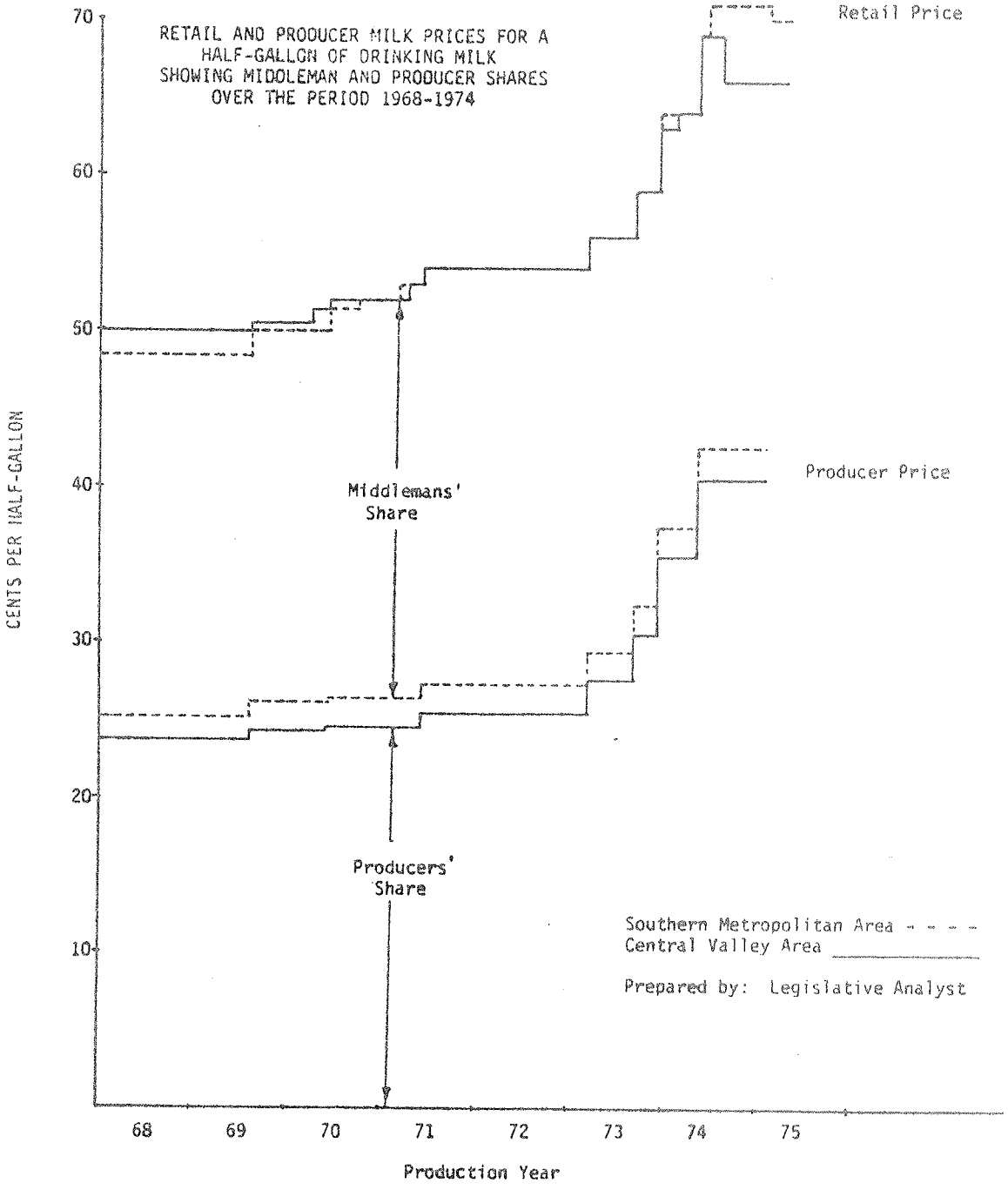
This report provides timely background information on the state's role in establishing and regulating minimum milk prices at the producer (dairymans') level. Our study originated with a legislative request that we examine the appropriateness of increases in milk prices authorized by the Department of Food and Agriculture during 1973 and 1974. Later it became evident that we needed to expand our research in order to analyze several milk pricing bills which were introduced and considered (but not enacted) by the Legislature during the 1975 session.

Purpose and Scope

The data gathering and analysis for this report was a complex undertaking which extended over a period of time during which milk prices were increased rapidly by the department. In February 1975, however, the department declined to increase producer milk prices further. It is too early to evaluate that decision. This report is therefore a description of the milk pricing system as it currently exists rather than an evaluation of any specific recent price changes.

The increases in the retail price of drinking milk in the last two years have essentially been due to increases in producers' milk prices. The retail price increases for a half-gallon of drinking milk are shown for the Southern Metropolitan and Central Valley Marketing Areas on Graph 1. The retail price has two major components: (1) the prices received by the producers which is shown by the two bottom lines on the graph, and (2) the cost added by middlemen (processors,

GRAPH 1


RETAIL AND PRODUCER MILK PRICES FOR A HALF-GALLON OF DRINKING MILK SHOWING MIDDLEMAN AND PRODUCER SHARES OVER THE PERIOD 1968-1974
Retail Price
Producer Price
Middlemans' Share
Producers' Share
Southern Metropolitan Area - - - -
Central Valley Area _____
Prepared by: Legislative Analyst
CENTS PER HALF-GALLON
70
60
50
40
30
20
10
68
69
70
71
72
73
74
75
Production Year

distributors, and retailers). The price component received by the producer has exhibited a rapid increase while the amount added by middlemen (the difference between the two top lines and the two bottom lines) has remained virtually constant. Graph 1 therefore indicates that the increases in retail milk prices, for all practical purposes, have been caused by increases at the producer level. Because of the foregoing considerations this report concentrates on pricing at the producer level rather than at the processor, distributor or retail levels as the most significant current consideration in recent state milk price changes.

It should also be recognized at the outset that state milk pricing is very complex and that the terms used in the statutes are confusing, sometimes inconsistent and often do not conform to common usage or general understanding. This report is an attempt to describe the operation of state milk pricing and its problems. The report is more general than detailed. It provides the reader with an understanding of the current state milk pricing system and does not attempt to evaluate in detail the large number of specific administrative actions, pricing decisions and legal problems which make up the pricing system.

The Legislature has charged the Department of Food and Agriculture with the regulation and control of a number of aspects of the milk industry. Within the department, four bureaus are involved. The Bureau of Milk and Dairy Food Control regulates the public health and quality aspects of milk production and processing. The Bureau of Milk Stabilization audits milk production costs and establishes minimum

prices which must be paid for milk at the producer, wholesale and retail levels. The Bureau of Milk Pooling performs an accounting function to distribute monies paid by processors to individual producers. The Bureau of Milk Marketing Enforcement enforces portions of the law relating to unfair trade and marketing practices. This report covers work of the Bureau of Milk Stabilization (pricing) at the producer level, and the Bureau of Milk Pooling (producer revenue distribution).

Producers' Marketing Problem

An understanding of milk pricing requires some knowledge of milk production and marketing problems confronting the farmer. A dairy cow must be milked twice every day or its production will decrease or cease until the animal calves again. This milk must be marketed every day. Raw milk from the cow cannot be stored on the farm for any significant period of time because of the short storage life of milk and also because the average producer does not have sufficient cooling and storage capacity. This forces him to sell his milk to processors soon after milking which places him at a disadvantage in bargaining with the processor for the sale of his milk. Processors, on the other hand, can bottle the milk after pasteurization or convert it into products which can be stored for extended time periods such as powdered milk, canned milk, butter, and cheese.

The producer also is limited in that any change in the quantity of milk he produces generally results from decisions made significantly in advance of an actual production change. Unless he can purchase cows which are in a milking cycle, he cannot increase production readily to

meet demand increases. He can, however, reduce production by culling his dairy herd, i.e., selling or slaughtering cows whose milk output is below average.

The processor, as the buyer of raw milk, has an interest in the price of milk at the producer level which differs from that of the producer even though both have a common interest in adequate and stable prices at the retail level. The conflicts between producers and processors, and the resultant shifting of emphasis in state controls to benefit one or the other, have been major forces in the establishment of the milk pricing laws.

Class-1-to-4 Milk

Milk is produced in California under two sanitary standards.[1] In this report milk which is produced to the stringent sanitary requirements of drinking milk is designated as Class-1-to-4 milk. This designation is used because it is consistent with existing law, is technically accurate and is understandable by the reader. Other terms such as Grade A, fluid milk and market milk are difficult to interpret in various portions of milk law, are sometimes used interchangeably or misused, and are therefore often misleading to persons who are not technically familiar with them.

About 95 percent of milk production in California is Class-1-to-4 milk. However only 58 percent of Class-1-to-4 milk is bottled for drinking purposes. The remaining 42 percent of Class-1-to-4 milk is used to manufacture dairy products.

Manufacturing Milk

Milk produced to less stringent standards than drinking milk is called manufacturing milk. Such milk can be used only for manufacture of dairy products. It presently represents less than five percent of total California milk production. Manufacturing milk production is declining because of (1) the continuing economic difficulties of dairies which produce manufacturing milk, and (2) the conversion of manufacturing milk dairies to Class-1-to-4 production.

The Department of Food and Agriculture establishes minimum prices which must be paid by processors for Class-1-to-4 milk. The department does not establish the prices which must be paid for manufacturing milk. This report is primarily concerned with Class-1-to-4 milk prices at the producer (farmer) level.

II. HISTORY OF MILK PRICING

Today's milk pricing laws are modifications and expansions of the general body of milk pricing law coming from the Great Depression. The fear in the industry, whether real or imagined, that a repetition of the pricing chaos of the depression will recur remains as the major justification for the state's present regulatory efforts. It is important to recognize this fear and its relationship to milk pricing.

In the decade of the twenties, the milk industry enjoyed the benefits of a generally favorable economic climate. Dairy farmers had formed cooperatives to strengthen their bargaining position with the milk processors. These cooperatives influenced favorably the price which producers received for their milk. This, in turn, stimulated more production.

The Great Depression of the 1930's collapsed consumer purchasing power and forced prices to decline substantially. Disasterous price wars erupted. The earlier overproduction which existed in the 1920's became a glut. Milk production remained in a chaotic condition through 1931 and most of 1932. The price wars caused producers to turn to government for assistance in reestablishing financial stability in the dairy industry.

In 1932, milk arbitration boards were organized under the State Marketing Act of 1917. The boards could only arbitrate prices; they did not have statutory authority to establish or enforce prices. Some degree of price stability was reached for a short while, but prices collapsed again in early 1933.

A Federal Milk Marketing Agreement was established under the Federal Agricultural Adjustment Act of 1933. The agreement provided for minimum prices to be paid by processors to producers and for minimum resale prices. The agreement was not put into effect. It was withdrawn by the federal government in 1934 because of legal doubts whether milk was in interstate commerce and therefore under federal jurisdiction. The California dairy industry then turned to the State Legislature for assistance.

In 1935 the Legislature passed the Young Act which is still the basic state legislation on milk pricing. The Act authorized the Director of the state Department of Agriculture to establish (stabilize)[12] the minimum price that processors must pay producers for drinking milk.[13] The stated premise and legal basis for establishing milk prices was to assure an adequate supply of wholesome drinking milk in the public interest. In effect the Legislature accepted the producer's contention that continued low prices to producers of drinking milk would force many producers out of business and would reduce drinking milk supplies.[14] An adequate price was also held to be essential to pay for the higher costs of producing pure, high quality milk for drinking purposes. It was further claimed that a milk shortage would be followed by excessive increases in the consumer price of the remaining supply of drinking milk. The theory has never been tested because a shortage of milk has not occurred. The theory nevertheless is the basis for the belief that state regulation of milk prices is in the public interest because it prevents a shortage of drinking milk and resulting

excessive prices. The Young Act did not include the establishment of minimum prices for manufacturing milk.

In 1937 the Act was expanded to require processors to pay state established minimum prices for all milk produced to drinking milk sanitary requirements, that is, Class-1-to-4 milk used for manufacturing purposes. It is difficult to reconstruct why the Legislature made this change. The Legislature probably acted on the basis that all the Class-1-to-4 milk was needed to provide an adequate supply of drinking milk in order to meet demand plus a reasonable reserve for peaks in demand. The reasonable reserve also tended to absorb any seasonal or annual excess production. This point will be explored in more detail later.

At the time the state initiated milk price controls, there was a relatively clear distinction between dairies producing milk for drinking purposes and dairies producing milk for manufacturing purposes. /5 Most of the milk produced during this period was manufacturing milk. Today, for all practical purposes, there is only one type of dairy and milk production, Class-1-to-4 milk. As a consequence, state price controls presently extend to virtually all milk production, regardless of whether the milk is used for manufacturing purposes or for drinking purposes. The Legislature has never authorized the establishment of minimum prices for manufacturing milk. However, because most milk products are made from Class-1-to-4 milk, which is price controlled, the price of most milk used for manufacturing purposes is now, as a practical matter, price controlled.

III. MILK STABILIZATION

The Producer Pricing System

The preceding brief discussion of the history of milk pricing indicates that pricing of milk by classes is important to an understanding of milk prices in California. This chapter begins the explanation of the system by describing milk classes.

Classes of Milk

In order to establish and thus control the price which a processor must pay a producer for the milk he uses, the department has divided milk products into four classes pursuant to statutory guidelines established by the Legislature.[6] These classes are used for purposes of processor payments to producers and do not directly apply to prices paid to processors or retail prices paid by consumers. Class 1 milk is used for all drinking purposes and for yogurt.[7] Class 2 milk is used primarily for cream and cottage cheese. Class 3 milk is used primarily for ice cream. Class 4 milk is made into powdered milk, hard cheeses and butter. The current classification of milk products by the department is shown in Table 1.

Under the Young Act and its amendments the state currently sets milk prices for each of 14 milk marketing areas into which the state has been divided. In a given milk marketing area, the state sets a price for each of the four classes of milk.

The processor pays the highest price for milk used for Class 1 products while milk used in Class 4 products brings the lowest price.

TABLE 1

RETAIL MILK PRODUCTS
AS CLASSIFIED BY THE DEPARTMENT OF FOOD AND AGRICULTURE

CLASS 1	CLASS 2	CLASS 3	CLASS 4
Market Milk Products*	Market Milk Products*	Milk Products	Milk Products
Acidophilus Milk	All Purpose Cream	Ice Cream	Butter
Concentrated Market Milk	Pastry Cream	Ice Cream Mix	Cheese, other than Cottage Cheese
Concentrated Market Skim Milk	Table Cream	Diabetic Ice Cream	Dried Milk, Dried Whole Milk
Fluid Market Goat Milk	Whipping Cream	Dietetic Ice Cream	Dry Buttermilk
Fluid Market Milk	Acidified Cream	Imitation Ice Cream	Nonfat Dry Milk
Flavored Milk	Sour Cream	Ice Milk	
Low-Fat Milk	Sour Cream Dressing	Ice Milk Mix	
Flavored Low Fat Milk	Buttermilk	Diabetic Ice Milk	
Fluid Market Skim Milk or Nonfat Milk	Acidified Buttermilk	Dietetic Ice Milk	
Flavored Nonfat Milk	Cottage Cheese, Uncreamed Cottage Cheese	Imitation Ice Milk	Subject to Section 61842 "Shall be assigned to the Classification of Ultimate Usage"
Imitation Milk Product	Creamed Cottage Cheese	Sherbet	
Filled Product	Creamed Cottage Cheese Spread	Quiescently Frozen Confections	
Modified Milk	Low Fat Cottage Cheese	Frozen Dairy Dessert	
Milk Drink	Partially Creamed Cottage Cheese	Frozen Yogurt Dessert	
Milk Drink Mix	Hoop Cheese	Nonfat Frozen Dairy Dessert	
Half and Half			Clotted Cream
Acidified Half and Half	Milk Products		Condensed Milk
Cultured Half and Half			Condensed Skim Milk
Sour Half and Half	Egg Nog		Evaporated Cream
Yogurt	Cream Topping		Evaporated Milk
Yogurt Sherbet	Cream Topping Mix		Evaporated Skim Milk
Dietetic Yogurt	Whipped Cream		Sweetened Condensed Milk
Fruit Yogurt	Whipped Cream Mix		Sweetened Evaporated Milk
Low Fat Yogurt	Sour Half and Half Dressing		
Low Fat Yogurt Drink	Acidified Half and Half Dressing		
Nonfat Yogurt	Acidified Cream Dressing		
Nonfat Liquid Yogurt Drink	Dry Whey		
	Sterilized Milk		
	Sterilized Flavored Milk		
	Sterilized Milk Drink Mix		
	Sterilized Flavored Drink		
	Sterilized Cream		
	Sterilized Flavored Cream		
	Sterilized Half and Half		
	Sterilized Sour Flavored Half and Half		
	Sterilized Dairy Spread		

*Required to be made from Class-1-to-4 milk.
Remainder of products may be made from Class-1-to-4 milk or manufacturing milk.

Classes 2 and 3 prices range between Class 1 and 4. The precise method used to establish these prices will be discussed later in this chapter after the matter of production costs is considered. The prices for the four milk classes on May 1974 are shown on Table 2.

In the milk industry, producers of Class-1-to-4 milk receive a higher price for milk which is used as drinking milk than they receive for milk which is used, for example, to make ice cream, even though the milk is identical in all characteristics. This pricing approach makes milk different from most raw materials pricing in other industries. In the steel industry for example, steel ingots of the same size and quality are sold for the same price, even though the steel will ultimately be used to make automobiles, buildings, or toys.

Class pricing of milk is not unique to California. Although the number of classes may vary and the way prices are established differs, the concept of milk class pricing is used in most parts of the nation. It is also general practice that there is no minimum price established by states or the federal government for manufacturing milk.

The Standard Production Cost Index

In establishing the price that processors must pay for Class 1 milk, which is the key to milk pricing, the department first determines the average cost of producing Class-1-to-4 milk. This average cost is based on sample surveys by the Bureau of Milk Stabilization of production costs of dairies in each milk production area. The department's surveys of milk production costs are published six times a year as the "Standard Production Cost Index" for the area.

TABLE 2

CLASS-1-TO-4 MILK PRICES PAID TO PRODUCERS FOR MAY, 1974

Milk	Price* Per cwt	Per Half-Gallon
Class 1	$9.35 to $9.86	$0.407 to $0.429
Class 2	$8.20 to $8.83	$0.357 to $0.384
Class 3	$7.93 to $8.04	$0.345 to $0.350
Class 4	$6.88 to $7.04	$0.299 to $0.306

* Price varies according to marketing areas.
Source: Department of Food and Agriculture's Dairy Information Bulletin

From Table 3, which is a copy of the department's index for one area, it can be seen that the following elements are included in this index:

1. Feed costs,
2. Labor costs,
3. Operating costs,
4. Taxes, insurance,
5. Depreciation,
6. Return of investment,
7. Management allowance,
8. Marketing costs.

