

National Family Farm Coalition Testimony on "Conditions of Competition for Milk Protein Products in the U.S. Market" to ITC General Factfinding Investigation

The International Trade Commission
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"Conditions of Competition for Milk Protein Products in the U.S. Market"

Testimony by the National Family Farm Coalition

Any meaningful discussion of the "Conditions of Competition for Milk Protein Products in the U.S. Market" must take into consideration the full meaning of the exploitation concept. The technology for most of what is considered Milk Protein Products is not new. Even ultrafiltration technology has been available for nearly 30 years. Exploitation of Milk Protein Products, including Milk Protein Concentrate (MPC) as ingredients is fairly recent going back only about eight years.

Corporate concentration fueled the present conditions and environment for widespread use of Milk Protein Products. Common sense informs us that large organizations, whether private or public, while commanding increased power, are not by nature efficient. Nearly all true economies of scale from farm through retail are captured at relatively low levels.

Concentration at the retail level has been largely a concentration of power in which the terms are dictated to suppliers. For processors this means the profits necessary to attract investors must come largely from the cost side of the equation. This has resulted in control of farm milk price by a handful of players on the one hand and partial substitution of one input, domestic milk for another, imported Milk Protein Products.

Safety

However, the question of power brings one more important point which should be mentioned at the very outset. Processors began using Milk Protein Concentrate as an ingredient in clear violation of the Code of Federal Regulation regarding safety. Milk Protein Concentrates were not produced prior to 1958 and therefore must conform to the 21 p 170.30 of the Code of Federal Regulation.i

The requirement for "Generally Regarded as Safe" (GRAS) clearly states in 21 p 170.30 (b) "General recognition of safety based upon scientific procedures shall require the same quantity and quality of scientific evidence as is required to obtain approval of a food additive regulation for the ingredient." GRAS status is necessary for food ingredients introduced after 1958.

The Food and Drug Administration (FDA) completely ignored the enforcement of this regulation until the public outcry required FDA to take some action. Finally, in late 2002 the FDA issued warning letters to Kraft Foods North America, Inc. (Kraft) and Lactoprot USA for violation of 21 p 133, which covers cheese Standards of Identity.ⁱⁱ However, FDA continues to ignore enforcement of 21 p 170.30 and this fact, in part, created the condition requiring this investigation.

Moreover, FDA stated in a Freedom of Information request: "We have searched our files and find no responsive information for scientific studies on human safety and consumption of ultra filtered milk/milk protein concentrates."ⁱⁱⁱ

Functional Aspects of Milk Proteins

Use of Milk Protein Products is appealing to large corporations quite simply because it allows the production of more product without additional capital cost. Cheese yield is a function of protein content of the cheese milk. Therefore, addition of MPC, whether wet or dry, increases the amount of cheese produced for a given volume of milk.

This occurs primarily because the processing of milk through ultrafiltration unnaturally binds whey proteins and free water which would naturally drain out of the cheese. Free water is also bound. A "Continuous Process for the Manufacture of Mozzarella Cheese" has been developed by Dr. Sy Rizvi of Cornell University. According to one report, "Using a higher concentration factor approach would allow for an even more efficient continuous cheesemaking process, with little or no whey drainage from the cheese, according to Sy Rizvi and Dave Barbano, Cornell professors associated with the project."^{iv}

Cheese produced in this manner is plagued with quality problems including inability to age, reduced melt-ability, and with some cheeses a bitter aftertaste. Although some studies indicate it is chemically the same as naturally produced cheese, no study is in the public realm which has examined the nutritional aspects of these products. Intuitively, if the milk is changed to such an extent that it no longer behaves as untreated milk, the product is likely to raise nutritional questions. This question seems to have not occurred to either industry or government.

Casein derived products such as calcium caseinate and sodium caseinate have the ability to retain or bind water. These products are widely used in the production of "direct set" cream cheese. Consumers buy "direct set" cream cheese as if it were truly cream cheese when in fact it is an imitation.

Much is made about the benefits of lactose reduction in some Milk Protein Products. Kraft has a patent (USPTO number 6,214,404, April 2001) for processed cheese which uses MPCs while at the same time increasing the lactose content in the cheese.

The patent states, "This invention succeeds in preventing significant crystallization of lactose in process cheese even when the lactose is incorporated at an elevated concentration that corresponds to supersaturation under the conditions of storage of the cheese. By permitting use of increased amounts of lactose, therefore, the present method and process cheese product lead to significant productivity savings for such products, since the lactose would essentially be wasted, and since it replaces more expensive ingredients." The intent here is clearly to reduce cost while possibly fooling the consumer.

