

INSIDE

Novel foods

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MARCH 2020



# The dairy best



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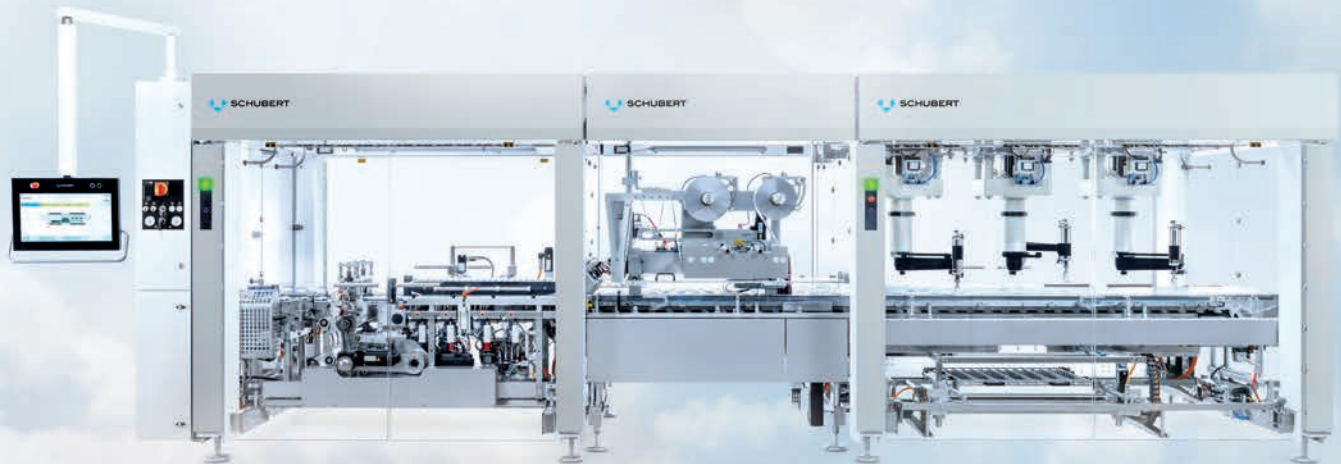


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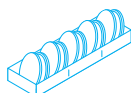
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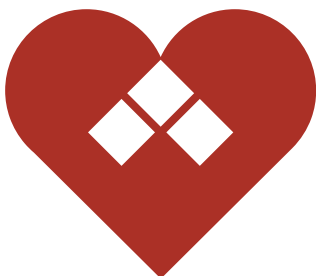
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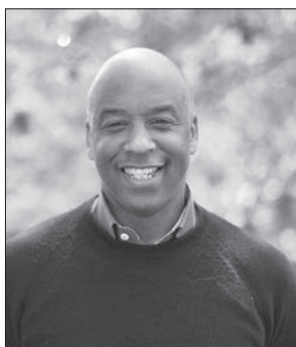


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# Time to meat halfway and process thoughts

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For years, many organisations of varying degrees of influence have been urging consumers to be wary of red meat, promoting that decreasing one's intake will result in better health and lower the risk of disease. But, given Professor Louise Fresco's City Food Lecture speech saying meat must be part of future diets, I'm minded to look more closely at this position.

The president of the executive board of Wageningen University, Fresco warned that despite real environmental concerns, animals will still play a vital role in the food chains of the future. She did call for a reduction in meat consumption to around three times a week, as well as for fish, which is manageable for most.

Yet, she did suggest that current meat alternatives and vegan products cannot currently replace the nutritional value of meat, nor its role in the food chain.

Waste, Professor Fresco said, is far higher than we expected. Based on the latest figures we leave as much as 500 calories per person world-wide, leftover, lost, damaged or not consumed.

"If we could use that to feed animals, that then provide us with other nutrients then we would be a lot better off," she asserted at the lecture.

That in essence is the challenge we face. We can't just take animals out of the equation. We'd still be left with greenhouse gases.

The rise of meat alternatives and plant-based products is ongoing and nowhere near peak,

however as Fresco said they are no panacea to global food insecurity and health.

As I've learnt, plants are not as easily digested. Vegan burgers are processed and as the Professor pointed out energy is needed to make these foods; at a time of transparency in the food sector, are these the best solutions nutritionally?

We still have a long way to go, but we, in the words of Fresco, "are best to look at meat, fish and shellfish as part of the story". Yes, eating less red meat may reduce your risk of heart disease or cancer but a meatless diet cannot guarantee it.

One way of tackling future diets is education of future generations. They don't have to follow the same path we have. While we're at it, why not open the doors to food production so others can see what we're made of?

**Rodney Jack, Editor,  
Food & Drink Technology**

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Food innovation consultant

# Fresco: meat is key to a sustainable world

Giving up on meat is not going to save the planet, said global food industry thought leader, Professor Louise Fresco, when she delivered The City Food Lecture 2020 at London's Guildhall (20 February).

In her lecture, titled: *'Fish nor flesh or both? Foods for the future'*, the Dutch scientist, academic and broadcaster said: "In future, we will not eat meat every day, but doing away with meat and animals completely would be the wrong choice – from a human health point of view, from the point of view of the use of our environment, and from the point of view of equity."

Professor Fresco said that grasslands [used for grazing] are "probably the best possible way for us humans to capture carbon and leave it in the soil.

"As much as 500 calories per person,



per day, are leftover, lost, or damaged from what is grown in the field to what comes on the plate. That is an enormous amount of food. If we could use that at least by feeding animals, that then provide us with other nutrients, we are already a lot better off."

Professor Fresco is the President of the Executive Board of Wageningen University & Research, Europe's leading academic agri-food organisation and research and development centre.

In her lecture, she addressed key questions such as: should our diets be local or global, vegetarian or flexitarian? Can cities restore their link to the countryside as to where the food comes from? Plus, what will science bring us in terms of new proteins, intensive and vertical agriculture and personalised nutrition?

## Campden BRI runs survey to develop scoring for listeria

Campden BRI has begun an industry survey to gain an insight into how much control the food industry has over Listeria. It forms part of a new research project that will deliver new guidelines and controls to help the industry manage this pathogen.

Microbiologist Gail Betts, who is leading the project, said: "All food business operators who manufacture ready-to-eat

foods must be able to demonstrate effective control of Listeria in their products.

"This is very important not just because of the health risk this pathogen poses to the public, but also because it is a requirement under EU legislation."

The results from the survey will provide the data that will help establish how well Listeria is managed in the industry and assemble more effective guidance and controls that producers can use to tackle this organism.

The project will create a structured



system to help food manufacturers prove they can control Listeria.

Betts continued: "Evidence of controlling Listeria can come from many different sources from challenge tests to historical data, but each approach will not necessarily provide evidence of control.

"Understandably, this can be confusing for food business operators. The

structured system that we're producing will work like a scoring system. Food business operators will receive points from these different approaches and when a threshold is reached, they will have assurance that they can demonstrate effective control of Listeria in ready-to-eat foods. This will be a big step forward for the industry so we're keen to encourage food businesses to take part and inform this valuable piece of work."

Take part in the survey at: [www.campdenbri.co.uk/listeriasurvey](http://www.campdenbri.co.uk/listeriasurvey)

## BENEIO INVESTS €50M IN INULIN

Beneo has announced an expansion for its chicory root fibre production facility in Chile by 2022, funded by an investment of more than €50m. The news comes following rising demand for Beneo's chicory root fibres, inulin and oligofructose.

As well as expanding production capacity, the raw material sourcing will be supported by additional surface (hectares) dedicated to chicory farming in the region. The existing plant already operates using 75% renewable energy.

The recent investment will enable Beneo to make yet further strides against its aim to increase the use of renewable energy over the coming years.



## Vogelsang plans capacity expansion

Vogelsang is planning capacity expansions at its site in Essen, Germany following sales increase to €125m.

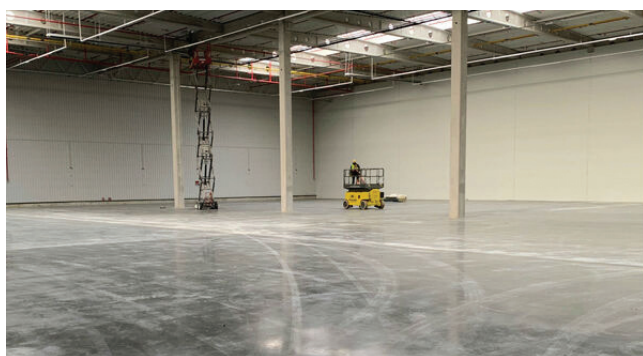


The expansion of capacities and the product portfolio includes a new automated bar storage system. The next few years will see a spatial extension of the transportation department and the construction of a new small parts warehouse. In addition, international branches, such as Denmark, are also to be further expanded.

The news comes after Vogelsang increased its sales by more than 11% in its anniversary year in 2019.

## KERRY ACQUIRES PEVESA BIOTECH

Kerry is expanding its non-allergenic and organic plant protein capability by acquiring the Spanish company Pevesa Biotech. The acquisition is to enhance Kerry's position in hydrolysed plant protein for specialised nutrition, and expands the company's capacity to serve the rapidly growing, high-quality, organic plant protein market.



## Bowman invests £8m in Poland

Bowman Ingredients has announced an £8m investment in a European manufacturing facility.

The purpose-built manufacturing facility will be located in Bielany, Wroclaw, Poland. It will feature a state-of-the-art blending plant, R&D facility, customer presentation suite, and warehousing, mirroring Bowman Ingredients' UK site.

Bowman Ingredients CEO Rory Bowman said the plant will strengthen the supply chain, and enable it to access new markets.

"The new production facility will enhance local response times and add extra capacity and contingency to ensure we continue to meet increasing demand from Europe," Bowman said.

The senior team have already been recruited and have been training in the UK. The new manufacturing facility is due to be operational from the end of March 2020.



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## Sugar content important in consumer choices

Sugar content is the most important factor for consumers when making healthy food choices using traffic light labelling (TLL), according to the findings of a study published in the *Journal of Human Nutrition and Dietetics*.

