Nonfat Solids Standards for Milk: Proposed Legislative Changes

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SUMMARY

Pending dairy legislation would increase the minimum Federal standards for solids not fat (SNF, or nonfat solids) in beverage milk from the current level of 8.25 percent for all types of fluid milk to 8.7 percent for whole milk, 9 percent for skim milk, 10 percent for 2% milk, and 11 percent for 1% milk.

Proponents of a change, which include many dairy farm groups, contend that the higher minimum standards would sell more milk, thereby reducing chronic dairy surpluses that tend to depress farm milk prices and increase dairy price support spending. The higher standards would require milk to be fortified with additional nonfat dry milk or concentrated skim milk, boosting farm sales. They also contend that milk fortified with nonfat solids is a better tasting, more nutritious product that would likely increase consumer demand for fluid milk.

The opposition, led by dairy processors and some consumer groups, counters that fortifying milk with nonfat solids would be so costly that the resulting increase in the consumer price of milk would cause a decline in demand that would more than offset any positive effects of the higher standards. They also maintain that a change in standards would add only marginal nutritive value to milk; usurp the rights consumers currently have to choose between fortified and unfortified milk; and require a restructuring of the current farm pricing system which places value only on the fat content of milk.

CURRENT NATIONAL STANDARDS OF IDENTITY

Unprocessed farm milk has three broad components: water (which constitutes nearly 88 percent of milk, by weight), milk solids not fat (SNF, or nonfat solids, which on average comprises about 8.6 percent of milk), and milkfat (averaging about 3.65 percent). The nonfat solids portion of milk consists primarily of protein; lactose, a naturally occurring sugar; vitamins; and minerals such as calcium, iron, magnesium, phosphorus, potassium, sodium, and zinc. The combination of milkfat and nonfat solids is commonly referred to as the total solids content of milk.

Section 401 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 341) authorizes the Secretary of Health and Human Services (HHS) to establish for...
any food a reasonable definition and standard of identity, when it is in the best interest of the consumer.

The Food and Drug Administration, an agency of HHS has regulations (21 CFR, Part 131) governing the minimum standards of identity for fluid milk and many milk products. These Federal standards apply to milk that is sold across interstate borders, but most States have adopted these minimum standards for intrastate shipments of milk as well.

Included within the Federal regulations are standards for both the fat and nonfat solids content of milk used in final package form for fluid consumption:

**Milkfat Standards:** Current Federal regulations require that whole milk contain not less than 3.25 percent milkfat. Lowfat milk must have a sufficient amount of fat removed so that it contains either 0.5, 1, 1.5, or 2 percent milkfat. Skim milk must contain no more than 0.5 percent milkfat.

**Nonfat Solids Standards:** Regardless of the fat content of the milk, the FDA regulations require all milk sold for fluid consumption to contain a minimum of 8.25 percent nonfat solids. Processors are already permitted to add vitamins and other nonfat solids to lowfat and skim milk to exceed the 8.25 percent standard, as long as the ratio of protein to nonfat solids is not reduced by such fortification. (The regulations are silent on nonfat solid fortification of whole milk.) Fortification with nonfat solids usually involves the addition of nonfat dry milk or concentrated skim milk to fluid milk in order to increase its percentage concentration of nonfat solids.\(^1\)

**CALIFORNIA STANDARDS**

Since the Federal regulations mandate minimum standards of identity that apply to interstate shipments of milk, any State is free to adopt standards that exceed the Federal standards. California mandates only slightly different milkfat standards for whole milk and skim milk, but significantly higher nonfat solids standards for all categories of milk. The Federal and California minimum solids standards are compared in table 1.

**Increasing SNF Standards: Pros and Cons**

Congress has been considering for the last several months various policy options designed to reduce dairy surpluses that tend to depress farm milk prices, and the Federal costs associated with purchasing this surplus through the dairy price support program. Many of the proposals that Congress has considered have involved some type of supply management program, whereby either voluntary or mandatory production controls would be authorized. Many farm

\(^1\) Nonfat dry milk is defined as the product that is obtained when all water is removed from pasteurized skim milk. Concentrated skim milk involves the partial removal of the water from skim milk.
groups contend that any supply management approach that is adopted needs to be complemented with a demand enhancement strategy.

