
**Memorandum**

April 13, 2015

To: Agricultural Marketing Service, USDA

From: Wisconsin Cheese Makers Association

**Re: Comments on the 610 Review of Federal Milk Marketing Orders**
**Docket ID: AMS-DA-09-0065**

**Background from USDA**

The purpose of the review is to determine whether the FMMO program should be continued without change, amended, or rescinded (consistent with the objectives of the Act) to minimize any significant economic impact of rules upon a substantial number of small entities. AMS will consider the continued need for the FMMO program; the nature of complaints or comments received from the public concerning the FMMO program; the complexity of the FMMO program; the extent to which the FMMO program overlaps, duplicates, or conflicts with other Federal rules, and, to the extent feasible, with State and local government rules; and the length of time since the FMMO program has been evaluated or the degrees to which technology, economic conditions, or other factors have changes in the area affected by the FMMO program.

**Introduction**

The Wisconsin Cheese Makers Association (the Association) is a cheese manufacturer trade association representing 82 dairy manufacturing sites in Wisconsin and 40 manufacturing sites outside of the state, as well as 41 sites that further process and market dairy products. The majority of Association members manufacture cheese, including most styles produced in the U.S. Other members further process and market dairy products including whey products, pasteurized process cheese, cold pack cheese, cheese cut and wrapped for sale and cheese used in foods. Association membership includes both Grade A and non-Grade A manufacturers of dairy products.

In the U.S. Code of Federal Regulations, Title 13 121.201, small business entities are defined, and in subsector 311 for Food Manufacturing, small business size is noted as 500 employees or fewer. (This is true for Fluid Milk Manufacturing, Creamery Butter Manufacturing, Cheese Manufacturing, Dry, Condensed and Evaporated Dairy Product manufacturing and Ice Cream and Frozen Dessert Manufacturing in subsector 311.)

Nearly every dairy product manufacturer member of the Wisconsin Cheese Makers Association is a small business by this relevant definition. Thus, this review of federal milk marketing orders "to minimize any significant economic impact of rules upon a substantial number of small entities" is applicable to nearly every dairy manufacturer in the Association, and to most dairy manufacturers nationwide.

**Dry Whey Pricing in Federal Order Class III Formula**

A particular concern in federal order regulation is the inclusion of the value of dry whey in classified pricing. As the Agricultural Marketing Service notes on its website, *"The Class III and IV milk and component prices and the Class II butterfat price are based on the monthly average product prices. Butter, Cheddar cheese and dry whey prices are used to compute values for butterfat, protein, and other solids, respectively."* The other solids value, included in the Class III milk price, is based on the value of dry whey as surveyed by USDA Agricultural Marketing Service.

The concern for small business entities is that the majority these small manufacturers do not produce dry whey. Yet the value of dry whey is added to the price paid to dairy producers for milk. These small businesses are required to pay dairy producers for the value of a product they do not make.

Wisconsin Cheese Makers Association maintains information on whey processing by its members, with information voluntarily supplied by members. In Wisconsin, 78 cheese manufacturing sites informed the Association that dried whey is not produced at these locations. Among these 78 locations, 44 locations do nothing more than sell separated, wet whey to other dairy businesses or other whey processing plants. The other 34 cheese plants

take only the first step in dry whey product processing and perform reverse osmosis and /or ultrafiltration on wet whey to produce a concentrated whey or a concentrated whey protein liquid product. The Association is aware of more cheese manufacturing sites in the state that similarly ship or process wet whey, but these firms have not voluntarily verified this information with the Association.

The Association has information on 18 dry whey product processing sites that are either cheese plants with additional ability to produce dried whey products (dried whey, whey protein concentrate, whey protein isolate, and lactose) or are solely whey processing sites.

The Association survey showing low levels of dry whey product processing capability in member plants is certainly supported by plant survey data collected by USDA's National Agricultural Statistics Service (NASS). NASS surveys cheese and whey plant operations for their production data, and includes plant statistics in their annual summary. The chart to the right compares the most recent NASS plant statistics, from the *Dairy Products 2013 Summary* published in April 2014. Nationally, there are only 32 dried whey plants, equal to only 6% of the 529 cheese plants included in the NASS survey. Wisconsin has 126 cheese facilities and 10 dried whey plants or 12.6 cheese plants for every dry whey facility.

