

Milk: Fitness That Could Change

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Do consumers want more protein-fortified milk? Will a richer tasting milk boost sales? These are just two of the questions being raised in response to proposals to change the solids-not-fat content of milk.

As it comes from the cow, milk contains an average of 3.7 percent butterfat and 8.7 percent solids-not-fat (SNF)—4.7 percent lactose, 3.3 percent protein, and 0.7 percent calcium and other minerals. But fluid milk products can be manufactured with a host of different ingredient combinations because milk can be legally and safely altered by removing some or all of the butterfat or by adding concentrated SNF from condensed skim milk or nonfat dry milk.

To assure that comparable products are available nationwide, the Food and Drug Administration (FDA) sets standards of identity for packaged fluid milk moving in interstate commerce, including product names, ingredients, and label information. The present standards took effect July 1, 1975, and most States have adopted them for intrastate sales.

However, for 23 years California milk processors have used higher levels of SNF in whole, lowfat, and skim milk than those established by the FDA (table 1). The result is a richer tasting milk that's higher in protein and calcium than most of the milk the Nation drinks. Some assert that this may be part of the reason that California's per capita consumption of fluid milk products is generally above the national average (table 2).

Considering Changes

Fluid milk still accounts for the largest share of dairy product sales, but its share is dropping as per capita sales have fallen and population growth has slowed. In 1982, per capita consumption of whole, lowfat, and skim milk (excluding flavored

Table 1. California Standards Mean More Solids-Not-Fat in Milk

Fluid milk products	FDA standards	California standards
	Percent	
Butterfat		
Whole milk	3.25	23.5
Lowfat milk	0.5-2.0	1.9-2.1
Skim milk	10.5	30.25
Solids-not-fat		
Whole milk	8.25	48.7
Lowfat milk	8.25	10.0
Skim milk	8.25	9.0

¹Content must be less than 0.5%. ²Allowed to equal 3.4% provided total solids are 12.2%. ³Maximum allowed. ⁴Allowed to equal 8.8% provided total solids are 12.2%.

milk and drinks) was 217.4 pounds, compared with 247.7 in 1972 and 257.2 in 1962. Within the fluid milk category, even more profound changes in consumption have taken place. Whole milk accounted for 60 percent of the fluid milk consumed in 1982, compared with 94 percent 20 years earlier. Lowfat milk products had a 35-percent share in 1982, up from just 1.8 percent of the fluid market in 1962. Skim milk's share has been

fairly constant at around 5 percent of the fluid milk market.

It is generally recognized throughout the dairy industry that the public wants lower fat products, and there is little disagreement among industry groups over the need to provide these. But the appropriate position on the nonfat component of fluid milk is less clear. Currently, Congress, some State legislatures, dairy industry groups, and consumer organizations are discussing raising the FDA minimum SNF standards for lowfat and skim milks, as well as higher butterfat standards for whole milk. At the center of the debate are the California standards.

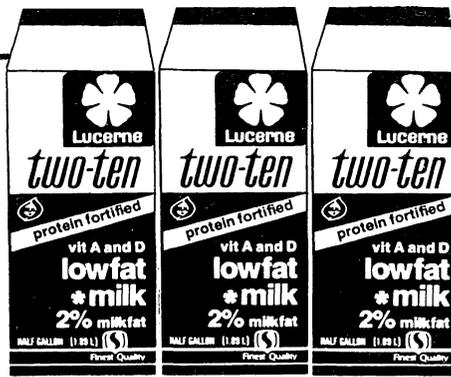
Several factors made it relatively easy for California to adopt higher standards. First, there was no lowfat product being sold there prior to 1962. Consequently, it was easier for the State's dairy industry to agree on the composition of a single lowfat product which research showed was most strongly preferred by California consumers.

Second, California is a relatively isolated and self-sufficient market for fluid milk products, which permits it to adopt standards different from neighboring

Table 2. California Milk Consumption Above the National Average

	Whole milk	Lowfat milk	Skim milk	Lowfat and skim milk	Total fluid
Pounds per capita, 1980					
California	154.2	80.4	13.8	94.2	248.4
Total U.S.	140.6	71.8	11.8	83.6	224.2
Federal order regions:					
N. Atlantic	178.2	39.3	11.8	51.1	229.3
S. Atlantic	140.7	43.7	7.8	51.5	192.2
E. North Central	129.8	94.2	12.5	106.7	236.5
W. North Central	94.9	131.2	19.1	150.3	245.2
E. South Central	141.5	67.2	6.9	74.1	215.6
W. South Central	163.6	35.5	7.2	42.7	206.3
Mountain	142.6	99.2	10.5	109.7	252.3
Pacific	100.4	144.2	9.9	154.1	254.5
All orders	138.6	71.8	11.4	83.2	221.8

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Those who oppose raising the national standard sometimes argue that protein-fortified milk is already available for those who want it.

system. Four benefits are often claimed for this system. Raw product costs are more uniform among processors because their payments to farmers are directly related to the various milk components they deliver. Second, since producers are paid on the basis of the actual pounds of butterfat and SNF in the milk they deliver, there is no incentive to add water to their bulk tanks to increase the volume, and thus the value, of their shipments. The multiple-component pricing system has also allowed the value of butterfat to producers and costs to processors to drift lower and more in line with its value to consumers. Finally, many producer groups assert that more SNF in fluid milk has helped stem the decline in California's per capita fluid milk consumption.

Nevertheless, some California processors say the system has its shortcomings. Some believe the butterfat standard for whole milk is too high given expressed consumer preference for foods low in fat. Others cite the costs of daily testing of milk at plants under the California component pricing system and argue that composite samples would be sufficiently accurate and much less expensive. A third complaint is that SNF fortification of whole milk should not be required since it is not rewarded in the marketplace.

