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Dairy Subcommittee of the U.S. Senate Agriculture Committee
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**Introduction**

Thirty-two years ago, I bought Cedar Grove Cheese. Ten years ago, I started Clock Shadow Creamery, an innovative, urban cheese factory. One of my colleagues said that I have the perspective of a seasoned dairy processor. However, I have always viewed our role as supporting the producers who supply milk to our factory as well as the health and safety of our consumers. I am confident that the average price paid to our patrons has been among the highest in the country.

Forty-seven years ago, I was on the staff of the Joint Economic Committee. Chairman Wright Patman directed me to the Library of Congress to find his statement at a hearing on the Glass-Steagall Banking Act of 1933. Afterward, he sent me a memo praising me for providing exactly what he wanted, with no additional fluff. The Congressman's note of appreciation for brevity is one of my most valued mementos.

Unfortunately, the subject of today's hearing is much tougher to condense:

> Administered milk pricing, established by Congress, functions opposite to its intent. Market orders cause higher dairy prices for consumers and lower milk prices for farmers. The system responds slowly and inadequately to changes in costs and demand shocks. The complexities of market orders create opportunities for anti-competitive behavior and promote consolidation among suppliers.
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> Today, the dairy industry faces unprecedented challenges. We face increased international competition. We face rising costs and uncertainty from climate change. And, we face disruptive technologies that could replace much of the dairy industry. To serve our customers and farmers, we must be efficient and reduce our environmental footprint. Administered pricing does not and cannot set dairy product prices fairly or efficiently. The survival of the dairy industry may depend on eliminating the rigidities of the market order system as soon as possible.

An entrenched network of institutions and experts thrive on their specialized access and esoteric knowledge about milk marketing. They create controversies, including arguments about the appropriate number and boundaries of market orders; the size of make allowances; the number of product classifications; pooling requirements; negative producer price differentials; or whether the Class I mover should be based on an average or higher of the prices in other product Classes. All of these controversies are distractions from the main point. Administered pricing is inherently inflexible and inefficient. Other competing products are not subject to similar intervention.

The dairy industry has operated under market orders for about 80 years. During that time, the numbers of farmers and milk buyers has crashed, but the variety, quality and quantity of dairy products has improved. We have gotten by in spite of market orders that cause excessive shipping, distort the mix of products and discourage innovation.

Over the last year, milk was dumped while shelves were empty and people went hungry. That pandemic dumping was well-publicized, but it is not unusual for the market orders to pay farmers to dump milk. Wasting milk is disrespectful to the cows, to the farmers who raise, feed and milk them and to the hungry people who could use the milk. This is a sign of a decrepit and indefensible system.

Here is another example of the absurdity of milk pricing. Yesterday, I learned the market order price for milk that I bought from farmers on August 1st. That is over 40 days after I have sold some of the cheese. In three days, my patrons will learn what they were paid for August milk. They have already made production decisions for September, and probably, October without knowing whether they will make money.

There are many other huge topics in dairy pricing. Dairy farmers, like cheese plants, have been through a tough period. Government programs to purchase and distribute dairy products were enthusiastically embraced throughout the industry. Direct payments to farmers efficiently provided relief. Many of my farmers would welcome supply management to raise milk prices, presumably offset by subsidies to needy consumers. I might prefer a solution that does not make it hard for dairy products to compete, but I welcome efforts to assist small dairy farmers. The

margin protection programs from the last Farm Bill had the opposite effect, lowering prices by encouraging additional production. These are tough issues, but I am going to limit my discussion here to market orders.

**A Vestige of the 1930s**

The first justification for administered pricing in the early years was nutrition. During the Great Depression, Congress wanted to assure that fluid milk was available to people, especially children, throughout the country. At the time, most milk was sold locally. Milk production was concentrated in Wisconsin, New York and a few other states. The Federal Milk Market Order (FMMO) was designed to encourage farmers to produce milk in underserved regions and to prioritize milk to bottling rather than other dairy products.

Today, bulk fluid milk moves easily around the country. And, there is plenty of milk for the relatively small fluid market. Nonetheless, the market order system continues to encourage dairy farming in hot and arid parts of the country where feed has to be supplied from hundreds of miles away.