When using the TLL consumers often make trade-offs between undesirable attributes and decide which to use to guide them in making a choice.

"We wanted to find out whether it was fat, saturated fat, sugar or salt they most wanted to avoid and see whether the traffic light labelling was influencing this decision," said dietician and PhD researcher Ola Anabtawi.

To assess the importance of macronutrients commonly used in TLL, researchers conducted a choice based conjoint analysis (CBC) study of 858 participants aged 18 years and older recruited from the general population of Nottingham,

UK. They also completed an additional cross-sectional online survey of 901 more participants to evaluate the public's knowledge of TLL intake recommendations.

The researchers observed that among 641 participants, when deciding upon the healthiness of items, sugar content was significantly the most important macronutrient (0.34; 95% CI, 0.32 to 0.35).

The results showed that red labelling was significantly more influential than green labelling across macronutrients. Moreover, in the sub-study, the results showed that 13.3% of participants correctly identify the maximum recommended intake of free sugars. Furthermore, 42.8% of the total sample could not identify whether the sugar content information on TLL refers to the total or free sugar content.



Typical values	100ml contains	250ml contains	%GDA*	typical adult
Energy	199kJ 47kcal	500kJ 120kcal	6%	2000kcal
Protein	0.5g	1.3g		
Carbohydrate	10.5g	26.3g	29%	90g
of which sugars	trace	trace		70g
Fat	trace	trace		
of which saturates	trace	trace		
Fibre	trace	trace		
Sodium	trace	trace		
Salt equivalent	trace	trace		

\*Guideline daily amounts 100ml contains 62.5mg

Anabtawi continued: "The dominance of sugar in decision-making shows the labelling system is having an impact in the current public health climate. However, it is important to consider the effect of disregarding other nutrients (ie fat and salt) for people with different nutritional needs. We suggest raising awareness of all nutrients to help the public achieve the well-balanced diet."

## Flavour innovation vital for consumers

Flavour is, on average, the single most important factor in consumers' food and drink choices. Interest in novelty and variety is also high, says a new report from Innova Market Insights revealing that three-quarters of global consumers 'love to discover new flavours'.

Such is flavour's importance in food and drink development that many of Innova's Top 10 Trends for 2020 are having a clear bearing on its evolution. For example, more detailed flavour descriptors and an emphasis on provenance reflect the #1 trend 'Storytelling: Winning With Words' theme, while growing diversity in the produce and botanicals used in flavourings is part of the #2 trend 'The Plant-Based Revolution'.

'Hello Hybrids' is another major theme, with more flavours familiar in one category crossing over into others. Also edition and seasonal flavours can help to invigorate brands and are a good way to test new tastes on the public.

Generationally, Millennials are the most

adventurous in their attitudes to flavour, while Boomers are the most conventional.



Perhaps surprisingly, Gen Zs are also less interested in mixing it up when it comes to taste.

"When asked if they like new, mixed or seasonal flavours, Gen Z agreement was generally at least 10 per cent lower than that of Millennials," says Lu Ann Williams, director of

Innovation at Innova Market Insights.

"But there is still an element of boldness when it comes to genuine novelty, with 45% of Gen Zs agreeing that 'the crazier the flavour, the better', a much higher percentage than is found among the over 45s and over 55s."

Looking ahead, key themes will include the diversification of authentic international flavours, further exploitation of the wider plant world, and 'permissible indulgence'. Meanwhile, sustainability and the sourcing of flavours, including the raw materials that go into them, will also become a more important issue.

## ORGANIC INGREDIENTS DRIVE INTEREST

Paradise Fruits by Jahncke has seen a surge in interest in its organic fruit inclusions after showcasing a range of new products at two major trade shows in Germany.

Following attendance at ProSweets 2020 in Cologne and BioFach 2020, the company has seen a number of enquiries for its latest organic innovations from confectionery and snack manufacturers.

Paradise Fruits Freeze Dried demonstrated its Crunchy and Smoothee Drops ranges. Throughout each event, Paradise Fruits Solutions also showcased a range of natural fruit based granulates, pastes, drops and shapes including a new high fibre recipe, which provides less than 40% sugar (naturally occurring) than standard fruit ingredients and almost 40g of fibre per 100g.



## FDF survey reveals improved confidence

The Food and Drink Federation's 2019 Business Confidence report reveals a sector reporting improved optimism in the fourth quarter. Despite official data signalling weak investment and growth for food and drink manufacturing in the first three quarters of the year, the survey shows:

Net confidence in the industry has improved by 29% since Q1 2019, although it remains negative overall.

Larger businesses are more optimistic about the year ahead than SMEs.

47% of manufacturers foresee UK business investment rising in 2020.

63% see increased domestic demand as an opportunity for their business this year, and over 40% are looking forward to increased certainty over the UK's future EU relationship.

Key concerns for businesses going into 2020 include the cost of ingredients, inconsistent policies on plastic reduction, and border/customs issues – all of which were highlighted by over two thirds of manufacturers.

## BÜHLER AND GIVAUDAN JOIN FORCES IN SINGAPORE

Bühler and Givaudan are to join forces to open an Innovation Center dedicated to



plant-based food. The facility is planned to open in Singapore later this year.

The new facility, located at Givaudan Woodlands site, will be run by the two companies, bringing together a pilot plant featuring Bühler extrusion and processing equipment and a kitchen and flavour laboratory by Givaudan. Both companies will supply experts.

## NEWS IN BRIEF

### Barry Callebaut opens world's first 3D Printing Studio

The Barry Callebaut Group has launched the world's first personalised 3D printed chocolate at scale, through its global brand Mona Lisa. Chefs and customers can personalise desserts, confectionery, hot drinks and pastries. The service is first available to chefs and hotels, coffee chains and restaurants in specific European countries. The first customer of the Mona Lisa 3D Studio is Van der Valk, a Dutch hotel chain.

### Syntegon Technology and Ceflex develop circular economy guide

Together with some of Ceflex's more than 140 industry partners, Syntegon Technology is developing a design guideline for flexible packaging as part of a circular economy roadmap. Ceflex aims to establish a circular economy for flexible packaging in Europe by 2025, insisting that polyolefines and other monomaterials will pave the way to more sustainable and circular packaging.



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# Bühler: A commitment to technology and innovation



**Food & Drink Technology recently visited Bühler in Uzwil, Switzerland to hear how its financial results will influence the company's plans for the future**

In 2019, Bühler delivered a “good” performance at group level, increasing its margin to 7.6% (previous year: 7.1%). Turnover was stable at CHF 3.3billion (€3.1bn) while order intake decreased by 4.6% to CHF 3.1bn (€2.9bn).

The newly-formed Consumer Foods segment, – created after the acquisition of the Haas Group – exceeded expectations and made a “material” contribution to group results. Bühler also increased its investments into innovation to a record high.

By division, the food and feed markets showed continued demand – specifically, plant-based

proteins for meat alternatives and malting. As a result, order intake for Grains & Food continued to grow at CHF 1.8bn (+5.2%) (€1.7bn), for Consumer

Foods it declined slightly to CHF 775mn (€728mn) (-1.7%). In regard to turnover, Grains & Food demonstrated robustness at CHF 1.8bn (€1.7bn) (+0.9%) and Consumer Foods grew turnover by 2.5% to CHF 774mn (€727mn).

Fundamental to Bühler's progress is its commitment to technology. As food demand reshapes industry, Bühler is exploring its role in food production food and its investment in research into the future of food. Technologies are rapidly changing and evolving, which in turn increases competition and the need for companies to innovate quickly.

In conversation with Ian Roberts, Bühler's chief technology officer, and Béatrice Conde-Petit, Bühler's food safety officer, *F&DT* editor *Rodney Jack* hears how embracing technologies will be vital for food businesses' future success.

## What bottlenecks does industry face and how can we manage them?

*Béatrice Conde-Petit:* Today, we are using more than half of the available agricultural land to produce feed for livestock. If we look at the food we need to produce there are two main components that are quite resource intensive. One is protein, the other is oil. In the developed world, we consume too much protein (80g per person per day) and also consume too much animal protein; many people could probably live with a lower protein intake – and with protein coming from other sources besides animals.

We have to recognise that many plant



Sortex A5  
ColorVision

proteins, such as pulses, are under-exploited. Furthermore, we are under-utilising proteins in side streams where we can potentially extract the protein or valorise it for human nutrition.

When it comes to the bottleneck of land, ways out are via fermentation, single cell organisms such as yeast, bacteria, or micro-algae to produce protein or oil. In the future we need to have a more sustainable food supply chain.

### How can we deliver the nutritional profiles consumers demand from plant proteins?

*Béatrice Conde-Petit:* This can be done with clever processing. Also, certain cultures realise that you can combine sources. For instance, combining wheat and pulses because they are synergistically complementary. In this sense, we will see more demand for reformulation of food based around nutrition and sustainability.

An interesting publication to note is by Alex Mathys at ETH Zurich. He performed a life cycle analysis of pasta and bread dependent on the recipe. Traditional pasta made of durum has 20 per cent of the wheat replaced with yellow pea. The end result is a significant improvement in carbon dioxide footprint and in the nutritional profile.

### Collaborations are important to Bühler, what can we expect going forward?

*Ian Roberts:* We are committed to finding partners and supporting our customers to bring about a 50 per cent reduction in their value chains. We will convene, inspire, learn, share best practices, and act. We encourage a mindset of collaboration to drive change. As a business, our focus is on achieving the 50 per cent reduction targets by 2025. If R&D investment requests do not support us in achieving these goals, then money will not be forthcoming for projects.

And as individuals, we are supporting our employees to understand their carbon footprint to

“ This move to plant protein is profound and it is changing the industry. We are facing a situation where demand and supply are mismatched ”

learn how they can reduce it with lifestyle choices or with validated drawdown programs. I am also delighted that we are moving ahead with our partnership between MassChallenge, the World Business Council for Sustainable Development, and One Young World to identify the ten most promising solutions or technologies to mitigate climate change. With our collaborations and partnerships, we can then determine real solutions that could make a difference, support them with access to financing, expertise, and more importantly, to the global companies that will enable them to scale their solutions.


