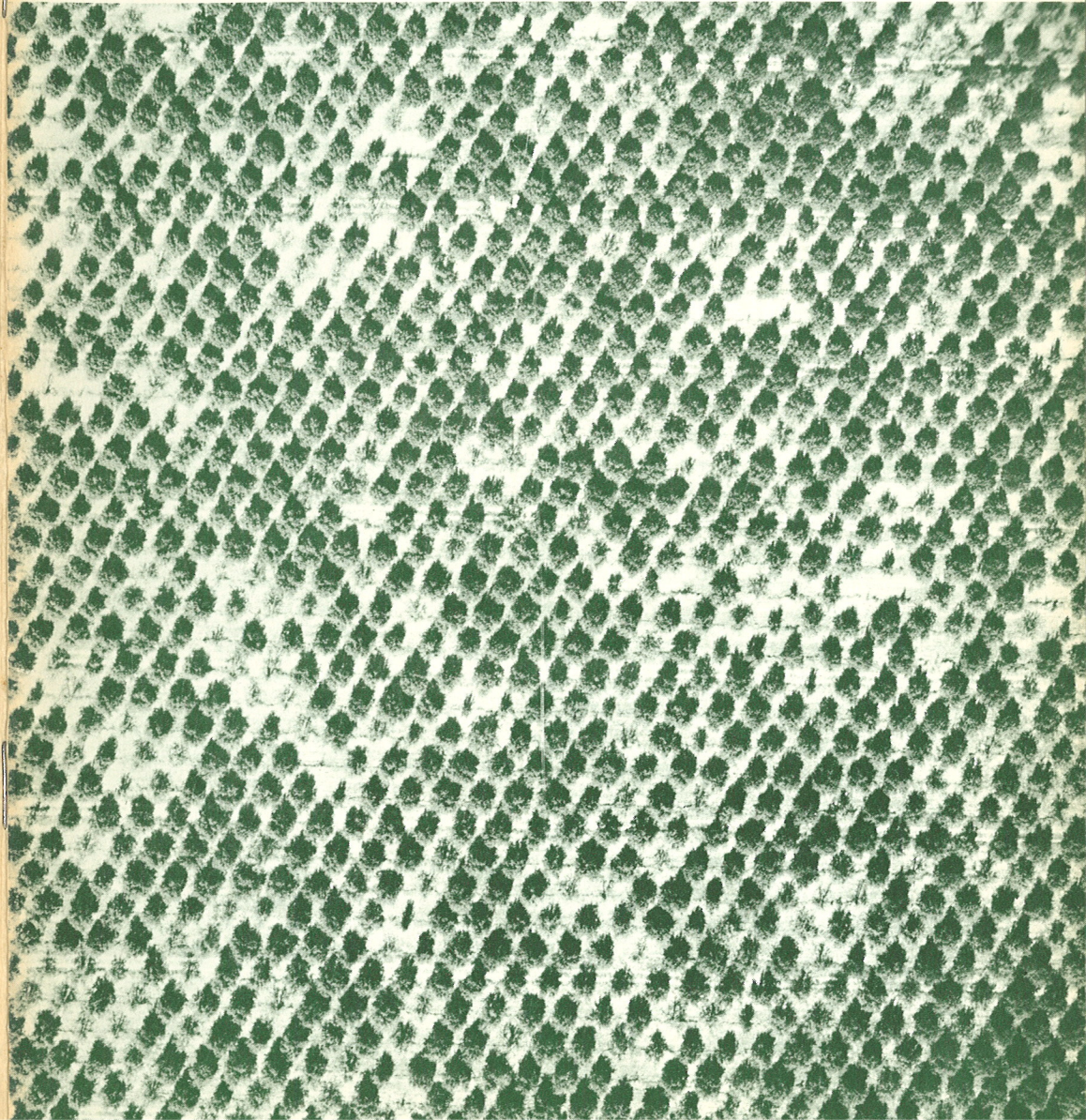


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New Emphasis on Solids-Not-Fat Component of Milk

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The market place is like a kaleidoscope. Consumer demands present a varied and constantly changing picture. Of all the commodities that flow into the market place, food items are perhaps the most stable. However, changes in dietary habits are causing changes in the demands for food commodities.

One such change is taking place in the marketing of dairy products.

A shift is taking place in the relative demand, and thus the relative value, of the milk-fat and solids-not-fat (SNF) components of milk.

In California, this shift can be measured in the per capita consumption of milk, skim milk and cream. The following table shows this trend:

PER CAPITA CONSUMPTION, CALIFORNIA

Year	(quarts)		
	Milk	Skim milk	Cream
1950	124.70	2.79	1.42
1955	130.30	5.05	1.03
1960	126.05	7.79	1.00

The per capita consumption of skim milk, or nonfat milk, demonstrates the increased demand for the SNF component of milk. The demand for cream and dairy products with a high proportion of milk fat has decreased.