TABLE 3

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
BUREAU OF MILK STABILIZATION
STANDARD MILK PRODUCTION COSTS
TEMP. 7/75

STANDARD MILK PRODUCTION COSTS
FOR THE YEARS 1970 TO MAY-JUNE BI-MONTHLY PERIOD, 1975
ALL COSTS FAT-CORRECTED TO A 3.5% MILK FAT BASIS

PRODUCTION AREA: Southern San Joaquin Valley

MARKET

	5-YEAR AVERAGE 1970 - 1974	YEARS 1970	1971	1972	1973	1974	SIX BIMONTHLY COSTS - 1975 JAN. FEB.	MARCH APRIL	MAY JUNE	JULY AUG.	SEPT. OCT.	NOV. DEC.
AVERAGE DRY ROUGHAGE PRICE PER TON	44.41	32.23	36.11	38.36	47.62	67.73	72.88	72.32	71.81			
AVERAGE WET ROUGHAGE PRICE PER TON	---	---	8.94	9.39	11.46	16.58	19.26	17.70	16.29			
AVERAGE CONCENTRATES PRICE PER TON	84.36	66.24	69.58	71.85	88.80	125.33	131.40	121.75	116.85			
T.D.N. PER HUNDREDWEIGHT OF MILK	72.54	71.06	72.07	71.11	74.24	74.22	74.63	72.71	72.00			
DRY ROUGHAGE PERCENT	59	61	41	40	39	38	41	39	37			
WET ROUGHAGE PERCENT	---	---	19	18	18	19	16	19	22			
CONCENTRATE PERCENT	41	39	40	42	43	43	43	42	41			
PASTURE PERCENT	---	---	---	---	---	---	---	---	---			
DRY ROUGHAGE COST	1.78	1.37	1.05	1.07	1.35	1.84	2.16	1.99	1.84			
WET ROUGHAGE COST	---	---	.37	.38	.48	.73	.68	.74	.84			
CONCENTRATE COST	1.77	1.27	1.41	1.48	1.96	2.75	2.89	2.58	2.38			
PASTURE COST	---	---	---	---	---	---	---	---	---			
TOTAL FEED COSTS SUBTOTAL (A)	3.55	2.64	2.83	2.93	3.79	5.32	5.73	5.31	5.06			
LABOR COSTS SUBTOTAL (B)	.68	.65	.63	.64	.69	.75	.86	.82	.80			
MISCELLANEOUS COSTS:												
HERD REPLACEMENT	.34	.22	.28	.29	.42	.50	.67	.60	.41			
TAXES AND INSURANCE	.16	.16	.16	.16	.16	.16	.12	.12	.12			
OPERATING COSTS	.51	.42	.47	.49	.53	.64	.75	.69	.67			
DEPRECIATION - BUILDING & EQUIPMENT	.12	.10	.11	.11	.12	.13	.15	.16	.14			
LESS: MISCELLANEOUS INCOME	- .25	- .21	- .22	- .26	- .37	- .18	- .07	- .08	- .07			
TOTAL MISCELLANEOUS SUBTOTAL (C)	.88	.69	.80	.79	.86	1.25	1.62	1.49	1.27			
TOTAL FEED, LABOR & MISC. COSTS (A,B,C)	5.11	3.98	4.26	4.36	5.34	7.32	8.21	7.62	7.13			
MARKETING COSTS	.26	.24	.24	.26	.26	.28	.28	.28	.29			
ALLOWANCE: RETURN ON INVESTMENT	.48	.39	.43	.45	.53	.62	.83	.77	.76			
ALLOWANCE: MANAGEMENT	.29	.24	.25	.26	.30	.39	.40	.41	.42			
TOTAL: ALL COSTS & ALLOWANCES	6.14	4.85	5.18	5.33	6.43	8.61	9.72	9.08	8.60			
COST PER COW PER DAY	2.33	1.81	1.97	2.05	2.43	3.26	3.65	3.54	3.42			
AVG. LBS. MILK PRODUCED COW/DAY @ 3.5%	37.88	37.33	38.09	38.40	37.74	37.83	37.59	38.94	39.74			

SOURCE: STANDARD MILK PRODUCTION COST SURVEYS, CONDUCTED BY THE BUREAU OF MILK STABILIZATION, MILK PRODUCTION COST SECTION.

Before discussing how the index is used in establishing Class 1 prices it is appropriate to consider problems and shortcomings in the index.

Statistical Reliability of the Index. If any sampling procedure is to be statistically reliable, it should be based on a random selection of data sources. The index does not meet this criterion. Instead the department compiles data for the cost index from producers who have been requested to volunteer to be included in the sample. It is probably to the theoretical advantage of all producers in an area to have the least efficient, i.e., higher cost producers, included in the sample. Such selectivity can bias the sample and cause the department to determine average milk production costs that are higher than justified. The result could be higher prices for Class 1 milk paid by processors and ultimately by consumers than is warranted.

We have found evidence that at least one producer dropped out of the sample because his production costs were low compared to the rest of the sample. In addition, we have been informed that some producer associations have recommended that certain efficient producers should not be in the sample. This lack of random statistical sampling techniques for selecting producers and the voluntary nature of the sampling make the reliability of the department's index statistically questionable. It should be noted that the department is not authorized by law to require producers to be included in the sample. In 1969 the Legislature repealed Section 61944 which authorized sample surveys if the names of producers were published. As a result there is currently no way to determine whether the department's sample is an accurate measure of production costs.

Excessive Depreciation. The purpose of depreciation is to provide an accounting basis through which the owner may recoup his investment as the asset is consumed, used up, or worn out during its useful life. When an asset is fully used or depreciated the owner's entire investment should ideally have been returned to him.

As can be seen on Table 3, the department includes depreciation in the cost index. When a producer is first included in the cost index, his equipment and improvements will be inventoried at the cost of acquisition. The annual rate of depreciation is calculated on the service life of the equipment and depreciation is taken for the number of years the property has been in use. However, if the asset has previously been fully depreciated by the producer or if it becomes fully depreciated while the producer is on the cost index, the asset will be entered in the inventory at 40 to 80 percent of original cost depending upon the type of asset. As a consequence the department does not terminate the depreciation allowance in accordance with the service life of the asset, but permits the depreciation to continue until the asset is retired or replaced. This handling of depreciation provides an excessive depreciation allowance in the production cost index.

Allowances for Profit. The department's cost index includes allowances which are in some respects intended to be the equivalent of the producer's profit. These allowances consist of three parts: an allowance for return on investment, a management allowance, and an allowance as appropriate for actual farm labor performed by the producer or his family. The allowance for return on invested capital and the management allowance both have some problems.

The allowance for return on investment is intended to permit a rate of return which is equivalent to alternative investment opportunities of equal risk. From 1957 to December 31, 1974, the department allowed a constant eight percent rate of return in computing its Standard Production Cost Index. Effective January 1, 1975, the rate of return was increased to 9.88 percent. It should be noted that the rate of return is an average cost factor computed for price setting purposes and is not a guarantee that each producer will receive the calculated return on his particular investment. The rate is computed on the original capital investment at the time of purchase plus subsequent investments. The department's method has three technical problems.

First, the rate of return is calculated on the basis of gross or original investment without deducting subsequent depreciation allowances. For example, if a dairyman had an original investment of $500,000, the return would be based on this amount each year despite the fact that part of this investment is recouped each year through the depreciation allowance. This department procedure is contrary to normal accounting practices and gives an upward bias in the cost index.

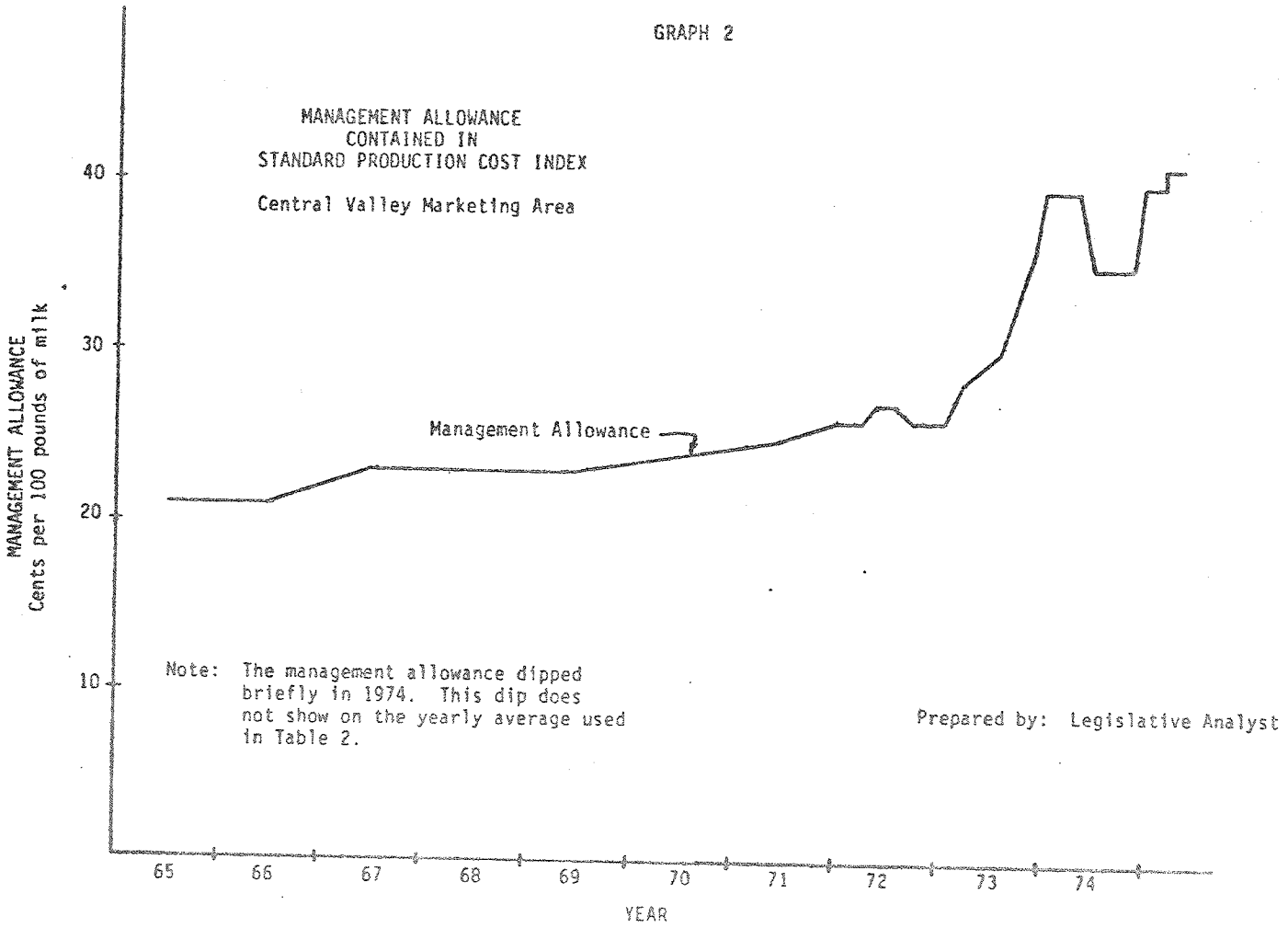
Second, the department does not consider any increased value of the land occupied by a dairy when it calculates the return on investment. The dairyman may in fact have a capital appreciation (particularly on land) and therefore a higher actual market value for calculation of the return on invested capital than is shown by the cost index.

Third, the department has used a flat eight percent factor from 1957 to 1974, despite the fluctuations in interest rates during this same time. (As a point of interest, the Public Utilities Commission used a rate of return which varied from a low of 5.75 percent in 1957 to a high of 8.75 percent in 1974. Last year's maximum is still in effect during 1975). When the department uses a rate of return which is too low it tends to hold down milk prices and when the rate is too high it tends to increase prices. We have not investigated the department's basis for increasing the rate of return to 9.88 percent effective January 1, 1975 but it appears reasonable in view of interest rates at that time.

In addition to the return on investment, the department also adds five percent to the total production costs in the index to allow the producer additional "profit" which is euphemistically called a management allowance. It is computed at five percent of the average receipts of producers in the marketing area. Although the department intends that management allowance be the equivalent of the costs of managing a dairy, it routinely computes the allowance at five percent of gross revenue whether or not there are management costs separate from family labor. For this reason and because the five percent is fairly high, the management allowance is in fact, providing for additional profit as well as any actual management costs.

The management allowance portion of total profits tends to become more dominant during an inflationary period of rising prices because it is tied to gross revenues rather than investment. This rapid rate of increase in the management allowance in recent years is shown on Graph 3.

GRAPH 2



Note: The management allowance dipped briefly in 1974. This dip does not show on the yearly average used in Table 2.

Prepared by: Legislative Analyst

Some producers appear to receive actual returns substantially in excess of the five percent allowance in the cost index. Graphs 14 and 15 as described in Chapter VI indicate that for some producers the allowance ranges as high as 20 and 25 percent of total receipts.

Determination of Class 1 Prices

The Standard Production Cost Index as discussed above is used by the department to represent the average cost of producing Class-1-to-4 milk. The cost index is a guide to the department in setting the Class 1 price. The department also considers other statutorily enumerated factors such as supply and demand, and the impact of price increases upon demand for various milk products. Comparisons made later in this report of the Class 1 price with the cost index demonstrate that the department in the past has relied heavily on the cost index in setting the Class 1 price. (The refusal of the department to increase prices in 1975 may establish a new, untested departmental policy). The Class 1 price is established by the director after a public hearing. It cannot be changed until another public hearing has been held and the director finds that a price change is appropriate.

Establishing Class 2, 3 and 4 Prices

The minimum prices for Classes 2, 3 and 4 are established by the department according to formulas established by the director following a public hearing. The formulas remain the same until changed by the director after a hearing. As of January 1975, the Class 4 formula was based on the federal support price or the Chicago Mercantile Exchange

price for butter, or the f.o.b. California plant price for nonfat powdered milk, whichever price is higher. The federal support price tends to be a floor under Class 4 milk and therefore indirectly helps to sustain the pricing system used in California.

The formulas for Class 2 and 3 are presently based on the price of Class 4 plus specific dollar amounts. These amounts spread Class 2 and 3 prices between Class 1 at the top and Class 4 at the bottom. The Class 2 and 3 prices are higher than Class 4 but not so high as to encourage substitution of powdered milk (made from Class 4 milk) in place of fresh milk for manufactured products. Based on the formulas, the prices of Classes 2, 3 and 4 are computed by the department on a monthly basis. The use of Classes 2 and 3 provide some increment of revenue for producers which would not be realized if the excess of drinking milk were sold only at Class 4 prices for manufacturing purposes. The class prices for May 1974 are shown in Table 2 (page 23).

It is interesting to note that the department prices Class 1 milk, which is in intrastate commerce, substantially higher than Class 4 milk which is in interstate commerce. Because of the geographic isolation of California and the high cost of importing milk in its fluid state, Class 1 drinking milk enjoys a relatively sheltered market in California and thus can be priced higher than other classes of milk. Class 4 milk is easily shipped in the form of butter and powdered milk and thus must compete with the same products manufactured in other parts of the nation. A high Class 1 price and low Class 4 price are the usual practice elsewhere in the nation.

IV. OPERATION OF THE MILK PRICING SYSTEM

Pricing and Supply

The present milk pricing statutes are not clear with regard to their precise intent or purpose. Because current conditions vary substantially from past conditions and the expectations of the future effects of the statutes when much of the law was written, there is a vagueness and generality in the statutes which makes the administration of milk pricing difficult for the department.

Slow Growth in Demand for Drinking Milk (Class 1)

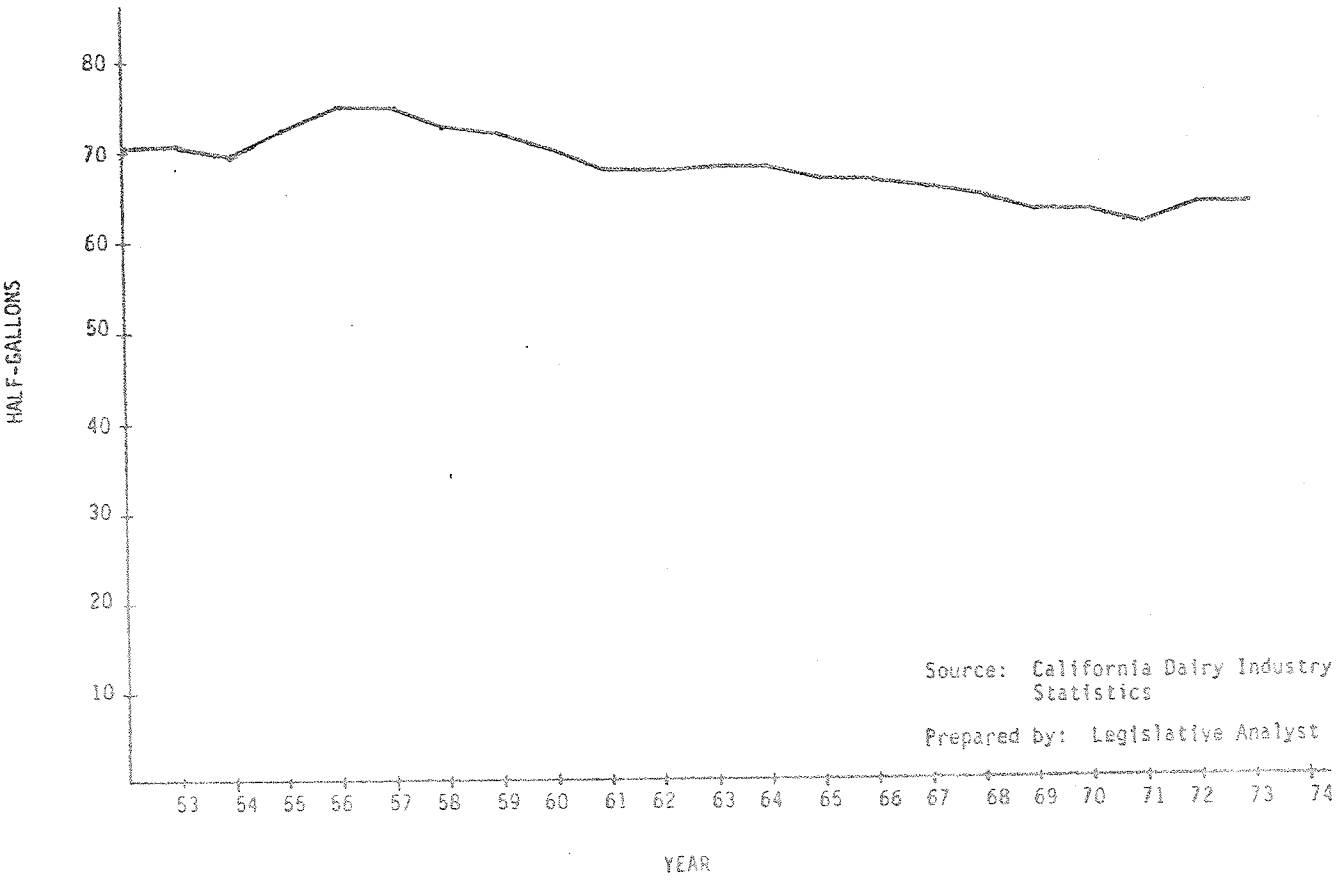
The line on Graph 3 shows that the per capita consumption of Class 1 milk, which is mostly drinking milk, decreased slightly from 1953 to 1966. Since 1966 total Class 1 milk consumption has increased only slightly as shown on Graph 6 by the dashed line. The minor increase in total Class 1 consumption over the years is the result of a combination of slowly decreasing per capita consumption of Class 1 milk offset by an increasing population.