### What is your focus for the year?

*Ian Roberts:* In short, it is to create new business opportunities that drive financial sustainability, while enabling us to play a key role in tackling global issues.

The Intergovernmental Panel on Climate Change (IPCC) report of November 2018 outlined our challenge very clearly – if we are to have a chance of restricting climate change to less than 1.5°C in 2030 versus preindustrial times, we must act now. We announced our targets at the Networking Days 2019, to reduce energy, waste, and water consumption in our customers' value chains by 50 per cent by 2025 and we are focusing our R&D activities, our ecosystem activities, and our energy on achieving these targets. Singapore is one of the hottest epicentre for sustainable food. It has an ambitious target of 30 per cent domestically produced food. We will be completely embedded in that ecosystem, which is a gateway to the rest of the Asean region.

### How would you sum up our current challenges?

*Ian Roberts:* The move to plant protein is profound and it is changing the industry. We are facing a situation where demand and supply are mismatched. We are going to see many evolutions not just of technology but also of supply chains and that's why we will play a role to ensure they are built on the principles of sustainability as much as possible.

We have seen some very impressive companies come to us who say we looking at our manufacturing at a CO<sub>2</sub> level, our location of plants according to CO<sub>2</sub> optimisation versus supply and demand. This is the most advanced execution of thinking that I've seen. Things are going to change very radically in the next five to ten years. 



Digital plant control

# Dairy long way to go

Dairy alternatives is a curious combination for our columnist Richard Ratcliffe who questions where the food market is heading



Richard Ratcliffe is a food innovation consultant and an editorial board member of *Food & Drink Technology*

Our editor suggested I might write about dairy alternatives this month and my first reaction was to think about margarine as, perhaps, the original and most widely used product falling under that descriptor.

Quick history lesson: Margarine was invented by one Hippolyte Mège-Mouriès in 1869. He invented it in response to a competitive challenge from the French government under Napoleon III, who was looking for a cheap and stable substitute for butter, and offered a big prize to anyone who could pull it off. One wonders whether Monsieur Mège-Mouriès ever received due reward for a product so widely used worldwide. As a side note, Margarine Unie merged with Lever Brothers in 1929 to form Unilever. Fats are big business.

## Cake formulations

The relatively straightforward technology of emulsification becomes grossly complex once one considers the different oil and fat inputs and emulsifying agents. Margarines could be tailored to specific uses as a food industry ingredient (never mind as a table spread) depending on melting point requirements and end-product needs. Winding the clock forward fairly rapidly the industry then became immersed, from the 1970s onwards, in marketplace battles for tub spreads (the term margarine seems to have been quietly dropped at that time – “spreads” is a better marketing word!) based on the “healthy” connotations of unsaturated vegetable oils. Such issues continue to be debated with the dairy lobby fighting back and fortification of spreads with plant sterols to lower cholesterol. The demonisation of palm oil is another factor. One wonders how confusing this is to the public.


## Alt- this and alt- that

There are of course, nowadays, much greater issues looming large in food debates when it comes to feeding the planet in 2050. The rise of veganism and the whole arena of reduction of meat in the diet has parallel implications for the dairy industry and hence to the “alternatives” in my brief. The economics of raw material selection

is part and parcel of such debates. On a wider subject of “alternatives” beyond just dairy, I recall evaluating the performance of different oils for the frying of fish fingers. The company moved in the mid-seventies from a narrow spectrum of vegetable oils, (groundnut, cottonseed and the like) to rapeseed and sunflower. This had nothing to do with health connotations – at least I do not recall Fish Fingers ever being marketed alongside any sort of health message! It was all about price. Indeed, for a period it was economically very advantageous to fry in lard when animal fat prices were lower than those from vegetable sources. I believe that situation lasted for about five years – BSE put paid to that pricing differential – and I doubt any enlightened technologist would suggest a return to animal fat frying.

## The sands of time

Beyond the dairy brief I should also reflect that the word “alternative” defines a considerable part of the work of the food scientist. Many NPD briefs involve the reworking of existing products: not many “new” products are genuinely “new” and many “range extensions” cover the use of “alternative” inputs be that for the pursuit of novelty or economic reasons. In working for Schweppes in the late 1970s the substitution of part of the sugar sweetness in products with artificial sweeteners could (and did) achieve substantial cost savings. Nowadays the same set of formulation actions would be implemented in the name of the health benefits of sugar reduction. Or even, dare one say, tax avoidance where lower sugar content products fall below the government “soft drink” tax threshold. I chuckle when I see a sort of post rationalisation of formulation decisions dependent on the macro stage of government action and public opinion! (I have noted previously that Soft Drink Regulations in the immediate post WW2 period had minimum sugar content requirements so that kids of my generation were nourished with plenty of caloric sugar).

So “alternatives” and “replacements” will always feature as keystones for the food formulators – it’s just the reasons for so doing which shift with time. 

# NOVEL FOODS: innovation and regulation

New laws are being designed to accelerate the growth of novel foods, including algae, insects and cultured meat

**N**ovelty can contribute to the success of a finished food product, offering consumers something new and giving competitors something to think about. However, introducing an exotic ingredient, be it algae or a lab-based burger, comes with challenges – both legally and, sometimes, ethically.

The recent Westminster Food & Nutrition Forum policy conference in February at Glaziers Hall, London, focussed on novel foods and gave attendees an insight into the regulatory landscape and potential market prospects.

Key speakers included Professor Peter Gregory, from the advisory committee on novel foods and processes (ACNFP); Kathryn Miller from Innovate UK; and Sarah Chapman from Campden BRI.

Professor Gregory gave industry a steer on the trends his office are witnessing, placing them under the categories of healthy, wellbeing, sustainability and novel proteins.

- Healthy foods include foods from algae containing fatty acids; krill oils; and the UV treatment of mushrooms to enhance vitamin D.
- Wellbeing – an example is ketone esters, which is being produced as a sport supplement for high performance athletes. Another, Tongkat Ali is a herbal remedy, now in the final stages of the European Union scheme of approval. Also, in this category are the fruits of Sacha Inchi, a Peru nut, very high in omega 3, 6 and 9s.
- New sources of protein include insects and cultured proteins to substitute for meat.
- Circular economy and sustainability. What would once be considered waste – the outer part of the coffee berry, coffee leaves and grapevine leaves – is being put forward in applications making use of secondary products.
- Processes – examples include ultraviolet treatment of foods including more nanoparticles.

## Market potential

Opportunities abound was the premise of Kathryn Miller's presentation. The innovation



*Waste products such as coffee berries are being put forward in applications for human nutrition*

lead, food and nutrition, at Innovate UK highlighted the potential to develop processes for sustainable source of staples, particularly high quality, high value proteins for example algae, insects and proteins from plant material.

Innovate UK is funding several projects from developing breeding programmes for insects to those utilising food waste to produce protein.

Public health challenges, such as obesity, could be addressed by developing ingredients to replace sugar, Miller said. Innovate UK has funded projects looking at developing a novel sugar replacement from marine microalgae, piloting it on an industrial scale and as well as purifying it.

There's also an opportunity for innovations to address vitamin deficiencies. Innovate UK has funded projects looking at vitamin D enriched eggs and vitamin D enriched mushrooms.

## Embracing regulatory changes

Of course, novel foods' potential cannot be realised without adherence to regulation. According to Sarah Chapman, product development specialist, at Campden BRI, the regulation now defines ten separate different categories.

Key changes have made the regulation a "little easier to deal with" she said, including:

- A centralised system where all of the safety evaluations are carried out by EFSA.
- Authorisations are generic.
- A definition for traditional foods comprising a list of all the authorised novel foods on the market.
- Summary of applications.
- A catalogue/database gives a classification as to whether a food is considered novel, whether it's not novel, whether it's approved, but it's not exhaustive. [71]

*New sources of protein include mealworms*



## WEETABIX REFRESHES TEAM

Weetabix has restructured its manufacturing team, introducing two new roles following the departure of Patrick Rigby, group operations director.

John Petre, previously head of technical (right), has been promoted to supply chain and technical director. Dave McBeain, senior vice president of business change and organisation effectiveness, will be interim

manufacturing director while a permanent candidate is sought. Petre will also lead the Weetabix Food Company Sustainability Steering Group.



## Inpong joins Müller

Müller Yogurt & Desserts has appointed Michael Inpong as strategy director to accelerate sustainable and profitable growth of the yogurt brand.



The role sits alongside his current responsibilities as chief marketing officer and has been created for Inpong to “add weight to long term consumer and customer centric thinking”.

## Syntegon Technology appoints Dr Michael Grosse



Dr Michael Grosse has been named as the CEO of global processing and packaging technology supplier, Syntegon Technology.

Most recently, he was a member of the management board of Tetra Pak, who he joined in 2003. Grosse is an expert for new product development and process technologies. Thanks to his many years of experience, he has built an extensive network and close relationships within the food industry.

Before joining Tetra Pak, he held several management positions in the automotive industry. Michael Grosse will take up his post on 1 March 2020.

## Lucozade Ribena Suntory welcomes sales director

Lucozade Ribena Suntory has appointed Alpesh Mistry as sales director for the UK and Ireland. Alpesh, who joins from multinational beverage company Molson Coors will sit on Lucozade Ribena Suntory's executive committee and report directly to chief operating officer Carol Robert. Former UK sales director Scott Meredith will take up a new role focused on revenue growth management after a comprehensive handover that ensures continuity for customers and employees.



## Lorien promotes Mallinson

Lorien Engineering Solutions has promoted David Mallinson to UK MD. He succeeds Steve Slater, who has taken on an international group role with parent company GP Strategies. As a chartered engineer, Mallinson's background is in the design and implementation of manufacturing systems. Prior to Lorien he held senior engineering positions at a food producer and an international packaging systems manufacturer.