The present trend in the market for dairy products is placing a relatively greater demand upon SNF and a lesser demand for the milk fat component of milk.

In this environment of change, representatives of the dairy industry for both producer and distributor groups prevailed upon the 1961 session of the California Legislature to enact a bill which would facilitate adjustment to this trend. As a result, Assembly Bill 2742 was passed and became effective in September, 1961.

Assembly Bill 2742 provides the standards for a new dairy product, "low-fat milk," which is to have a milk-fat content that

ranges from 1.9 percent to 2.1 percent, a SNF content of not less than 10 percent. It also provides for the establishment of minimum wholesale and minimum retail prices for this new product.

In connection with low-fat milk, the bill provides that the standards for this product cannot become effective until minimum producer prices are established on the basis of the milk-fat and SNF components of milk and that the section of the bill containing the standards for low-fat milk expires October 1, 1963, unless re-enacted.

The bill provides for pricing milk received from dairy farmers on the basis of the milk-fat and SNF components of milk, and for testing to determine the SNF content of the milk.

This bill, although only four pages long, calls for a complete overhaul of the producer pricing system and creates a new dairy product for California consumers.

The bill was assigned to the Director of Agriculture to administer.

In response to his obligations under the new legislation, the Director of Agriculture has designated the Bureau of Dairy Service to administer the testing of the milk for SNF, the licensing of the testers and the certification for accuracy of the testing equipment. The Bureau of Dairy Service has held a rules and regulations hearing and will issue rules and regulations to achieve this purpose.

The Director has assigned the task of creating a new pricing procedure for producer prices and establishing minimum prices for low-fat milk to the Bureau of Milk Stabilization.

An objective of marketing low-fat milk is to increase the total sales of dairy products and not merely provide a new dairy product to displace sales of regular milk. It is important to market this new product with a minimum of market disruption.

Initially, this product must be priced on a relative cost basis in the absence of actual cost experience in the market. The difference in raw product cost between low-fat milk and regular milk can readily be computed. Under the present minimum producer prices that are established, the raw product cost differential is approximately 3 cents per quart. However, the cost of handling this product, both in the plant and on the routes, will be somewhat higher than regular milk because of the smaller quantities that will be handled. For example, in the filling operation, the runs, or amount of filling time, will be shorter than for regular milk and the filling expense for low-fat milk will probably be more comparable to that for by-products such as skim milk or buttermilk. The expense for handling on the routes would probably be more comparable to the handling expense for by-products than for regular milk. At any rate, the initial cost determination for marketing this product will necessarily be a related cost determination, rather than an actual cost determination.

In establishing the minimum prices for low-fat milk, if these prices are substantially below those of regular milk, there will be a price incentive created that will result in decreased sales of regular milk and the industry will be faced with increased costs of marketing regular milk.

On the other hand, if the minimum prices that are established for this product are set too high, say, for example, at the same prices as regular milk, the margin accruing to distributors would be relatively large, and thus create a strong incentive for distributors to merchandise this product to the detriment of regular milk sales.

This set of circumstances creates quite an enigma, since either extreme could produce market disruption; therefore, pricing limits within which the Bureau of Milk Stabilization must work are relatively narrow.

The problems inherent in a milk-fat and SNF pricing program for milk received from dairy farmers are many and complex. In considering such a program, it is important to know the potential pitfalls in order to be in a position to avoid them.

The dangers inherent in this program are a breed war, a threat to the quality of standard milk and an artificial stimulation to the importation of SNF from out-of-state.

In connection with a preference for milk from one breed of cattle over another, it is desirable that a change in pricing procedure does not act in such a way as to unduly stimulate the supply of milk from one breed in preference to another and that milk from all the regular commercial herds maintains its place in the market.

An objective in pricing milk on a SNF basis is that the quality of standard milk does not suffer. Under the present pricing procedure with milk being paid for on the basis of the volume of skim milk, there is an incentive to maintain high quality because the price for skim milk of a higher SNF test is the same as skim milk of a lower SNF test. In changing over to pricing skim milk not on a volume basis, but on a SNF content basis, skim milk with a lower SNF content will actually cost less than skim milk with a higher SNF content.

The legal minimum standard for the solids-not-fat content of regular milk is 8.15 percent. The average SNF content of the regular milk on the market today is substantially higher than this minimum amount and it is important that a change in pricing method does not stimulate a lowering of the SNF content of regular milk, thereby lowering its quality.

Another pitfall to avoid is the potential of stimulating an out-of-state supply of SNF, either wet or dry.

Presently, no Grade A skim milk solids are imported into the State to be used in Class 1 products. However, if a price per pound of SNF were established at a level substantially higher than the cost of procuring SNF from out of state, an economic environment conducive to importing solids would be created.

These hazards must be given due recognition in formulating a pricing program based on the milk-fat and SNF content of milk.

There are several alternative methods of pricing milk on the basis of the solids content. However, at the present time, three methods seem to provide the most promise.

