

Before the United States Department
Of Agriculture
Agricultural Marketing Service

In the Matter of Class III and IV Price Formulas

Docket No. AO-14-77, et al; DA-07-02

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National All-Jersey Inc. (NAJ), an organization with over 1,000 members nationwide concerned with equity in milk pricing, is submitting this brief regarding the Class III and IV price formula hearing. The document will focus on the four primary principles that prompted NAJ to submit Proposal 16 to value whey on a protein basis instead of the current other solids basis.

1. Whey's value is due to its protein content and not its lactose content.

This is the single most important issue supporting NAJ's proposal. In addition to testimony provided by NAJ, other witnesses gave testimony supporting this premise. Bob Wellington of Agri Mark commented, "For example, the demand for protein solids, milk protein solids internationally is skyrocketing. So we have a huge increase in demand for nonfat dry milk powders, for whey powders." (Tr page 376)

Later, during the same line of questioning, Mr. Wellington stated, "We still land spread some of the permeate, the lactose, we try to get all the protein out." (Tr pg 381)

Mr. Wellington later provided more details on Agri Mark's whey handling. "The whey is actually processed at our Middlebury facility. To the extent that it is made at our Middlebury facility, it is condensed at our Cabot facility and brought over to Middlebury, and it is separated to try to get some of the lactose out at our Chateaugay facility, and the lactose is land spread and the protein is brought over." (Tr pg 858)

Dr. Ken Bailey also commented on the protein value of whey. "One of the things that came to my attention is that there is, historically, there has been a relationship between the price of powder and the price of dry whey. Because whey, while used for livestock feed abroad, it is priced in relation to the protein content." (Tr pg 649)
Dr. Bailey's statement was not challenged under cross examination.

Certainly Agri Mark wouldn't be removing all of the protein possible from their whey stream and then land spreading lactose if lactose held any significant value.

These unsolicited statements from Mr. Wellington and Dr. Bailey combined with NAJ's testimony and supporting Graphs 1 and 2 in Exhibit 43 establish unequivocally that dry whey's value is due to protein and not lactose.

2. Higher protein milk yields higher protein whey

During cross examination, NAJ testified that approximately 20% of the true protein in milk passes through to the whey stream (Tr pg 1678). This response was not challenged during further cross examination, and is borne out in the examples given below.

The Van Slyke cheese yield formula, which serves as the basis for the protein valuation equation of the Class III price formula, is given below:

$$\frac{(\% \text{ Fat} \times 90\% \text{ Recovery} + \text{True Protein} \times 82.9\% \text{ Casein} - 0.1) \times 1.09}{(1 - \% \text{ Moisture})}$$

The segment of the formula (True Protein * 82.9% - 0.1%) represents the amount of protein that is captured in cheese. By default, the remainder of the protein pass through to the whey (True Protein * 17.1% + constant 0.1%). Comparing two different milks, one testing 3.0% true protein and the other testing 3.5% true protein, shows they will have different amounts of whey protein.

$$3.0 \text{ pounds true protein} \times .829 - 0.1 = 2.387 \text{ pounds of protein in cheese}$$

$$3.0 \text{ pounds true protein} - 2.387 \text{ pounds of protein in cheese} = 0.613 \text{ pounds of protein in whey.}$$

$$0.613 \text{ pounds of true protein in whey} / 3.0 \text{ pounds of true protein} = 20.43\%$$

$$3.5 \text{ pounds true protein} \times .829 - 0.1 = 2.8015 \text{ pounds protein in cheese}$$

3.5 pounds true protein – 2.8015 pounds protein in cheese = 0.6985 pounds of protein in whey

0.6985 pounds of true protein in whey/3.5 pounds of true protein = 19.96%

The current price formula to convert dry whey value to other solids value ignores this additional whey protein from milk testing above standard protein levels.

3. More total pounds of whey solids are being used in protein standardized whey products than in dry whey.

NAJ testified that since 2003, more whey solids have been processed into the protein standardized whey products of whey protein concentrates (WPCs) and whey protein isolates (WPIs) than were processed into dry whey (Tr pgs 1656-1658, Ex 43 Table 3 and Graph 3). Furthermore, the product yields of WPCs and WPIs are directly dependant on the amount of protein in the whey stream. This testimony and data was not challenged during cross examination.

4. The current Federal Order other solids price formula creates a disconnect between the market value of whey solids and how producers are compensated for whey value. Therefore, the current formula does not send the correct economic signal to producers because it converts all of whey's value to be paid to producers for the other solids (mostly lactose) in milk and ignores the whey value of protein.