## Gallagher heads up Freaks of Nature

Yorkshire-based desserts brand Freaks of Nature has appointed chocolatier, patisserie and bakery expert



Claire Gallagher as director of product innovation.

Commenting on the senior appointment Freaks of Nature's founder Peter Ahye said: “Claire is a highly innovative product developer; it really is quite a coup for us to have her on board. She had been working with us for a few months as a consultant helping to expand our product range but now she is a fully-fledged member of the team.”

Gallagher has worked alongside top Michelin-starred chefs including Raymond Blanc at Le Manoir Quat Saisons. In recent years, she led the Food and Drink Innovation Team at Bettys delighting customers with treats such as afternoon tea, chocolates and continental cakes.

## Kemtile appoints Northern territory manager

Hygienic flooring company Kemtile has put the experienced George Morton in charge of existing clients and new business across the North of England.



Morton brings 30 years' of construction and flooring installation expertise to the territory manager role and will now work as part of an extensive commercial team based in Kemtile's UK HQ in Warrington.

It represents a new era in the UK for both firms, combining in-depth expertise for specification, manufacture and installation all under one roof.

He will be tasked with selling the single source commercial flooring solution across Kemtile's heartland food and drink marketplace.

## Butt Foods adds to its development line-up

Nottingham-based naan and flatbread Butt Foods has added Helen Procter and Chris Collings to its line-up.

Procter joins as technical manager while Chris Collings is product development manager. The hires come as Butt Foods prepares to celebrate its 30th anniversary later this year.

Procter, who has worked for a number of high profile food manufacturers, has been in the food manufacturing industry since 2009. Her role includes ensuring all processes meet legal requirements, along with food safety and customer satisfaction.

Collings has 15 years of bakery experience in a career that has been in the food sector for a total of 18 years. He has already begun developing new products for Butt Foods.



## TRIO OF APPOINTMENTS BOLSTERS FOOD INDUSTRY CENTRE TECHNICAL EXPERTISE

A trio of new appointments at Cardiff Metropolitan University's Zero2Five Food Industry Centre will boost the organisation's technical capacity.

Lee Pugh, Lucy Llewellyn and Sergio Ardu all bring technical expertise to Zero2Five, which delivers Project Helix, a Welsh Government and EU-funded initiative that provides eligible Welsh food and drink companies with a range of support.

In his new role as head of baking, Lee Pugh (middle) will support bakery companies with NPD and also lead the development of industry opportunities for Cardiff Metropolitan University's food science and technology students. Llewellyn will support food and drink companies from concept to launch with recipe development, ingredient sourcing, sensory analysis, shelf life optimisation and legal-labelling.



Sergio Ardu will work on areas such as third-party accreditation (including BRCGS and SALSA), internal auditing, HACCP, microbiology, health and safety, and food safety and security.

## East Yorkshire poultry business rewarded for long service

Twelve employees at a Driffield poultry business were rewarded for their long service recently.

Soanes Poultry's nights and logistics manager, Neil Mennell and production manager, Allison Clark both received awards for achieving 20 years' service while another 10 members of the 120 strong team were rewarded with a bonus for having ten or more years' service.



Soanes Poultry's MD, Nigel Upson launched the new 10 years' service reward initiative at the company's annual party. Members rewarded included operational and dispatch personnel, Piotr Trzeciak, Simon Vint,

Simon Atkinson, Marek Ulaszek, Baby Chako Chelackal, Daniel Spohny, Kimberley Vincent-Allison, Stasys Kybartas and Lee Eastwood; maintenance and cleaning staff, Bestwn Kdr and Petra Kdr, plus head of sales and marketing, Ben Lee.

## INSIGHT...Supply Side – Malcolm Swift, president of European Brands Association

**I made the decision to stand for president of the European Brands Association because** I believe passionately in the power of brands and want to help create a positive and proactive agenda for our members in Europe going forward. As one of the longest-serving board members, I'm honoured to become president of AIM, with the opportunity of working with such a talented group of individuals in our office in Brussels, and I'm excited about our future plans.

**I feel the industry needs to...**promote and distinguish the innovation, creativity and value created by brands in an ever-changing external landscape. There are major changes afoot for brands, in a world

marked by digital transformation and new technologies, growing consumer and societal expectations of our sustainability footprint, and increasingly diverse routes to market

**My election as the new president of the European Brands Association**

**means** working hard to protect and enhance brands as we navigate a new European Union mandate. Our members are facing numerous challenges impacting their ability to design, distribute and market their prod-



ucts, creating an environment of fair and vigorous competition, fostering innovation and guaranteeing maximum value to consumers now and for generations to come.

**I have amassed extensive experience...**during my career. Alongside being a member of the management committee of a global organisation, I have also held various

leadership positions for companies in Europe including Mars, Diageo, Time Warner and Hero.w



# RESULTS MAY DAIRY: using emulsifiers and stabilisers to meet dairy alternative demands

**To compete, and appeal to consumer demands, manufacturers are increasingly faced with formulation and production challenges relating to the use of emulsifiers and stabilisers in dairy alternatives.**

**Natasha Spencer-Jolliffe explores the hurdles manufacturers operating in the dairy alternatives sphere face and how suppliers can tackle such formulation and production obstacles around soy, rice and almond drinks**

**A**s our evolving diets shine a spotlight on our nutrition, health and wider environment, vegan and flexitarian diets inspire new innovations in the plant-based market — with dairy alternatives taking centre stage.

Flavour, health benefits, ingredient sources and all-natural offerings have been cited amongst the most important attributes that dairy alternative shoppers base their purchasing decisions on, Comax Flavors revealed in its non-dairy study.

As such, soya, oats, nut and rice milks have captured the attention of consumers seeking dairy alternatives that have healthful and nutritious properties with broad market appeal.

### DAIRY ALTERNATIVE APPEAL

“The dairy alternative segment is currently growing at a double-digit rate, while the dairy market is declining,” emphasises Sonia Huppert, global marketing lead Plant Health & Meal Solutions, at plant-based dairy alternatives specialists, DuPont Nutrition & Biosciences.

Developing dairy alternative products that have a healthier profile, such as reduced sugar or containing probiotics and prebiotics for digestive health, along with sustainable plant bases from fair-trade sources, are opening up opportunities in the dairy alternatives space.

Describing how plant-based dairy alternatives is “becoming a very interesting market”, Giselle Baez, regional application manager at global emulsifier and stabiliser company for food ingredients, Palsgaard Ind. de Mexico, states that at present, “the availability and characteristics of raw materials play a key role in the final product and in the production”.

Commenting on “the significant growth potential for the many manufacturers who are entering the segment”, DuPont’s Sonia Huppert relays that what is important is that manufacturers “differentiate their brands while responding to consumers, who pay increasing

attention to how healthy and sustainable dairy alternatives are”.

### WHAT’S THE ROLE OF EMULSIFIERS AND STABILISERS?

Using emulsifiers in food products supports formulation by ensuring the oil or fat is equally distributed throughout the food item. Keeping fats dispersed homogeneously is a vital part of the formulation process as it contributes to the dairy alternative product’s overall taste, texture and appeal. Emulsifiers can help bind water and oil for a longer period of time, helping to ►

“Taste and texture optimisation continues to be one of the biggest challenges in this segment, especially when diversifying bases”



increase the shelf life of the product. It is then the role of stabilisers to support the texture by improving its cohesiveness.

In dairy alternatives, adding emulsifiers and stabilisers can help to avoid separation of fat as well as the sedimentation of insoluble solids. Plant-based dairy alternatives often feature vegetable fats that are sourced from the original ingredients, such as soy, almonds or cashews. A variety of emulsifiers are also made from vegetable-based raw materials such as palm, rapeseed, sunflower and soy; while stabilisers are also often made from natural raw materials.

### CHALLENGES FACING MANUFACTURERS

Dairy alternatives such as soy, rice and almond drinks require variations in fats and oils compared to dairy products. "Of course, every new plant-based alternative dairy product represents a challenge," confirms Palgaard's Giselle Baez.

Emulsification plays a crucial role in the formation and stability of manufactured food products. Handling emulsification in dairy alternatives, therefore, presents specific considerations.

#### 1. Navigating differences between dairy products and dairy alternatives

As the "amount and type of fats and oils used in dairy alternatives differs completely from dairy products", Palgaard's Giselle Baez

highlights that the "recommended emulsifiers and doses of such may also vary compared with a dairy product".

Along with the functional and quantifiable attention required in formulating and manufacturing dairy alternatives, Giselle Baez emphasises how "knowledge on the final application is very important in order to use the most adequate emulsifier or emulsifiers and achieve the best performance of them".

When it comes to the stabilisation of dairy alternative products such as soy, rice and almond drinks, Baez states that stabiliser performance comes down to synergy and understanding the performance of available hydrocolloids.

Hydrocolloids comprise of a colloid (particle) that is mixed in water (hydro) to offer the desired texture, viscosity or structure in dairy alternative products.

Emulsification refers to the process of dispersing one liquid (containing the bio-active compounds) in a second immiscible liquid, by applying electrostatic, or hydrophobic, or hydrogen bonding interactions between the bioactive compounds and an encapsulating material.

An emulsifier is an agent that can produce an emulsion, which means it can bind liquid phases that are not naturally friendly to each other.



DuPont, for example, has launched a plant-based range that focuses on providing stabilisation throughout shelf life, particle suspension and texture optimisation. Its solutions are based on various hydrocolloids plus emulsifiers, calcium and sequestrants.

## 2. Giving consumers what they want

Yet, in 2020 the biggest challenge facing dairy alternative manufacturers is undoubtedly meeting “consumer demands”, Baez answers. With “clean label or clear label products, very long and stable shelf life, natural products with the least possible ingredients and also organic labels if possible” all sought after, manufacturers have to constantly evolve to keep up with changing preferences.

If we take the demand for a long and stable product shelf life, for example, Baez explains that achieving this is “a very big challenge – considering emulsifiers and stabilisers are part of an additives list sometimes targeted by unfriendly propaganda”. Due to the perceivably negative presence of emulsifiers and stabilisers, “it is difficult to make consumers understand that they are very inoffensive substances coming mainly from plants and vegetable oils”, Baez adds.

