

IS THE MILK PROTEIN BOOM STRUCTURALLY CHANGING THE DAIRY MANUFACTURING LANDSCAPE?

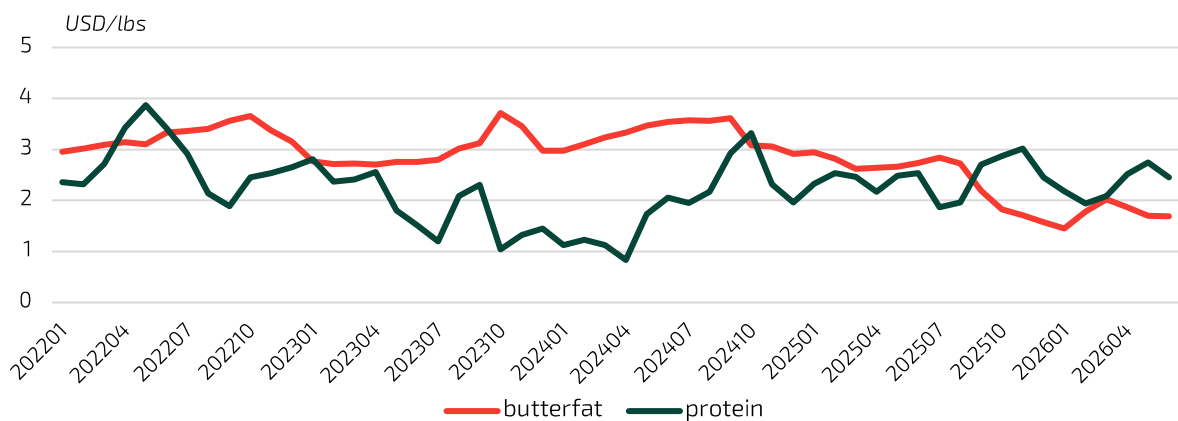
It can't have escaped the reader's attention that milk protein is not only dominating every headline in articles on the dairy market, but that it is also the major driving force of recent investments and M&A transactions. The popularity of milk protein in all formats appears to be driven by a few structural changes in food consumption behaviour that have the potential to fundamentally change relative intake of proteins, fats, and carbs by the average consumer the world over. If this change proves to be structural rather than temporary, then it may fundamentally change milk processors' strategic priorities and investment behaviour. In this insight we will take a closer look at some recent changes in the US output portfolio in particular as the US situation is probably some time ahead of things to come in other markets.

It is not the first time that the relative value of fat versus protein in milk changes

The relative contribution of milk components has never been stable over the years. Butter went through a positive revaluation in 2017 for instance which caused the contribution of fat to carry the most weight in the milk price for nearly a decade. Milk protein now appears to be reclaiming that leading role.

The protein boom brings protein prices back towards –and above – fat price levels. The graph in figure 1 indicates that in a US market that was flooded with a lot of milk since early 2025, fat price levels declined accordingly whereas protein prices appreciated despite much more milk proteins being on offer.

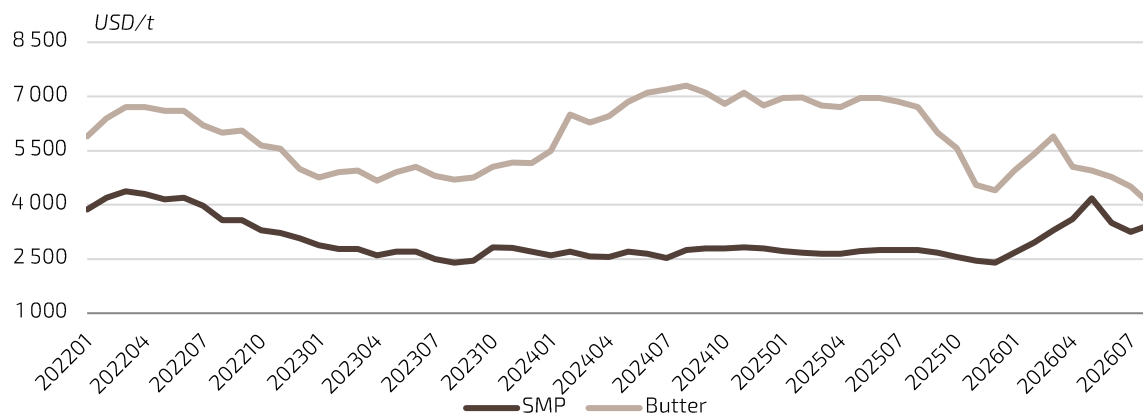
Figure 1. USDA butterfat and protein prices



Sources: USDA, ZMB Dairy world

The graph in figure 2 suggests that although the US appears somewhat ahead of the rest of the world in terms new protein demand, international trading prices of SMP and butter are also clearly starting to reflect the new price relationship between fats and proteins.