**2013 US Cheese and Whey Plants**
**US, Wisconsin and the 3 Survey Regions**

| State & Region | Total Cheese | Dried Whey | Dried Whey Plants as % of Cheese Plants |
|---|---|---|---|
| Total US | 529 | 32 | 6.0% |
| Wisconsin | 126 | 10 | 7.9% |
| US Regions: | | | |
| Atlantic | 191 | 7 | 3.7% |
| Central | 232 | 18 | 7.8% |
| West | 106 | 7 | 6.6% |

*Source: Dairy Products 2013 Summary, NASS-USDA.*

The ratios aren't much better when comparing dried whey production to estimated available whey solids. The chart to the right shows U.S., Wisconsin and regional cheese production, and shows estimates of total whey solids from that cheese production. U.S. dry whey production volume is equal to only 14.1% of estimated whey solids and Wisconsin dry whey

**2013 US Cheese and Whey Production**
**US, Wisconsin and the 3 Survey Regions**

| State & Region | Total Cheese[1] | Estimated Whey Solids[2] | Dry Whey Production[1] | Dry Whey Production as % of Whey Solids[3] |
|---|---|---|---|---|
| | *1,000 lbs* | *1,000 lbs* | *1,000 lbs* | *Percent* |
| Total US | 11,101,135 | 6,549,670 | 924,146 | 14.1% |
| Wisconsin | 2,885,681 | 1,702,552 | 302,843 | 17.8% |
| US Regions: | | | | |
| Atlantic | 1,434,460 | 846,331 | 255,441 | 30.2% |
| Central | 4,973,700 | 2,934,483 | 445,860 | 15.2% |
| West | 4,692,975 | 2,768,855 | 222,845 | 8.0% |

[1] *Source: Dairy Products 2013 Summary, NASS-USDA.*
[2] *Assumes Available Whey Solids = 59% of Cheese Production. (5.69 OS /9.72 CY)*
[3] *Assumes Whey contains 97% milk solids.*

production uses only 17.8% of total whey solids in the state. Despite the very low utilization rate of whey solids for dry whey, both regionally and as a national total, dry whey remains the sole determinant of the other solids price in the FMMO Class III price. This relatively small amount of dry whey production impacts the value of an enormous amount of milk: about 62 billion pounds of milk used for cheese and whey products was regulated by Federal Orders in 2013. The actual amount of milk priced under Class III is even greater due to Class III contracts used to price milk that is not always pooled and the use of Class III-based forward contracting between dairy manufacturers and farms.

The data above supports the fact that the vast majority of Wisconsin cheese plants do not have any whey drying capacity. But the vast majority of cheese manufacturing sites in Wisconsin buy milk from dairy farm patrons and pay these patrons for the value of dry whey through the other solids value included in the Class III milk price. These cheese manufacturers do not earn the value of dry whey from the marketplace. The majority of these Wisconsin cheese plants produce separated, wet whey, which is a lower value commodity than dried whey. This lower-value revenue source is all that most Wisconsin cheese manufacturers have to cover the Class III other solids price they are obliged to pay dairy producers.

This is a fundamental flaw in FMMO Class III milk pricing – a built-in discrimination against small cheese manufacturing businesses that cannot begin to afford the cost of dried whey manufacturing. Production of dried whey requires massive capital investment, in the tens of millions of dollars, and this investment is not possible for most cheese manufacturing small businesses. Only the largest U.S. cheese manufacturers, and independent dry whey processors (who do not buy any raw milk from dairy producers) can obtain the capital needed to invest in whey drying plants. These massive costs require drying plants to operate constantly, and at high volumes, to be cost effective.

The California Department of Food and Agriculture faced a similar problem when they moved to a cheese milk pricing formula that valued whey solids in a similar fashion to FMMO Class III Other Solids. The state returned to a lower whey valuation for their Class 4b formula when it

became apparent that their formula overvalued milk relative to its true value for the vast majority of California cheese processors that do not manufacture dry whey.

Because small cheese manufacturing businesses operating under FMMO pricing cannot derive the value of dry whey from their whey solids, they must attempt to find other dollars in the marketplace each month to pay producers the other solids value in the milk price.

Dried whey simply cannot be produced by our many small cheese manufacturing businesses, yet the value of dried whey rests in the milk price these manufacturers must pay to dairy producers.