Making strides to increase consumer knowledge is, therefore, a big priority for global emulsifiers and stabilisers name, Palsgaard. In its blog, *Emulsifiers for good*, the company details what emulsifiers and stabilisers do for us, why they are useful in day to day food consumption and where they come from.

## 3. It's all about the senses

“Taste and texture optimisation continues to be one of the biggest challenges in this segment, especially when diversifying bases,” reveals DuPont’s Sonia Huppert, when detailing one of the biggest challenges currently facing dairy alternative manufacturing.

Optimising yield, fermentation and stabilisation through enzymes, cultures and texturants is how ingredient player DuPont is currently overcoming the core challenges in the area of taste. The inclusion of proteins, fibres, prebiotics and probiotics are also popular options for brands looking to improve the nutritional profile of their dairy alternative products.

## THE FUTURE FOR DAIRY ALTERNATIVE MANUFACTURING

Other key challenges present today for dairy alternative manufacturers extend to raw material availability and the impact of global warming on crops in determining prices and



processes. “Generational changes and marketing trends” is also a current challenge that Baez suggests may also affect the demand of dairy alternative products moving forward.

Identifying the manufacturing capabilities required to produce dairy alternatives with no dairy and no soy is a hurdle manufacturers are also facing, DuPont’s Sonia Huppert adds, “which is restricting the possibilities of production”.

Detailing this particular dairy alternative production challenge as “especially interesting”, Huppert notes that the main consumers driving the growth of the dairy alternatives segment are “not vegans or vegetarians anymore, but flexitarians”.

Consumers want more choice, so they have access to a dairy alternative option that matches their purchasing preferences. As a result, manufacturers need to respond by introducing new, exciting products that will attract more to the dairy alternatives category.

Looking ahead, DuPont highlights that one way manufacturers can do this and secure their competitive place in the market is through a variety of protein bases that secure premium taste and texture, and will continue to be sustainable, even as demand grows. [\[7\]](#)

A stabiliser will bind and absorb significant amounts of water, maximising the potential to increase the volume and texture of the food product. Stabilisers contribute to the texture of food products by helping to make them more cohesive.

There are also some stabilisers that can retain insoluble heavy particles, such as plant fibres, that can be suspended and homogeneously distributed in beverages, instead of sinking to the bottom as sediment.



Giselle Baez, regional application manager at global emulsifier and stabiliser company for food ingredients, Palsgaard Ind. de Mexico

# Is the future of milk PLANT-BASED?

**Plant-based alternatives are on the rise. Are we in a post-milk era? Anna-Lena Klapp, nutrition and health specialist, and Jimmy Pierson, a spokesperson for ProVeg, give *Food & Drink Technology* their thoughts**

**J**ust a decade ago, finding alternatives to cow's milk was a challenge in the UK. If your local coffee shop stocked any, it was probably just soya milk, and if you drank it you were in a minority.

Supermarket free-from sections were either non-existent or new and small, certainly nothing like the full-length aisles we see today. Today, however, most of the major supermarkets and coffee shop chains stock multiple plant-based milks, usually at least four: soya, oat, almond, and coconut.

Market data reinforces this observation. In the US, in the year leading up to June 2018, sales of plant-based milk rose by nine per cent while sales of traditional cow's milk declined by six per cent with plant milks accounting for 15 per cent of total milk sales.

A similar story is unfolding in Europe, particularly in Germany, the Netherlands, and the UK. For example, close to 25 per cent of Britons are now drinking plant-based milks, up from 18 per cent in 2018. According to Research and Markets, revenue from the global non-dairy milk market is set to reach more than \$38bn (€34bn) by 2024, growing at a compound rate of more than 14 per cent between 2018 and 2024.

## On the up?

Can this shift towards plant-based alternatives to milk continue on such a sharp, upward trajectory over the next decade and beyond? There are many reasons to suggest that it will.

Many people are opting for alternatives to



cow's milk for health reasons, particularly intolerances and allergies. Around 75 per cent of the world's adult population is intolerant to ingested dietary lactose, while cow's milk allergy (CMA) is the most common form of food allergy in infants and children – with awareness of both continuing to grow.

The nutritional profiles of many plant milks also compare favourably to cow's milk. Soya milk, still the world's most popular plant milk, typically contains the same amount of protein as cow's milk – about 3 g per 100 ml – for example. And because most manufacturers fortify soya milk with calcium and other vitamins, many nutrition experts consider soya milk to be a nutritionally adequate alternative to cow's milk. Chemical contaminants in milk and dairy products, such as antibiotics, hormones, and pesticides, also play a role in consumer choices.

Environmental concerns are also driving many more consumers away from dairy, particularly now that the climate crisis is gaining increasing prominence in the media. The Food and Agriculture Organization of the United Nations (FAO) has stated that the livestock sector is a significant contributor to climate change. The sector is responsible for about 16 per cent of all anthropogenic greenhouse gas

emissions, with cattle producing 62 per cent of livestock sector emissions, and beef and dairy cattle generating roughly equal amounts of greenhouse gases.

Environmental comparisons are particularly damning for dairy: a litre of cow's milk requires more than 22 times more water and roughly 12 times more land than a litre of soya milk, and emits three times more greenhouse gas emissions. Other types of plant milk, such as oat and rice milk, are similarly sustainable.

### Tax take

However, there are certain challenges facing the plant-based milk industry, not least of which is the tax faced by plant-milk producers. In six countries across Europe, VAT on plant-based milk is significantly higher than it is on cow's milk. In Germany, for example, VAT on soya milk is 19 per cent, but it is only seven per cent for cow's milk. This means that there is a 171 per cent higher VAT rate for the plant-based milk. In Spain, VAT on cow's milk is 150 per cent higher and in Italy it is 450 per cent higher.

### Legislation

Food-labelling legislation also varies internationally, with some countries permitting the use of dairy denominations for plant-based alternatives, with other countries applying stricter regulations. In Europe, the use of the term 'milk' is prohibited for commercial use on non-dairy products. Soya milks are therefore often labelled 'soya drink', for example. This is an unnecessary restriction for manufacturers, producers, and consumers, and is stifling plant-based innovation and competition.

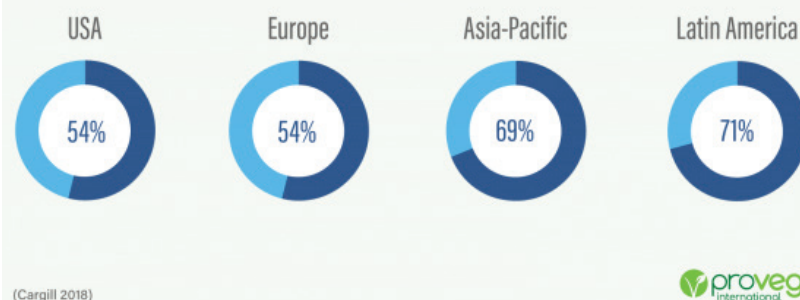
In spite of these challenges, more and more companies are waking up to the commercial opportunities presented by plant-based alternatives. Danone, the world's largest producer of dairy products, has said that it considers plant milk to be particularly lucrative because plant-based proteins are on average 30 per cent cheaper than dairy proteins. Danone plans to triple its plant-based output by 2025.

### Cultured or derived?

The longer-term future of milk might be cultured, rather than derived directly from plants or animals. Using an approach that is similar to the production of cultured meat, several scientists are currently working on producing lab-grown versions of the proteins that are found in cow's milk, such as casein and whey – in fact, a prototype of the first cultured ice-cream has already been produced.

In order to produce these animal-free dairy

## CONSUMERS USING PLANT MILK EITHER BY ITSELF OR IN ADDITION TO COW'S MILK



proteins, the genetic code of certain microorganisms, such as baker's yeast, for example, is modified, enabling them to produce milk proteins that are identical to those derived from animals through a fermentation process. The production process is similar to that of vanillin, a food additive often used in ice cream and pastries, or insulin, which is used by people with diabetes to control their blood-sugar levels.

Animal-free dairy proteins offer a number of advantages compared to conventional dairy products. They do not contain antibiotics, hormones, or lactose, and are therefore suitable for people affected by the respective allergies or intolerances. They also provide the same nutritional value, taste, texture, and functionality, as dairy protein. Proponents of cellular milk argue that its production requires less energy and land, and emits less greenhouse gases, and is therefore more resource-efficient than animal farming.

Whether or not cultured milk will go on to eventually dominate the milk market, it is clear that the plant milk revolution is showing no sign of abating. And, in the climate crisis, that can only be good news. [F&T](#)

## CULTURED MILK PRODUCTION PROCESS



# Q & A

## How to achieve maximum efficiency in coding and marking with coding automation

**The Holy Grail of maximum efficiency could be realised with coding automation. Adem Kulauzovic, director of coding automation at Domino Printing Sciences, highlights different ways in which this can be achieved through coding and marking**

**Q. What recommendations would you share on preventing printer downtime?**

**A.** Manufacturers want peace of mind that their printers will remain operational at all times, and utilising Industry 4.0 concepts helps to prevent downtime. Using a variety of sensors enables system monitoring to take place and allows engineers to use this information to monitor their printers and detect any reliability issues remotely.

With this, there is no need for engineers to unnecessarily go to a customer site to diagnose a fault. A site visit is only required if a physical fix is needed, with engineers turning up on site prepared with the knowledge and spare parts. Additionally, the use of the Cloud will ensure engineers are automatically alerted of any faults and potential issues with the printers, which enable issues to be managed faster and resolutions sought before they impact the production line.

Trends can be discovered and root cause analysis provided from data collected from the Cloud to determine proper preventative maintenance in the future.

**Q. How can automation help customers fulfil their needs?**

**A.** Customers can check the status of their printers from any location, remotely diagnose faults and plan for refills and reorders by watching ink levels and usage. They can even set alerts if their ink levels reach a dangerously low level and restock. Carefully monitoring and cleaning equipment frequently will increase the life of the printer and its components.

