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NZ/China

FONTERRA SELL CHINA FARMS FOR NZ\$555m

Fonterra are selling their farms in China to two Chinese companies for NZ\$555m (2.5bn yuan/US\$368m). The move has been in the offing for 2yrs as they continue to refocus on domestic NZ production and cutting debt. China Youran Dairy Group, through their subsidiary Inner Mongolia Natural Dairy, are acquiring two farming hubs in Ying (Shanxi province) and Yutian (Habei province) in eastern China, for \$513m and Beijing Sanyuan Venture Capital are set to acquire Fonterra's 85% stake in the Hangu farm. Sanyuan hold the remaining 15%. "For the last 18mths, we have been reviewing every part of the business to ensure our assets and investments meet the needs of the co-op today," CEO Miles Hurrell said. "Selling the farms is in line with our decision to focus on our NZ farmers' milk." After the sale, Fonterra will prioritise their foodservice, consumer and ingredients business in China, their biggest market. The transaction value is subject to customary purchase price adjustments, and exchange rate movements. Any gains or losses on the sale would be "normalised" upon completion of the sale.

Just 6yrs ago, in 2014, Fonterra announced their plans to build four to six farming hubs to produce 1bn litres of milk in China by 2020. At that time they were still building the Shanxi hub to add to their existing Habei farms. Fonterra have invested over NZ\$1bn in the China farms over the past 10yrs. In April, they wrote down the value of the farms, which carry 31,000 dairy cows in feedlot systems, by a further \$61m to \$500m following a \$200m write-down last year, on what CFO Marc Rivers described as "new information". They yielded just \$1m in EBIT in 2017, despite a \$38m subsidy from Fonterra's China Ingredients division (see also p3 and I Hear, p7).

USA/France

GENERAL MILLS TO SELL YOPLAIT STAKE?

General Mills are working on a potential sale of their stake in the Yoplait brand. The US giant acquired 51% of the French yogurt company for \$1.2bn in 2011 from European private equity firm PAI Partners, who had owned the business since 2002. The remaining stake is owned by French dairy co-op Sodiaal. French media suggest that Sodiaal would be offered first option in any sale. A sale of the entire brand could be worth nearly \$3bn, according to French financial newspaper L'Agefi.

General Mills have had a difficult time with their yogurt business as the category has become more crowded. Although US sales of Yoplait were up 5% in the most recent earnings report, yogurt sales have dragged earnings down in the past. According to Mintel statistics, US yogurt sales peaked in 2015 at \$9bn and have fallen every year since. They are projected to total \$8.2bn in 2019. General Mills sold their growing Chinese Yoplait business last March to private equity firm Tiantu Capital, 8yrs after they acquired the brand.

World

WWF DEMANDS RADICAL CHANGE OF DIET

Consumers should give up at least two-thirds of the volume of dairy products currently consumed, according to WWF (the Worldwide Fund for Nature). WWF have launched 'Planet Based Diets', an international platform aiming to illustrate how food choices can help ensure a "healthy planet" and healthy eating, which defines measures and recommendations for 147 countries. WWF are promoting the expansion of plant-based foods and calling for agricultural subsidies to be shifted from animal to plant production. For consumers, this means consuming significantly less meat and fewer dairy products. According to WWF, legumes, nuts and other plant seeds can account for the majority of protein requirements and meat consumption should be cut to 14g per day. They suggest the main causes of emerging infectious diseases, including Covid-19, include the unsustainable conversion of land for agriculture, intensive livestock farming and the consumption of wild animals. (See also PM Consulting's analysis of dairy alternatives, back page.)

China

AUGUST POWDER IMPORTS DROP

China's August imports of the main dairy categories were up 8.1% from last year at 267,000 tonnes. However, imports of WMP were down 20% at 29,980t and SMP imports were down 11% at 27,530t. Milk and cream imports dominated trade with a 31% increase to 94,590t, whey imports were up 23% to 55,530t as the pig herd continues to rebuild, and butter imports were up 18% to 5,040t. Cumulative imports for the year to date now total 2.16m tonnes, up 7.3% from Jan-Aug 2019, with butter imports up 44% and whey imports up 35%, but with imports of infant formula, SMP and WMP now all below last year's levels.

CHINA DAIRY IMPORTS

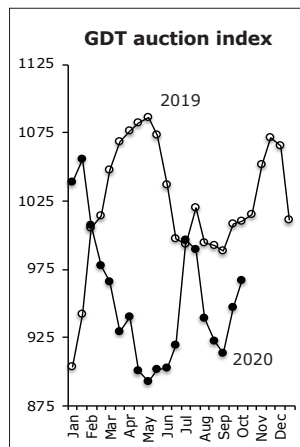
tonnes	Aug '20	v. '19	YTD
Total	267,000	+8%	+7%
Milk & cream	94,600	+31%	+7%
Whey prods.	55,500	+23%	+35%
Infant form.	28,100	+49%	-3%
WMP	30,000	-20%	-1%
SMP	27,500	-11%	-10%
Butter	5,000	+18%	+44%
Cheese	8,400	+5%	+11%

Netherlands

DOC TO APPEAL BONUS RULING

DOC Kaas are appealing against a new decision by the Court of First Instance in Assen requiring the co-op to make an additional payment of 2.2c/kg of milk delivered by a group of 63 members who left the co-op in 2015. According to the judgment handed down last Wednesday, DOC should have allowed these former members to take advantage of the DMK merger bonus. The dairy farmers' claim amounts to about €1.7m; with interest of 8% this now exceeds €2m.

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LATEST GDT RESULTS

	\$/tonne	Change in 2020
WMP	3,041	-3%
SMP	2,865	-5%
Butter	3,561	-12%
AMF	4,131	-16%
Cheddar	3,694	-8%
Lactose	1,182	+48%
Index	967	-6.9%

GDT world markets

GDT PRICE INDEX UP 2.2%

The most recent GDT auction resulted in an overall index up 2.2% from the auction 3wks before. The WMP index was up 1.7% based on an average price of US\$3,041/t and SMP was down 0.9% at an average \$2,865/t. AMF was up 5.4% at \$4,131/; Cheddar was up 0.4% at \$3,694/t; butter was up 8.4% at \$3,561/t; and BMP was up 9.1% at \$2,569/t. The lactose index was down 7.4% at \$1,182/t. A total 35,090t of product was sold, up 3.8% from the previous auction and 9.4% less a year earlier.

Futures and derivatives

NZX & SGX IN NEW PARTNERSHIP

The NZX and the Singapore Exchange have signed an agreement with a view to setting up a global partnership to grow NZX's dairy derivatives market together.

- Last week the NZX Dairy market traded its first Exchange for Physical contract (EFP) for 48 lots of December WMP at NZ\$3,115/t. EFPs are a tool that allows two parties to exchange futures positions for a physical position.

TRADERS AT RISK OF BOREDOM

Traders may not like to admit liking volatility, but the reality is that they do. Margins are won or lost on the vagaries of market swings. Being restless creatures by nature, boredom can quickly set in when nothing much is happening. Which sums up this last week, for everything apart from cream.