Consequently, these groups have proposed that the minimum national standards for nonfat solids be statutorily increased to the level currently in effect in California. The SNF standards would be increased from the current level of 8.25 for all milk to: 8.7 percent for whole milk, 9 percent for skim milk, 10 percent for 2% milk, and 11% for 1% milk.

This proposed increase in SNF standards has been the subject of much controversy, with proponents and opponents each presenting conflicting scenarios of whether higher standards would achieve the intended goal of spurring demand for fluid milk and reducing the milk surplus to the point that farm milk prices would improve. The concept of federally mandated SNF-fortification is not new. An attempt was made to increase the national SNF standards to the California level in 1982, when the Senate attached an amendment to the FY83 agriculture appropriations bill, that was later deleted in conference. (See the Congressional Record of Sept. 28, 1982, pages S12394-8.)

**Pros:** The major proponents of an increase in the national standards are many dairy farmer groups, including the National Milk Producers Federation, the largest trade organization of dairy farmer cooperatives. They contend that an increase in SNF standards would have several positive effects on the milk market.

First, they contend that since most farm milk would not meet the increased standards, the necessary fortification of milk with either nonfat dry milk or condensed skim milk would move more of these milk components on commercial markets. Since nonfat dry milk is one of the products that the Federal Government purchases through the dairy price support program, proponents maintain that a stronger commercial demand for the product could potentially reduce Government expenditures.

Second, proponents also maintain that milk fortified with nonfat solids is a better tasting, more nutritious product which consumers will prefer over unfortified milk. As a result of the higher standards, they estimate that

<table>
<thead>
<tr>
<th>Fluid Milk Product</th>
<th>National Fat</th>
<th>National SNF</th>
<th>California Fat</th>
<th>California SNF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Milk</td>
<td>3.25</td>
<td>8.25</td>
<td>3.5</td>
<td>8.7</td>
</tr>
<tr>
<td>Lowfat Milk</td>
<td>0.5-2.0</td>
<td>8.25</td>
<td>2.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Skim Milk</td>
<td>&lt; 0.5</td>
<td>8.25</td>
<td>&lt; 0.25</td>
<td>9.0</td>
</tr>
</tbody>
</table>
Consumer sales of milk would increase, further reducing the surplus. Proponents point to milk marketing statistics that show that per capita consumption of all types of fluid milk have been consistently higher in California in recent years than the national average rate of milk consumption, and attribute this to the higher California standards.

If fluid milk sales increase, milk producer income would likely increase as well, say the proponents. Under Federal milk marketing orders, processors are required to pay into a producer marketing pool a higher price for milk used in fluid form than milk used for cheese, butter, yogurt or other processed dairy products. Therefore, more fluid use of milk could mean more producer income.2

**Cons:** Leading the opposition against the increase in SNF standards are milk processors and their largest trade group, the Milk Industry Foundation, as well as various consumer groups. They maintain that the producer groups are making dubious assumptions about the costs and benefits associated with the increase in SNF standards.

They question the claims that consumers want a “thicker” milk and believe that the higher costs associated with fortifying the milk and the resulting higher consumer prices will cause consumer demand to decline, further exacerbating the milk surplus rather than improving it. Opponents point out that consumers already have the option of purchasing SNF-fortified milk in many markets, but demand for such products has been declining steadily over the last several years. Mandating higher standards, they say, will deprive consumers of choice.

Moreover, opponents argue, consumers will be receiving a product that has very little added value for the additional cost. They contend that the added nutritive value is only marginal and that some consumers, particularly those that are lactose intolerant, may be adversely affected by the addition of more lactose to the milk through fortification. Lower-income consumers and the domestic feeding programs (such as the Women, Infants and Children (WIC) program, food stamps, and the school lunch program), would also be affected by the change in standards, say the opponents, since the higher consumer costs would be hardest for these groups and programs to absorb.

Opponents have also expressed concern about the process through which the standards would be changed. Legislation to increase the SNF standards is originating in the agriculture committees, which do not have primary jurisdiction over FDA. Therefore, rather than amending the Federal Food, Drug, and Cosmetic Act, legislative proposals would mandate the higher standards through the Federal milk marketing order system, which regulates fluid-grade farm milk prices in a large portion of the Nation. Opponents

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2 Milk marketed under the Federal order system combined with the California state order account for more than 90 percent of all fluid milk sales. For more information on Federal orders, see Milk Marketing Orders: Background and Current Issues, CRS Report Number 90-542 (ENR).
maintain that Federal milk market administrators lack the resources to monitor fluid milk standards, and that FDA is better equipped to continue serving this function.