A secondary purpose for establishing administered pricing was to protect small farmers from exploitation by “large” processors. By establishing minimum prices, all covered farmers, especially farmers in regions with few potential buyers, would be protected from exploitation.

Today, most milk is produced on farms that make more milk than my cheese plant uses. The total number of farms in Wisconsin fell from 140,000 to under 7000 while the total volume of milk increased. Most milk comes from farms that sell tanker loads of milk, often with part of the water removed, and the farmers are able to sell to buyers hundreds of miles aware. Farmers are savvy and sophisticated business owners, often belonging to marketing groups, who are not exceptionally needy of government protection.

Participation in marketing orders is not mandatory, except for bottling plants. Why would manufacturers of other dairy products voluntarily make their milk available to the market order?

To encourage participation, the Federal Milk Market Order system, created "classified pricing". To simplify, a premium price for bottled milk creates a premium pool that is distributed to manufacturers of yogurt, cheese, or butter and milk powder. When participating manufacturers receive their share of the pool, they must pay higher prices to their farmers. Companies that don't participate have less money and would lose farms.

**Flimflam**

I asked Senator Gillibrand's staff to omit the part of my biography when I worked for a carnival, Royal American Shows. But, actually, I find that I learned many valuable lessons in that job. Let me illustrate the market order system with a kind of shell game.

I have 4 cups (Class I, II, III, and IV) and under each one I place 5 beans, representing milk from 20 identical farms. For simplicity, think of a bean as a gallon of milk produced by one farmer and initially earning that farmer $1/gallon.

The Market Administrator says, "We can raise the price of fluid milk if we reduce the volume of milk going to bottling". So, three beans move to the other cups. The price of milk in Cup I jumps from $1 to $2.50 because of scarcity. But, because there is now more milk in Class II, III and IV, the price those manufacturers get for that milk goes down to $.83. Those farmers aren't happy and the companies they sell to don't like the game. Only the two farmers supplying the first cup are happy. So, the Market Administrator takes the extra $3 from the first cup and gives part to each of the farmers supplying the other three cups. Now, every farmer gets the same $1 price for their gallon of milk.

In this case, the price received by the farmers is the same as if the Market Administrator had not intervened and milk in each cup sold for $1. But milk in the first cup only uses 10 percent of the total milk supply and each of the other cups get 30% of the milk rather than each getting 25%.

From the perspective of the 18 farmers in the last three cups, the market order is wonderful because it has given them $.17 of "extra" money compared to the $.83 that came from sales of products made from their milk.

**A Tax on Vulnerable Consumers**

So, if our cup game represented the real world, why would policy favor the administered pricing system over the competitive market?

Some economists have sold this system to farmers and policy makers as a way to take advantage of market segmentation. The theory is that the total returns for milk can be increased if some segment, in this case fluid milk, has inelastic demand. By reducing the amount of milk in that segment and raising its price, while redirecting the milk to other segments, the total amount of money spent by consumers for dairy products would increase. In other words, the order would take advantage of consumers who continue to buy fluid milk when its price is increased (or at least do not reduce purchases proportionately). We add more extra money to Cup I than we take away from the other three.

Of course, this strategy runs directly counter to the initial purpose of the market order, namely to support nutrition by making milk available to consumers, especially children. The product we ostensibly want to encourage people to consume has an artificially higher price. The premium on fluid milk also causes higher costs for school lunches and government food programs.

What's more, those economists were wrong in expecting consumers would keep buying more expensive milk. Over time, milk has faced more and more competition in the beverage sector. Non-dairy substitutes, enhanced water, juice, coffee, and alcoholic beverages have taken market from fluid milk. Bottled milk's share of total milk and of total beverage sales has been in continuous decline for decades. Because consumers buy less fluid milk, the premium pool to be shared with other manufacturers keeps shrinking.

Back to our cups. Suppose consumers will pay only $2 for fluid milk in Cup I rather than $2.50. The pool is $2.10 and after distribution each of the 20 farmers gets $.95. Farmers supplying cups II through IV still see that they are receiving $.12 more than they would have gotten from their own market.