The true, basic commodity that should be reflected in the Class III milk price formula is separated, wet whey. Dried whey is a value-added product produced by a small number of plants in the U.S. Separated, wet whey is generally purchased on a contract basis using a price that is a fraction of the price of whey protein concentrate containing 34 percent protein (WPC 34). This creates two problems for small cheese manufacturers. First, these small businesses cannot possibly produce dried whey. Second, the value of WPC 34 per cwt. milk has been lower than dried whey (pound for pound of protein) in the last 39 months (see table on the next page).

In other words, these small businesses selling liquid whey can only earn a portion of the value of dried WPC 34, and that dried WPC value is even lower on a per cwt. milk basis than the value of dried whey. This increases the difficulty for small dairy manufacturers to meet the monthly Class III price. The table on the next page compares the value difference per cwt. milk for Central AOM WPC 34 and NDPSR Whey, based on FMMO yield for whey and industry referenced yield for WPC 34.

| Price and Value Comparison: WPC 34 vs. NDPSR Whey Per Cwt. Milk, January 2012 through March 2015 | | | | | | |
|---|---|---|---|---|---|---|
| | Price per Pound | | Value per Cwt. Milk[1] | | | |
| Month & Year | NDPSR WHEY | AMS AOM WPC 34 | NDPSR WHEY[2] | AMS AOM WPC 34[3] | Difference per Cwt. | Annual Average |
| Jan 2012 | $0.6876 | $1.5239 | $4.03 | $2.62 | -$1.41 | |
| Feb 2012 | $0.6400 | $1.5271 | $3.75 | $2.63 | -$1.12 | |
| Mar 2012 | $0.6107 | $1.5091 | $3.58 | $2.60 | -$0.98 | |
| Apr 2012 | $0.5921 | $1.4195 | $3.47 | $2.44 | -$1.03 | |
| May 2012 | $0.5389 | $1.3010 | $3.16 | $2.24 | -$0.92 | |
| Jun 2012 | $0.5013 | $1.1977 | $2.94 | $2.06 | -$0.88 | |
| Jul 2012 | $0.5023 | $1.1401 | $2.94 | $1.96 | -$0.98 | |
| Aug 2012 | $0.5352 | $1.1272 | $3.14 | $1.94 | -$1.20 | |
| Sep 2012 | $0.5846 | $1.1862 | $3.43 | $2.04 | -$1.39 | |
| Oct 2012 | $0.6205 | $1.2283 | $3.64 | $2.11 | -$1.52 | |
| Nov 2012 | $0.6480 | $1.2358 | $3.80 | $2.13 | -$1.67 | |
| Dec 2012 | $0.6610 | $1.2483 | $3.87 | $2.15 | -$1.73 | -$1.24 |
| Jan 2013 | $0.6503 | $1.2606 | $3.81 | $2.17 | -$1.64 | |
| Feb 2013 | $0.6393 | $1.2472 | $3.75 | $2.15 | -$1.60 | |
| Mar 2013 | $0.6048 | $1.2150 | $3.54 | $2.09 | -$1.45 | |
| Apr 2013 | $0.5741 | $1.2378 | $3.36 | $2.13 | -$1.24 | |
| May 2013 | $0.5765 | $1.2786 | $3.38 | $2.20 | -$1.18 | |
| Jun 2013 | $0.5738 | $1.3172 | $3.36 | $2.27 | -$1.10 | |
| Jul 2013 | $0.5804 | $1.3518 | $3.40 | $2.33 | -$1.08 | |
| Aug 2013 | $0.5778 | $1.3670 | $3.39 | $2.35 | -$1.03 | |
| Sep 2013 | $0.5791 | $1.3884 | $3.39 | $2.39 | -$1.01 | |
| Oct 2013 | $0.5731 | $1.4567 | $3.36 | $2.51 | -$0.85 | |
| Nov 2013 | $0.5831 | $1.5816 | $3.42 | $2.72 | -$0.70 | |
| Dec 2013 | $0.5706 | $1.6000 | $3.34 | $2.75 | -$0.59 | -$1.12 |
| Jan 2014 | $0.6025 | $1.7573 | $3.53 | $3.02 | -$0.51 | |
| Feb 2014 | $0.6314 | $1.7808 | $3.70 | $3.06 | -$0.64 | |
| Mar 2014 | $0.6554 | $1.7683 | $3.84 | $3.04 | -$0.80 | |
| Apr 2014 | $0.6774 | $1.7700 | $3.97 | $3.04 | -$0.93 | |
| May 2014 | $0.6745 | $1.7661 | $3.95 | $3.04 | -$0.91 | |
| Jun 2014 | $0.6789 | $1.6779 | $3.98 | $2.89 | -$1.09 | |
| Jul 2014 | $0.6890 | $1.6182 | $4.04 | $2.78 | -$1.25 | |
| Aug 2014 | $0.6880 | $1.5713 | $4.03 | $2.70 | -$1.33 | |
| Sep 2014 | $0.6725 | $1.4524 | $3.94 | $2.50 | -$1.44 | |
| Oct 2014 | $0.6508 | $1.3495 | $3.81 | $2.32 | -$1.49 | |
| Nov 2014 | $0.6365 | $1.2877 | $3.73 | $2.21 | -$1.52 | |
| Dec 2014 | $0.5871 | $1.2409 | $3.44 | $2.13 | -$1.31 | -$1.10 |
| Jan 2015 | $0.5875 | $1.1697 | $3.44 | $2.01 | -$1.43 | |
| Feb 2015 | $0.5169 | $1.1105 | $3.03 | $1.91 | -$1.12 | |
| Mar 2015 | $0.4824 | $1.0213 | $2.83 | $1.76 | -$1.07 | |