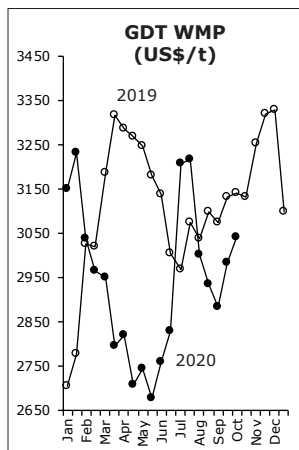
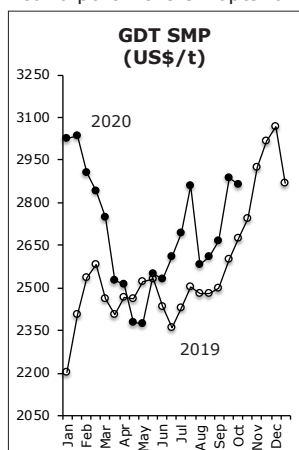
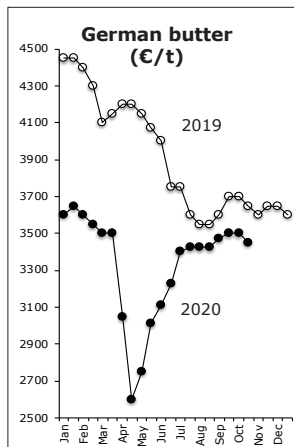
That's not to say the market for butter, powders and cheeses isn't moving. It is. Just painfully, tortuously, slowly. EU butter was up just €8/t last week; WMP was down €7; SMP up €10; whey up €3; Edam and Gouda up more impressively with a €20 move; and Cheddar not at all, including in the UK. These are hardly the sort of swings that reinforce dairy's reputation as being one of the most volatile of commodities, if not the most volatile.

On the German listings, butter settled at an average of €3,400/t after a €25 increase, and there was no movement in France or the Netherlands. At least they weren't down, however, as they were in the previous couple of weeks. French SMP made it to the €2,200/t threshold, alongside German SMP, after less than stellar increases, with WMP hanging out at around €2,715/t and feed whey just over €700/t. Futures prices also gained some ground for butter, and are generally within €50/t of the current real market prices for the next 6mths. SMP futures, in contrast, are generally €50/t ahead.

At least cream has maintained—even enhanced—its volatile reputation. Demand for cream on the Continent has been strong in recent weeks but it dropped last week, at the same time as routine maintenance and breakdown woes affected the ability of one major UK butter maker to churn. The net effect was more cream on the market, and a drop in price from £1.60/kg in the UK and as high as €4,600/t (at 100%) on the Continent to as low as £1.45/kg and €4,250/t. One trader said the cream market was "wild", with the gap as big as it has been for a while. Few traders had a view of the immediate future, but most were united in their opinion that come the end of the year not much cream would be going anywhere near a port if the UK opts for a 'no deal' Brexit or, equally, a hard Brexit.

Cue, therefore, even cheaper cream prices in December, potentially, and probably a big uptick in WMP manufacture, at least to mop up some of the cream that won't be going abroad. Add to this the (current) fact that UK milk volumes are pretty strong at the moment—September's volumes were the second highest on record, see p6—and it's not hard to see a potent mix brewing. That's all to come with the UK's new, glorious, independent future. Apparently. In the meantime, back to the boredom:

UK Cheddar isn't really moving much yet, and is still at £2,950/t for mild. But curd isn't far behind with some manufacturers—who have options, the milk to make it and (export) markets—saying that it's around £2,870/t or so. Thus it's more profitable for them to sell curd than it is to make mild. Other young cheeses are also on the up, with Edam and Gouda now seemingly settled within the €2,900/t zone after further small gains, as opposed to their recent to-ing and fro-ing at the border. Mozzarella has mixed reports—some sellers say it is still at £2,650/t in the UK, others say it's a bit less. But it could well be a major beneficiary of further lockdowns, as might mature Cheddar, which is viewed as being in pole position for increases under these circumstances. Spot milk, meanwhile, is at 29p–31ppl with higher volumes tempering prices slightly.



Weekly market prices @17.10.20

EU OBSERVATORY PRICES

(€/t)	Oct 15 v. Sept 30 2020	2020 high	2020 low
Butter	3470 -0.9%	3720	2880
WMP	2750 +1.9%	3070	2610
SMP	2170 +1.4%	2620	1910
Cheddar	3050 +2.0%	3190	2960
Whey powder	730 +1.4%	830	710

US QUOTES, CHICAGO MERC.*

(\$/t)	Oct 17 v. Oct 2 2020	2020 high	2020 low
Butter (AA)	3270 -1.7%	4300	2540
SMP (grdA)	2505 +0.8%	2850	1800
Cheddar			
—40lb blcks	5985 +5.3%	6245	2275
—500lb bar.	4790 +20%	5330	2260

*Conv. from US ¢/lb@1 tonne = 2,205lb

EU market indicators

PRICES CLOSE IN ON PRE-COVID LEVELS

The latest weighted EU average Cheddar price, at €3,050/t, is back at its pre-pandemic level, according to the European Commission's Milk Market Observatory. The SMP average, reported last week at €2,170/t, is 17% below its February level and WMP (€2,750/t) is 10% down. Butter, at €3,470/t after a dip in the past 2wks, is 5.7% below its peak in early January, and 2.2% below February.

DUTCH CUT WMP PRICE

The **Dutch Dairy Board/ZuivelNL** have increased their SMP (food) price by another €10 to €2,180/t and the WMP price has been cut by €40 to €2,640/t. Butter is unchanged at €3,350/t, SMP (feed) at €2,090 and whey powder at €720/t.

The German **IFE institute** estimated an average EU raw milk value last week up 0.1c to 29.9c/kg, reversing the previous week's cut. This price is based on the official prices of butter and SMP in Germany, France and the Netherlands. SMP prices were up marginally in all three countries, increasing the average for SMP by €10 to €2,200/t. The butter average was up €8 to €3,402/t.

FAO Index

DAIRY INDEX STABLE

The FAO Dairy Price Index averaged 102.2 points in September, almost unchanged from August and up 2.5 points (+2.5%) from the same month last year. Moderate increases in price quotations for butter, cheese and SMP were offset by a fall in those of WMP as import demand eased, especially from the Middle East, amid rising production in Oceania.

Australia/Canada**AURORA INVEST ANOTHER \$55m**

Canadian-owned Aurora Dairies are acquiring Gray Wigg, one of Australia's biggest dairy farm operations on 2,500ha of land in Gippsland, for over A\$55m, subject to Foreign Investment Review Board approval. Aurora, who are owned by Canada's Public Sector Pension Investment Board, already have more than 20 dairy farms in southeast Australia, producing more than 100m litres of milk a year. The combined farms milk about 5,000 cows, supplying an estimated 30m litres a year to Saputo's Maffra factory. According to the Weekly Times, Saputo Dairy Australia are understood to hold a mortgage on at least one of the Gray Wigg farms. Earlier this year Aurora paid \$40.4m for four dairy farms at Mt Gambier in South Australia owned by ASX-listed Beston Global Food Co.