U.S Customs states in a ruling (NY B88248 July 24, 1997 to Tedford/Tellico, Inc. 9433 Tedford Road Concord, TN 37922):

"In your letter, dated July 16, 1997, you have requested a tariff classification ruling."

"The product is milk protein concentrate. The ingredients are 42-45 percent lactose, 42 percent (minimum) protein, 7-9 percent ash, 3-4 percent moisture, and 0.5-1.75 percent fat."

This product which they consider as HTS 04049010 contains nearly the level of lactose found in Nonfat Dry Milk (NFD). The letter says, "The milk protein concentrate is manufactured by the ultrafiltration of pasteurized cow's milk. The raw milk undergoes a process of cooling, pasteurization, ultrafiltration, retentate drying, and packaging." No mention is made as to how so much lactose could be in an ultrafiltered milk product.

A search of patents for Kraft and Milk Protein Concentrate is educational.

1

6,596,335

Refrigerated ready to eat aseptically produced rice pudding

2

6,576,253

Food bars containing nutritional supplements

3

6,572,901

Process for making a cheese product using transglutaminase

4
6,562,383
Process for producing flavored cheese without curing
5
6,475,538
Process for mozzarella cheese
6
6,416,797
Process for making a wheyless cream cheese using transglutaminase
7
6,406,736
Process for making cream cheese products without whey separation
8
6,406,724
Natural biogenerated cheese flavoring system
9
6,372,268
Wheyless process for production of natural mozzarella cheese
10
6,303,160
High moisture cream cheese texture control
11
6,270,814
Incorporation of whey into process cheese
12
6,251,445
Method for producing enzyme-modified cheese flavorings
13
6,214,404
Incorporation of supersaturated lactose in process cheese and product thereof
14
6,183,804
Continuous on-demand manufacture of process cheese
15
6,129,943
Foaming cappuccino creamer containing gasified carbohydrate
16
5,458,902
High protein content bread product
17
4,244,971
Process and products for the manufacture of cheese flavored products

Source: USPTO

Patent applications contain similar information:

- 1
20030108594
Food bars containing nutritional supplements
- 2
20030104106
Manufacture of non-standard cheese products
- 3
20030054069
Process for making a cheese product using transglutaminase
- 4
20020192348
Process cheese containing increased levels of whey protein
- 5
20020150607
Food bars containing nutritional supplements
- 6
20020146500
Method for preparing solid milk product
- 7
20020127301
Process for mozzarella cheese
- 8
20020071897
Method for preparing cheese products and process cheese bases

Source: USPTO

A reading of these patent and applications indicates that Kraft, a leader in the industry, is exploiting a non-domestic supply of ingredients instead of using regional American milk supplies. At the same time Kraft is attempting to obtain its profits from the US consumer while placing part of the burden for this approach on the US taxpayer.

Substitutability for NFDM - Exploitation of Tariff Rules

Various players have attempted to define Milk Protein Concentrate. US Customs made one attempt. In fact, National Milk Producers Federation (NMPF) petitioned Customs to define Milk Protein Concentrate solely as dried ultrafiltered skim milk. Industry vigorously opposed both these attempts and successfully lobbied the issue to its death.

No one knows how much MPC product is simply a blend assembled for the purpose of legally circumventing tariffs. It is thought by most in the industry to be a wide spread of the product entering the US currently.

Again, a Customs ruling gives a clue of composition. In a recent ruling (HQ 965395 April 5, 2002 Mr. David M. Dunbar, Katten Muchin Zavis 525 West Monroe Street Suite 1600 Chicago, IL 60661-3693), Customs found:

"You state that the product under consideration, a "milk protein concentrate," will be manufactured either by dry blending nonfat dry milk, whey protein concentrate 35 and fine, 90-mesh casein or by mixing condensed liquid skim milk with whey protein concentrate 35 and casein and then spray drying that mixture. The product will contain 76.2 percent nonfat dry milk, 15 percent casein, and 8.8 percent whey protein concentrate 35. On a dry basis, the imported milk protein concentrate will consist of 42 to 44 percent protein, 4 to 8 percent minerals, 44 to 47 percent lactose, 1.5 to 5 percent moisture and not more than one percent fat. Under both of the methods, the resulting product will be a homogeneous mixture which cannot be separated into its constituent ingredients by conventional methods. The product will be used in nutritional products, milk replacement products and similar industrial applications."