**Q. What can consumers do to reduce operator error?**

**A.** Switching from manually operating each printer to centrally managing and automating the coordination of jobs, labels and data removes the risk of human error and can prevent coding and marking errors, providing

essential production data on your factory floor. If incorrect information is entered by operators, this results in costly recalls and reworks, causing detrimental and significant impacts to the manufacturer. Integrating printers with factory automation systems, such as MES (manufacturing execution system) and ERP (enterprise resource planning) systems enables labelling data to be coordinated automatically, without the need for human input.

**Q. With so many systems in place, how can we ensure standardisations are in place?**

**A.** We must ensure there is standardised communication in place between equipment and factory systems, which helps to reduce setup, support and development costs.

If we adopt a common data language, setup times are reduced, and there's no need to develop software to interface between equipment, reducing development time. This avoids any inconsistencies in data capture, too.

**Q. How can we protect consumers through serialisation?**

**A.** To meet the challenges of serialisation, there are several solutions that can be deployed, such as unique identification, aggregation, tracing, and verification of products. As a result, serialisation products can generate encrypted, unique numbers, and enable multiple levels of aggregation and integration across various databases.

If items are removed or changed during production, or even damaged during transit, the associated serial numbers are decommissioned, and the data in the central repository is updated. Scanning products at the point of purchase gives assurance to consumers and retailers.

Did you know pharmacies can validate medicines before dispensing, and customers (via smartphone apps) can check food products are safe, before they purchase them? [\[21\]](#)



Adem Kulauzovic,  
director of  
coding automation,  
Domino Printing  
Services



*Patented solution for affixing the foil: a servomotor turns the bottles, while linear motors press the foil onto the containers with the aid of sponges*

# MOZART RESCUE

## Unique labeller for unique containers

A label with creases, and a labeller that deliberately produces these creases – what for most beverage producers is a no-no was one of the paramount requirements of Mozart Distillerie in Salzburg. A look at the container's shape explains the paradox: the liqueur bottles are spherical, to connote the world-famous Mozart-Kugel. The label, made of aluminium-coated paper foil, is required to fit snugly round the container – and to look as if it had been applied by hand.

Hitherto, Mozart Distillerie had been using a 30-year-old labeller from a customised-machine manufacturer, which plant manager Friedrich Guggenberger had individualised over the course of time with numerous design enhancements. But the output no longer sufficed – and Mozart Distillerie was looking for a partner to jointly develop a new machine.

### Numerous customisation features combined


Krones accepted the challenge – and combined the long years of practical experience and visions contributed by Friedrich Guggenberger and his team with the technical expertise of Krones' own labelling specialists.

And the results are truly impressive: a combination of features for precise container positioning, several inspection systems, and a multiplicity of technological customisation improvements ensure that Mozart Distillerie's requirements are translated into engineered reality.

For labelling, Krones is for the first time deploying a combination of one cold-glue and one wrap-around Controll labelling station, and pressure-sensitive body labels are applied to a sloping area. For affixing the foil, Krones developed a patented combination of a servomotor that turns the bottles, and linear motors that in twelve press-on operations use sponges to carefully press the foil onto the containers.

To ensure that the closure cap is correctly positioned, Krones has specially developed a guide rail that uses the sloping label area as an orientation reference point.

These rails can be re-adjusted with only a few manipulations, so that all six sizes – from the small 50-millilitre to the large one-litre bottle – can be handled with the same system.

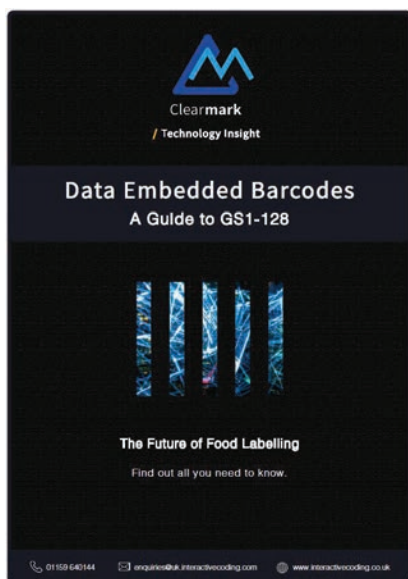
The new line is currently dressing around 5,000 bottles per hour, with an option for increasing the output to as much as 9,000 bph. It embodies two antithetical characteristics: the technology is fully automated to the latest state of the art, while the results, by contrast, reflect Mozart Distillerie's craft philosophy. 

*For labelling its spherical containers, Mozart Distillerie will use a fully automatic labeller rated at 5,000 containers per hour, which Krones has designed with the client*



# 7 competitive advantages to introducing data embedded barcodes to your production line

**Coding and Labelling experts Clearmark discuss how introducing the GS1-128 barcode can offer an array of competitive advantages for manufacturers willing to invest in the future of their production line**



**F**ood traceability is in higher demand than ever: from ethical sourcing expectations to avoiding food scandals, manu-

facturers are keen to ensure as much information is available from sourcing through to the supermarket shelf. Adapting your coding to include the GS1-128 case identification allows for more data to be embedded from the beginning of the packaging process, leading to improved traceability through the supply chain.

## TRACEABILITY

Manufacturers must meet demands put in place by both consumers and the government. GS1-128 barcodes are the simplest way to increase data sharing for traceability purposes.

## APPLICATION IDENTIFIERS

In addition to the data required by distributors such as best before dates and batch codes, companies can also embed a variety of relevant information for each product from manufacture.

## AUTOMATED PROCEDURES

Automated procedures can deal with split pallet deliveries on a more regular basis as opposed to half and quarter pallets sporadically. Not only does this save time in the warehouse, but much-needed storage space and in turn, money throughout the distribution process.

## BETTER VISIBILITY

Better visibility over the supply chain due to

the additional data and more detailed printing requirements to ensure all GS1-128 barcodes are clear and readable.

## CUSTOMER CONFIDENCE


The rapid development of technology makes it possible for consumers and government bodies to track any item from production to consumption, ensuring your barcode meets these expectations enhances consumer confidence in your product and brand.

## COMPETITIVE EDGE

Consumer shopping habits have transformed over the last five years alone. Shoppers are becoming savvier with their money and shopping. All levels of food supply now need that competitive edge, not only when it comes to price and quality, but both availability and ethics are now huge factors in purchasing decisions.

## SPEED

On-demand is no longer just a perk – it's expected. The GS1-128 barcode allows single scan traceability on both primary and secondary packaging, however far down the supply chain the product is, less manpower and time is required to check vital information. GS1-128 barcodes also allow distributors to have the most up to date stock information at hand, more choice due to less wasted space on pallets in the warehouse and can make it easier for consumers to find their exact ideal product.

For more information on data embedded barcodes, download the full Clearmark DEB Guide online, or contact a coding and labelling experts to discuss your factory requirements in detail on [enquiries@uk.interactivecoding.com](mailto:enquiries@uk.interactivecoding.com) or 01159 640144. 

# CODING AND MARKING

## - more than just a necessity

**C**oding and marking, the process in which variable data such as lot codes, batch numbers and barcodes are applied onto products, packaging or labels is often seen as a mandatory, unavoidable part of the production and packaging process and nothing more. However, applying codes and marks on to packaging can bring many benefits, for both the consumer and the manufacturer in question. For example, clever coding can deliver a personalised experience to the consumer whilst invisible-to-the-naked-eye, UV codes allow brands to feel confident that their product cannot be counterfeited.

Here we explain how, when done well, the addition of variable data on to packaging can benefit both consumers and manufacturers alike.

### Documentation of origin

With sustainability being - quite rightly - a hot topic, an increasing amount of people are becoming aware of their shopping habits and how their buying choices can impact on the environment.

If a product clearly states where it or its packaging was sourced and whether it is sustainable then it allows the consumer to make an informed purchase which reflects their personal views.

Having this level of transparency is generally a positive thing for brands as it helps instil a level of trust and loyalty between themselves and their customer base. It can also assist in setting them apart from their competitors who aren't as quick to disclose this information.

### Traceability

Simply speaking, serialisation codes help to protect brands, manage the supply chain and aid quick product recalls.

Their presence on packaging/products also help to deliver a better overall experience for the consumer as they provide reassurance that the products being purchased are authentic and safe.

### Anti-counterfeiting

Some products, particularly cosmetic and pharmaceutical products are prime targets for counterfeiters.

By having the right anti-counterfeiting coding



and marking measures in place, the risk of fake products entering the market can be minimised, if not eradicated completely.


Applying variable codes with UV ink is becoming increasingly popular. The addition of these 'invisible' codes alongside standard date/batch codes give the manufacturer an enhanced level of security for their products and/or packaging.

As they cannot be seen, these codes can be positioned in various locations only known to the manufacturer, making it extremely difficult to replicate - especially if they have different areas that they switch between throughout the month (position relative to date of manufacture).

### Consumer experience

Variable coding allows for unique codes to be printed on individual packs and products. When used well, these cleverly placed codes can increase brand loyalty and encourage consumers to engage and interact with the product in a way they wouldn't usually.

For example, codes that the consumer can use to get a discount or enter a competition can lead the buyer to submit valuable information about themselves that can be used to the company's advantage.

The data collected from running such campaigns can enable brands to understand their buyers' habits (when and where they are buying) and tailor any future marketing communications or sales strategies to meet the trends that they are seeing. 

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choices based on diet, allergies, personal taste or cost. Recent studies have shown that the readability of information is a key factor to the consumer's purchasing decision.

There are several different printing solutions out there helping food and drink producers, manufacturers, retailers and suppliers to produce their products labels. One of them is DTM Print, an international OEM and solution provider based in Germany with years of experience in developing individual printing services. Beside own products, the company works closely with well-known manufacturers like Primera Technology and OKI Europe to provide the best possible printing solution for compliant product labels as well as POS and retail applications.