Supply of Class-1-to-4 Milk and Decline of Manufacturing Milk Production

Manufacturing milk producers have been in an economic squeeze for many years. As a result, they are slowly going out of business or converting to Class-1-to-4 production. The economic squeeze is due to two factors. First, the quality required by processors of manufacturing milk has increased so that it now approximates the quality of Class-1-to-4 milk. According to the department, because of the higher quality, the costs of efficiently producing manufacturing milk are now close to the

GRAPH 3

PER-CAPITA CLASS 1 CONSUMPTION



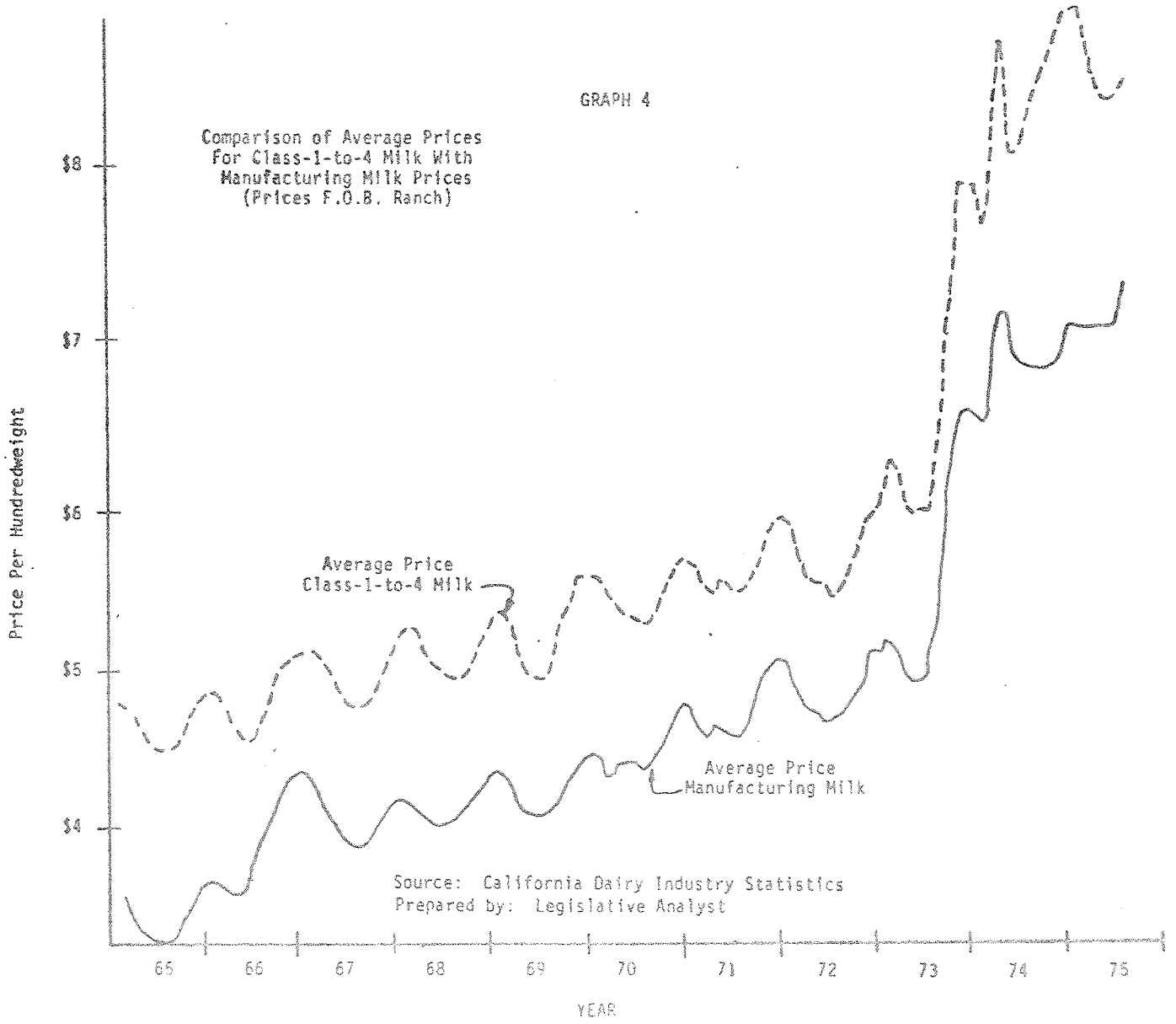
costs of efficiently producing Class-1-to-4 milk. Second, processors have customarily paid manufacturing milk producers less than they paid Class-1-to-4 milk producers. Graph 4 shows the average price paid by processors to Class-1-to-4 milk producers per 100 pounds of milk and the average price paid to manufacturing milk producers. The graph shows that the average Class-1-to-4 milk producer consistently received approximately $1 more per 100 pounds than the average manufacturing producer. Manufacturing milk producers sell their milk for approximately the Class 4 price which is the lowest price that can be paid by processors for Class-1-to-4 milk under state law. Class 1, Class 4 and manufacturing milk prices are illustrated for the San Joaquin Valley Marketing Area by Graph 5.

On Graph 6, manufacturing milk production is compared with total production of milk. From 1953 manufacturing milk has declined from about 30 percent of total production to about 5 percent in January 1975. The department expects the remainder of manufacturing milk producers to go out of business or to become Class-1-to-4 milk producers within a few years. If this happens, the entire California produced supply of milk will be produced as Class-1-to-4 milk. In that case, all milk for all uses will be under state price controls. Graph 6 shows clearly the basic long-term change in the market share of price controlled milk (Class-1-to-4) compared to manufacturing milk under the current milk pricing system.

Size of Milk Supply

A basic problem is that the statutes do not specify the size of the milk supply that the pricing system should find acceptable or seek

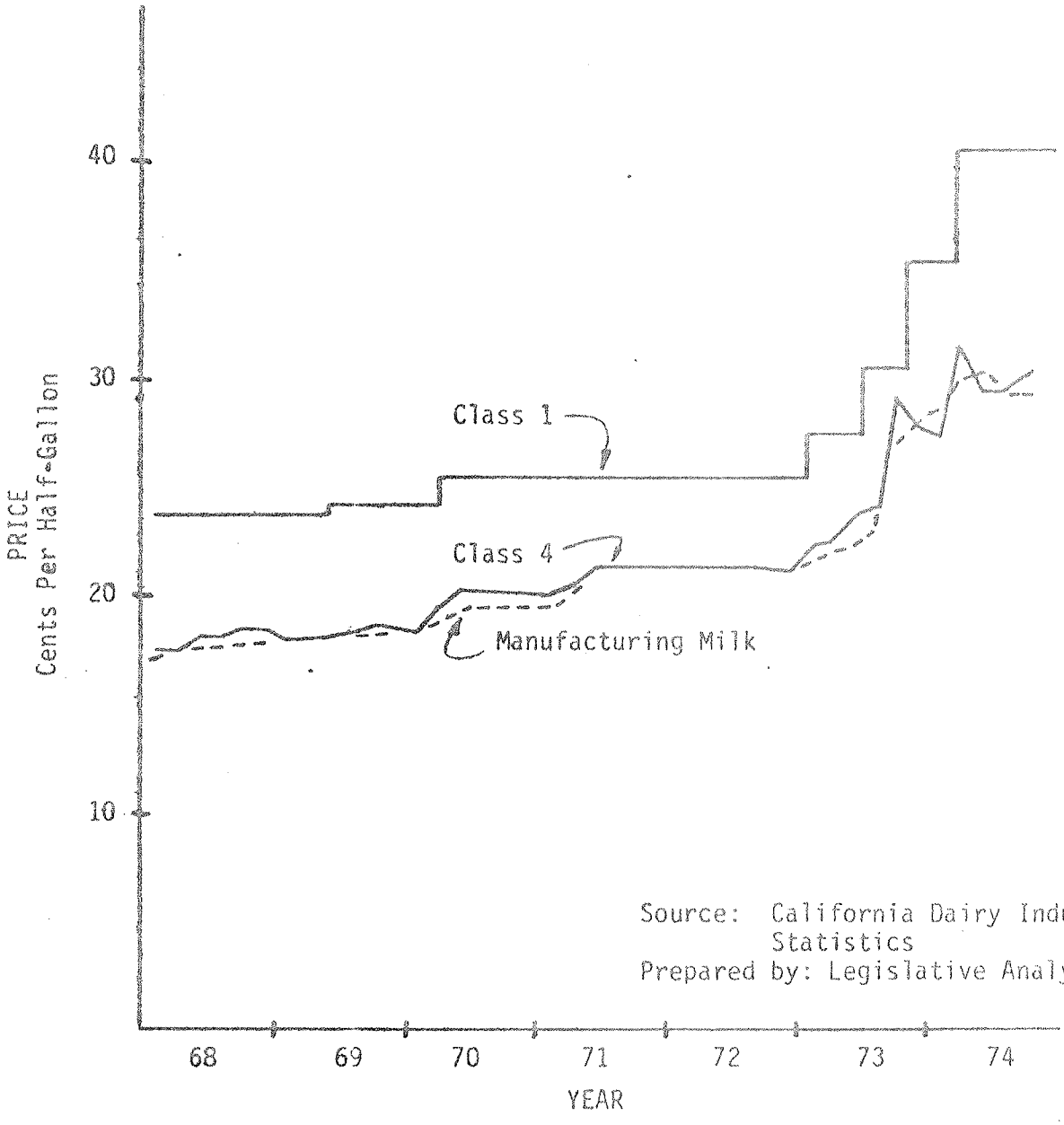
GRAPH 4


Comparison of Average Prices
For Class-1-to-4 Milk With
Manufacturing Milk Prices
(Prices F.O.B. Ranch)
Price Per Hundredweight
$8
$7
$6
$5
$4
Average Price
Class-1-to-4 Milk
Average Price
Manufacturing Milk
Source: California Dairy Industry Statistics
Prepared by: Legislative Analyst
65
66
67
68
69
70
71
72
73
74
75
YEAR

GRAPH 5

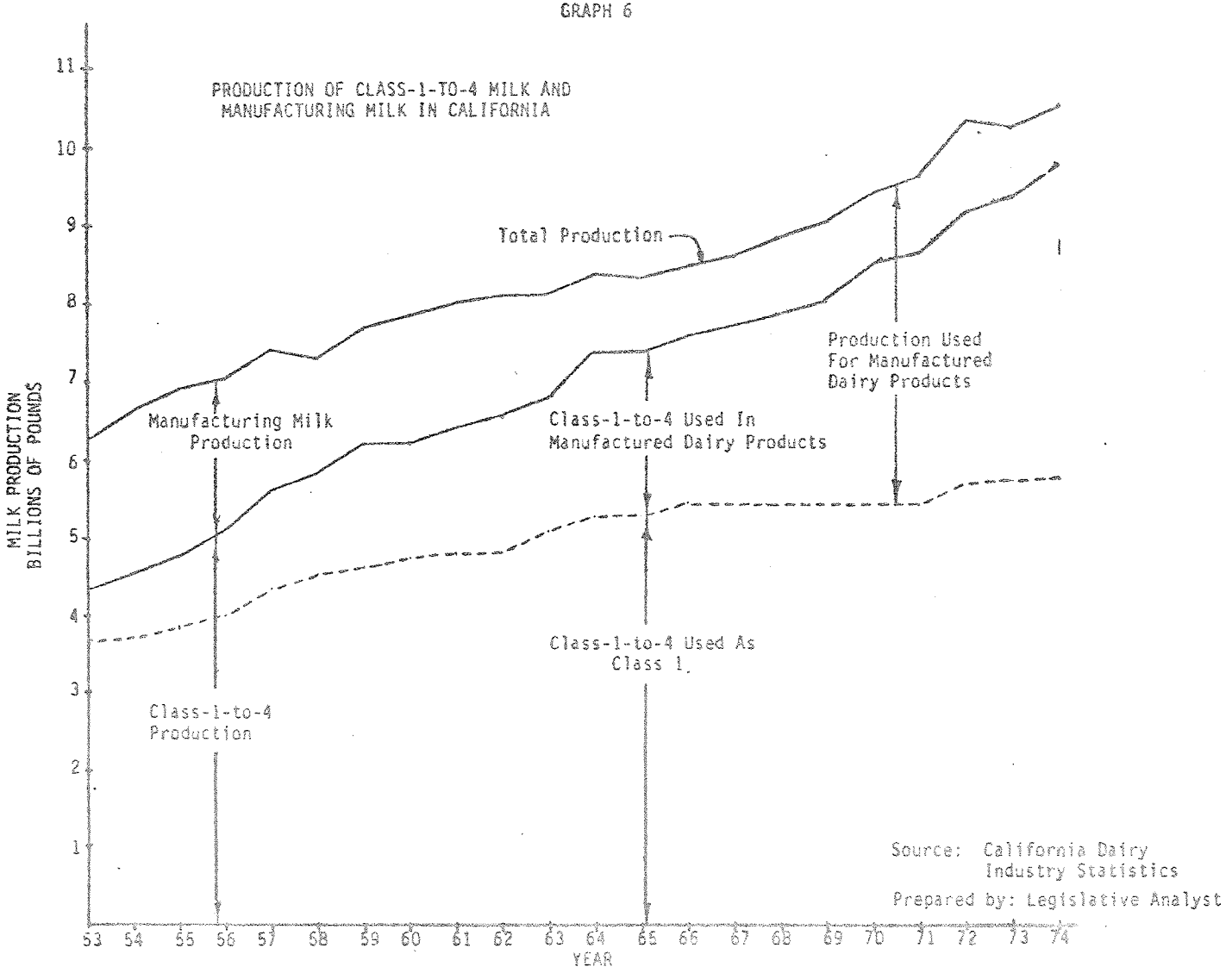
MANUFACTURING MILK PRICE
COMPARED WITH
CLASS 1 AND CLASS 4 PRICES

San Joaquin Marketing Area



Source: California Dairy Industry Statistics
Prepared by: Legislative Analyst

GRAPH 6



Source: California Dairy Industry Statistics

Prepared by: Legislative Analyst

to produce. When state pricing of milk was established in 1935, it was clear that the intent of the Legislature was to control prices with the objective of providing an adequate supply of milk for drinking purposes. The Legislature did not provide minimum price protection for milk now designated as Classes 2, 3 and 4. It essentially included only Class 1. As already noted, minimum pricing did not include manufacturing grade milk from which most dairy products were made at that time.

It would appear, therefore, that the setting of a price in 1935 to bring forth an adequate supply essentially involved only an assurance of producing the amount of drinking milk (including cream) which could be sold based on previous sales experience and the current sales data. Because producers were losing money and there was more milk being produced than needed to meet the demand, a minimum price that primarily increased and stabilized prices by eliminating destructive price cutting was presumably adequate. The possibility of establishing the price too high did not appear as a prospect at that time. Furthermore, the price for manufacturing milk provided a semblance of a free market price that served as a floor above which drinking milk could be priced to compensate for the higher costs of producing higher quality drinking milk. In this context the statutory pricing directive of Section 62212 has appreciable historical relevance and meaning. /8

Conditions have changed since the Young Act was passed in 1935. Currently the determination of the supply of milk that is to be produced for drinking milk (dotted line on Graph 6) is no longer clear. The

state now provides price protection at the producer level not only for drinking milk but also for the remainder of Class-1-to-4 milk used in dairy products, including yogurt, cottage cheese, eggnog, ice cream, sherbet, etc. (lower solid line on Graph 6). This change has occurred gradually since 1935 due to the cumulative effect of a series of revisions in the statutes. In particular, most manufactured milk products were placed within the class pricing system in order to expand the use of drinking quality milk. The multiple prices now existing pursuant to the four-class pricing system have, over time, become a mechanism which seeks to dispose of the actual Class-1-to-4 milk production, while providing some producer profit. The pricing approach now employed primarily seeks a high price for drinking milk while the statutory and administrative classification of milk products in Classes 2 to 4 is used to support the price of milk used for most manufactured products.

As a consequence, the amount of drinking milk which the Department of Food and Agriculture is to assure by the pricing system appears as a practical matter to have been converted to the disposal of about 95 percent of milk production in California (all milk except manufacturing grade milk). This major change in factual conditions and pricing operations is difficult to contemplate under the current pricing law. The department is faced with (1) the difficulty of attempting to dispose of available Class-1-to-4 milk by minimum pricing techniques without directly seeking to limit or affect supply and (2) the fact that the use of the pricing mechanism to limit supply

is not specifically provided in the law. Instead the law provides for prices to cover costs of production and to bring forth an adequate supply rather than to limit the supply or to reduce an excess supply. The magnitude of the increase in class-priced milk is approximately the increasing separation between the dotted line and the lower solid line shown on Graph 6.

Extent of Excess Production

In its written testimony presented to the Senate Committee on Agriculture and Water on May 7, 1974, the department stated that the determination of the proper level of production was an area needing improvement. This study concurs.

Graph 6 shows that in 1953 about 85 percent of Class-1-to-4 production went to Class 1 which is mostly drinking milk. The additional or "reserve" production in 1953 was 17.6 percent of the actual Class 1 demand (15 percent divided by 85 percent).

Graph 6 also shows the total annual and cumulative increase in Class-1-to-4 production compared to Class 1 usage which has resulted over recent years due to (1) conversion of manufacturing milk producers to Class-1-to-4 production, (2) the slow increase in total Class 1 usage, and (3) the considerable increase in total milk production. Thus by 1974, about 60 percent of Class-1-to-4 production went to Class 1 (drinking) usage which gives an additional or "reserve" annual production of 67 percent (40 percent divided by 60 percent) of the actual Class 1 demand.

The total annual "reserve" production is important in considering the balance of supply and demand. However, class pricing is more

directly related to monthly production than total annual production. Graph 7 shows that the Class-1-to-4 production on a monthly basis is subject to seasonal fluctuations but is still significantly above the relatively constant monthly Class 1 usage.

Graph 8 charts monthly Class-1-to-4 production with monthly Class 1 usage for the period 1967-1973. It is evident that Class 1 usage or demand (a) is quite flat over a given year, (b) is very predictable from year-to-year and month-to-month, and (c) is not expanding much from year-to-year. Class-1-to-4 production or supply (a) is very predictable from year-to-year and from month-to-month, and (b) has expanded considerably since 1967 as shown by the higher level of the curves.

It is evident that the Class-1-to-4 supply is substantially greater than the Class 1 demand. This excess of supply over demand (the difference between the two sets of curves) is the most apparent measure of the excess production of drinking quality milk which the current class pricing system is seeking to market through Class 2 to 4 prices for use in manufacturing milk products.

The Public Interest in Class-1-to-4 Pricing

One statutory objective of the milk pricing program is to assure a reasonable price to the consumer. The present state program charges the consumer more per half-gallon for drinking milk than for a similar quantity and quality of Class 2 to 4 milk going into other milk products. During the month of May 1974, processors in Los Angeles (and thereby consumers) were required to pay producers a raw product cost of 42.7¢

GRAPH 7

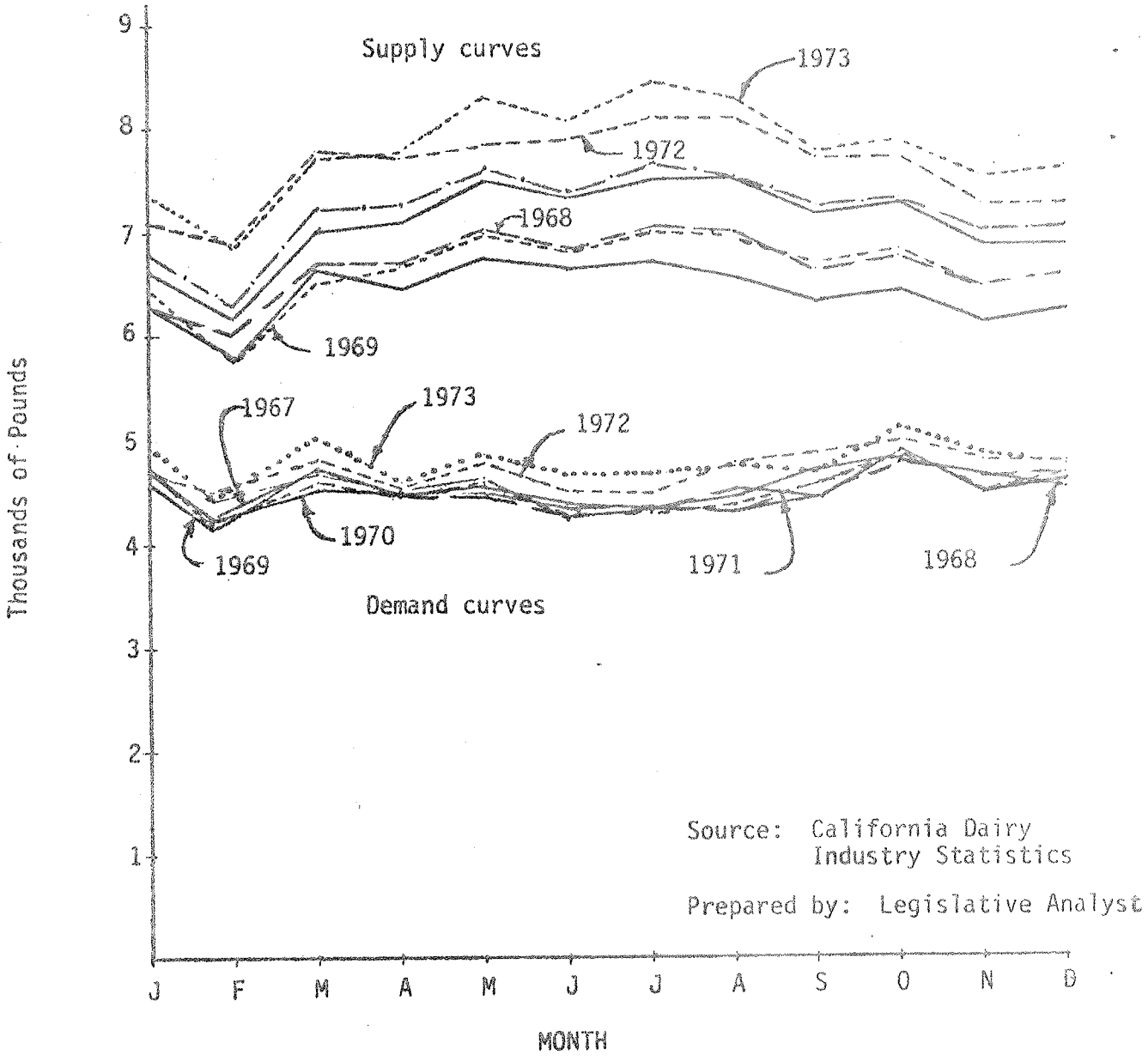
MONTHLY PRODUCTION OF CLASS-1-TO-4 MILK
AND
MONTHLY CLASS 1 USAGE

Source: California Dairy Industry Statistics and the Dairy Information Bulletin

Prepared by: Legislative Analyst

GRAPH 8

MONTHLY PRODUCTION OF CLASS-1-TO-4 MILK
AND
MONTHLY USAGE OF CLASS 1 MILK
1967 - 1973



Source: California Dairy Industry Statistics

Prepared by: Legislative Analyst

per half-gallon for drinking milk, 38.4¢ per half-gallon for milk used in Class 2 products such as cottage cheese, 35.0¢ per half-gallon for milk used in Class 3 products such as ice cream, and 30¢ per half-gallon for milk used in Class 4 products such as butter and powdered milk.