China**SET FOR 70% DAIRY SELF-SUFFICIENCY**

Bloomberg reported that China has set a long-term goal for 95% food self-sufficiency, including for sufficient domestic dairy production to cover more than 70% of consumption. Also, unconfirmed reports recently suggested that pork reserves were still depleted after their African Swine Fever epidemic.

Australia**ORG. SUPPLIERS SEEK BUYER**

Dairy farmers holding the largest pool of organic milk in Australia have agreed to take a conventional milk price in the short term, placing their 28m litres with Australian Dairy Farmers Corp. until they find a processor who will offer higher returns. As part of their new start, the group have changed their company name from True Organic Dairy Farmers Australia to Aussie Organic Dairy following the collapse of their initial venture, Organic Dairy Farmers of Australia. Aussie Organic Dairy chairman Craig Fletcher said they were in negotiations with four or five parties seeking organic milk; options include becoming an organic unit of ADFC. "We also think there is an opportunity to develop an A1-free organic milk market," he said.

- The Remarkable Milk Co, who bought the North Geelong dairy processing plant last month from ODFA after the organic milk processor went bust, have launched O3 milk, which contains naturally-occurring Omega-3. RMC are owned by the Mulcahy family's Kyvalley Dairy Group, who also supply the a2 Milk Company and acquired the Kiewa Country Milk brand from Murray Goulburn in 2017.

FINANCIAL STIMULUS FOR COVID RECOVERY

Australia's dairy industry is expected to benefit from tax cuts and federal grants aimed at boosting jobs and growth over the next 4yrs. Under the government's flagship A\$74bn JobMaker package announced to stimulate economic recovery from the Covid-19 pandemic, key measures include the ability for businesses with turnover of up to \$5bn to write off assets until June 2022; options to carry back tax losses, incentives for taking on new young employees, export support and \$1.5bn over 5yrs to support manufacturing. Investment in building and modernising regional infrastructure is also a key priority in the Budget.

AUG PRODUCTION UP 3.5%

August milk production in Australia has been estimated by Dairy Australia up 3.5% from last year to 620.3m litres. Production was up in all states apart from QLD (-6.6%). Production for July and August—the first 2mths of the new season—was up 3.2%.

NZ**FONTERRA LIFT FORECAST PAYOUT BY 6%**

Fonterra have increased their forecast farmgate milk price for the current season to NZ\$6.30-\$7.30/kg of milksolids, up from \$5.90-\$6.90, implying a mid-point around 6% higher at \$6.80/kg MS. They say that recovering demand from China is driving the increase, together with a refocus back to NZ (see p1).

- Fonterra have launched a programme profiling greenhouse gas emissions for all their farms as part of a Farm Environmental Report, which combines the CHG report and a nitrogen risk scorecard. One farmer taking part in the trial said he had halved his nitrogen fertiliser use without impacting production.

MIRAKA PAY OUT \$7.14

Miraka's final 2019-20 farmgate milk price payout was NZ\$7.14/kg MS, just below Fonterra's \$7.19 and slightly below target, according to CEO Richard Wyeth. Miraka are now the second highest payer after Tatura. The Maori-owned milk processor is forecasting a payout range of \$5.75-\$6.75/kg MS for the current season amid continuing Covid-19 uncertainties. Miraka are producing 35,000t of milk powder and 240m UHT units a year, generating a turnover of \$250m.

NZ MILK PAYOUTS

\$/kg MS

	2018-19	2019-20
Tatura	8.50	na
Miraka	8.50	7.14
Synlait	6.58	7.30
Oceania	6.50	7.30
Fonterra	6.35	7.19
Westland	5.86	6.75
Open Country	6.30	6.30

Netherlands/Nigeria**F/C WAMCO LAUNCH DAIRY CENTRE**

FrieslandCampina WAMCO Nigeria have entered into a partnership venture with key stakeholders to launch Nigeria's first expertise centre for dairy development, the Centre for Nigerian Dutch Dairy Development (CNDDD). "The Centre will engage and promote co-operation between the government, private sector, academics, students and dairy farmers. It will undertake activities that will improve the dairy chain in Nigeria, focusing on both the upstream and downstream sides of the chain," said F/C WAMCO managing director Ben Langat.

- F/C have launched a new packaging innovation in Singapore that enables mothers to track the source of their infant formula milk brand, Friso.

WESTLAND SALE STILL UNDER SCRUTINY

The NZ government's involvement in the decision to approve the NZ\$588m sale of Westland Milk Products to Hong Kong Jingang Trade Holding, a company wholly-owned by Chinese conglomerate Inner Mongolian Yili Industrial Group, was under scrutiny in the High Court last week. A hearing began into Social Credit's judicial review of last year's Overseas Investment Office decision to approve the sale. Social Credit's position is that the OIO applied the wrong legal test. They want Hong Kong Jingang's consent to be declared to be unlawful and potentially invalid.

US**AUGUST SMP EXPORTS UP 35%**

August US exports of SMP/NDM were up 35% from last year to 68,800t, according to the US Dairy Export Council, driven mainly by a doubling of shipments to SE Asia. Shipments to China have risen in the past year from almost nothing in 2019 to 5,300t in August 2020, making it the third largest destination for US milk powder after Mexico and Canada. Cheese exports were up 17% and whey exports were up 29% (shipments to China up 318%). Lactose exports were down 8%. Jan-Aug dairy exports were up 17% in volume and up 11% in value.

- The USDA's October WASDE report has increased the forecast for 2020 milk production to 222.3bn lb (100.8m tonnes), 1.8% higher than in 2019.

Canada**EASING OUT OF SUPPLY MANAGEMENT**

Canada needs to make major changes to their dairy supply management (quota) system to help the industry combat declining milk consumption and the incursion of more foreign imports, according to a new report by a group of agri-food researchers at Dalhousie University and the University of Guelph. They say that supply management has held back innovation in the dairy sector by providing a steady price and relieving the pressure to respond to shifting consumer habits and industry trends. Both the number of dairy farms in Canada and sales of fluid milk have been steadily declining for decades and the dairy farming sector could contract by as much as half in the next decade. "We could grow the dairy sector, instead of just managing decline," said Sylvain Charlebois, director of Dalhousie's Agri-Food Analytics Lab, who co-authored the report. "The sector could grow via a 20-year plan to establish 'Supply Management 2.0' by slowly reducing tariffs and opening up the market to more imports by buying out struggling farmers and building up an international brand for Canadian dairy."

- The Canadian government announced last week another C\$2.5m to support Ontario dairy processors "to enhance productivity".

Italy**GRANAROLO SELL PANDEA**

Granarolo have sold Pandeia, a subsidiary specialising in bakery products, to Morato Pane. Pandeia was taken over by Granarolo in 2016 following a bankruptcy. The bakery products manufacturer had a turnover of €12m in 2019, over 80% of which was generated in France and England. Granarolo justified the sale by focusing on their core business of dairy products in Italy and abroad, while announcing further acquisitions. The Granarolo Group has 2,770 employees and a milk pool of 850m kg. Consorzio Granlatte have a 77.48% stake in the business, Intesa Sanpaolo 19.78% and Cooperlat 2.74%.