*Sources: USDA AMS Dairy Market News, USDA AMS National Dairy Product Sales Report (NDPSR), and GEA-Niro (WPC Yield)*

*1/ Milk at USDA FMMO Standard Test of 3.5% Fat, 2.99% True Protein, and 5.69% Other Solids*

*2/ USDA FMMO Whey Yield is 5.86 lbs. per Cwt Milk at FMMO Standard Test*

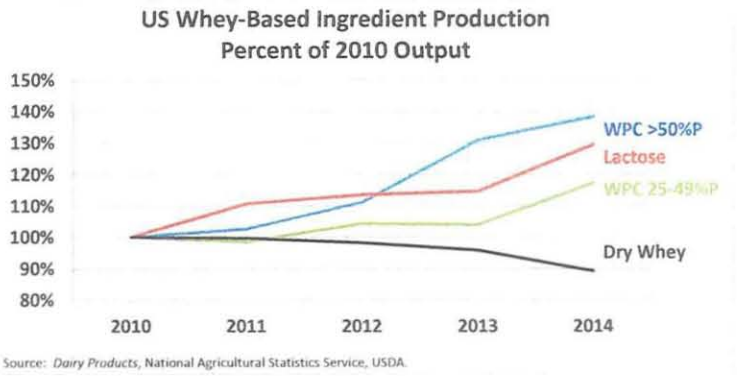
*3/ WPC 34 Yield is 1.72 lbs per cwt, based on Industry References*

The table above comparing the relative value of whey protein concentrate vs. dried whey illustrates the point that even cheese plants that invest in a 'second tier' of whey processing – concentrating and filtering wet whey – face the same problem as other cheese plants in gaining enough dollars from the marketplace to pay the Class III milk price.

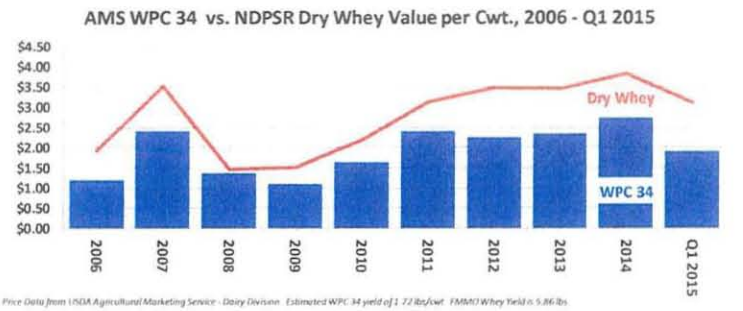
Whey protein concentrate in various concentrations has become the preferred product in the marketplace. Concentrating protein creates a lactose-rich permeate that also has a value in the marketplace. As these products have increased in volume, output of dried whey has decreased, and dried whey has become the higher value product in the marketplace.

Thus even small dairy businesses that have sufficient volume to venture into value-added processing of whey have found over the past several years that their products are less valuable than the dried whey value used to set the other solids value in the Class III milk price. Like their fellow cheesemakers selling only separated, wet whey, these more sophisticated whey protein manufacturers will not earn the full value of dried whey in the marketplace, despite millions of dollars in investment.