The above spread of 12.7¢ per half-gallon for milk having identical sanitary and use characteristics is the result of state pricing of milk by class of products. The argument for this Class 1 premium is that without it an adequate supply of drinking milk would not exist. Graphs 6, 7 and 8 demonstrate that the supply of Class-1-to-4 milk is significantly larger than the demand for Class 1 milk. This excess supply does not support the premise of the milk pricing system that a premium price needs to be paid producers to secure an adequate supply of Class 1 milk.

Class 1 also includes yogurt and a variety of specialty dairy drinks. These products do not have the traditional acceptance as a basic family food that drinking milk has. It is not clear what aspect of the public interest justifies state support of a raw milk price for these products which is the same as drinking milk.

Class 2 products consist primarily of creams and cottage cheeses. Prior to 1974, Class 2 products could be made from either Class-1-to-4 milk or from manufacturing milk. In 1974 the law was changed to require processors to make certain specified Class 2 products only from Class-1-to-4 milk. Those products so specified are shown in Table 1 (page 21) as the upper grouping of products under Class 2 (designated "Market Milk Products").

Class 3 products consist primarily of ice creams. Class 2 and 3 milk receive a small premium above the Class 4 price. The benefit that processors and consumers receive to justify such a premium is far from clear.

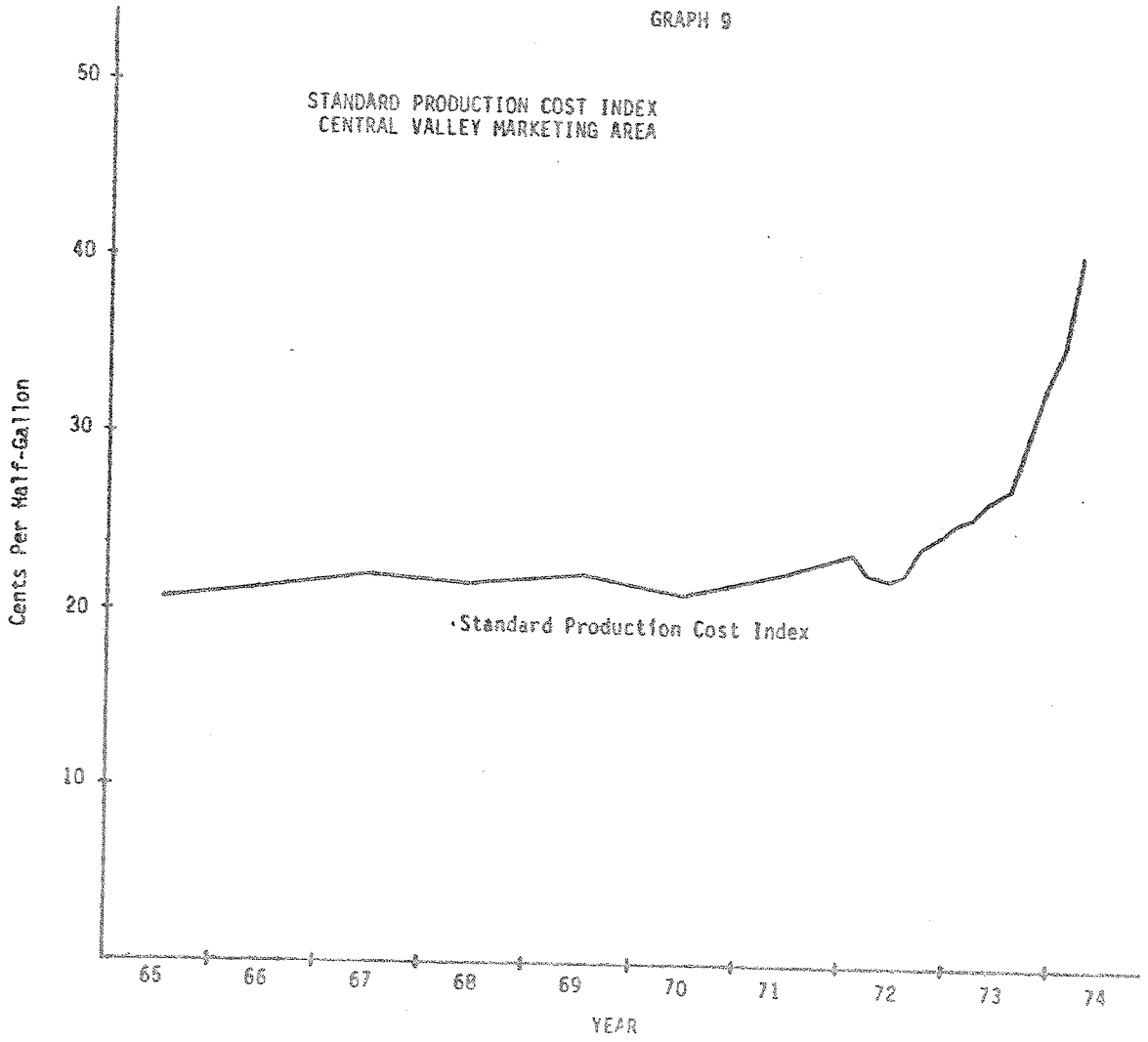
The Class 4 price is essentially a modified supply and demand price for surplus milk based on (1) economic factors external to California and (2) the federal government's support price. The latter tends to be an artificial, infinite demand that the federal government provides by purchasing excess milk as butter and powdered milk in order to stabilize the national market for dairy products. Presumably, therefore, the Class 4 price or an equivalent price would not change significantly if the state did not establish it. The setting of the price is primarily a convenience to processors and producers. California consumers do not appear to be appreciably affected by having the department establish this price.

Recent Trends in Milk Pricing

As stated previously, the Standard Production Cost Index is used in establishing the price which processors must pay for milk used in Class 1 products. The department's Standard Milk Production Cost Index exhibited a substantial increase beginning in mid-1972, as exemplified by Graph 9 which is for the Central Valley area. The principal factors were the increasing cost of feed due to the nation's export of feed grains, the higher cost of energy, etc.

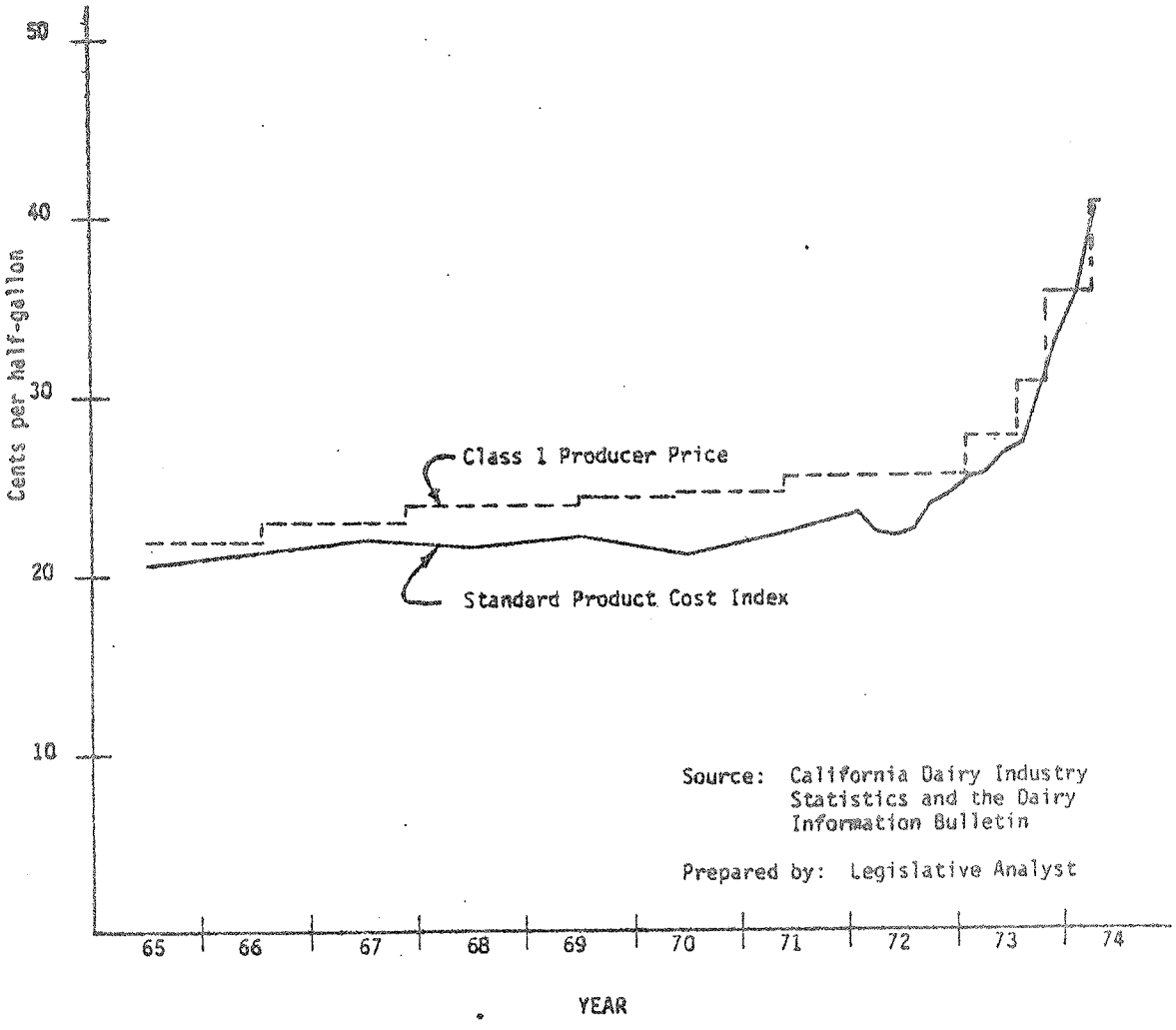
Graphs 10, 11 and 12 compare the cost index for three major marketing areas with the Class 1 price established for those areas.

GRAPH 9


STANDARD PRODUCTION COST INDEX
CENTRAL VALLEY MARKETING AREA
Cents Per Half-Gallon
50
40
30
20
10
Standard Production Cost Index
65
66
67
68
69
70
71
72
73
74
YEAR