Figure 2. West EU FOB prices of SMP and butter



Sources: USDA, ZMB Dairy world

How much "new protein demand" are we actually talking about

Given the strong indication that the US milk protein balance remained remarkably tight during a phase of excess milk production, it would be interesting to get some idea of the volume of "new protein demand" we are actually talking about. Furthermore - and by looking at the USA alone - does it justify the assumption that we should assume a structural and global revaluation of the price and value contribution of milk protein in milk?

One of the problems of getting a decent estimate of the kind of volumes of milk proteins allocated to products and markets that weren't there a few years ago is that today's dairy statistics are not really set up to deal with the many ultra filtered liquid formats that milk solids get traded in these days. Manufacturers of protein enriched dairy products, protein enriched tea and coffee beverages in foodservice outlets and many kinds of innovative dairy drinks with high protein content mostly buy their dairy proteins in a liquid format. But still, even a simplified overview of the US milk protein market balance - as visualized in table 1 - gives a strong indication that the traditional US surplus of milk protein is quickly declining. Protein availability from milk production is rapidly rising, as it is driven by both higher milk production and higher content levels. However, whereas in a traditional protein-surplus market like the US one would expect an equally strong rise in NFDMS/SMP exports, the opposite occurred. Of course, this is a very high-level approach to getting a rough idea of the degree of "new demand for milk proteins" in the US dairy market, but even this simple analysis shows intuitively that a growing volume of milk proteins is being consumed inside the US. Even if we forget about growing exports of milk proteins in cheese and whey and milk concentrates, table 1 provides strong evidence the local dairy US consumption profile is becoming more "protein-heavy".

Table 1. NFDMS export in relation to overall US milk protein supply (2021 – 2026(f))

US milk protein balance	2021	2022	2023	2024	2025	2026(f)
Protein availability from milk production	3,300	3,339	3,350	3,365	3,510	3,658
Protein exported in NFDMS/SMP	322	299	292	268	243	232
NFDMS export surplus in %-share	10%	9%	9%	8%	7%	6%

NB: the 2026 forecast for both milk production and NFDMS exports is based on actual numbers until June

Sources: USDA, Dairyntel trade data analysis

The next question is what this means for protein prices in other markets

Judging by recent investment behaviour by dairy manufacturers all over the world it seems that they are already convinced that this is not just another food hype that is going to go away again. Many investments are in building or extending capacities for liquid protein formats. Both suppliers and customers are happy to be able to skip the step of drying in many protein enrichment applications. Secondly we see a lot of investments in bringing whey to a higher value. At a WPC-80 price of €7/kg it doesn't make sense to work hard on converting feed whey powder operations or try to access lower quality whey solids, but at a price of €25/kg it does.

There is strong evidence that the protein boom has all the characteristics of a structural change in food consumption behaviour that has the potential to fundamentally change relative intake of proteins, fats, and carbs by the average consumer the world over. Firstly, whey protein has benefited from strong tailwinds for several already years due to the "gym culture." As a result, recreational athletes are no longer inclined to grab a beer and a snack after a game of tennis or football. Instead, they are completing performance programs in local fitness centers combined with sophisticated muscle-building diets in which whey protein plays a key role. The interesting aspect of the protein boom is that it is a highly global development. The gym culture, which is particularly dominant among young people, fuels the demand for whey proteins in China, India, the rest of Asia, and West Africa just as much as in the Western world.

Secondarily, the tailwinds for protein now extend beyond just whey proteins. GLP-1 weight-loss medication is rapidly gaining popularity. Users of weight-loss medication are advised to consume sufficient protein in their diet to maintain muscle mass during the weight-loss process. The US is ahead of the rest of the world with a user rate of about 10-12% whereas the EU is still only at 4-6%, depending on the country. Given that this medication is now also available in pill form, the growth potential is quite impressive.

Therefore, we can only conclude that the revaluation of milk proteins – including its pricing implications for sellers and buyers – is here to stay. As encouraging as this is for anyone operating on the sell side of the dairy market, it also carries strategic implications regarding the total valuation of milk, milk allocation to the most profitable product streams, the choice of product format (e.g., dry or liquid), and operational efficiency in factories. One way or another, it is injecting a lot of life in dairy value chains all over the world these days.

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