That is what this old, former-carnie would call a flimflam. The farmers cannot see that without the intervention of the market order, they would have received a dollar. "Everyone is a winner!"

The illusion of winning even when actually losing explains some of the continuing loyalty to the market order system. Manufacturers of Class II, III and IV products, and the farmers who supply them, see the gifts from Class I. But, they cannot discern that the total pot is smaller.

There is no evidence that current Class I and II premiums are optimal and provide enhanced value to farmers. If the premiums are set too high, then a larger drop in milk sales results in lower revenue. If the premiums are set too low, then value lost in other classes could be greater than the premiums. Not only is it unclear that there is a Cinderella value of premiums that helps farmers, but if there is such a value, there is no evidence that the government is able to choose it.

**Complications**

Part of the reason it is hard to see whether or not market orders are beneficial is because they are immensely complicated. Market orders distort the mix of products. Market orders create numerous inefficiencies including needlessly transporting milk. Eleven different regional market orders have different prices and rules. Large companies move milk to take advantage of order differences. But the overall point is that the regulations and order shopping reduce the size of the pool and the total money available to farmers.

Bottling plants often compete for contracts, such as schools, that required advanced pricing. To enable bottlers to set an advanced price, market orders base premiums for Class I on the prices of cheese and butter and powder in an earlier period. This creates mismatched timing in the formulas. When commodity prices are going up, the pool of premiums on fluid milk can be small or non-existent. The lags are partly responsible for the controversial negative Producer Price Differentials (PPDs). In those periods, other dairy processors and their milk suppliers are subsidizing bottlers.

Small or negative PPDs occur most frequently in areas where the percentage of milk used in bottling is small. When the premiums are no longer an incentive to participate, milk associated with those other products is pulled from the administered pricing system. Various market orders have created rules to prevent or discourage companies from “depooling” milk. Sometimes milk dumping occurs

when suppliers are forced to stay in an order that that has no capacity to use the milk.

During the past year and a half, most milk has not been pooled in market orders because the cost of participation is greater than the value. My factory decided two years ago to leave the administered pricing system. Many other independent dairy companies have made the same choice. The draw from FMMA Order 30 over the past several years has averaged negative, meaning our milk producers were being taxed to support farmers supplying other plants.

The decision to depool also results from technical flaws in the pricing system. Unlike cooperatives, proprietary plants are required to pay each farmer a minimum price based on components of their milk. The formula for calculating that price recognizes that plants have a cost of transforming milk into cheese; The current “make allowance” was established based on studies conducted about 12 years ago. Most of the information came from the old California market order and was based on the costs in large volume plants using powder in addition to fluid milk. These allowances were below the costs faced by actual plants in most of the country even when they were adopted.

Since the “make allowances” were calculated, costs have increased significantly. Just over the past year, we have faced increases in costs of cultures, enzymes, salt, plastic, cleaning supplies and cardboard averaging over 5 percent. Labor costs alone for our plant have increased about 4 cents per pound of cheese. Inflationary pressures have increased “post-pandemic”. If we were to pay every farmer the required market order minimum prices every month, we would not be able to pay our employees. It takes more than a just a positive pool draw to justify participating in the market order because the formula does not account for real processing costs. Continuing inflation will force more proprietary companies to withdraw.

To illustrate, think about another carnival scenario. I have an ice cream stand and but I have to buy the ice cream mix from the carnival owner. When I charge 25 cents a cone, the owner charges me 30 cents. If I raise my price for a cone to 30 cents, she charges me 35 cents for the mix. The obvious solution is to sell cotton candy.

Similarly, cheese producers are under increased pressure to sell varieties of cheese other than Cheddar so they are able to make money. If they make cheddar and pass along cost increases the formula will increase the price of milk. Basing the Class III formula on Cheddar prices discourages production of that variety. The price of that biggest selling variety, Mozzarella, is not included in the weekly survey of prices used in FMMO price formulas.

Among the rules governing market order participation is a requirement that plants demonstrate their ability to supply milk to a bottling plant. These shipping requirements have varied widely across order regions and over time.