Those opposing an increase in standards also maintain that the California milk consumption record is not as impressive as the proponents claim. Although per capita California milk consumption is higher than the national average, say the opponents, several milk marketing order regions can boast of a higher per capita consumption rate than California. They also contend that the above-average consumption rate in California may be attributable to the State's aggressive advertising campaign for milk, lower retail prices, and a younger population, rather than the higher standards. 3

COST OF HIGHER SNF STANDARDS

Additional costs associated with higher SNF standards stem from two sources: 1) processors will have to procure necessary quantities of nonfat dry milk or concentrated skim milk to meet the higher standards, and 2) some processors would have to purchase the necessary equipment to process the milk.

Cost estimates associated with complying with the higher standards have been provided by the U.S. Department of Agriculture, the National Milk Producers Federation, and the Milk Industry Foundation, among others. A consensus of these estimates shows that the higher standards would have the following effect on the cost of producing a gallon of milk:

<table>
<thead>
<tr>
<th>Milk Type</th>
<th>Cost Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Milk</td>
<td>+ 3 to 4 cents per gallon</td>
</tr>
<tr>
<td>Lowfat Milk</td>
<td>+ 14 to 17 cents per gallon</td>
</tr>
<tr>
<td>Skim Milk</td>
<td>+ 4 to 7 cents per gallon</td>
</tr>
<tr>
<td><strong>All Fluid Milk Average</strong></td>
<td><strong>+ 8 to 10 cents per gallon</strong></td>
</tr>
</tbody>
</table>

The added cost of fortifying lowfat milk would be significantly higher than for whole milk and skim milk, since the proposed SNF standards for lowfat milk are higher. Lowfat milk has been the fastest growing category of milk sales in recent years.

A major unknown in this analysis is how much of the cost increase processors and retailers will absorb by narrowing their profit margins, and how much they will pass on to the consumer. Also unknown is how consumer demand will respond to a higher-priced fortified milk.

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3 For a more detailed analysis of the pros and cons of an increase in SNF standards, see Nationwide Adoption of the California Solids Standards for Fluid Milk Products, Issues and Impacts, published by the U.S. Department of Agriculture's Economic Research Service, August 1984. Staff Report Number AGES840816.
The National Milk Producers Federation estimates that the economic effect of an average 10-cent increase in retail milk prices would reduce total milk consumption by less than 1 percent. However, milk consumption would actually increase rather than decline, say producer groups, since consumers would be willing to pay the higher price based on the perceived improvements in taste and the nutritive value. Processor groups counter that consumer response to the higher prices and the change in standards will be negative on both counts. They estimate that milk consumption will decline by 1.5 percent annually under the higher SNF standards, which they say would more than offset consumption gains realized in recent years.

MULTIPLE COMPONENT PRICING

One of the few issues in the SNF standards debate on which both producers and processors have little disagreement is that mandated higher standards would require a restructuring of the current farm milk pricing system. In nearly all Federal milk marketing order regions, dairy producers are paid according to the volume of milk they produce and receive a premium when the milkfat content exceeds 3.5 percent. Many have questioned the efficacy of the current pricing structure, given that many consumers have shown a preference for lowfat milk products in recent years, and that no more value is placed on the SNF in milk than on its water content. (Cheese processors in many regions do pay farmers a premium for milk that contains a higher protein content, but this is not part of the formal pricing structure of Federal orders.)

If higher SNF standards are adopted, most groups agree that a multiple component pricing (MCP) structure should be adopted, whereby producers would be paid according to the value of both the SNF and the milkfat in the milk that is delivered. Such a change could be implemented administratively through the Federal order amendment process. Processors maintain that higher SNF standards without MCP pricing would be inequitable, since processors would pay the same price for milk regardless of the SNF content. Many economists believe a move to MCP would encourage farmers to produce milk with a higher SNF content and help reduce the costs associated with the higher standards.