The company provides customers everything needed to print their own labels: Label printers using inkjet, colour laser or digital LED technology, customised software solutions, POS applications e.g. label kiosks, special accessories like label applicators, foil imprinters, re- and unwinders and a wide selection of DTM certified Genuine Label Stock of approved inkjet and dry toner materials, available in any size or shape.

In addition, DTM Print recently announced the sales start of new the LX610e Color Label Printer. The LX610e is the only full-colour, desktop label printer/plotter in the world that delivers photo-quality product labels in any size and shape. It combines colour inkjet label printing with a built-in digital die-cutting mechanism. The printer features a built-in die-cutting knife blade for cutting labels into custom shapes and sizes and also a built-in "pizza-wheel" style cutter for horizontal cutting of labels.

LX610e includes an easy-to-use software, called PTCreat, for laying out print and cut files. That allows the fast production of custom labels of virtually any size or shape all in one process. Like any other desktop colour label printer the LX610e can also be fed with standard pre die-cut labels and tags for just printing.

At Natural & Organic Products Europe, taking place at 19-20 April 2020 in London, DTM Print presents its wide range of label printers, including the brand-new LX610e, label applicators and label substrates at its stand T43. 

<sup>1</sup>Source: Guidance: Food and drink labelling changes from 1 January 2021, 23 August 2019,

<https://www.gov.uk/guidance/food-labelling-changes-after-brex>

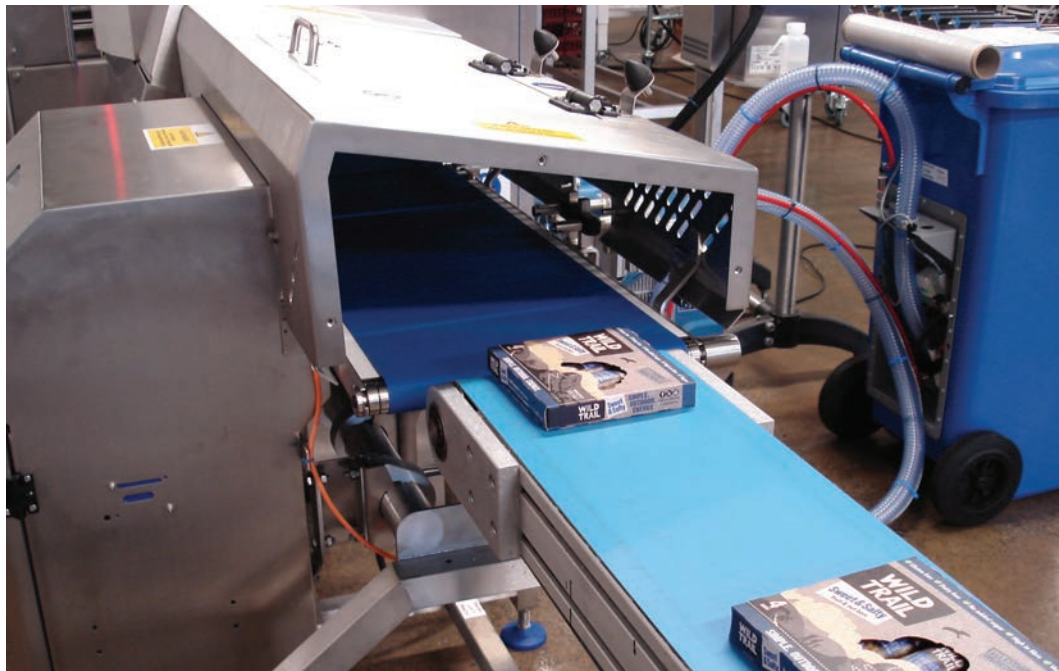
<sup>2</sup>Source: Packaging and labelling: How to label your food packaging products and the legal requirements that you have to follow as a food business, 18 January 2018, <https://www.food.gov.uk/business-guidance/packaging-and-labelling#labelling-food-pre-packed>



## The numbers speak for themselves.

150 years of experience meet newly gained independence. The result is flexibility that will convince you from day one. Of course we remain your reliable partner for the pharmaceutical and food industries worldwide. Bosch Packaging Technology becomes **Syntegon. The new name for processing and packaging technology.**

**Syntegon. Formerly Bosch Packaging Technology.**  
[syntegon.com/numbers](https://syntegon.com/numbers)



# A BRIGHT RESULT

Award-winning food manufacturer, Brighter Foods, has recently invested in X-ray inspection technology from Loma Systems. *Food & Drink Technology* hears how the move supports an increased emphasis in the company's product checking processes

**B**righter Foods innovate and manufacture snack bars in niche areas including slimming, sport, organic and Free From bars for many brand partners across the globe, with the capacity to produce over one million bars each day. Previously, Brighter Foods used Loma metal detectors and were satisfied with the metal contamination detection results. However, an increasing number of customers had been adding to their code of practice (COP) the requirement for even greater checks through the use of X-ray inspection. Plus, Brighter Food's BRC audit highlighted they should consider X-ray inspection as it offers many quality and safety benefits.

## **Eradicating human error**

As well as looking beyond metal contaminant, by upgrading to X-ray, they also wanted the additional comfort of checking the number of bars per box and undamaged packaged product. These checks were previously time consuming

and susceptible to human error, therefore they were looking for a solution to improve their product checking processes. With Loma metal detectors already used by Brighter Foods, they approached Loma to investigate how the X-ray would benefit their business.

Following a full audit of Brighter Foods' current operation, Loma presented the solution of the Loma X5C compact with air blast reject systems to detect and remove any contaminated product into a lockable stainless steel reject bin. The machine offered Loma's X-ray technology with a small footprint that could easily fit into a relatively narrow production line length.

Along with the X5C checking for a wide selection of contaminants from metal to hard plastics, it analyses the product's integrity, including counting the number of bars within the pack, checking the volume per bar, and ensuring the product is undamaged. In the event of any defect, the product is quickly removed from the production line and logged on the system, so Brighter

Loma X5C




#### The benefits of the Loma X5C X-ray for Brighter Foods

- Upgrading from metal detection to X-ray, Brighter Foods can now detect so much more for their snack bars.
- The X5C was the perfect size to fit into their production line with a 1000mm machine length.
- Increased monitoring of the quality of the finished product for greater customer satisfaction.
  - Helps instill a 'right first time' approach, which has improved their factory's productivity.
- Manual checks now automated and so improved use of people resources and all checks to the same standard.

to complete manual checks.

"Overall the performance and reliability the Loma X5C delivers has surpassed my expectations and we can feel comfortable in the knowledge that every bar we ship has been quality and safety checked. Our customers are very happy we have these checks in place.

"Given our experience of Loma, we would recommend them as a supplier of metal detection and X-ray monitoring. We have had great support from the Loma team to get the product right and our team are very positive towards using the numerous X5C's on site, helped by the fact they are intuitive to use." 

Foods can investigate.

"The Loma X-ray X5C solution gives us total peace of mind as I now know within each pack we ship there are the correct number of bars, the correct volume and all product is checked for any possible contaminants," says David John, engineering manager, Brighter Foods.

#### Made to measure

Like all Loma machines, the X5C can be configured to suit the latest code of practice (COP) to ensure compliance. It also has a simplified, yet powerful inspection feature set, plug and play installation and software, reliable inspection and low ongoing running costs.

David John, engineering manager, Brighter Foods says: "Having had experience of Loma previously, Brighter Foods were happy to select Loma again. We are always looking at how to do things even better and this helps underpin our strong quality values.

"With the Loma X5C in place this gives us extra peace of mind that the products we ship are to the highest quality and reduced the requirements

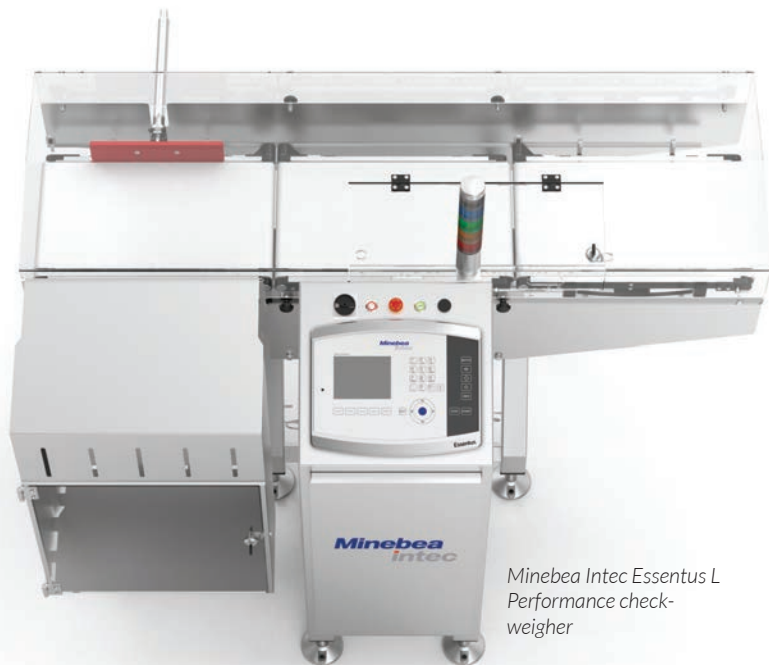


Brighter Foods production line

# Reliability counts in baked goods production



## Minebea Intec meets increasing consumer demand for healthier snacks with flexible processing technologies



*Minebea Intec Essentus L  
Performance check-  
weigher*

**I**n many countries, the production of bakery goods is one of the largest and fastest-growing segments in the food industry. Minebea Intec offers a unique range of products and services for the various tasks in this area.

The international food and beverage industry has been experiencing something of a boom in recent years. By 2023, the annual growth rate is expected to be in the region of 10.3 per cent. The industry's total sales in the three largest markets alone – China, the UK and South Korea – will be around €34 billion in 2019. In many countries, the production of bakery goods is one of the largest and fastest-growing segments in the food industry, and is often only surpassed by sales in meat and poultry production.