The first method that would naturally come to one's mind in considering pricing milk on solids content basis would be a method that established a minimum price directly for each of the two types of solid components. Such a method would provide a price per pound of milk-fat component and a price per pound of SNF component. Using this method, it would be

very simple to assign the present milk-fat minimum prices that are in effect to the milk-fat component, and use the present minimum prices per hundredweight of skim milk to arrive at a comparable value per pound of solids-not-fat. Under this method, the present solids-not-fat prices would range from 19 to 23 cents per pound in the fall and winter months and from 15 to 19 cents per pound in the spring and summer months.

This method of pricing might have a very drastic impact on the market because the relatively high price for SNF could stimulate an out-of-state supply. Also, this method offers very little by way of softening the impact of the other hazards previously mentioned.

Another method that is receiving consideration might be described as a plant pool method.

A reference to the plant pool method appeared in 1942 in an article entitled "Paying Producers for Solids and Solids-Not-Fat in Milk" by Rudolph K. Froker and Clifford N. Hardin, Wisconsin Research Bulletin No. 143. The basic feature of this plan was for the distributor to continue to pay the same hundredweight price for milk but to distribute the proceeds among producers upon the basis of the milk-fat and solids-not-fat tests. A modification of this plan which basically consisted of continuing the present minimum price as established for the milk-fat component having the present minimum hundredweight price for skim milk paid into a plant pool by the distributor, who then divides the total dollars paid into the pool for skim milk by the total pounds of SNF received to determine a price per pound of SNF. Producers then would receive this determined price per pound of SNF for the SNF component of the milk that they shipped. Under this proposal, the processor would pay the same price that he pays now but this money would be divided among producers on the basis of the solids components of their milk.

The main advantage of this method is that it would remove any threat to the quality of standard milk because the distributors would continue to purchase the skim milk components on the same basis as before.

A third basic solids pricing procedure is called the "fluid premium" method. Under this method, a value is established and assigned to the three components of milk; the three components being the milk-fat con-

tent, the SNF content, and the residual component which, theoretically, is water. Now this is not just ordinary water. It is more than that. It is the fluid carrier of the other two components. It is a representation of location differentials and it is a component that cannot be obtained by any other means than obtaining fluid milk from the dairy cow because milk of a higher than minimum SNF content cannot be standardized down by the addition of water. Therefore, this fluid has a value. The proposal made using this method would establish the milk-fat value at the present minimum milk-fat price, a minimum price for SNF that is competitive to the open market price for SNF, and the price for the third component would be the difference between the present minimum price converted to a hundredweight basis and these established prices for fat and SNF.

By way of example, if the present minimum prices for the Los Angeles Marketing Area of \$1.04 per pound milk fat and \$1.83 per hundredweight of skim were used, a hundredweight of milk testing 3.8 percent milk fat would cost \$5.71. If the value of the milk fat in this hundredweight were subtracted and the value of 8.8 pounds of solids at the rate of 18½ cents per pound were subtracted, there would remain approximately 13 cents not accounted for. This 13 cents, then, would be the price for the third component which is the fluid.

The main advantage of this proposal is that it provides for the pricing of SNF on a competitive basis and thus removes any stimulation to import SNF.

A number of suggestions that modify or combine features of these three basic plans have been considered. One such suggestion would require that the present prices be paid by distributors into a plant pool but that producers would draw payments from the pool on the basis of the milk-fat, SNF and residual fluid component of the milk.

No description of the impending new pricing program in California is complete without an explanation of the part played by the dairy industry study committees.

The Director of Agriculture has appointed representative leaders of the dairy industry to meet with members of his staff to study the problems facing the dairy industry in California. These members serve without compensation and meet in Sacramento on call by the Director.

There are four such committees: a market milk producer committee, a market milk processor committee, a manufacturing milk producer committee and a manufacturing milk processor committee.

The market milk producer and processor committees have worked jointly along with the staff of the department for a period of several months studying the problems of establishing a new pricing method based on the solids components of milk. Their work has been of great value in several ways. Their meeting has provided a forum to discuss the pros and cons of the several pricing methods. This group sitting together has provided a medium for resolving many of the conflicts between producers and processors and between producers divided on the basis of breed of dairy cattle and section of the State. These men, being leaders in their area and experts in their

field, have provided the Director with expert advice. Also, these meetings have helped the Department and the dairy industry prepare for the public hearings that must necessarily be called and held to establish minimum wholesale and retail prices for low-fat milk and minimum producer prices based upon the milk-fat and SNF components of milk.

These two committees sitting jointly have recommended that public hearings to consider inaugurating the new dairy product, low-fat milk, and establishing a milk solids producer pricing method be called beginning in February 1962, with April 1, 1962, as the effective date for the new marketing orders.

The dairy industry in California is making a major adjustment in its operations to meet the new market emphasis on the solids-not-fat component of milk.