GRAPH 10

CENTRAL VALLEY MARKETING AREA
COMPARISON OF STANDARD PRODUCTION COST INDEX
WITH CLASS 1 MILK PRICE

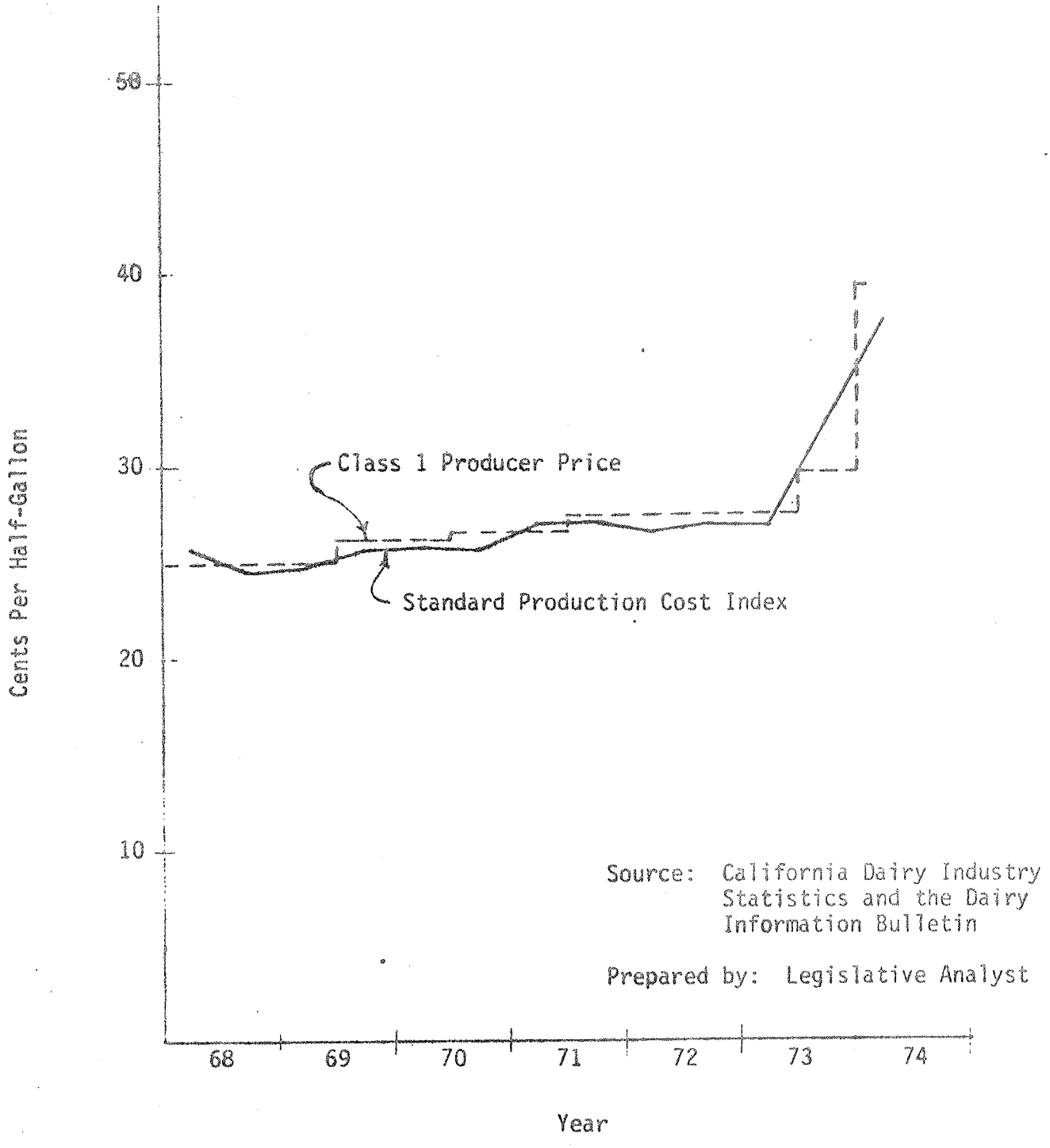


Source: California Dairy Industry Statistics and the Dairy Information Bulletin

Prepared by: Legislative Analyst

GRAPH 11

COMPARISON OF SOUTHERN METROPOLITAN MARKETING AREA
STANDARD PRODUCTION COST INDEX
WITH CLASS I MILK PRICE

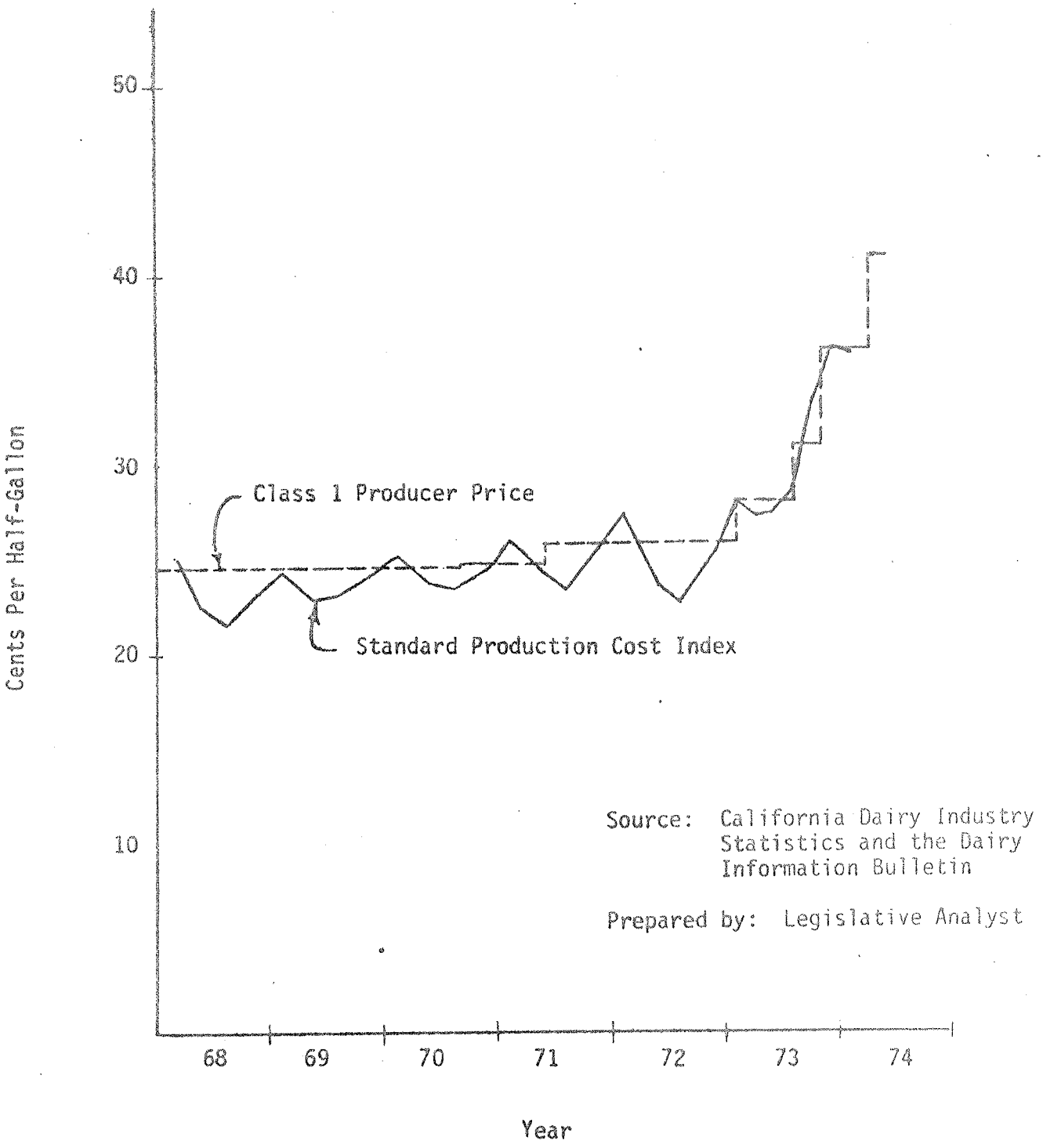


Source: California Dairy Industry Statistics and the Dairy Information Bulletin

Prepared by: Legislative Analyst

GRAPH 12

COMPARISON OF NORTH CENTRAL VALLEY MARKETING AREA
STANDARD PRODUCTION COST INDEX
WITH CLASS 1 MILK PRICE



Source: California Dairy Industry Statistics and the Dairy Information Bulletin

Prepared by: Legislative Analyst

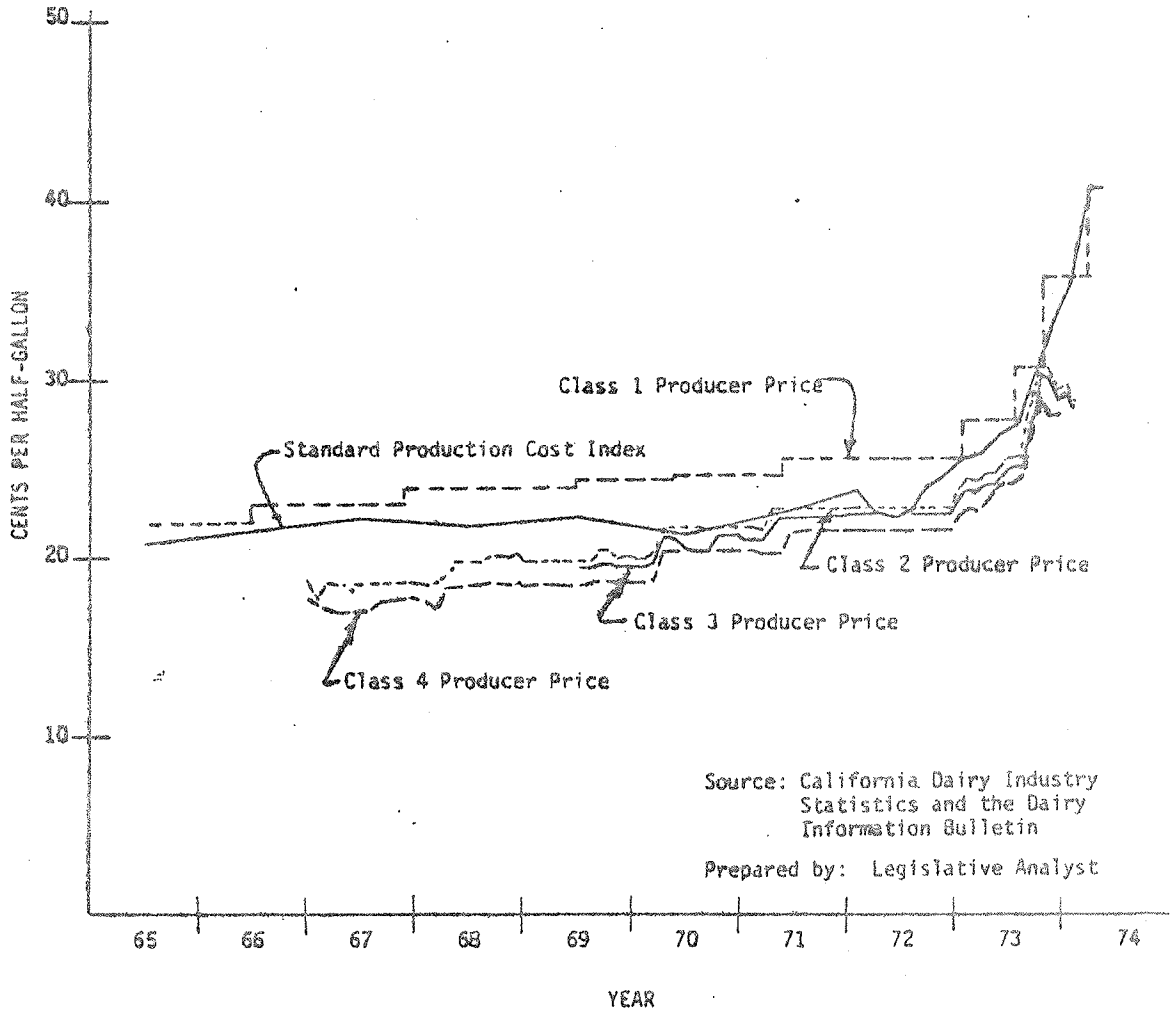
It is evident from Graph 10 that in the Central Valley Marketing Area the department has been establishing the minimum price received by producers for Class 1 milk noticeably above the cost index. This is especially evident before 1973 when milk prices and costs were relatively stable. In 1973 and 1974, the price fell behind the cost index on two occasions.

In the Southern Metropolitan Marketing Area and in the North Central Valley Marketing Area, the Class 1 prices are quite close to the cost index as shown in Graphs 11 and 12 respectively. However, during years of stable price and cost index, the Class 1 price was still slightly above the cost index. This indicates a tendency to favor higher rather than lower producer prices.

Graph 13 compares the four class prices with the cost index for the Central Valley Marketing Area which is the major milk supply area. This area has relatively low production costs compared to the rest of the state and particularly the adjacent Southern Metropolitan Marketing Area. This graph clearly shows that Class 2, 3 and 4 prices were below the cost index and that they earn the producer less than his average cost of production as measured by the production cost index. This relationship of class pricing to the cost index suggests, but does not prove because of other variables involved such as quantities of milk usage in each price class, that the price of the four classes of milk tends to result in an average price that approximates the cost index. However, the effect of pooling as discussed in the next two chapters must be considered in arriving at such a conclusion.

GRAPH 13

COMPARISON OF CENTRAL VALLEY MARKETING AREA
STANDARD PRODUCTION COST INDEX
WITH CLASS-1-TO-4 MILK PRICES



Source: California Dairy Industry Statistics and the Dairy Information Bulletin

Prepared by: Legislative Analyst

Effect of Minimum Pricing

In our economy, government does not customarily establish prices and when it does, such pricing is not well understood. Governments can establish both maximum and minimum prices. Maximum price controls are generally used to prevent prices from becoming excessively high. Examples of maximum prices would be wage and price controls, control of interstate natural gas prices and rent controls. Minimum prices are less frequently used but generally are applied to assure an adequate supply or service where there would otherwise be excessive price competition. An example of minimum pricing is the setting of transportation carrier rates by the Public Utilities Commission.

The public interest in milk pricing is stated in the statutes as intended to assure an adequate supply of milk to the consumer at a reasonable price. The setting of "a reasonable" maximum price could be so low that it would depress production and eliminate an adequate supply. A minimum price can be established at a level which provides an adequate supply by giving the producer a reasonable return. It can also be set so high that it results in an excess supply. Other variations are also available to assist in assuring an adequate supply. For example a minimum price could be established that would come into effect intermittently during periods of depressed milk prices, rather than operating continuously as does the current minimum price.

Under classical economics a price will be established at the point where supply and demand tend to balance. If the minimum price for milk, i.e., the protective floor, is established below the price

at which supply and demand are in balance, the selling price will be set by supply and demand and will be unaffected by the minimum price. If, on the other hand, the minimum price is higher than the point where supply and demand balance, the selling price will be the minimum price.

In California, producer prices for Classes 1, 2 and 3 milk (representing about 80 percent of total milk production) do not float above (are not greater than) the established minimum producer prices. Therefore the minimum prices are at or above those at which demand will take the entire supply of existing production or the price would rise above the minimum in order to stimulate production. It is probable that a free market for drinking milk at the existing high production level would depress prices, perhaps to the Class 4 price. The free market price might also be lower depending on federal policy in purchasing surplus milk.

Because the market price does not float above the minimum price at the current production level, it can also be inferred that the public is being required to pay for a Class-1-to-4 supply which is larger than it needs. In early 1975 the department declined to grant a producer request for a further price increase for this reason. Whether this action will significantly effect the supply cannot be determined at this time.

Any specific milk price is difficult to evaluate in terms of supply and demand without some element of free market pricing for comparison purposes. Since passage of the Young Act in 1935 and its 1937 amendment, there has been virtually no free market in California

for the sale of Class-1-to-4 milk by producers. Consequently, there is today no basis to compare the California experience under state established producer prices with prices established under the more traditionally accepted approach to market pricing. Data are not available to indicate what amount of milk the public would consume at a given price, what amount of production a given price would secure, the price that would produce a balance between supply and demand, whether that balancing price would provide an adequate long-term supply of milk, or whether it would lead to monopoly pricing of milk.

V. GONSALVES MILK POOLING ACT

Determination of Producer Revenues

In the preceding chapter we have described the class prices as the amounts of money a processor must pay for milk to manufacture specific dairy products as distinguished from the revenues that producers receive. This has been intentional because an individual producer does not directly receive revenue equal to the class prices for the milk he sells. This chapter describes how the money which processors have paid for the milk they purchased is distributed to producers.

Before describing the current pooling system which was established in 1967, we should briefly discuss how producers had previously received income from processors and why the system was changed. An individual producer was paid for his milk according to the amount of his milk used for each class of products manufactured by the processor. Thus a producer who secured a contract to sell all or most of his milk to a processor who made mostly Class 1 products fared well financially. Another producer who had a contract to sell his milk to a processor who did not use much milk for Class 1 products would receive mostly Class 2 through 4 prices. This usage brought him substantially less for an equivalent quality and quantity of milk. The production cost and amount of production for the two producers might have been the same, but their respective revenues would have been different depending on the processors with whom they contracted. Producers therefore competed fiercely for contracts with the processors who purchased mostly Class 1 milk. Their

contracts had a 30-day termination notice and "kickback" agreements were sometimes used by producers who sought Class 1 contracts with processors.

The above condition was brought to the attention of the Legislature, and in 1967 the Legislature enacted the Gonsalves Milk Pooling Act. In very simple terms, the act provided for the state to base the portion of revenue which would be received by individual producers on total milk sales and usage. It thereby eliminated the capability of processors to extract kickbacks and discriminatory agreements.

Pooling Mechanism

More specifically, the Gonsalves Milk Pooling Act provided for the department to administer a mechanism to collect (pool) revenues paid by processors for each class of milk used each month and to distribute the totality of class revenue in each marketing area to individual producers according to a three-tiered priority system. The three tiers are called "quota", "base", and "overbase".

In most respects quota may be viewed as the right of a producer to receive Class 1 prices for a specified amount of milk production. Quota has the highest revenue priority, base is second, and overbase is last. The amount of a producer's quota was originally established in 1968 as 110 percent of the quantity of milk the producer sold as Class 1 in 1966-67. The amount of quota can change by sale or purchase as discussed later in this chapter. "Base" milk was established as the producer's total production in 1966-67 less his quota, that is, the

the remainder of his production in 1966-67. If a producer has subsequently increased production over his 1966-67 level, the increase is called "overbase" production. The department has made two distributions of quota to new producers and overbase producers since 1966-67. As a result of this method of determining quota and base, individual producers have differing amounts of quota and base. In addition each producer can secure overbase or increased overbase to the extent each has chosen to increase his production since 1966-67.

An example will demonstrate how the pooling system operates, the distribution of revenues, and the effect of pooling on the revenues of individual producers. This example will be described in simplified rather than technical terms. For example, the breakdown of the allocation of quota into "quota-fat", "quota-solids-not-fat" and "residual fluid" will not be included because it unnecessarily complicates understanding.

The department first determines the value of milk in the pool which was used for each class of products sold by processors. This value equals the quantity of milk used or sold in each class times the class price. It will be assumed that the total Class-1-to-4 milk production is 10,000 hundredweight (cwt) with class prices, class usage and resulting total producer revenues of $85,490 all as shown in Table 4.

Table 4

POOLING EXAMPLE SHOWING POOL CLASS USAGE,
CLASS PRICE, AND VALUE BY CLASS

Class	Usage		Price		Value by Class
1	4,600	x	$9.81	=	$45,126
2	2,000	x	8.15	=	16,300
3	1,400	x	7.36	=	10,304
4	2,000	x	6.88	=	13,760
Total Usage	10,000		Total Sales		$85,490

Next, the department determines the value of the milk in each class allocable to quota, base and overbase in the pool. It will be further assumed that the 10,000 cwt in the pool is distributed between quota and base, with the residual in overbase as given below.

Quota	4,800 cwt
Base	2,800 cwt
Overbase	2,400 cwt
Total Production	10,000 cwt

The quota priority is entitled to the revenues from 4,800 cwt of sales starting with the highest class of sales. Consequently, quota would first be allocated all 4,600 cwt of the Class 1 usage priced at $9.81/cwt (see Table 4). Next, 200 cwt of the Class 2 usage priced at $8.15/cwt would be allocated to quota to equal the 4,800 cwt. The average price of the 4,800 cwt of milk allocated to quota can then be computed. That price is $9.741 cwt (that is, the value of the two prices of milk proportional to the quantity

of each class included in the quota amount). In this case the quota price will be slightly less than the Class 1 price because of the presence of Class 2 milk under quota.

The base priority is 2,800 cwt. Base would be allocated the remaining 1,800 cwt of the Class 2 usage at $8.15 per cwt and 1,000 cwt of the Class 3 usage at $7.36/cwt. The price of the milk allocated to base is computed to be $7.87/cwt.

The remaining 400 cwt of Class 3 at $7.36/cwt plus the total amount in Class 4 becomes overbase and has an average value of $6.96/cwt which is $.08/cwt more than the Class 4 price of $6.88. The price for each of the three priority categories vary from month-to-month depending on the amount of milk usage or sale in each class price and the amount of milk production.

At this point the money to be paid by the processor to an individual producer can be determined. It is the pool price per cwt for quota milk times the producer's individual quota quantity, plus the pool price for base milk times his base quantity, plus the pool price for overbase milk times his overbase quantity.

The computation of revenues of five hypothetical producers under pooling, using assumed individual producer's quota, base and overbase is shown in Table 5. This table illustrates the operation of the pool hypothecated in Table 4 in order to indicate the impact of pooling on individual producer's revenues.

Producer A in this table illustrates a producer with a large amount of quota, that is, most of his sales were for drinking milk (Class 1) during the 1966-67 base period. Producer A's quota is equal to his 1966-67 Class 1 milk sales (1,729 cwt assumed) x 110% which

TABLE 5

CALCULATION OF POOLING REVENUES

	Milk Produced (cwt)	Percent Quota	Price/cwt	Dollar Amount	Blend Price
Producer A					
Quota	1900	95	$9.74	$18,506	
Base	100		7.87	787	
Overbase	-0-		6.96	-0-	
	2000			$19,293	$9.64
Producer B					
Quota	1300	65	$9.74	$12,662	
Base	700		7.87	5,509	
Overbase	-0-		6.96	-0-	
	2000			$18,171	$9.09
Producer C					
Quota	900	47	$9.74	$ 8,766	
Base	1000		7.87	7,870	
Overbase	100		6.96	696	
	2000			$17,332	$8.67
Producer D					
Quota	700	41	$9.74	$ 6,818	
Base	1000		7.87	7,870	
Overbase	300		6.96	2,088	
	2000			$16,776	$8.38
Producer E					
Quota	-0-	0	$9.74	-0-	
Base	-0-		7.87	-0-	
Overbase	2000		6.96	$13,920	
	2000			$13,920	$6.96
			Total Revenue	$85,490*	

* Rounded

gives a 1975 quota of 1,900 cwt as shown in Table 5. It is assumed that the producer has not purchased, sold or otherwise secured a quota change. In addition, Producer A had 100 cwt of Class 2, 3 and 4 sales in 1966-67 which has become his base. This producer is assumed not to have increased his production and therefore he has no overbase.

Producer B is similar to Producer A but has less quota and more base. Producer C has less than half his production in quota, half in base and a small amount of overbase. Producer D is similar to C but has less quota and more overbase. He illustrates a producer whose sales in 1966-67 included drinking milk but whose sales of Class 2, 3 or 4 also gave him a large base allocation. In addition, this producer is assumed to have increased his total production from 1,700 cwt in 1966-67 to 2,000 in 1975. The increase (after deducting quota and base) is overbase. The calculations in cwt's are: Class 1 sales in 1966-67 of 636 cwt x 110% equals quota of 700 cwt in 1975. Class 2, 3 and 4 sales of 1,064 in 1966-67 equals a 1975 base of 1,000 cwt (1966-67 total production minus quota). Increased production over 1966-67 level gives 300 cwt in overbase.

Producer E has only overbase because he has sold his quota or is a new producer with no base or quota.

All Class-1-to-4 milk has the same quality. Nevertheless, in this hypothetical example, Producer A was paid $19,293 for his production principally because he has a large amount of quota, while Producer D was paid only $13,920 for the same quantity of milk because he has no quota and no base. Dividing the total revenues of each producer by his production gives his "blend" price, i.e., actual

average revenue per cwt. This blend price varies from $9.64 for producer A to $6.96 for Producer E. It is obvious that the key to profits for Class-1-to-4 milk producer is significantly dependent on his possession of quota, because it gives him the right to receive the high Class 1 revenues (a higher blend price).

The Difficulty of Understanding Pooling

As seen above, the distribution of the money paid by processors for each class of milk into the revenues received by each producer according to his quota, base and overbase is quite complex. According to the department, many producers do not comprehend how pooling works or, more importantly, what pooling means to them. Specifically, they do not understand how pooling controls for each producer the extent his income will change if he increases or decreases his production. If each producer knew how much revenue he could earn for each unit of production, he might be able to determine his most profitable production level based on his cost of producing each increment of milk. In fact, the department indicates that producers who are unable to unravel the complex pooling system merely run their operations at capacity. For example, the department made a detailed analysis of one producer's operation, and determined that by properly adjusting herd size to account for the effect of pooling on revenues, the producer's large loss could be turned into a sizeable profit.

Equalization

The Gonsalves Milk Pooling Act (Section 62702) declared the legislative intent that Class 1 revenues would slowly equalize among

producers. The act provided that new quota would be created by the department as the result of future expansion of Class I sales and would be allocated mainly to producers with low quota. The department states that in 1967 this equalization was expected to occur in about seven years, or 1974. However, the equalization of quota has not occurred. Since 1967, total Class 1 consumption has been virtually level except for minor increases as shown previously on Graph 6 by the dotted line. Thus quota remains maldistributed among producers, somewhat the same as before the adoption of pooling.

The pooling legislation also allows new Class-1-to-4 milk producers (mostly those converting from manufacturing milk) to enter the industry. This has created a new group of producers, some with low quota, some without any quota and possibly some with only overbase. To the extent that new producers lack quota, they further delay equalization.

In its May 7, 1974 testimony before the Senate Agriculture and Water Resources Committee, the department identified the slow equalization of quota as an area needing improvement. It should be noted, however, that when the department refers to equalizing quota, it refers only to equalizing quota as a percentage of quota plus base and does not include overbase. While this form of equalization, if achieved, would narrow the range of revenue distribution, it would still retain a significant variation of revenues among producers.

Any effort at this time to equalize revenues per unit of production of each producer would undoubtedly cause serious financial difficulties for some producers. The producers who would have the most

difficulty are those who have been protected by the high revenues provided by pooling and who have not maintained high efficiencies.

Selling Quota

Pooling established the ownership of quota and base under law and specifically permitted the right to sell quota. Some of the producers who received quota in the original distribution have sold their quota and retired from the industry. Because the selling price of quota presumably is the present worth of a stream of future Class 1 revenues, these retiring producers will be capitalizing and withdrawing future revenues that would otherwise be received as profits by producers for actually producing milk. The pooling system was established to equalize revenues among all producers. It was not intended to permit the producer who originally obtained quota to sell it and retire from the industry with an artificial profit.

In setting producer Class 1 milk prices, the state does not recognize the cost of purchasing quota. Nevertheless producers who purchase quota expect to receive higher future revenues sufficient to amortize the cost of the purchase.[19] In this sense the cost of purchasing quota is a real cost to the producer who made the investment to secure the additional revenue provided by quota. The cost is not, however, a production cost and the department properly does not recognize it in setting milk prices. As time passes, more and more producers will own quota purchased from those who sell it when they leave the industry through death, retirement or going out of business. Consequently, industry pressures will probably increase to include the purchase price of quota in the setting of milk prices.

VI. INTERRELATIONSHIP OF CLASS PRICING AND POOLING

Previous chapters have described the operations of class pricing of milk and the pooling of revenues resulting from the class pricing. This chapter will evaluate by various means and to the extent possible, the effect of their combined operation. Such evaluation is significant because the producer receives for the quantity of milk he sells only that revenue measured by his entitlement to the pooled money from all milk sales. As a result there is no customary, direct relationship between sales, prices and revenues.

The previous chapter on pooling noted the department's observation that most producers do not understand how to determine the appropriate amount of milk to produce or how to maximize their profits under the pooling system. Many apparently attempt to produce as much milk as possible. Equally important is the question whether the Department of Food and Agriculture can effectively manage the system.

Information System Needed

A major weakness in the class pricing-pooling interrelationship is that the department itself does not have an adequate information base which interrelates pricing and pooling information so that their combined effect on pooling and producer revenues can be adequately considered in determining price increases. The difficulty arises because the law states that producer prices are to be set on production costs but, because of pooling, producers do not directly receive the revenues that their individual quantity of milk sales would produce. They receive a blend price as described in the previous chapter.