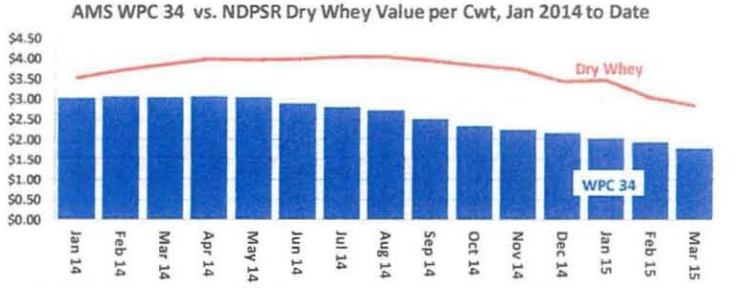
The situation has worsened over the past year. Revenues from WPC 34 sales were 50 cents below dry whey in January 2014, but fell to over $1.50 lower than whey by November and have been more than $1 below whey since last June (see chart on right).




Source: *Dairy Products*, National Agricultural Statistics Service, USDA.




Price Data from USDA Agricultural Marketing Service - Dairy Division. Estimated WPC 34 yield of 1.72 lbs/cwt. FMMO Whey Yield is 5.86 lbs.

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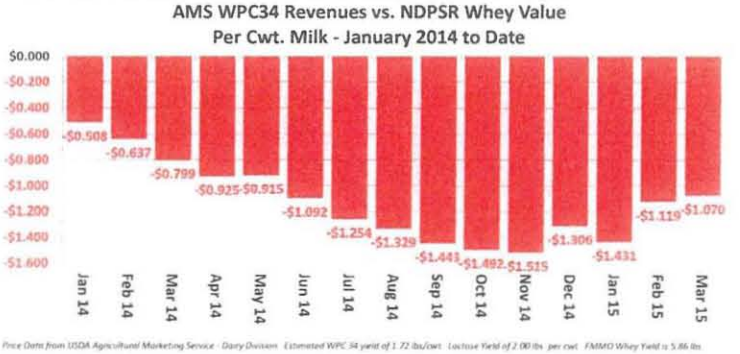


Price Data from USDA Agricultural Marketing Service - Dairy Division. Estimated WPC 34 yield of 1.72 lbs/cwt. Lactose Yield of 2.00 lbs per cwt. FMMO Whey Yield is 5.86 lbs.

**Conclusion**

In Wisconsin, at least 78 cheese manufacturing sites do not manufacture dry whey (in any form) and do not earn the value of dried whey, even sites that produce whey protein concentrates. These small businesses are forced by federal milk marketing order milk price formulas to pay dairy producers for a product they do not make – a product with a higher value than these manufacturers can collect in the marketplace.

Many small cheese manufacturers survive this dilemma by producing value-added or specialty cheese. But there is no certainty that small manufacturers can gain a premium price for cheese. A cheese plant that gains more for its products has applied skills in crafting cheese, marketing an intriguing story and convincing buyers and consumers to spend a little more. That comes through hard work, skill and persistence.

This regulatory review (610 Review) seeks to find changes in federal milk marketing order rules in order to "minimize any significant economic impact of rules upon a substantial number of small entities." This can be accomplished by removing the value of dried whey from the Class III milk price formula, and substituting it with a surveyed value for separated, wet whey. As the USDA's summary of this 610 Review states, "A classified pricing plan sets forth *minimum prices* that handlers must pay for milk used in different classes of products." (Emphasis is added to the words "minimum prices.") The Class III value for milk should be a minimum price, established using baseline commodities. Separated, wet whey is the baseline commodity for valuing "other solids." Dried whey is far too high in value, and far too expensive an investment for small cheese businesses to make, to be residing in a minimum milk price formula.

Supporting a baseline value for whey is true to the principles of market capitalism. When the proper, basic whey product (separated, wet whey) is used, those that invest in value-added whey processing will be rewarded in the marketplace, and can develop premiums to attract dairy farm patrons. Smaller plants that cannot invest in whey processing will do what they must – what they've already done – and that is make value-added cheeses to survive. If they don't find added revenue on the cheese side, they depart the market. But, at least their fight to

succeed will be in the free marketplace, and they won't fail because a federally-mandated Class III price, loaded with an unfair dry whey value, bled them dry.