The most significant change in access has resulted from consolidation among bottlers. At one time, we had several bottling plants that we could call on to buy the qualifying loads and they in turn would call me if they needed more milk. Many bottling plants closed or were purchased by larger conglomerates and cooperatives. Other bottling plants entered into full supply agreements with larger milk suppliers. Today, national concentration in milk bottling is high and, regionally, sellers of bulk fluid milk may have few options to qualify their milk for access to pool draws. Besides limiting market order access, the requirements for qualifying shipments contribute to unnecessary trucking and greenhouse gas emissions.

In place of our direct relationships with bottlers, we were offered the option of joining a “super pool” (Central Milk Producers Cooperative) administered by the cooperatives who also set the regional market order rules. In a very complicated and obscure process, the administrators would decide when and how much milk we had to ship and which bottling plants it would go to. By joining the super pool, we lost control of timing and predictability of shipments as well as pricing of the milk. Some years we would have no milk shipments, but would be allowed to continue to participate in the market order based on shipments by other entities in the super pool. We had higher management expenses and made less money than we did when we could supply bottlers directly. This contributed to our decision to exit the market order.

To summarize, I suspect that voluntary participation in market orders by proprietary processors will continue to decline. Only fluid milk handlers are required to participate. The various market order formulae are rigid and cannot

adjust quickly to changes in costs or technology or demand. Current make allowances are woefully inadequate. Only companies or cooperatives who can manipulate that system will remain and any benefit to their farmers will shrink. People who make their living by understanding the orders will engage in increasingly desperate efforts to tweak the system to encourage participation. Likely, they will solicit various forms of Congressional intervention to keep the system afloat. These efforts are not primarily based on the ability to help farmers.

**New Challenges**

The dairy industry has survived, and in some cases thrived, through 80 some years of market regulation and administered pricing. Why is it urgent to reconsider the system today?

One reason is the need to address every policy that contributes to climate change. Removing authority for milk market orders would prevent excess trucking of milk to take advantage of differences across the orders or trucking as a requirement of participation.

Another challenge prodding change comes from companies investing in ways to produce milk that do not involve animals. Plant-based milk substitutes, such as soy and almond drinks, provide an important alternative for people who are unable to consume dairy. But, these products have, so far, been unable to replicate milk for nutrition, taste and functional properties. To date, the sales of these products have grown, but only a small amount of consumption has seemed to replace milk.

In coming years, fermentation-based technologies may pose a bigger threat to milk. New startups are attracting large investments from large, international investors. Some of the bio-food companies are using genes transplanted in microbes to produce specific dairy proteins in large tanks. Those proteins are then isolated and have the same characteristics as milk-derived components like casein and whey protein. Several ice cream companies are using these to produce non-animal ice cream.

The potential for large-scale production of whey protein, presents a serious threat to the dairy industry. For every pound of cheese, about 9 pounds of whey is left

from the milk. During the last couple decades, selling whey powder has created significant revenue for cheese plants, especially those that have their own drying capacity. Whey protein goes into many products as diverse as energy and body building drinks, and pancakes. The new industry may be able to gather feedstock for their bio-processors and produce an isolated “whey” protein cheaper than dairy plants can cool, pasteurize, remove lactose and fat, and dry whey. Without a whey market, cheese plant’s disposal would be environmentally challenging and expensive for dairy processors.

In the latest technological development, some scientists have replicated bovine (and maybe human) mammary cells, grown them in mass and learned how to make them lactate. Unlike the earlier technology, this technique claims to be able to produce the entire matrix of “milk”, including fat, sugar, vitamins, minerals and other nutrients, that is indistinguishable from cows’ milk.

The success of these alternative methods of producing “dairy” products hinges of economic cost and consumer acceptance as much as science. To compete, the dairy industry will need to reduce its environmental impact and lower its costs as much as possible. It will need to convince consumers that cows are not as creepy as vats full of genetically-altered cells.

None of the challengers to milk sales, including international competitors and processors of vegetable analogs or biotech replacements, are saddled with the burden of the milk market orders. The dairy industry needs to quit squabbling over esoterica of milk marketing and keep its eye on the prize, our customers. The government should step out and let dairy compete. That is the best hope for our farmers.