The department through its Bureau of Milk Pooling collects and computer processes large amounts of data on both the volume of sales in each class and revenues generated by each class in order to determine individual producer revenues under the pooling system. The department through its Bureau of Milk Stabilization also collects and manually processes producer cost data in preparing the production cost index. The revenue information from the computerized pooling data system and the cost information from the production cost index data system are in such separate, compartmented form that information from one cannot be readily compared with the other and thereby be used for comprehensive milk pricing analysis and decisionmaking.

The lack of a comprehensive data management system which relates pooling revenue to the production index cost is a severe handicap to evaluation of the system as well as for the department's management of the system. It is even more difficult to evaluate ranges of costs, ranges in revenues, changes in blend prices, impacts of quota changes on pooling operations, and the effect of all the foregoing on supply and demand. The department's current system provides little capacity to analyze milk pricing experience either as conditions develop in the current year or over a period of years. /10

The department has indicated that it has given consideration to converting its manual production cost index to a computerized system. The department further indicates that this conversion would be undertaken if it were financially superior to the existing manual system. We believe that a computerized data management system should be

considered to improve the efficiency of the department's personnel who currently manually prepare production cost evaluations. It also should be considered for its value in improving the amounts of relevant cost data which could be made available to assist the department in making milk pricing decisions. Unfortunately, any computerized system will be no more valid as an analysis tool than the production cost data gathered from the farmers for the cost index. If the production cost index cannot be made demonstrably reliable, computerized manipulation of the data may be of little real benefit.

Detailed Cost Study

The department makes a special, more detailed cost study of about 50 of the producers who are included in the production cost index. This cost study data is used as a means of checking the accuracy of the index. It has already been pointed out that the department's production cost index data may not be representative of producers as a whole. Selected producers in the cost index are requested by the department to supply additional data for the detailed cost study. The department states that it generally requests only producers who keep good financial records to be on cost study, which further limits the sample of producers.

The principal value of the cost study data is that with adjustment, it can be used to make some semblance of a comparison between producer's actual revenues (including the effect of pooling) and costs based on the producer's cost records (rather than the department's calculated averages as contained in the production cost index).

With such data it is possible to compare actual revenues with costs, to compare profits as calculated for the standard production cost index with actual profits, and to compare the amount of profits of individual producers. In order to do this the individual profit measurements must be computed for each producer on a comparable basis. For the detailed cost study the department derives the amount of profit by subtracting a producer's total actual cost from his total actual revenues. Costs of family labor and return on investment are computed in the same manner as in the production cost index and subtracted from the total actual profit. This "derived" or residual profit is the same in concept as the management allowance calculated for the production cost index. It is intended to be the equivalent of the customary use of the term net profit.

Three Hypotheses Evaluated

Using the detailed cost study, adjusted as above, we have evaluated three hypotheses.

Do Producers Earn More Than the Cost Index Indicates? The Standard Production Cost Index shows the department's calculated average cost of producing milk plus five percent of gross revenues added as a management allowance. Theoretically, the Class 1 price is equal to the cost index, modified by supply and demand considerations, although the department has stated that supply and demand considerations were not significant in 1971 and 1972.

If the average producer does earn a management allowance of five percent on Class 1, he would earn less than five percent on Classes 2

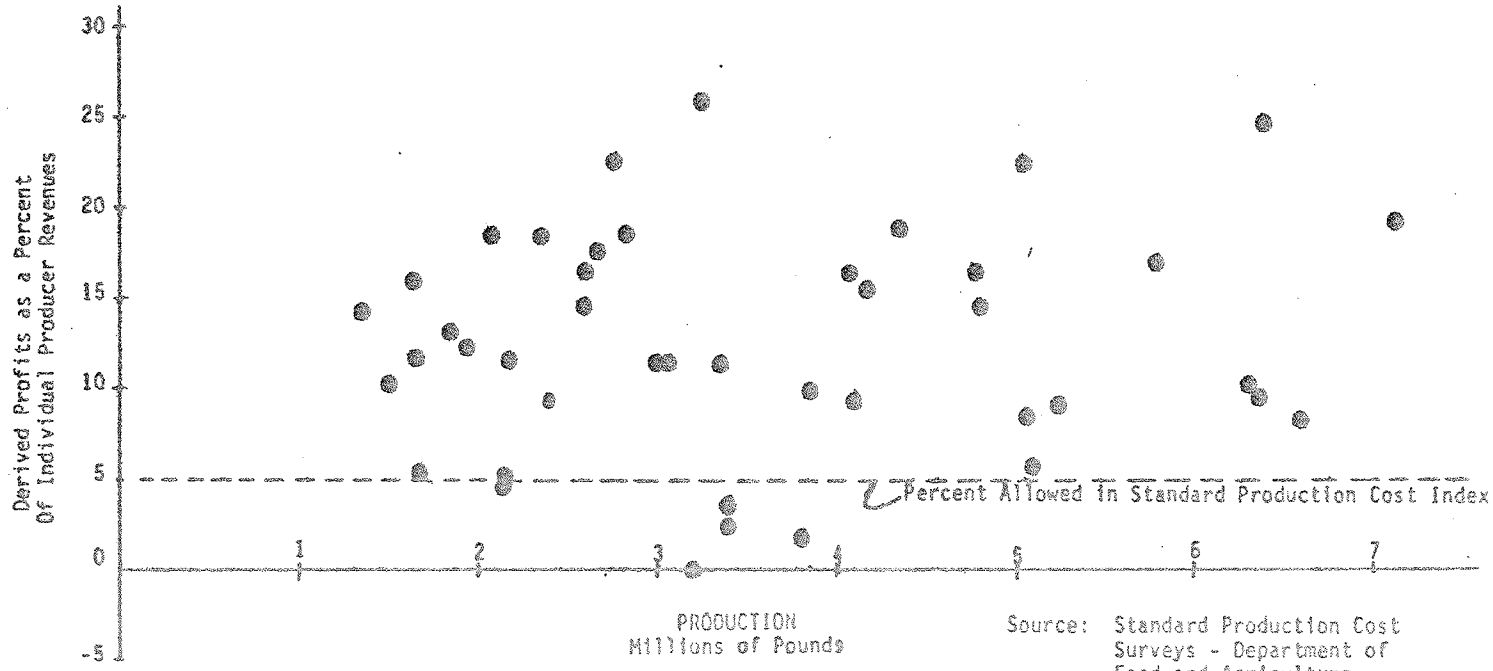
to 4 because the other class prices are lower than Class 1 as shown on Graph 13 (page 51). Consequently, the average producer should earn an average management allowance of something less than five percent on all his milk.

The five percent level is shown on Graphs 14 and 15 as a dashed line while the individual "derived" profits from the detailed cost index have been plotted as dots which represent the derived profits as a percentage of total receipts. The large number of dots above the dashed line shows that most of the 50 producers in the cost study earned significantly more derived profit than five percent in 1971 and 1972. Table 7 shows the range of derived profit for the cost study producers for the period 1968 through 1973 (1974 data were not available). The table clearly shows that many producers actually received considerably more than five percent and that a number received more than 20 percent. For the years 1968 through 1973, we computed the "average" residual profit to have been 9.2, 8.9, 12.5, 12.2, 11.8 and 6.1 percent respectively. Note that the average percentage is consistently and considerably more than the five percent allowed.

We suggest two possible reasons to explain why the earnings exceed the management allowance. First, the cost index may be overstating actual producer costs. Some of the reasons are suggested in Chapter III. A high cost index would presumably result in somewhat higher Class 1 prices and cause higher actual producer profits. Second, the producers on cost study are, as noted, a limited sample of producers. If the profits of cost study producers are not representative of all

GRAPH 14

1971
DERIVED PROFITS
VS
PRODUCTION

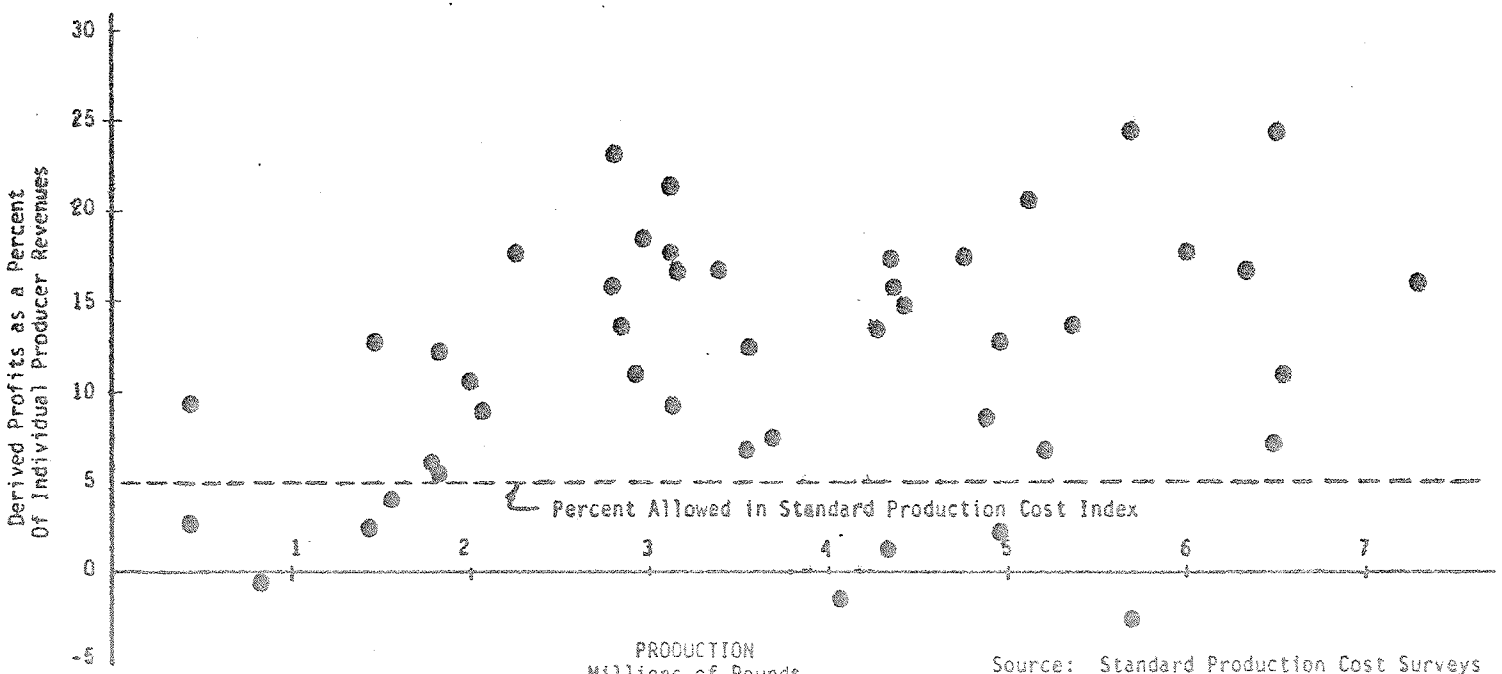


Source: Standard Production Cost Surveys - Department of Food and Agriculture

Prepared by: Legislative Analyst

GRAPH 15

1972
DERIVED PROFITS
VS.
PRODUCTION



Source: Standard Production Cost Surveys
Department of Food and Agriculture

Prepared by: Legislative Analyst

TABLE 7

RANGE OF DERIVED PROFITS EARNED
BY COST STUDY PRODUCERS
1968-1973

Derived Profit Range %	Number of Producers in Range by Year					
	1968	1969	1970	1971	1972	1973
25 to 30		2	2	1		1
20 to 25	2	2	5	3	5	2
15 to 20	7	9	11	12	11	4
10 to 15	6	9	12	19	13	11
5 to 10	10	11	9	10	11	14
0 to 5	6	6	3	5	4	7
-5 to 0	2	3	3	1	2	4
-5 to -10	2	2				2
-15 to -10		1				4
Average Derived Profit	9.2	8.96	12.5	12.2	11.8	6.1

producers, then the department's in-depth evaluation of the cost study producers does not have much value for determining the accuracy of the less detailed cost index.

On the other hand it is possible that the cost study does accurately reflect producer costs. The problems of securing accurate cost data have been previously explored. Table 7 seems to be at least as indicative of problems within the system as it is conclusive about the level of profits.

Are Large Producers More Profitable Than Small Ones? It might be expected that large producers are more profitable than small producers because of economies of scale or other related factors. Graphs 14 and 15 permit the derived profit expressed as a percentage of the total revenues of each producer to be compared with the production for each of the producers on cost study in 1971 and 1972. The data points show a general scatter over a wide range of production (along the horizontal axis). There appears to be no significant relationship between this measure of profitability and the amount of production. High profits occur at all production levels. Thus, if there are economies of scale inherent in milk production operations, as might be expected, these economies are not being reflected in the derived profits. It is possible that other factors such as pooling have greater effect.

Is There A Relationship Between Cost and Revenue? As discussed in the chapter on pooling, some producers receive significantly higher blend prices and therefore higher revenues from each hundredweight unit of milk sold than other producers. These high revenues could result in

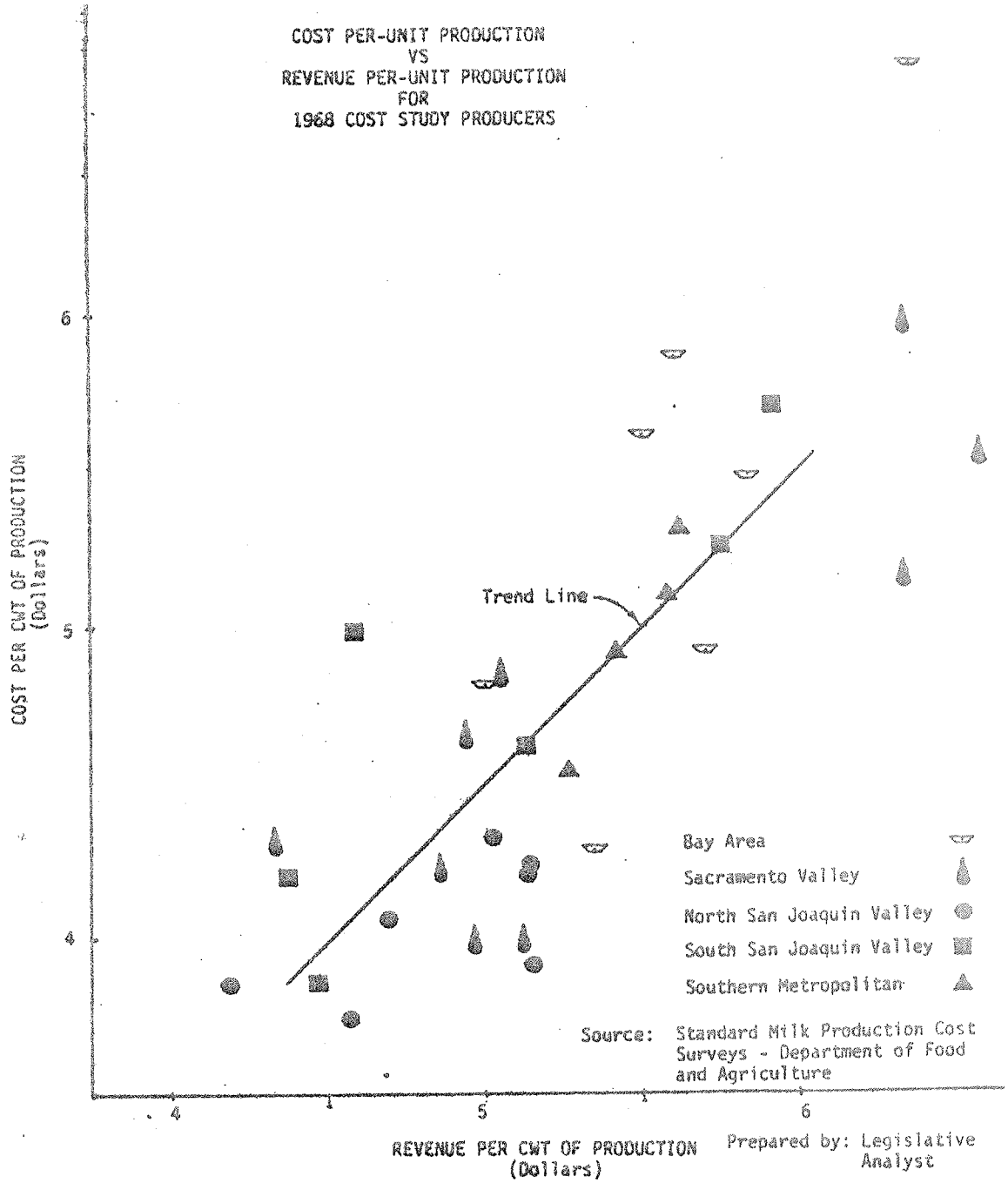
high profits or could be eroded through inefficiency. As the best available measure of the efficiency of high quota producers, their revenues per hundredweight can be plotted against their per-unit costs. Graphs 16 through 21 make the above efficiency comparison for cost study producers for 1968 through 1973 respectively for five milk marketing areas.

On each graph, an average curve is sketched through the point where costs per hundredweight meet the revenues per hundredweight of production to indicate the trend relationship between cost and revenue. The relative number of points along the upper portion of the trend line indicate the high proportion of those producers who have high per-unit revenues and who also have high per-unit costs, that is, the proportion of producers who appear to be inefficient.

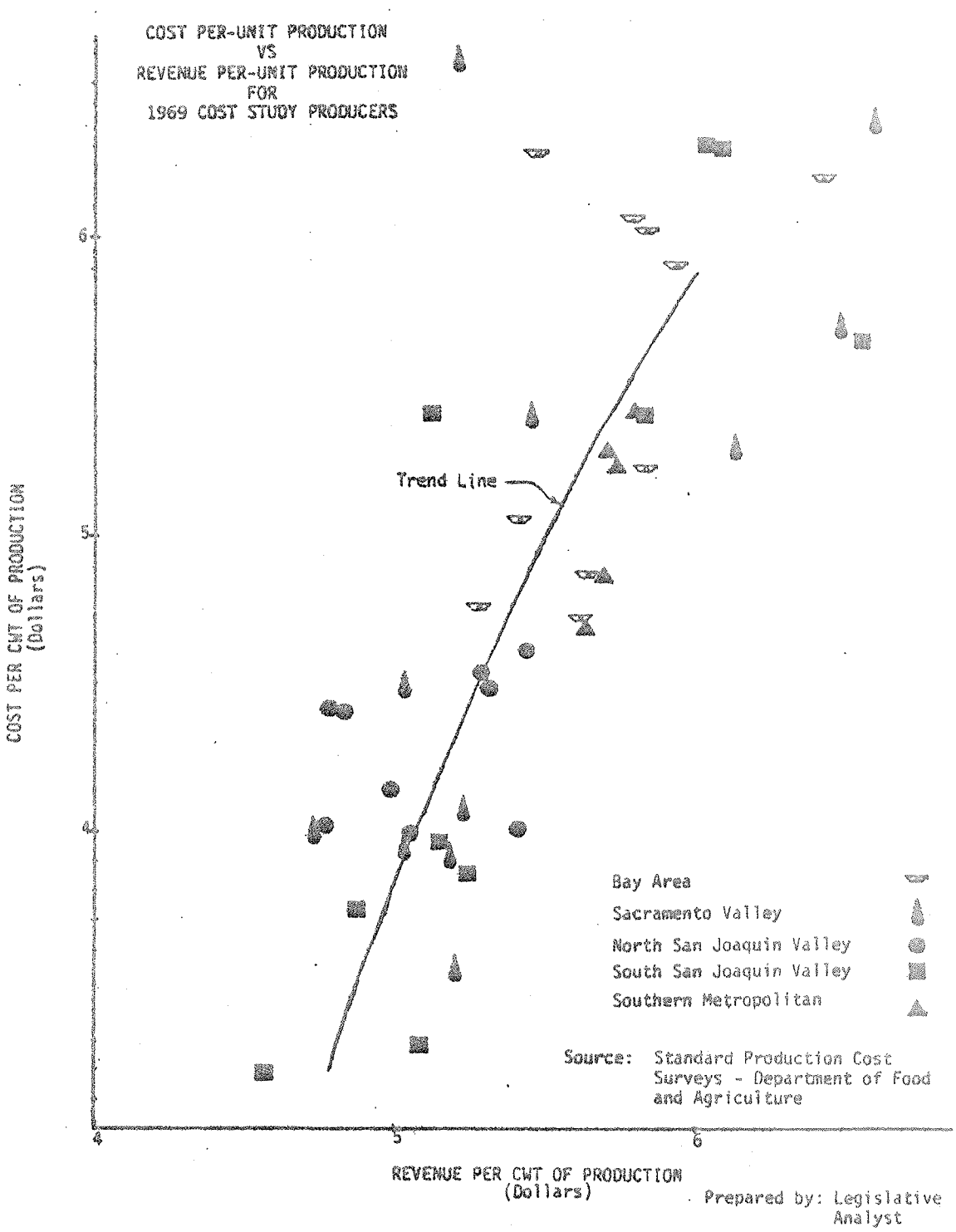
It has been suggested that the high revenue/high cost relationship may be due to producers located in high cost areas. Producers in each of the five major milk producing areas of the state, as determined by the department, are designated on the graphs using different symbols. It is evident that there is generally no clustering on the graphs of producers in any of the five areas. Producers in each area are generally well distributed along the trend lines with only a very slight tendency for the Southern Metropolitan producers to be at the high end of the trend line and the San Joaquin Valley producers to be at the lower end.