- Granarolo have developed a new e-commerce portal, Spacciograno, launched last month as a result of lockdowns hampering fresh milk sales. Online orders are being processed within 48 hours in 500 municipalities in the north of Italy for orders of €30 or more, with free delivery. Sales will be extended to Rome and then to the south. The platform, which currently accounts for 2%-3% of Granarolo's €1.3bn turnover, delivers fresh products and cheese, egg and pasta and also food and juices from small local producers. "The lockdown has accelerated the modernisation of the entire food supply chain, especially for milk," said Granarolo president Giampiero Calzolari.

Italy/UK**NEWLAT OFFER UP TO £1m FOR HOVIS**

Italy's Newlat Food, owned by the Mastrolia family and formerly part of bankrupt Parmalat, have made a preliminary, non-binding offer to buy Hovis, the 134-year-old British bread maker. Hovis have also attracted the interest of private equity and turnaround funds, according to analysts. The Parma-based Italian company could invest up to £100m for Hovis, which is owned by Premier Foods and The Gores Group—the acquisition would increase Newlat Food's annual turnover to €1bn, ahead of a goal set when they listed in October 2019. It would also give more international exposure to the Milan-listed group, which is already active in Germany. Newlat recently acquired Italian dairy company Centrale del Latte d'Italia and are diversifying their brands, which include Delverde pasta. They also manufacture Buitoni products under a licensing deal with Nestlé.

Italy/Germany**AMBROSI SECURE €27.5m LOAN**

Italian cheesemaker Ambrosi have taken out a €27.5m loan with Deutsche Bank. The money is destined for new ripening storage for Grana Padano and Parmogiano Reggiano. Deutsche Bank have accepted 125,000 loafs of cheese as security.

Netherlands**F/C SUSPEND PLANETPROOF APPLICATIONS**

FrieslandCampina have shut the door on new applications for their 'On the way to Planet Proof' milk programme. Currently, 600 farms are producing milk to the Planet Proof standard. Farmers were this week told that the co-op stopped taking on new milk supply for it. Farmel, FarmDairy, Veco and NoorderlandMelk are also now supplying Dutch supermarkets with milk and dairy products with the Planet Proof label.

- Vreugdenhil** are paying a Sept milk price of 35.96c/kg, up 3.9c on Oct due to the start of a winter bonus, now the only such bonus paid in the Netherlands. The maximum payable with bonuses is 38.06c.

Germany**ODENWALD STRIKE**

Workers at the Odenwald dairy plant in Elsterwerda were on strike for five hours last weekend. Around 150 of the 350 employees took part in the action, called by the union NGG to support higher wages.

France/Japan**DANONE SELL YAKULT HONSHA STAKE**

A day after signalling their intention to sell their remaining 6.61% stake in Yakult Honsha as they continue to restructure, Danone announced the sale had been finalised. The transaction was valued at 58bn yen (€470m) through an accelerated bookbuilding process. The companies say they would both remain committed to long-term strategic collaboration to promote probiotics. Existing commercial partnerships, including joint ventures in India and Vietnam, remain in place. Danone's collaboration with Yakult began in 2004; they divested most of their 21.29% stake in the company in 2018.

Spain**TGT ACQUIRE 20% STAKE IN COBREROS**

Dairy company Grupo TGT, Spain's leading cheese producer by volume, have bought a 20% stake in Lacteas Cobrerros, a sheep and goat's milk products supplier. The two family-run companies have worked together since 2005 when they started a five-year rolling partnership which involved TGT distributing Lacteas Cobrerros products. It is understood that the transaction gives Grupo first refusal rights in any future sales. Cobrerros said the investment would support continued expansion, especially in milk powders and baby formula. They plan to increase 2020 turnover to €50m, and add another €8m-€10m in 2021. TGT's 2019 turnover was €383m.

France**BEL LAUNCH PLANT-BASED CHEESES**

Groupe Bel have announced they will launch plant-based counterparts to each of their core brands in the coming months. The group, which owns popular cheese brands such as 'La vache qui rit', 'Kiri', 'Babybel' and 'Boursin', is relying on its recently acquired majority stake in All In Foods, a company producing vegan dairy alternatives. A vegetable version of Boursin will be launched on the US market as early as the end of October. Vegan Mini-Babybel will follow next year. Bel also plan to launch alternative products under the brand name 'The Laughing Cow' in the US, UK, Canada and Germany from January 2021.

NEW DRYER FOR ISIGNY SAINTE-MERE

French co-op dairy Isigny Sainte-Mère are building a new drying tower with a capacity of 25,000t, taking total capacity for milk powder to around 70,000t. The plant will come on stream in May 2021 and will produce powder for baby food. The €83m project will create 150 new jobs. Normandy-based Isigny Sainte-Mère say that despite Covid-19, they have been operating at full capacity throughout the year. Some 47% of their €452m turnover, which was up 10% in 2019, is generated by exports. Dry products account for 63% of Isigny Sainte-Mère's business.

LTO league table**MILK PRICES EASE UP AGAIN TO 26.19c/kg**

The LTO milk price league table for August showed little change in the average price from July—up 0.2c to 32.71c/kg. This is 0.85c or 2.5% lower than the same month last year. All milk prices remained unchanged or increased in August with the exception of Danone (-0.6c) and Savencia (-0.3c). As usual Granarolo were top (36.35c) while Saputo UK stayed at the bottom—26% below Granarolo despite a small price increase. The biggest gainers were Sodial of France (+1.13c), due to seasonality, and F/C (+0.95c).

LTO LEAGUE TABLE MONTHLY

MILK PRICES (c/kg)	Aug 2020	Aug v. July
Granarolo (It)	37.87	=
Danone (Fr)	36.50	-0.60
Valio (Fin)	35.88	=
Sodial (Fr)	35.79	+1.13
Lactalis (Fr)	34.04	+0.56
Savencia (Fr)	34.16	-0.30
F/C (Neth)	32.95	+0.95
Hochwald (Ger)	32.63	=
Arla Foods (Den)	31.82	-0.01
Kerry (Ire)	31.69	+0.42
DMK (Ger)	30.91	+0.51
Dairygold (Ire)	30.80	=
Glanbia (Ire)	30.78	+0.49
Müller (Ger)	30.68	=
Milobel (Bel)	28.73	=
Saputo UK	28.19	+0.13
Average	32.71	+0.20
Capsa (Sp)	31.69	=
Emmi (Switz)	55.11	-0.26
Fonterra	27.13	-1.69
US Class 111	41.18	-11.49

Source: LTO, ranked on Aug prices. The prices are exclusive of all supplementary payments, for milk standardised to 4.2% b/f and 3.4% prot., and delivery of 1m kg.

Brussels update**FARMGATE MILK PRICE UP 0.6% IN AUGUST**

The EU-27 average farmgate milk price in August was up 0.6% from July to 33.1c/kg. This is 2.9% down on August 2019. The September milk price, with Ireland and Romania still to report, is estimated up slightly to 33.4c/kg.

The **Italian spot milk price** is stable at 34.8c/kg, according to the Milk Market Observatory.



Netherlands—Former Fonterra boss **Theo Spierings**, who took home around NZ\$45m in his 7yrs with the co-op before it announced its first-ever losses, has re-emerged as the founder of The Purpose Factory, a consultancy specialising in sustainability and efficiency, especially in the food sector, based in Ommen, Netherlands. They are working with Grupo Gloria in Peru.