Market value for dry whey is converted to the other solids value in producer milk to compensate producers for the milk components processors sell in whey products. When producer milk in the federal order system is tested for other solids, the milk components of lactose, ash and non-protein nitrogen are measured. However, dry whey includes significant amounts of protein in addition to lactose, ash and non-protein nitrogen. And, in fact, as was reinforced in Point 1 of this brief, whey's value is due primarily to its protein content. Therefore, the industry is operating using the following dynamic:

- The market values whey due to its protein.
- Whey value is converted to producer pay prices through payment for other solids, which consist of the milk components of lactose, ash and non-protein nitrogen.

$$\text{Other solids price} = (\text{Dry whey price} - 0.1956) \text{ times } 1.03.$$
- Higher protein milk yields higher protein whey, yet the price formula doesn't compensate producers of higher protein milk for their additional whey protein.

Points 1 through 3 outlined above justify changing whey's value from other solids to protein as outlined in NAJ's Proposal 16.

Objections

The only significant objection to NAJ's proposal came from the International Dairy Foods Association through cross examination of the NAJ witness. The objection focused on the yield factor recommended by NAJ whereby the dry whey price less manufacturing allowance would be multiplied by 1.96 to determine a whey protein value (Tr pgs 1690-1695).

However, IDFA's own witness inferred that the current yield factor for converting dry whey value to other solids price is overstated. The current price formula of:

$$\text{Other solids price per pound} = (\text{Dry whey price} - 0.1956) \text{ times } 1.03$$

assumes that all of the other solids in milk pass through to whey because the other solids price per pound is applied to all the pounds of other solids in producer milk. However, Addendum A of Exhibit 69 provided by an IDFA witness shows that 0.2816 pounds of "other non-fat non-casein solids" is captured in cheese curd and is not part of the whey yield.

If NAJ's yield factor overstates the dry whey yield that can be expected from a protein based pricing formula, the current price formula overstates the amount of dry whey that can be expected from producer milk on an other solids basis. Given a choice between the two formulas, NAJ recommends the Secretary choose NAJ's proposed formula which compensates producers for the most valuable component of whey, protein.

Comments on other proposals

Proposals 9 and 10 seek to reduce the Class III protein price due to whey butter having a lower value than Grade AA butter. NAJ does not dispute the proposition that butter made from whey cream has less market value than standard Grade AA butter. However, this finding points to the fact that butter has two different values, and, therefore, butterfat has two different values. NAJ understands the positions and reasons why proponents of Proposals 9 and 10 do not want the price formulas to incorporate two different values for butterfat. However, among several purposes of the Federal Milk Marketing Orders are to compensate producers for the market value of their milk and to send producers economic signals to provide the market the most valuable milk components.

Reducing the value of protein because of a marketplace difference between whey butter and Grade AA butter neither compensates producers correctly nor sends them the proper economic signal. If whey butter's value trails Grade AA butter's value by enough of a margin that processors need relief in price formulas, then a separate whey butterfat price should be established and incorporated into the price formulas. Protein producers should not be penalized for the difference in butterfat values.

Reducing the protein price due to whey butter's lower value would be akin to the National Collegiate Athletic Association becoming so upset at Kentucky's recruiting violations that they put Vanderbilt on three years probation! If Kentucky commits the violations, Kentucky, not Vanderbilt, gets put on probation.

If whey butter is worth less than Grade AA butter, the price formulas should reflect that lower value through the butterfat price, not the protein price.

NAJ Request to Expand Proposal 2

NAJ provided testimony during the Pittsburgh session of the hearing requesting that Proposal 2 be expanded to include plant manufacturing costs for whey protein concentrate-34 (WPC-34) and lactose. Furthermore, NAJ proposed that the National Agricultural Statistics Service (NASS) survey of product prices be expanded to include wholesale prices of these two products (Tr. Pgs. 2525-2529). The only questions posed during cross examination pertained to whether there were enough different manufacturers of these two products to retain confidentiality of manufacturing costs and selling prices between processors (Tr. Pgs 2530-2534). Assured that there were more than two processors of WPC-34 and lactose cross examination concluded.

Conclusion

The current Federal Order Class III formula values whey incorrectly. The value of protein in whey products is not recognized and producers are being sent incorrect economic signals in the other solids portion of their milk checks. NAJ asks the Secretary of Agriculture adopt Proposal 16 as presented in our testimony. NAJ also asks that Proposal 2 be expanded to include price surveys for WPC-34 and lactose.

Respectfully submitted,

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