To the extent that these graphs seem to show a lack of efficiency on the part of high revenue producers in the present system, there is a lack of benefit to the individual producer, to the industry, or to the

GRAPH 16

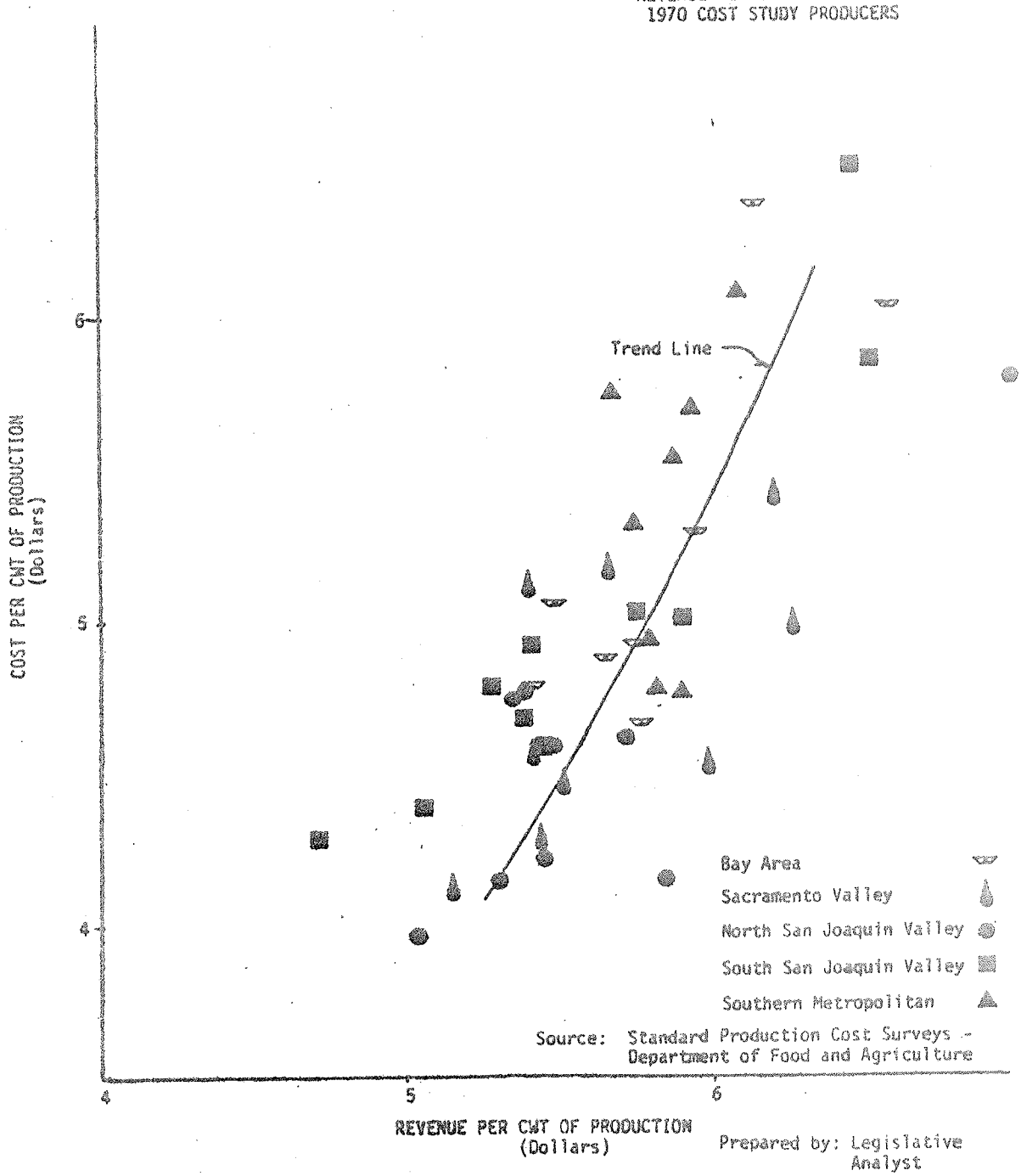

COST PER-UNIT PRODUCTION
VS
REVENUE PER-UNIT PRODUCTION
FOR
1968 COST STUDY PRODUCERS
COST PER CWT OF PRODUCTION
(Dollars)
6
5
4
Trend Line
Bay Area
Sacramento Valley
North San Joaquin Valley
South San Joaquin Valley
Southern Metropolitan
Source: Standard Milk Production Cost Surveys - Department of Food and Agriculture
4
5
6
REVENUE PER CWT OF PRODUCTION
(Dollars)
Prepared by: Legislative Analyst

GRAPH 17


COST PER-UNIT PRODUCTION
VS
REVENUE PER-UNIT PRODUCTION
FOR
1969 COST STUDY PRODUCERS
Trend Line
COST PER CWT OF PRODUCTION
(Dollars)
6
5
4
4
5
6
REVENUE PER CWT OF PRODUCTION
(Dollars)
Bay Area
Sacramento Valley
North San Joaquin Valley
South San Joaquin Valley
Southern Metropolitan
Source: Standard Production Cost Surveys - Department of Food and Agriculture
Prepared by: Legislative Analyst

GRAPH 18

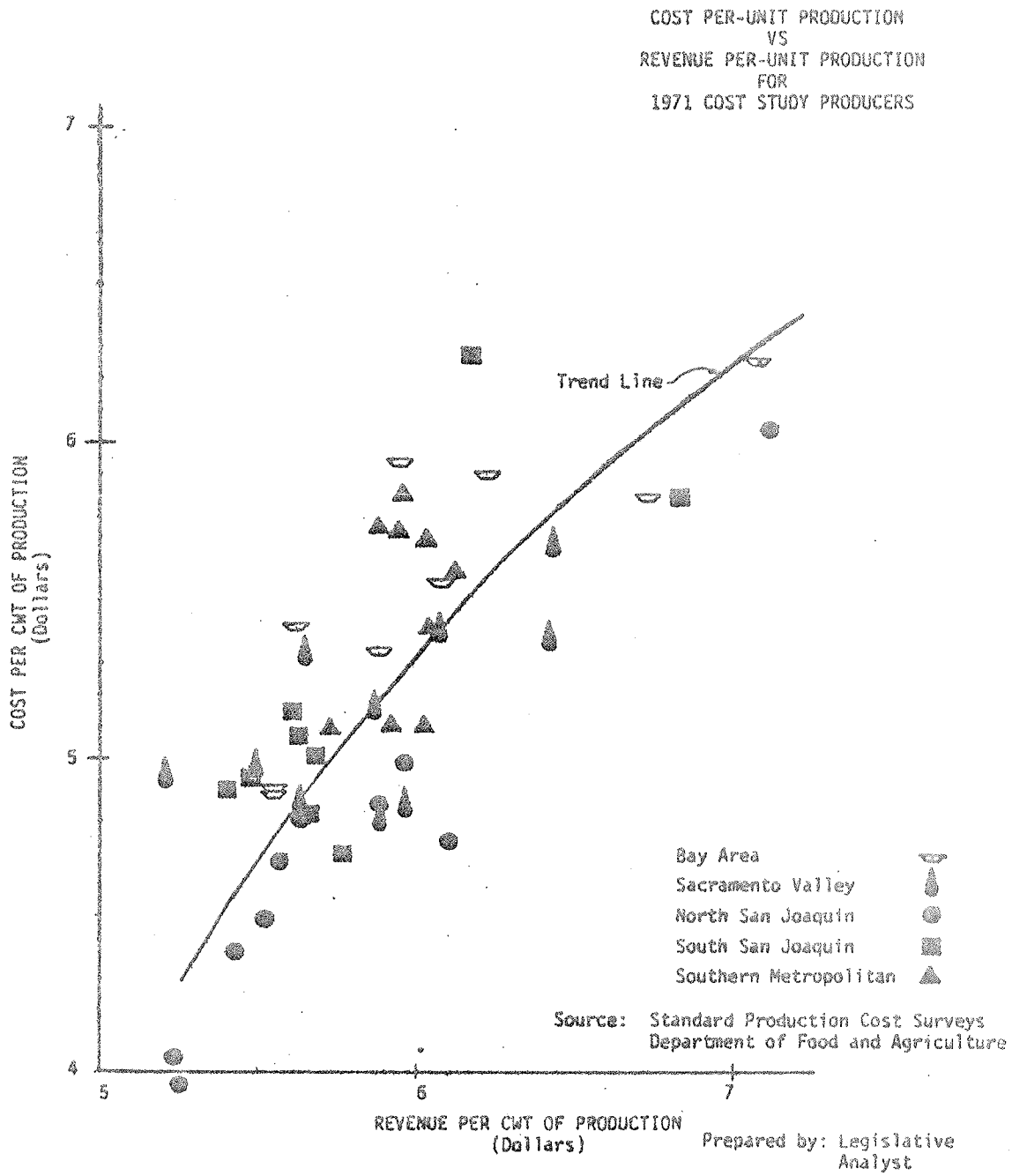
COST PER-UNIT PRODUCTION
VS
REVENUE PER-UNIT PRODUCTION
1970 COST STUDY PRODUCERS



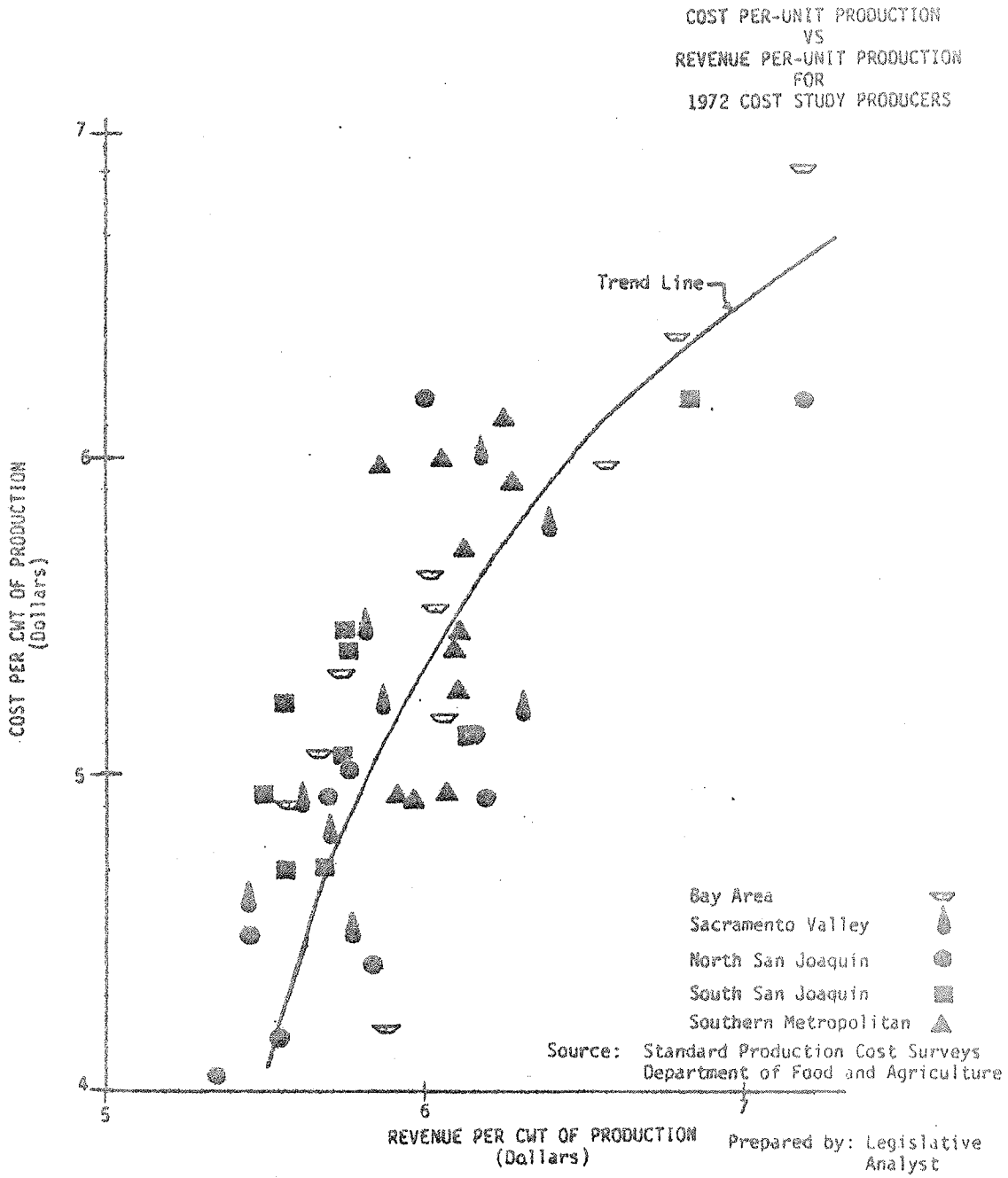
Source: Standard Production Cost Surveys - Department of Food and Agriculture

Prepared by: Legislative Analyst

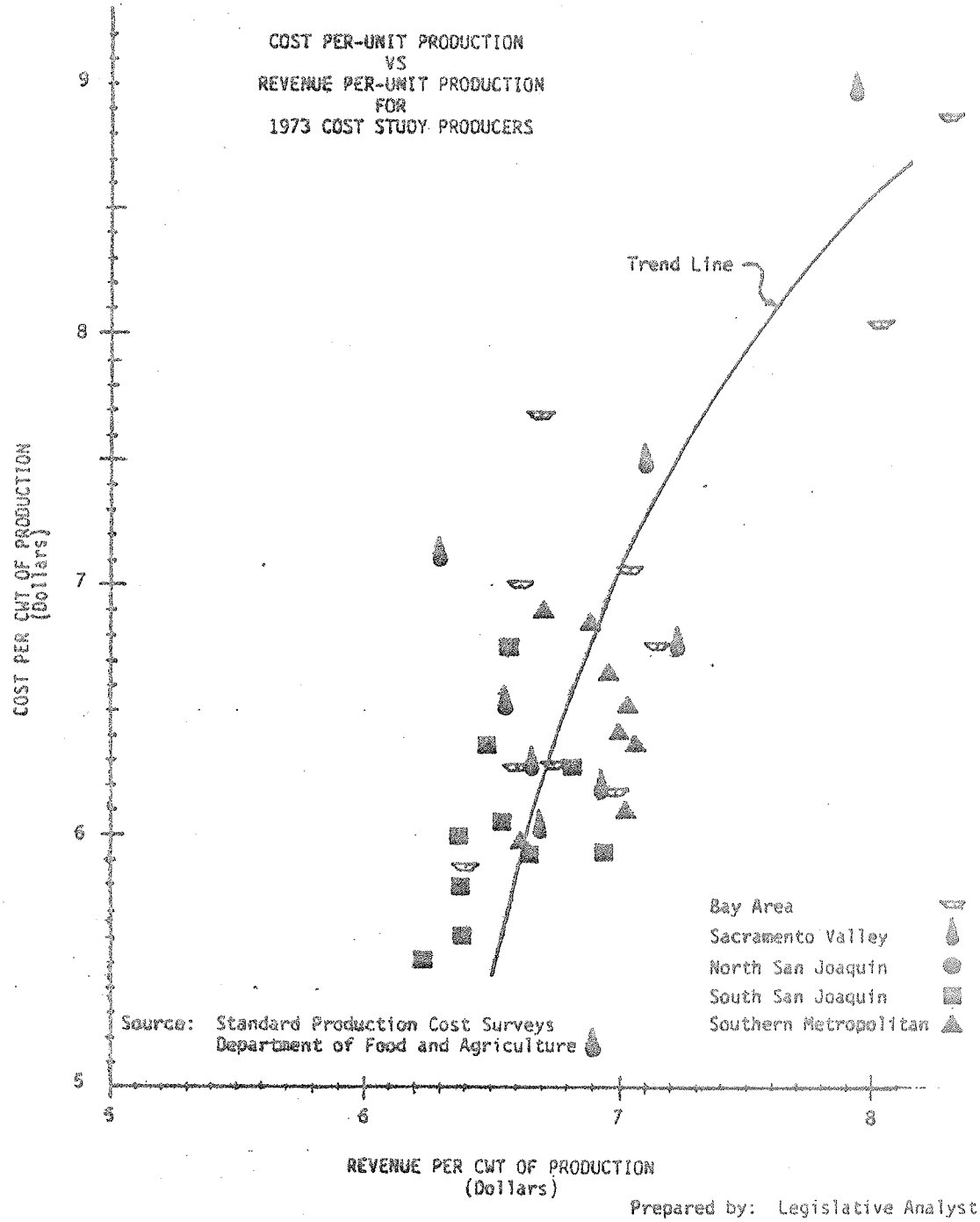
GRAPH 19


COST PER-UNIT PRODUCTION
VS
REVENUE PER-UNIT PRODUCTION
FOR
1971 COST STUDY PRODUCERS
Trend Line
COST PER CWT OF PRODUCTION
(Dollars)
7
6
5
4
5
6
7
REVENUE PER CWT OF PRODUCTION
(Dollars)
Bay Area
Sacramento Valley
North San Joaquin
South San Joaquin
Southern Metropolitan
Source: Standard Production Cost Surveys
Department of Food and Agriculture
Prepared by: Legislative
Analyst

GRAPH 20


COST PER-UNIT PRODUCTION
VS
REVENUE PER-UNIT PRODUCTION
FOR
1972 COST STUDY PRODUCERS
Trend Line
COST PER CWT OF PRODUCTION
(Dollars)
7
6
5
4
5
6
7
REVENUE PER CWT OF PRODUCTION
(Dollars)
Bay Area
Sacramento Valley
North San Joaquin
South San Joaquin
Southern Metropolitan
Source: Standard Production Cost Surveys
Department of Food and Agriculture
Prepared by: Legislative
Analyst

GRAPH 21



Prepared by: Legislative Analyst

consumer. If the state is to provide price protection and stability to the milk industry, the department should assure, in the best interests of all parties, that established minimum prices reflect reasonable efficiency.

Competition and the Public Interest

State milk pricing was established in the public interest to provide the consumer an adequate supply of milk at a reasonable price. In a market economy such as ours, "reasonable price" implies a market where the efficient, low-cost producer is in some respect favored over the inefficient high cost producer.

Graphs 16 through 21 show on the horizontal axis the wide range in per-unit producer revenues permitted under pooling. For example, based on the department's 50 cost study producers for 1972 (Graph 20), average producer receipts varied from 23.2 cents to 31.1 cents per one-half gallon of milk. Stated from the consumer's point of view, the pooling system required the processor, and thereby the consumer, to pay one producer 31.1 cents per one-half gallon of raw milk product when other producers were willing to supply the same quality of milk for up to eight cents less per half gallon. Producers who receive the low per-unit revenues theoretically should be unable to compete on a price basis with those producers having high per-unit (high quota) revenues unless (a) milk prices are too high overall, (b) the low revenue producers operate under lower cost factors for fuel, land, labor, etc., or (c) they are more efficient.