Australia—**Peter Cullinane**, who launched boutique milk company Lewis Road Creamery in July 2012, has sold his stake to Southern Pastures, which now owns 100% of the company.

UK—After 5yrs, **Bergen Merey** is to step down from his role as CEO of Müller Yogurt & Desserts at the end of the year, citing family reasons. **John Broekmans**, currently responsible for Müller’s branded business, will assume his responsibilities on an interim basis from mid-Oct.

Ireland—**Martin Keane** stood down from his role chairing both Glanbia PLC and Co-op on Oct 8. Glanbia said the changes were “in line with the new agreement between the PLC and the Co-op” the two entities will now be chaired separately. Glanbia PLC have appointed independent US-based non-exec director **Donard Gaynor** as chairman in place of Keane. As Gaynor has been on the Glanbia board since March 2013, he will chair the PLC only until the 2022 agm at the latest. Keane will remain on the board until his normal retirement at the 2021 agm. The Co-op has appointed Wexford farmer **John Murphy** as chairman; he was previously vice-chairman. **Pat Murphy** has been reconfirmed as Co-op vice-chairman and is joined by **Brendan Hayes**. **Jer Doheny**, **Diarmuid Lally** and **Eamonn Power** have retired as directors from the Co-op board, and are replaced by **Robert Barron**, **Denis O’Sullivan** and **John Regan**.

Ireland—Nominations for the new Ornuua board, which has committed reducing the potential for conflict of interest by dropping the number of co-op bosses involved, are: **John Hunter**, CEO at MTL (a pilot processing plant in a joint venture between Teagasc and nine dairy processing companies), who is a former general deputy manager at Tipperary Co-op, for Tipperary, replacing **John Daly**; **Michael O’Shea** for North Cork, replacing North Cork CEO **Pat Sheahan**; and **Jerry Houlihan** for Kerry Group, replacing Arrabawn CEO **Conor Ryan**. These three will join **Edmund Lynch** (the Dairygold nomination), **Diarmuid Lally** (Glanbia), **Joe O’Sullivan** (Carberry), **Sean Brady** (Lakeland) and **Sean Sweeney** (Aurivo).

Denmark—After 30yrs with Arla, **Tim Ørting Jørgensen**, executive vice president of Arla’s International Zone, will leave at the end of the year to join Sysco, the Fortune 500 US foodservice company, as president for international foodservice operations. He will be succeeded by **Simon Stevens**, senior vice president of Arla’s MENA region.

Netherlands—FrieslandCampina’s members’ council have appointed farmer and former Rabobank manager **Frans van den Hurk** to the board from Dec 15. He succeeds **Gjalt Mulder**, who indicated that he is unavailable for a second term. He also joins the supervisory board.

Brussels—The European Milk Board have appointed current vice-president **Sieta van Keimpema** from the Netherlands as their new president. The previous chair, Belgian dairy farmer **Erwin Schöppes**, did not stand for re-election.

Russia/Finland—**Elena Kipeneva** has been appointed to head up the Russian division of Valio from January 2021, replacing **Kari Finska**, who will continue to work from the head office in Finland.

Russia

DANONE TOP OF THE PROCESSORS

Danone have 11 plants among the top 100 in Russia, according to Michael Mischenko’s Dairy Intelligence Agency, processing 1.22m tonnes of milk in 2019. PepsiCo had the second most plants, with seven facilities processing 1.13m tonnes. The top 100 plants processed a total 10.7m tonnes in 2019, up 5.2% from 2018, DIA say.

Romania

MARIUTA IN BONDS ISSUE

Agroserv Mariuta, who have the ‘Laptaria cu Caimac’ brand, plan to issue bonds worth €2m-€3m and list them on the Bucharest Stock Exchange. The company is looking to expand exports, initially into Spain and Italy. It posted 2019 turnover up 12% to €8.9m and profit up 25% to €0.66m.

Austria

REINE LUNGAU DROPPED

Salzburg Milch have taken the ‘Reine Lungau’ product line, launched 3yrs ago, off the market. It aimed to market milk from a self-sustaining ecosphere but failed financially.

Ireland

ARRABAWN’S MILK UNDER SCRUTINY

Arrabawn Co-op last week issued a recall notice on some batches of their fresh milk, described as potentially unsafe after enterobacteriaceae was detected during routine testing of their milk. Brands affected include Aldi, Mace, Spar and Gala. Arrabawn have been dealing with liquid milk supply issues with supermarkets after problems emerged at their Kilconnell liquid milk processing facility in Co Galway. Last Wednesday it emerged that they had lost a key liquid milk contract with Tesco after an inspection uncovered a non-pathogenic E coli bacterial problem.

- **Glanbia** last week ordered all their stores to stop selling bagged cattle feed pending an investigation into the possible presence of Zilpaterol, a growth hormone licensed for use in the US but banned in the EU, which had been found in some of their horse feed, in an ingredient also used for ruminant feed.
- **Kerry Group** have unveiled a new sustainability strategy—including a commitment to achieve net zero greenhouse emissions before 2050—and a new brand identity.
- **BELVIEW BELOW CAPACITY**—Glanbia’s new facility in Belview has been operating at full capacity only for 14-16wks a year, during peak milk supply, according to reports from the Glanbia Co-op agm. In contrast, the processing capacity at Ballyragget was full for 40wks of the year. The peak-to-trough ratio of supply was reportedly costing suppliers the equivalent of 0.5c/kg.

Ireland

ORNUA PPI UP 1.0% IN SEPT

Ornuua’s Purchase Price Index, which measures value paid to member co-ops for products marketed, was 102.8 in Sept, up one point from August. This converts to 30.4c/litre (Aug: 29.1c/litre).

ECJ ruling

EU LABELLING RULES REINFORCED BY ECJ IN LACTALIS APPEAL

EU legislation designed to harmonise rules on origin labelling of foods and, in particular, of milk does not stop Member States “imposing certain additional particulars regarding origin or provenance,” according to a judgment issued by the European Court of Justice on Oct 1. But the adoption of those particulars is conditional on there being an objectively proven link between the origin/provenance and certain qualities of that food. The case was originally brought by Lactalis against the French prime minister and the justice, farm and economy ministers, seeking to overturn a decree requiring labelling for the origin of milk and milk used as an ingredient in pre-packed foods. The French Conseil d’État referred questions on the interpretation of the regulation to the ECJ. Advocate General Gerard Hogan previously noted that Member States may impose additional requirements including public health, consumer protection, fraud prevention, the protection of property rights and avoiding unfair competition. Countries also needed to show that the majority of consumers find the information valuable and there has to be a proven link between certain qualities of the food and its provenance or origin. Lawyers emphasise in the judgment that the two elements cannot be combined to justify an extra origin labelling requirement purely on the basis of consumers’ subjective opinions on provenance (so-called food nationalism). European Dairy Association secretary general Alexander Anton issued a statement noting that the ECJ rejected the French mandatory origin labelling scheme for milk and dairy: “France has not shown any valid objective criteria for a quality difference which is a prerequisite for any mandatory national origin labelling scheme.” The EDA “appreciates this outcome and will continue to defend the European single market”. [AGRAFACTS]