This demonstrates that MPCs are not a unique product produced by utilizing the latest technology, but merely an exploitation of a legal technicality.

Cheese production requires very tight fat to protein ratios to produce even a minimally acceptable cheese. Massive imports of MPCs in 2000 appear to have placed a drain on domestic butter fat. In 2001 the US imported record amounts of butter, much of this at a high tariff rate. This year the USDA exported butter (anhydrous milkfat) under the Dairy Export Incentive Program (DEIP). Butter and butter oil imports have dropped off even though MPC imports are up sharply in both Chapter 4 and 35.

A look at another Customs rulings provides a hint that not only is dairy protein circumventing tariffs but butter/butterfat has also become part of that exploitation package.

In ruling another (HQ 964523, June 4, 2002 Mr. F. Gordon Lee O'Connor & Hannan Suite 500, 1666 K Street, N.W., Washington, D.C. 20006-2803, RE: New Zealand Milk Products; Milk Protein Concentrate Mixtures.) Customs said:

"The three products identified by the importer as ALAPRO 4424, ALAPRO 4454, and ALAPRO 4430, are a spray-dried, ultrafiltrated milk protein concentrate made from pasteurized milk. Each of the products contains 42% or more protein by weight. The ALAPRO 4424 contains 24 - 28% fat, ALAPRO 4454 contains 28 - 34% fat, and the ALAPRO 4430 contains 34 - 38% fat. The lactose content is reduced as the fat content increases. The moisture content of each of the ALAPRO products is between 3 - 6%, and the ash content of each of the ALAPRO products is between 4 - 6%. The importer intends to import the product in commercial quantities."

"In your submission you suggest the products are classified in subheading 0404.90.1000, HTSUS, as milk protein concentrates."

The ruling provides a partial answer as to reduction of butter imports from 2002 onward.

Nonfat Dry Milk until the mid-90s was an industry standard for "balancing" cheese vat protein. That has changed to the use of imported proteins. Meanwhile, production facilities continue to be used in the name of capital efficiency. The price and the questions of "tilt" are meaningless as long as processors have a "make allowance" built into the formula. The "make allowance" provides the profit to the plant while totally ignoring the needs of the farmer.

The following graph illustrates vividly, the statistical correlation of $-.94$ of NFDM going into the hard cheese (cheddar type) and imports of MPC's.

Economic Push/Pull

At the same time corporations in the US were looking to reduce cost, the economies of Southeast Asia were starting to crumble. The market was largely served by New Zealand and Australia. The currency devaluations of that region were large while the US dollar grew in strength. The data of this is evident.

New Zealand promoted the adaptation of MPCs in cheese. Once the marketing of adaptation was established imports of MPCs have poured in from all over the globe.

Shipments came from countries of questionable sanitation. Shipments came from countries with known radioactive contamination of dairy products. Shipments came from countries that are not dairy producing countries. In November 2000, 13 metric tons came from Japan. This has been linked by some insiders to contamination at Snow Brands Dairy.

Trans-shipments have become common. Although a product might appear to have come from the European Union (EU), it might have originated anywhere. In August of 2003 11 metric tons came from Singapore. Where it was produced remains a question. Without standards and without traceability, these imported milk proteins are merely a bomb ticking.

Milk Protein and Other Dairy Imports and U.S. Farm Milk Price

Milk pricing at the farm gate has been made unduly complex. Additionally, although dairy economist may reveal some understanding of milk pricing, they have little understanding of use in product manufacture. Dairy economists, Ken Bailey, who testified at the hearing has succeeded in ignoring the wide means by which cheese production increased. The relationship of the data however, shows a connection.

When imports increased farm milk price decreased. Precise quantification is not necessary to show a relationship.

Ken Bailey in his written submission to the hearing stated, "However, to put it in perspective, the protein in this class of imports grew just 1,239 metric tons between 2001 and 2002, whereas the protein in U.S. milk marketings grew 64,054 metric tons." "Clearly farm milk production had a much greater impact on the supply and demand balance in 2002 than did imports of MPC, Casein & Albumins."

Unmentioned by Bailey and others is the fact that milk production fell dramatically in 2001. Additionally, production is only meaningful relative to population. On a per capita basis, domestic milk production grew 1.7 percent between 2001 and 2002. By comparison, HTS 04049010 Milk Protein Concentrate imports grew 17 percent. If it is a case of the straw breaking the camel's back, the size of the straw is growing at a faster rate than the camel.