Views on Changing the National Standards

Some proponents of more solids in milk nationwide argue that the marketplace has not provided the type of products consumers want. Some believe that

States. With very little packaged fluid milk moving across State lines, the higher California standards do not affect interstate trade.

Although no longer used, minimum retail prices established and enforced by the State also made the transition to higher standards smoother and more predictable than it would have been in other markets. When California's minimum standards were put into place, the State's resale price control program set the margin between prices of whole, lowfat, and skim milks in order to stabilize the market. For a time after the introduction of fortified lowfat milk, the minimum retail price was equal to that of whole milk. However, as lowfat sales grew, plant efficiencies were obtained by processors, and retail prices for lowfat milk were lowered relative to whole milk.

Finally, the simultaneous adoption of multiple-component pricing and higher standards assured both that costs among processors would be more equal for raw products and that there would be a market for the SNF they were paying for on a component basis.

The price most U.S. farmers receive for their milk varies only with changes in the butterfat content. There is a high correlation between SNF and butterfat in most cow's milk, and farmers indirectly receive a differential payment for the SNF content of their milk. However, the pricing system places more emphasis on butterfat, and there is no penalty for milk of low SNF content.

The SNF content of milk affects the yield of many manufactured dairy products. For example, milk of high protein content (a key ingredient of SNF) is especially desirable for cheese production since yields are increased and more cheese is produced from a given volume of milk.

In general, California's milk processors support the State's solids standards and companion multiple-component pricing

under present Federal standards, lowfat milk products lack taste and texture. Intense competition at the wholesale and retail levels has pushed products toward the minimum standards for the lowest possible prices.

Proponents frequently cite California's record as proof that higher standards will sell more fluid dairy products. Per capita consumption of fluid milk in California is about 11 percent above the national average, although consumption in some regions of the United States exceeds that of California. However, there are several other factors, in addition to higher solids standards, that may account for the State's above-average consumption of fluid milk products. California has:

- relatively low retail milk prices because of efficient farms and markets.
- a population younger than the U.S. average—important because children tend to drink more milk than adults.
- especially high milk quality on the farm and throughout the distribution system.
- one of the oldest and most innovative milk advertising campaigns in the Nation.

Most dairy farmer groups, including the National Milk Producers Federation, favor higher national standards. Generally, it's felt that, although retail prices would rise slightly, sales would increase because of improved taste, producer returns would grow, and Federal dairy product purchases under the price support program might be reduced.

Meanwhile, opponents assert that fortified fluid milk products are already available in most markets, and some consumers opt not to buy them because of the added costs. In fact, market data for the past 15 years show a decline in fortified (high SNF) fluid milk product sales.

Milk processors argue against higher standards which they feel would hurt sales by raising costs of ingredients and processing. They also say that since

Federal standards only pertain to milk sold interstate, competitive relationships could be harmed because individual States could have lower standards for milk sold within their borders. Local processors selling milk only within the State could thus have a competitive advantage. Processors also feel the issue needs further study, partly because consumers have not expressed a preference for fortified products in the marketplace, and mandating higher standards reduces their freedom of choice. Processors suggest new standards might need to be coupled with a multiple-component pricing plan.

A coalition of seven consumer groups opposes increasing the standards. They feel prices for fluid milk products, especially lowfat milk, would rise and discourage consumption, adding to Government purchases. Additionally, consumer choices would be limited, and higher minimums would lead to more

Government regulation of milk markets. A retail grocers trade association opposes new standards on many of the same points.

In opposing legislation in Congress in 1982, the FDA pointed out the explicit statutory purpose for food standards—the promotion of honesty and fair dealing in the interest of consumers—should continue to be the basis for justifying the Federal standards for milk. The FDA does not believe that the authority exists for changing the standards simply to improve quality or promote sales, although it has changed standards in the past to require addition of a nutrient in order to improve the nutritional quality.

Higher SNF standards would generally have positive nutritional effects on milk drinkers—especially where diets are deficient in calcium. At the same time, higher butterfat standards could raise concerns about the level of cholesterol and calorie intake. Furthermore, to the extent that higher milk prices discourage consumption, lower income people might be nutritionally disadvantaged.

If higher Federal standards are to be effective, greater enforcement at the processing level would be needed. The California experience suggests that enforcement is possible, but at an additional expense.

Costs and Consequences

While conflicting consumer and industry opinion abounds on the impacts of changes in the standards, it is possible to identify the effect on milk sales of price increases caused by higher solids standards. Added ingredients and processing costs, if passed on to consumers, would raise the price by about 3.1 cents for a half gallon of regular whole milk, 5.7 cents for regular 2-percent lowfat, 3 cents for fortified 2-percent lowfat, 5.4 cents for regular 1-percent lowfat, 3.6 cents for fortified 1-percent lowfat, and 1.6 cents for regular skim milk. This implies an overall average retail price increase for fluid milk products of about 3.5 cents a half-gallon—a 3-percent rise.

Depending on how the cost increases are passed on to consumers and their reaction to price changes, sales of all fluid milk products likely would drop between 537 million pounds (1.1 percent) and 2,347 million pounds (4.7 percent) annually. Under these scenarios, consumer expenditures for milk could increase by up to \$200 million annually or fall by as much as \$600 million if sales decline significantly.

The higher standards could increase SNF sales between 12.7 million pounds and 180.3 million pounds a year, and butterfat sales might gain from 10.2 to 58.7 million pounds if the California standards were adopted nationwide. Because freshly produced nonfat dry milk powder and condensed skim milk would be used in commercial fortification, Federal purchases of surplus dairy products could be reduced between \$12 million and \$218 million annually from costs of about \$2 billion annually in recent years. □