Company reports

ARLA CUTS COSTS, BOOST BRANDS, POST PROFITS

Arla Foods, Arla amba's UK subsidiary, have reported sales for calendar year 2019 down 6% at £2,468.7m, making them still substantially the biggest dairy business in the UK, nearly 30% bigger than No.2, Müller. The UK represents Arla's biggest market in Europe with 36% of their global sales. Arla reported net operating profits of £44.9m compared with losses of £34.3m in 2018. Total costs in 2019 amounted to £2,432m, down £208m (8%) on the year before, leaving an operating profit of £37m compared with an operating loss of £19m in 2018. Exceptional items amounted to a loss of £15m in 2018 and a profit of £9m in 2019, most of which was attributable to sales of property and impairment charges. Pre-tax profits in 2019 totalled £38.5m compared with losses of £40.7m in 2018. The improved performance in 2019 was down to a significant cut in costs although staff numbers were virtually unchanged at 3,440. On the sales side, sales of branded products (Lurpak, Anchor, Starbucks

ARLA UK'S FINANCIAL PERFORMANCE		
£m	2018	2019
Revenue	2,621	2,469
Costs	2,640	2,432
Oper. profit	-19	+37
Except items	-15	+9
Pre-tax profits	-41	+38

ARLA'S PERFORMANCE MILK PRICE				
	€/kg	£:€	p/kg	ppl
2015	33.7	1.38	24.4	25.1
2016	30.9	1.22	25.3	26.1
2017	38.1	1.14	33.4	34.4
2018	36.4	1.13	32.2	33.2
2019	36.6	1.14	31.1	32.0

and Yeo Valley) were up on largely unchanged prices. Sales of supermarket milk were also up but profit margins fell again. In addition, changes in charges between parent Arla amba and the UK subsidiary impacted positively on

overall profitability. Arla's performance price of milk paid to co-op owners was virtually unchanged in 2019 at 36.6 eurocents/kg but was down 3.5% in pence per litre in the UK. But the 2018-19 average milk price was 14% higher than the 2015-17 average in ppl, whereas the euro price was up by only 7%. Arla's UK intake of milk last year was virtually unchanged at 3.2bn kg (3.1bn litres).

KIRBY & WEST POSTING LOSSES

Leicester-based liquid milk distributor Kirby & West, now 100% owned by Braeforge—who acquired the remaining 33% of the shareholding in the company in February 2020—reported sales for the year to June 2019 down 16.5% from the previous 15-month accounting period (actually up 4% on an annual basis, they say) at £7.2m. They report an operating loss of £78,100 compared with a profit of £75,900 in the previous 15mths, and a pre-tax loss of £88,900 compared with a year-earlier profit of £64,300. Staff numbers increased from 43 to 49. The group refinanced its banking arrangements in Sept 2019, increasing overall facilities to £13.75m. Kirby & West's ultimate parent company is listed as BWP (Cambridge), wholly owned by Bernard Plumb, which has a majority shareholding in Braeforge Investment Ltd. Graham Smith resigned as a director in August 2020, leaving Mike Mitchell and AED Consultancy (Arthur and Jacqueline Dunne) on the board.

FrieslandCampina UK, based at Horsham in West Sussex—whose main business in the UK for more than 20yrs has been imports of the Belgium-made Yazoo flavoured milk drinks—claim that in 2019 their sales volumes were up 7% with market share up to 27% but while sales were up 13% at £52.3m their pre-tax profits were slashed from £1.2m to under £0.5m. Staff numbers were down from 35 to 28. They said they continued to increase profitability with their private label contracts and they said they planned to continue with their new product development launched last year with Chocomel and Barista.

Specialist yogurt producer **Rachel's Dairy**, based in west Wales—a wholly-owned subsidiary of Lactalis Nestlé Chilled Dairy since 2012—have reported sales for calendar year 2019 down 7% at £21.7m and operating and pre-tax profits almost doubled at £1.5m, lifting operating margin from 3% to 7%. Production was cut to 16,700t. Net assets were up 33% to £4.8m. Staff numbers were down from 100 to 94.

UK company news

MEDINA LOSE SUPPLIER INJUNCTION HEARING

Medina Dairy lost a High Court case this week involving 16 suppliers who had withdrawn supply. The judge ruled that Medina's High Court injunction to force 16 Meadow Milk farmers to continue to supply all their milk (27m litres per annum) to Medina for a further 9mths amounted to a restriction of trade. This milk was not unique, and alternative supplies would be available on the spot market and elsewhere, the judge concluded. Meadow Milk were awarded costs. The group opted to stop supplying Medina by giving 3mths' notice after the processor slashed farmgate milk prices and changed payment terms when foodservice and other market channels were lost as a result of the pandemic lockdown. Most of these farmers are now supplying Meadow Foods. The legality of the notice period has yet to be determined.

BUTLERS GO FULLY RECYCLABLE

Lancashire-based farmhouse cheesemaker Butlers have developed recyclable polyethylene (PE) packaging for all their cheese. This can be recycled as one unit—label and all. Butlers credit Ian Schofield, known for his plastics work with Iceland, for bringing this to market, making them the first in the industry, they say, to have fully recyclable packaging on hard, blue and soft cheeses. M&S will be the first to stock product with the new packaging, with 'This is Proper' goat's cheese from Nov 4. "Sustainable cheese packaging is notoriously difficult to get right with different cheeses having complex packaging needs—managing taste and quality, maturity, interaction with light, heat, oxygen etc.," said Schofield. Butlers are now exploring natural alternatives including seaweed.

UK milk supply

SEPTEMBER MILK PRODUCTION SURGE

AHDB have provisionally estimated GB milk production at 998m litres in September, 0.9% above last year and the second highest level for the month in 25yrs. A backdated milk production amendment from December 2019 onwards, after a milk buyer submitted revised delivery volume data, raised the estimate slightly, but an unusually strong lift in milk production towards the end of the month was the main reason, AHDB say. Volumes are currently tracking 1.9% above AHDB's recent forecast. The adjustment added around 2m litres (+0.2%) per month from Jan-May, 3m litres (+0.3%) to June supply and 5m litres (+0.5%) to July. GB milk production for 2019-20 is now put at 12,564m litres, 5m litres more than the previous total and 0.4% above last season.

Company report

PRIMA CHEESE SALES TOP £69m

The Beni family's Durham-based **Prima Cheese**—who started 20yrs ago producing grated and shredded cheese and pizza toppings—have reported sales up 5.6% at £69.3m for the year to March 2020 and operating profits up 23% at £1.9m, increasing their average operating margin from 2.3% to 2.7%. Pre-tax profits were up 30% at £1.8m. Their tax charge was up 30% at £308,000. The company more than doubled their factory capacity to more than 80,000 sq ft in completing their three-year investment programme. Staff numbers were up from 118 to 133 despite the onset of the Covid crisis. Exports were cut from 25% to 21% of total sales. Total equity was up 16% at £6.6m.