During difficult economic times, the producer who is most likely to go out of business would normally be the one who receives low per-unit revenues. However, Graphs 16 through 21 show that the low per-unit revenue producers are also generally low cost producers. Therefore, they are the producers who theoretically should be kept in production. If any producers are forced out of business for any economic reason, it should be the high cost producers but these producers are generally protected by pooling. Pooling did not cause the present wide range of per-unit revenues. Graph 16 indicates that the wide range of revenues existed in 1968 when pooling was initiated. Pooling has only tended to freeze in law the condition that existed in the mid-1960's. But pooling is now being operated by government and it should be operated to reflect the public interest. The current pooling mechanism does not do this because it both restricts competition for the higher quota revenues and tends to protect the higher cost producer.

Who Gets a Class 1 Price Increase?

Failure of the pooling system to equalize producer revenues has placed the department in a difficult position in setting the price of Class 1 milk. This is because distribution of milk revenues as controlled by pooling distorts the actual amount of any class price increase received by any one producer compared to another producer. In effect, a low quota producer who probably has greatest need for the Class 1 price increase would only get a small portion of a price increase.

The department considers production costs in setting Class 1 milk prices, but pooling (the blend price) rather than the class price

substantially determines a producer's actual revenues. This tends to make any direct comparison of costs and class prices relatively meaningless. Thus the imposition in 1967 of pooling on top of the complex class pricing system further complicated the state's controls and reduced the responsiveness of producers to any supply and demand considerations.

Prices Elsewhere in the Nation

A frequently used standard analysis is to compare milk prices in California with prices elsewhere. In its May 7, 1974 report to the Senate, the department compared the California Class 1 price in the Southern Metropolitan Marketing area with the comparable price average for all federal milk marketing areas, as shown in Table 6. The table shows that for a number of years prior to 1966 the California price was higher than the average federal price. In 1966 and afterwards, the California price has been lower. As of May 1974, Los Angeles processors paid about 1.9 cents less per half gallon for Class 1 milk. This information indicates that Class 1 California producer milk prices are roughly in line with prices in federal milk marketing areas. However, any comparison of California prices with average federal marketing area prices has limited usefulness because of different production costs and markets in other states. For example, California dairies are much larger than the average dairy in the federal marketing areas. Also, California cows produce substantially more milk per cow than elsewhere, the climate is more moderate, feed costs vary, etc. Therefore, Table 6 only shows that California milk prices are not out of line with the rest of the nation. It does not show that California prices are accurately established.

TABLE 6

CLASS 1 BLEND PRICE COMPARISON BETWEEN CALIFORNIA (SOUTHERN METROPOLITAN MARKETING AREA) AND THE AVERAGE OF ALL FEDERAL MILK MARKETING AREAS*

Year	California	Federal Marketing Areas	Differential $
1957	5.12	4.90	-0.22
1958	5.12	4.85	-0.27
1959	5.28	4.86	-0.42
1960	5.34	4.92	-0.42
1961	5.34	4.92	-0.42
1962	5.36	4.80	-0.56
1963	5.33	4.80	-0.53
1964	5.34	4.84	-0.50
1965	5.33	4.93	-0.40
1966	5.40	5.63	+0.23
1967	5.57	5.94	+0.37
1968	5.77	6.25	+0.48
1969	5.77	6.67	+0.90
1970	5.89	6.76	+0.87
1971	6.05	6.90	+0.85
1972	6.31	7.10	+0.79
1973	7.21	8.03	+0.81
1974			
Jan.	8.61	9.73	+1.12
Feb.	8.61	10.04	+1.43
Mar.	8.61	10.20**	+1.59
Apr.	9.81	10.24**	+0.43
May	9.81	10.25**	+0.44

* 3.5 percent test milk f.o.b. Plant

** Estimated

Source: Department of Food and Agriculture
Submitted May 7, 1974 to the Senate Agriculture and Water Resources Committee

Class Pricing and the Consumer

Recently one dairy product manufacturer has been advising consumers through its advertising to mix one-half gallon of reconstituted powdered skim milk with one-half gallon of whole fresh milk. The result is a gallon of low-fat drinking milk that is virtually indistinguishable from fresh milk at a cost that represents a substantial savings of about 20 cents per gallon to the consumer. The difference in price between one-half gallon of fresh milk (Class 1 price) and one-half gallon of reconstituted skim milk (Class 4 price) primarily makes the savings possible.

Because Class 1 milk is the source of most producer's highest earning capability, any appreciable substitution of powdered skim milk for fresh whole milk by consumers would result in major hardships for many milk producers, especially high quota producers. This is because producers receive the Class 4 price for powdered skim milk and the higher Class 1 price for whole fresh milk. If consumers substantially shifted their purchases from Class 1 to Class 4 milk, the value of quota would drop and consumers could make substantial savings in milk costs with no real loss in nutrition. In effect, the current milk pricing system could be used by the consumer against the producer.

The consumer has the opportunity to change up to half of his milk consumption from Class 1 to Class 4 prices by stretching drinking milk with powdered milk because of (a) technological improvements in powdered milk, and (b) the milk pricing system is sufficiently artificial that consumers can manipulate it. Thus continued operation of the milk

pricing system relies largely on consumer habits, minor taste preferences for fluid milk, and lack of consumer knowledge of the milk pricing system.

General Evaluation

The foregoing sections of this chapter have sought to provide an evaluation of the combined operation of class pricing and pooling; in other words, the California milk pricing system. It has already been pointed out that there is no free market price to guide such evaluation. Therefore a variety of expedients have been used to provide the most apparent and most meaningful evaluation using available sources of data. However, it has been necessary even to question the statistical validity of some of the basic data available for such evaluation.

The various evaluations have shown many problems and difficulties. However, the system has worked for four decades. A supply of milk has been furnished and it has been marketed at a price which has in the long-run been sufficiently satisfactory to the producers that they have been willing to continue to produce and the consumers have not refused to purchase the milk in any identifiable quantities.

The system is so complex that any change in the milk pricing system would probably be a series of adjustments on a trial and error basis; some changes could be cumulative in their effect on prices; some could be offsetting increases and reductions. Such changes or "fine-tuning" of the system would require much better administration of the

system by the department and a keener awareness of the operation of the system by its critics and supporters than currently exists.

Whenever government controls prices and, indirectly, production of a commodity in the public interest, decisionmaking tends to favor selected interests. The department has been responsive to various interests at different times and it can be speculated that this has been more influential than the large amounts of vague policy and regulatory language in the codes.

Last February the department declined to increase producer prices on the basis that there is currently an excess supply of milk. This decision may provide an opportunity in future months to evaluate whether state pricing influences the supply of Class-1-to-4 milk or whether the state will continue to seek pricing techniques to market as much milk as is produced.

FOOTNOTES

1. See Food and Agricultural Code Sections 32509, 32510 and 61808. The law also allows for certified raw milk, see Sections 35921 et. seq. All citations are to the Food and Agricultural Code unless otherwise indicated.

2. State established minimum prices on milk sales apply only if the director has established a stabilization plan for a particular milk marketing area. These stabilization plans are producer approved and are a carryover from the depression era when government sought to organize and stabilize many commodity markets. Milk stabilization has some similarity to state marketing orders. In some areas of California there are no stabilization plans. See Section 61873 and 61936. Minimum pricing under stabilization applies only to Class-1-to-4 milk.

3. Section 735.3(b) of Chapter 241, Statutes of 1935 which defined fluid milk for the first time is generally as follows:

> "Fluid milk is milk produced for consumption as milk until it is sold for cream or until it is sold for a manufacturing use."

   It is reasonably clear that "fluid milk" in this context meant drinking milk because milk produced in excess of the drinking need, i.e., sold for manufacturing was not covered under the law for pricing.

4. The department indicates that in the dairy industry when overproduction causes falling prices there is a tendency on the part of the individuals with cash flow problems to increase production to increase cash flow. In the aggregate this causes a worsening of the situation and in turn causes still more production by individuals trying to maintain a short-run cash flow.

   According to the department, prior to the Thirties, California was primarily a manufacturing milk state. Producing milk to the sanitary standard for drinking purposes was not only more costly but was attended with greater risks than producing manufacturing milk which was used primarily for butter. Skim milk from butter production became hog food. Also, during this period, the technology on the farm for quick cooling and bulk holding, both methods for preventing the rapid buildup of bacteria, were not generally available. Health requirements for workers and disease testing schedules for dairy cattle were considerably more stringent for drinking milk. Milk for drinking purposes had to be handled only under the most sanitary conditions. These conditions substantially increased costs. The Legislature of the period recognized that milk was an excellent and insidious carrier of disease and that the farmers must receive sufficient revenue to cover these added costs if the health of milk consumers was to be protected.

5. Under Statutes of 1937, p. 151, Agricultural Code 1933, Section 735.3(b) and p. 642, Agricultural Code 1933, Section 479 relating to stabilization and marketing of fluid milk and fluid cream, fluid milk was defined as milk produced in conformity with quality standards prescribed for "market milk" which was defined as milk supplied to the consumer in the natural fluid state or prepared for human consumption without being converted into any other form or product as distinguished from "manufacturing milk," which was not defined. "Manufacturing milk" therefore included all milk supplied or prepared for human consumption except market or fluid milk. Jersey Maid Milk Products Co. vs. Brock (1939) 91 P. 2d 577, 13 C.2d 620.

6. See generally Code Sections 61842-47.

7. The presence of yogurt in Class 1 is unusual because it is a manufactured product. It was placed in Class 1 by the department pursuant to Section 61842(d) of the Food and Agriculture Code.

8. Section 62212 is the basic pricing guide to the department for Class-1-to-4 milk. It currently reads as follows:

62212. Pricing methods

Each stabilization and marketing plan shall contain provisions whereby the director designates and prescribes, or provides methods for designating or prescribing, minimum prices to be paid by distributors to producers for fluid milk in the various classes.

The prices so designated or prescribed shall be in a reasonable and sound economic relationship with the price of manufacturing milk.

In determining such economic relationship, the director shall take into consideration all of the relevant factors in such economic relationship, including, but not limited to, all of the following:

(a) The reasonableness and economic soundness of manufacturing milk prices in relation to the costs of producing manufacturing milk.

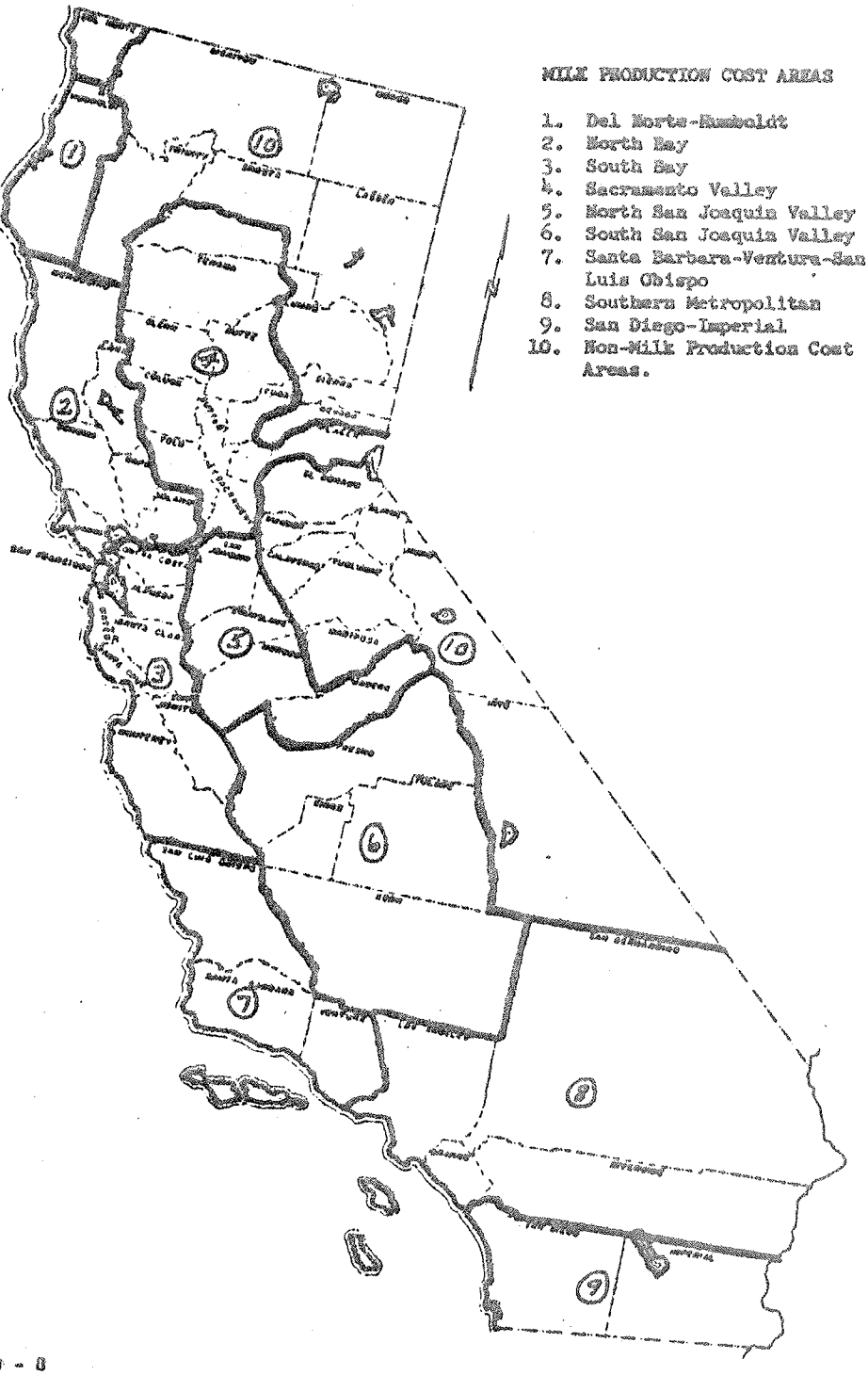
(b) The additional costs of producing and marketing fluid milk over and above costs of producing and marketing manufacturing milk.

(c) Current and prospective supplies of fluid milk in relation to current and prospective demands for such fluid milk for all purposes including manufacturing purposes.

The director shall also find that such prices will insure consumers an adequate and continuous supply of pure, fresh, wholesome milk at fair and reasonable prices, including a reasonable estimate of the additional supply which is needed to provide for normal fluctuations in production and in consumer demand for fluid milk, cream, and skim milk for such marketing area.

9. The Department of Food and Agriculture indicates that theoretically producers can gain sufficiently higher revenues to repay the cost of purchasing quota within approximately one year. The average repayment, however, appears to be between two to four years because quota gives a return on investment of 20 to 30 percent. Obviously quota sales are limited by the number of willing sellers and buyers.

10. Indicative of the complexities of analyzing available data is the difference between the geographical areas (shown on the maps following this footnote) which are used by the department to secure production cost data for use in establishing producer milk prices and the marketing areas which are used for establishing prices at producer and retail levels.

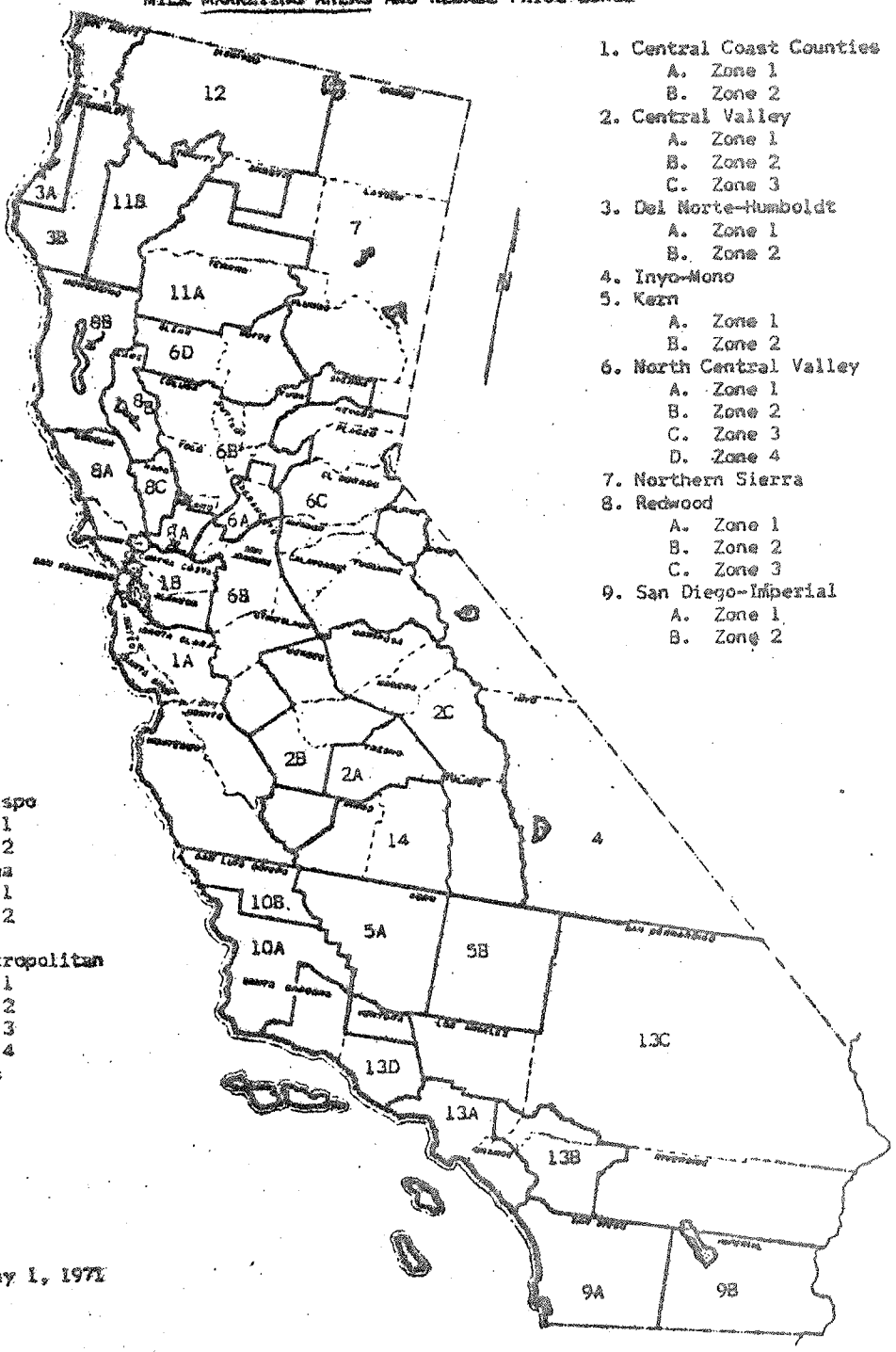


MILK PRODUCTION COST AREAS

1. Del Norte-Humboldt
2. North Bay
3. South Bay
4. Sacramento Valley
5. North San Joaquin Valley
6. South San Joaquin Valley
7. Santa Barbara-Ventura-San Luis Obispo
8. Southern Metropolitan
9. San Diego-Imperial
10. Non-Milk Production Cost Areas.

FORM SO - 8

MILK MARKETING AREAS AND RESALE PRICE ZONES



1. Central Coast Counties
   - A. Zone 1
   - B. Zone 2
2. Central Valley
   - A. Zone 1
   - B. Zone 2
   - C. Zone 3
3. Del Norte-Humboldt
   - A. Zone 1
   - B. Zone 2
4. Inyo-Mono
5. Kern
   - A. Zone 1
   - B. Zone 2
6. North Central Valley
   - A. Zone 1
   - B. Zone 2
   - C. Zone 3
   - D. Zone 4
7. Northern Sierra
8. Redwood
   - A. Zone 1
   - B. Zone 2
   - C. Zone 3
9. San Diego-Imperial
   - A. Zone 1
   - B. Zone 2
10. San Luis Obispo
    - A. Zone 1
    - B. Zone 2
11. Shasta-Tehama
    - A. Zone 1
    - B. Zone 2
12. Siskiyou
13. Southern Metropolitan
    - A. Zone 1
    - B. Zone 2
    - C. Zone 3
    - D. Zone 4
14. Tulare-Kings

Effective May 1, 1971