In his testimony Bailey stated, "Clearly in 2002 as the milk supply grew and as demand slowed a bit you can see that the blue line, the stock to use ratio rose fairly significantly. That drove the price down." It is important to understand "stock" or holdings include any imports inventoried more than 30 days. Imports of cheese were at record levels for 2002. On a per capita basis they grew by 5.9 percent in 2002 compared with 2001.

As discussed in the next section cheese price virtually determines farm milk price. Kraft is the dominant trader determining farm milk price on the Chicago Mercantile Exchange. Kraft is also an importer of cheese and cheese products. FDA detention records show Kraft Cheez Whiz, manufactured in the Philippines was detained in June 2003.v

Milk Pricing

Farm milk pricing is confusing with dairy experts picking a bit of data here and bit there with the objective of explaining low farm milk price. Ultimately it is a case of control by confusion. Farm milk price in 2001 was relatively high. If the per capita production for 2001 is compared with per capita in 2003 they are nearly even. Yet, 2003 farm milk price in both nominal and real terms is painfully low.

This happens because milk is priced from a formula. That formula is applied to what is known as the NASS price survey. The plants surveyed base their price on the trading on the Chicago Mercantile Exchange (CME). Since the formula is fixed and since plants price from the cash market trading on the CME all volatility originates at the CME. All trading is done by a handful of corporate traders which the industry acknowledges is dominated by Kraft.

Commonly, price changes with no trading whatsoever. A recent letter by a dairy broker said, "CME is not a cash exchange." "Five minutes a day spot

trading with no bids or offers and the price moving like a mad bull just does not do it."vi Most economist recognize the function of this type of cash market in an oligopoly is to signal price and not to exchange goods.

Price signals from Chicago are heard round the world. While there is much talk about the price of NFDM in the US being artificially high, no one seems to think world prices for NFDM are high. In Fact for 2003 the average price FOB Oceania is \$.79 per pound and from western Europe it is the same \$.79 per pound. The price for NFDM on the CME is \$.84 per pound which equals FOB foreign price plus shipping.

Conclusions

A reasonable conclusion, and perhaps the only reasonable conclusion, is that those who set the price in Chicago are also the main users of imported milk proteins. There can be no doubt that farm milk price has suffered. The extent of the damage is not readily quantifiable quite simply because pricing shed of all trappings comes down to a matter of power. That the powerful exploit without regards to long term effects has, since Enron, become a given.

Considerable time is spent contemplating growing government stocks of NFDM and the support price. The root of the "structural problem" is not in the support price but rather external forces driving production in the West. Dairy industrialization and real estate values combined with capital gains tax incentives have encouraged milk production to ignore milk price signals. If on the supply side, market signals are ignore and if on the demand side (retail) supply signals do not apply, then we delude ourselves into thinking we have a market system at all.

Production in 5 Western States*
Production in 15 Remaining States

1998

45,738 (million lbs.)

89,182 (million lbs.)

1999

50,119

89,910

2000

53,312

91,229

2001

54,998

87,911

2002

58,314

88,264

% Chg. 98 vs. 02

0.274957
-0.01029

Data Source: USDA
*Az, Ca, Id, NM, & Wa

The fact is we wish to avoid the larger picture. If competition is good, which most would agree it is, then consolidation is bad. Yet, consolidation and concentration at all levels is not only thought to inevitable, but also desirable. No definition of a functional market system includes the concept of concentrated power.

Although, 70 percent of the population lives in the Eastern two time zones, concentrated power has encouraged milk production in the West and have attempted to pass imported milk proteins off as a choice made by the public. The choice of imported milk proteins have been made in the name of cost savings. It is a choice made by the few with no significant benefits for the many.

All cost savings have been retained by processors and retailers within the time period that imported Milk Protein Product use has become common. The cost born by the farmer cannot be sustained.

Perhaps more importantly, a borderless world is not a safe world. It is not safe for the American farmer, and it is not safe for the American consumer. Lack of tariff restriction combined with lax FDA oversight is not a solution, it is the problem.

i <http://vm.cfsan.fda.gov/~lrd/cfr17030.html>

ii http://www.fda.gov/foi/warning_letters/g3740d.htm

http://www.fda.gov/foi/warning_letters/g3651d.htm

iii FOIA FO3-8050 to John Bunting (August 13, 2003) iv

http://www.findarticles.com/cf_dls/m3301/2_102/72705832/p1/article.jhtml

v http://www.fda.gov/ora/oasis/6/ora_oasis_i_12.html

vi <http://www.dairy.nu/mikedownesxmaslist.pdf>