Milk prices

FIRST MILK UP 0.5ppl

First Milk announced that their November farmgate milk price will increase by 0.5ppl. This takes their liquid standard litre to 27.75ppl (27.68ppl for the DIN/AHDB standard litre) and their manufacturing litre to 28.69ppl, both prices including their member premium. F/M vice chairman and farmer director Robert Craig said the increase was a result of strong business performance and improved market returns, mainly for cheese, but he warned of "considerable potential for disruption" in coming months with Covid-19 on the rise and Brexit terms still to be agreed.

Lactalis have increased their November milk price by 0.5ppl to 27.9ppl for the DIN/AHDB standard litre. **Heler's** (now in a Tier 2 Covid zone) have increased their November milk price by 0.75ppl.

UK/Canada

UPFIELD TO SET UP CANADA PLANT

UK-based spreads and margarine company Upfield are planning a new plant-based production facility in Brantford, Ontario in Canada.

Anaerobic digestion**ARLA FARMS IN A/D MUCK-TO-FUEL TRIAL**

Arla Foods have launched a trial to explore the potential for powering vehicles using cow manure from their farms. Farmers will send manure to a nearby anaerobic digestion plant where it will be broken down into components, including clean bio-methane, and converted into usable fuel. Arla say the trial makes them the first UK business to use waste from their own farms to generate power for their fleet. The fertiliser created from this process will go back onto the farms. The 3-month trial will involve two Arla milk tankers that have been adapted to run on biofuel. Together they are expected to cover around 90,000km and help reduce Arla's carbon impact by 80t. Arla will use manure from 500 cows (around 190t of slurry each week) to create 27,000kg of biofuel to power the trial vehicles. A fuel station has been set up on one of the farms taking part in Winslow, Bucks.

• **BREXIT ALERT**—Arla are again warning consumers about likely price increases for grocery essentials including butter and cheese if the UK leaves the EU without a Brexit deal. Food suppliers could struggle to manage a late or no deal in the face of coronavirus disruption and Christmas demand, says Arla UK boss Ash Amirahmadi. Suppliers are in discussion with supermarkets over how to deal with more than £3bn of tariffs in the event of no deal, he said, with dairy tariffs likely to have a significant impact—35% of yogurt, 40% of butter and 67% of cheese consumed in the UK is imported. He said farmers were also expecting to mitigate the cost of feed and other price rises by passing some of the impact on to consumers.

Retail**MÜLLER FAT-FREE SKYR**

After their recent launch of Müller Corner Icelandic Skyr, Müller have added a fat-free skyr yogurt to their portfolio, containing 14g of protein per pot. This is their highest protein-per-serving offering so far.

• **Biotiful Dairy** have launched a new line of kefir shots that contain 30bn active cultures per small bottle to meet perceived daily health demands.

• Late last week **Lidl GB** ordered a recall of their Simply Mature White Cheddar because it may contain pieces of plastic.

More Dean dirt—Some milk suppliers to Dean Foods (deceased) have been approached by US law firm ASK LLP, who specialise in corporate 'debt collection', demanding repayment of 15%-20% of monies paid to the dairy farmers by Dean for the 90 days prior to Dean's bankruptcy filing on Nov 12, 2019. Federal US bankruptcy law provides for a 90-day clawback of "preferential payments" made by the bankrupt firm. The claimant would have to prove that the payments were "preferential"; under US Federal Milk Orders payments by dairy companies to milk suppliers must be "timely". ASK have been asked if all milk suppliers to Dean have received these "demands" for repayment to Southern Foods Group, Dean's bankruptcy umbrella holding company. Dean's biggest milk supplier was DFA, who are now in the process of buying most of Dean's assets. Under the law quoted by ASK, DFA would be liable for the repayment of about \$100m. ASK have not yet replied to these queries from The Milkweed, who have described the firm as "maggots feasting on what's left of the Dean carcass".

Armer digs in—The NZ Financial Markets Authority says one year on that their investigation into a Fonterra shareholder's complaint about the valuation and auditing of the company's assets is "still ongoing". One of Fonterra's biggest shareholders and a former board member, Colin Armer, took his concerns about the shock asset writedowns in FY-19 and financial statements for 2015-19 to the regulator last September. Also still ongoing are inquiries into Armer's complaint by the auditors' regulator NZICA. In FY-19 Fonterra posted asset writedowns and accounting adjustments of \$826m and a net loss of \$605m. Around \$4bn—representing 5% of dairy farm equity in NZ—was wiped off the balance sheets of Fonterra's 10,000 farmer-owners in FY-18 and FY-19, shareholder watchdog the Fonterra Shareholders' Council calculated. Armer said at the time of his complaint that shareholders had been badly let down by the company's leaders, the council and auditor PwC. Armer said there had been inconsistent valuation methods for the carrying values of Fonterra's \$750m investment in China's Beingmate and of China Farms, a \$1bn loss-making investment (see p1). Armer also asked the FMA to investigate Fonterra directors' calculations on executive performance pay and why they were not independently audited. PwC had been Fonterra's auditor since the dairy exporter's formation in 2001. It surrendered the contract last year after pressure from shareholders, including Armer. Two Fonterra directors, Bruce Hassall and Brent Goldsack, are former PwC partners.

—Voting for the 2020 Fonterra board of directors is underway, with six candidates vying for two places on the board. The two 'wild cards' are former director Nicola Shadbolt and Hamilton farmer and financial analyst Annabel Cotton. Little seems to be known about Cotton, while Shadbolt has returned with all guns blazing to tackle "unfinished business" after her 2018 spat with Fonterra when an independent panel threw her off for insubordination. It's a sensitive time for Fonterra. Will farmers trust in their self-congratulatory declarations of new purpose and direction, backed by the (timely) announcement of the sale of the disastrous China farms venture, or will they back an outspoken critic?

Glanbia changes—It was a surprise to most that

**I hear....**

Martin Keane, who ousted Henry Corbally to chair the Glanbia PLC and Co-op in May 2yrs ago, has already dropped out of the role not just at one but at both entities. Under the new governance, with PLC and Co-op to be chaired separately for the first time, it will also be the first time a non-farmer takes the PLC chair, a reflection of the

minority shareholding now held by farmers. Farmers are left hoping that the Beam spirits company executive, Donard Gaynor, will find a way for a pinta to be as profitable as a dram. There's been griping at Glanbia at management and farm level for months now—over their share price (down from €16 to €9 during Keane's incumbency), milk prices and the well-aired row over conflicting sales in the US. Ironically, Keane has fallen on his sword just as Corbally is promoted back to represent Glanbia on the Ornuua board, albeit temporarily. Diarmuid Lally is Glanbia's official 'non-conflicted' nominee to the new board, but cannot join it for at least 6mths. It is thought that a number of these participants have grown weary of the wrangling.

UK contract issues—The 16 dairy farmers who collectively supplied Medina/Watson's as Meadow Milk acknowledged significant support from the NFU—which included an on-the-ball solicitor—for their successful challenge a fortnight ago to the processor's injunction (see p6). Conflict arose out of the lockdown turmoil that robbed Medina of key markets and resulted not only in an eye-watering 5ppl farmgate price cut for suppliers in May (to less than 25ppl), but also a change in payment terms. Meadow Milk's problems with Watsons started in the summer of 2019, long before Covid, when the processor took away their pricing mechanism and started discretionary pricing. But they were among the last to repay stopped money and slow to put their price back up, which proved the last straw for Meadow Milk, chaired by Hampshire County Council farm tenant Jon Proctor. In late June, with Watson's still 3ppl off most of their competitors, the group finally served 3mths' (as opposed to a year's) notice, believing they had a strong case for breach of contract. On Sept 30—the last day of the notice period—Watson's obtained the interim injunction stopping the farmers from selling their milk elsewhere (most had signed up to start supplying Meadow Foods from Oct 1). A week later they were in court defending it, represented by legal heavyweights Burges Salmon (who built their reputation as advocates for the underdog, including agricultural tenants), who argued that the processor's long-term financial viability depended on the supply of milk from Meadow Milk. According to Meadow Milk's lawyer, Clarke Willmott's Esther Woolford (who moved to the firm from Burges Salmon), the judge "comprehensively dismissed" this case. The judge noted that two other members of Meadow Milk who had also given notice (but were not involved in the litigation) had found better terms with another buyer—so tying the remaining 16 to a more disadvantageous relationship would be to "subvert the free market". In light of the Defra consultation on milk contracts, all this is grist to the mill for those who argue that dairy farmers are expected to bear the risk of contracts controlled by milk processors. Litigation is likely to be ongoing, even if Medina/Watson's manage to buy in the milk they need at a near or better price, which looks unlikely given spot prices still hovering around 30ppl.

Around the world there is increasing focus on the role of dairy products in sustainable diets and a steady rise in plant-based dairy alternatives—including drinks, yogurt-like products, spreads, ice cream, cream and cheese—made from soy, legumes, seeds, nuts and cereals which may have lower negative environmental impacts. Rearing ruminant animals is associated with important negative environmental impacts such as high GHG emissions and large land requirements. **Well-known dairy consultant, Denmark-based Preben Mikkelsen, has now produced the most detailed 58-page analysis of the current state of play with plant based dairy alternatives**, many of them now actually made by producers of dairy products.

Alternative products have been known for many years, most of them using soy as protein and cheap vegetable oil as fat-ingredients. This has created concern about the possible negative impact on sales of traditional dairy products. These products were previously ranged at the cheaper end of the product line-up but this has changed in the past decade with plant-based products now often categorised as premium products.

Consumer attitudes have changed for a number of reasons: dairy-free is seen as healthier, especially among young people; taste is seen to be better; more consumers in richer economies are cutting down on the daily intake of animal products including dairy. Lactose-intolerance is widespread in Asia.

Global sales of plant-based dairy alternatives totalled \$18bn in 2017 with a CAGR of 8.4% over the past 10yrs (latest figures available). The total global dairy market is valued at around \$600bn so sales of dairy alternatives are still equal to only

3% of total traditional dairy sales. But Euromonitor forecast that sales of plant-based alternatives will grow by 5% over the next 5yrs whereas dairy sales will grow by only 2%.

Soy accounted for 39% of sales of all dairy-free until recently but soy is now losing market share to competitive 'milks' with sales up by only 3.2% since 2012 and sales of alternatives up by 13.2%. Almond 'milk' sales accounted for 68% of alternative sales in the US in 2017. Common plant milks are sourced from almonds, coconut, oats and rice. Other sources include hemp, peas and peanuts.

Plant milks are seen as milk substitutes in Western countries but in other parts of the world a huge range of products have been consumed as 'milk' substitutes for decades:

- Grains: barley, fonio, maize, millet, oat, rice, rye, sorghum, teff, triticale, spelt, wheat;
- Pseudocereals: amaranth, buckwheat, quinoa;
- Legumes: lupin, peas, peanut, soy;
- Nuts: almond, brazil, cashew, hazelnut, macadamia, pecan, pistachio, walnut;
- Seeds: chia seed, flax seed, hemp seed, pumpkin seed, sesame seed, sunflower seed;
- Other: coconut (fruit; drupe), potato (tuber), tiger nut (tuber).

A blend is a plant milk created by mixing two or more types. Common examples are almond-coconut milk and almond-cashew milk. Pacific Foods 7 Grain plant milk consists of oat, rice, triticale, wheat, barley, spelt, and millet. Other traditional plant milk recipes include:

- Kunu, a Nigerian beverage made from sprouted millet, sorghum, or maize;
- Sikhye, a traditional sweet Korean rice beverage;

- Amazake, a Japanese rice milk.

There are variations in the manufacturing of plant milks according to the starting plant material. As an example, the general technique for soy milk involves several steps, including: cleaning, soaking and dehulling the beans; grinding of the starting material to produce a slurry, powder or emulsion; heating the processed plant material to denature lipoxidase enzymes to minimise their effects on flavour; removing sedimentable solids by filtration; adding water, sugar and other ingredients to improve flavour, aroma and micronutrient content; pasteurising the pre-final liquid and homogenising the liquid to break down fat globules and particles for a smooth mouthfeel.

Producing a glass of dairy milk every day for a year, however, requires 650sq m (7,000sq ft) of land—the equivalent of two tennis courts and more than 10 times as much as the same amount of oat milk, according to this study.

Almond milk requires more water to produce a milk alternative than soy or oat milk. A single glass requires 74 litres of water. Rice milk is also comparatively thirsty, requiring 54 litres of water per glass. However, it's worth noting that both almond and rice milk still require less water to produce than a typical glass of dairy milk.

While product launches remain a key strategy for alternative manufacturers, there are increasing strategic collaborations in the market. In 2018, Canada-based Daiya Foods, for example, who were founded a decade earlier, announced a significant expansion in production to meet the growing demand for plant-based products, moving their operations to British Columbia with a new 400,000sq ft facility providing the means to increase production.

Plant-based yogurts exhibit impressive scope for growth. Lured by the possibilities of maximising revenue, an increasing number of dairy companies as well as new companies are venturing into the market.

"The global dairy industry must now face the challenge from plant-based alternatives; hoping for the best is not an advisable strategy. Consumers have spoken. They want new and innovative quality products and they are willing to pay for them," says Preben Mikkelsen.

Major dairy companies that have now entered the plant-based alternatives segment, including: Danone, Lactalis, Chobani, General Mills, Saputo, Unilever, KraftHeinz, Nestlé, Bel Group, Kerry, Valio, Granarolo, PHW Gruppe (Italy). Dairy Farmers of America (DFA), Blue Diamond (US), HP Hood (US), Delamere Dairy (UK), Arla Foods and Vandersterre (Netherlands).

The greatest threats to dairy

- The greatest threat to dairy from alternatives is for drinking milk where consumption has been declining for many years while sales of plant-based alternatives have gained market share rapidly.
- The yogurt market has also been penetrated but there seems to be room for both traditional dairy yogurt and alternatives.
- The competition in the butter and cheese segments is limited because alternatives still struggle in terms of taste and flavour.
- Ice cream represents the largest penetration of plant-based alternatives and product development has created new and 'better' tasting alternatives.
- Some dairy companies have reacted by acquiring some of the most successful alternative producers, but often not co-ops who are anxious not to antagonise their milk producing owners.
- By operating in both segments the dairy industry can diversify risk.

**PLANT-BASED DAIRY PRODUCTS – THREAT OR OPPORTUNITY?
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