The challenges posed by this growing demand include trends like consumers' desire for healthier, vegan or vegetarian products and the clear labelling of ingredients on packaging. Producers of bakery

goods also have to contend with increasing environmental requirements and present their products in a more environmentally conscious manner. Even societal changes like the rise in single-person households and increasing mobility affect the industry: packaging sizes and the way that products are prepared change and present growing challenges for producers of food products and bakery goods.

Before the end-consumer can buy and enjoy their baked goods, there are a lot of processes to complete, which can roughly be divided into four steps.

1. First, the required raw materials are delivered.
2. The actual production is the second step and is either carried out manually or by automated means. This step is made up of many individual processes, from dosing, mixing and kneading ingredients to adding them to the moulds for baking, cooling and eventually cutting the baked goods.
3. The products then need to be packaged up, during which various inspections and checkweighing processes are usually carried out.
4. The final step is to dispatch the goods, which involves picking the order and shipping the finished bakery products to retailers or end-customers.

As one of the leading manufacturers internationally of industrial weighing and inspection technology, Minebea Intec supplies flexible, high-performance solutions for each of these sets of processes in the baked goods industry.

### Increasing requirements for production technology


With the demand for food growing exponentially worldwide, a much higher level of automation is required in the industry – and this includes the production of bakery goods. High-precision, reliable technology is needed to inspect the baked goods in virtually every single one of the work steps described above in order to guarantee the large quantities required at a consistently high level of quality. Silo weighing solutions and floor scales record the exact material quantities during the various production phases and truck scales perform the same task at goods receipt and goods issue. Checkweighers record the product weight for quality assurance purposes. Metal and X-ray inspection systems ensure during various process stages that the end products do not contain anything other than the desired ingredients. Every component that comes into direct contact with the food must fulfil strict hygienic design requirements to minimise any safety risks for the consumer.

The bakery goods industry is an important customer segment for Minebea Intec. “With our unique portfolio of products and services, we offer a wide

range of solutions worldwide for this special market, covering everything from receipt of the raw materials to the finished end product,” explains Willy-Sebastian Metzger, director marketing, strategy and business development at Minebea Intec.

### Reliable X-ray inspections with Dymond and Dylight

Metzger describes two examples of the high-performance X-ray inspection systems currently available from his company: the Dymond and Dylight systems. “The X-ray inspection systems in our Dymond series are extremely versatile and are ideal for inspecting packaged bakery goods at the end of the production process, for instance. The systems reliably detect foreign objects in the product and enables hollow spaces to be detected in products and check whether the product contents fill the entire packaging.” Whether the food products are dry or liquid, in cartons, bags or portion packs makes no difference to these systems. To meet the individual requirements of each production line, Minebea Intec offers three different Dymond models with belt widths of 200 mm to 800 mm. Multi-track applications with up to eight tracks are also possible with Dymond.

With Dymond Bulk, Minebea Intec has developed an X-ray inspection system for bulk materials that enables raw materials such as vegetables, nuts, dried fruit and grains to be reliably checked for foreign objects of any kind at goods receipt. “The X-ray inspection also helps to protect downstream machines, like grinders, by monitoring goods that enter the production process straight from the field, as it were,” Metzger explains. 



Dymond 40



# FREEZE DRYING FOR ALL SUSTAINABLE REASONS

**Freeze-drying technology is being used to improve shelf-life while supporting sustainability strategies**



*Freeze drying technology... gently removes the water*

**T**he pressures on manufacturers and the food and drink supply chain to reduce waste and develop sustainable processes mount by the day.

Legislation, environmental considerations and the demand from consumers for food that is produced from sustainable sources places the manufacture of quality ingredients way up the agenda.

Diana Morris, country manager UK for European Freeze Dry, says: "We are working more closely than ever with our customers to support their sustainability policies. They want less time dealing with waste, a reduced carbon footprint and a process that adds value to their green credentials long term.

"Our freeze drying technology supports their sustainability strategy, and the results are prolonged shelf-life of fresh products, reduced food waste, with the structure of the food retained along with the flavour and nutritional value. This means they are ready to be used as ingredients

in a range of applications be it sweet or savoury.

"To achieve this, we work with them from the outset on existing or new product development, whether meat, seafood, dairy, fruit or vegetables and pulses. With the support of our science and technology, and our expertise in research and development, we can develop ingredients in a process that is sustainable and environmentally friendly in every way."

## **Sustainability is better business**

Moreover, sustainable business is good business sense. Recent research by Accenture says that 53 per cent of UK consumers 'prefer to buy goods and services from companies that stand for a shared purpose that reflects their personal values and beliefs, and are ditching those that don't'.

The manufacturing, hospitality and food service sectors in the UK are responsible for 2.6million tonnes of food waste each year worth an estimated £3.7billion.

At European Freeze Dry, all products for freeze drying start as frozen raw materials, and



Diana Morris,  
country manager UK,  
European Freeze Dry

undergo a process known as sublimation under specifically designed programmes.

Freeze drying technology gently removes the water in a product whilst retaining the natural colour, shape and nutritional characteristics. This enables these products to be marketed as nothing added offering multiple benefits with natural colours and flavours coming through in beverages, for example.

During the freeze drying process a deep vacuum is applied, and under these conditions neither ice nor water can exist. The pressure from the vacuum, with a controlled amount of heat applied, causes the ice to leave the product as a vapour trail which is then captured on an ice condenser within the freeze drier, upon which the vapour forms again as ice.

The process takes on average a day to complete, carried out in a set of chambers, which can be controlled at various temperatures and time schedules depending on specific product requirements.

Freeze drying also means there is a much reduced potential for microorganisms existing in such low amounts of water. Food supply chains are becoming smarter, more sustainable and inclusive with interaction between producers, businesses and consumers.

Diana Morris adds: "With environmental pressures on sustainability to add value for the consumer, our products also come with clean ingredient declaration and traceability providing clarity for people about whether their food is sustainably sourced rather than being part of an eclectic mix of suppliers.

"Ultimately, the end-customer wants to know that the super-foods they consume are everything they are claimed to be from source to shop. Increasingly, and in response to consumer demand and changing lifestyles, we are

*Freeze drying...much reduced potential for microorganisms*



“ We are working more closely than ever with our customers to support their sustainability policies. They want less time dealing with waste, a reduced carbon footprint and a process that adds value to their green credentials long term ”

also seeing a rise of plant protein requirements alongside traditional protein products such as meat and seafood.”

### Freeze drying and nutraceuticals

European Freeze Dry is also applying its technology to the development of nutraceuticals - natural foods and dietary supplements - with the natural flavours and colour retention being an integral part of the product.

During the first six weeks of 2020, European Freeze Dry increased sales of its freeze dried vegetables and pulses over the same time period in 2019 by an increase of 1,783 per cent. Sales of vegetables and pulses in the first six weeks of 2020 have already outsold the first nine months of 2019 for European Freeze Dry.

The rise in consumer demand for vegan products is influencing the whole food and beverage market, with recent research by Mintel suggesting 23 per cent of new food products launched in the UK last year were labelled as vegan. Meanwhile, the proportion of meat eaters who say they have reduced the amount of meat they consume grew to 39 per cent, citing health and the environment as key factors.

Not surprisingly, the global freeze-dried foods market size is estimated to grow by £17billion during 2019-2023. 



# TAILORING SUPPLY

to meet growing demand

**Air Products' recent work with Manor Farm chicken has managed an increase in gas usage from the business's recent growth**



The Manor Farm brand has grown exponentially in recent years and now employs close to 1,000 people. From its base in County Cavan, Ireland, it processes up to 950,000 chickens per week – controlling all stages of production, from farming through to packaging.

Back in 2006, Manor Farm made the decision to pack its fresh chicken in a modified atmosphere to achieve an extended shelf life, without the addition of preservatives. Modified atmosphere packaging (MAP), or gas flushing, is an established technology proven to slow microbial spoilage and extend the shelf life of packaged foods, thus reducing food waste.

Originally, the company used individual gas cylinders as a method of supplying MAP gas. This was a logical choice and is the right solution for smaller operations, but as Manor Farm grew, it began to become unwieldy. At peak times, Manor Farm was using up to 500 cylinders a month –

meaning around 160 hours of production time was being spent replenishing empty cylinders.

Shorter term methods of combating this were also liable to cause sustainability problems. One way of tackling inefficiency on the pro-

duction line was to change a cylinder at the end of a shift regardless of whether it was empty – an approach taken to cut the amount of time spent on changeovers during working hours. This meant some cylinders were being removed before they were completely empty to save time the following day, wasting as much as 10 per cent of the gas.

Consequently, the company took the decision to change its method of gas supply, switching to a large-scale tank, which supplies the MAP gases to the packaging machines via a pipeline network, thus removing the need for single cylinders. Now, instead of supplying large numbers of


cylinders, Air Products provides gas for the tank in scheduled bulk deliveries. In just 12 months, the company has found that the change to bulk has brought considerable improvements.

Operationally, not having to change cylinders several times a day means productivity has increased, as staff are able to continue work without interruption. From a health and safety perspective, cylinders are no longer being lifted and carried by staff, eliminating any potential risk of injury during changeovers.

The fact that refilling the bulk storage is handled by Air Products, rather than staff on site, further increases the efficiency of the process and assures a continuity of quality. In addition, the reduced number of deliveries means fewer vehicles travelling to and from the site – improving site safety and reducing the carbon footprint of the operation.

Robert Caldwell, Lean Six Sigma manager at Manor Farm, says: "Switching our gas supply mode from cylinders to bulk storage has made a significant difference to our business. It has delivered a number of benefits, both from a commercial and sustainability point of view and has enabled us to operate our production lines more efficiently.

"As our business has grown, our needs have changed. The bulk storage solution that Air Products was able to offer has not only met those needs, but will continue to grow with us."

For businesses, quick growth needs to be managed carefully and in conjunction with other important issues. Sustainability, health and safety and environmental policies can all become less effective if not properly monitored as the size of a business changes. It is not just the responsibility of the business, but also of its supply chain, to facilitate any changes needed in their field to help operations continue to run as smoothly as possible. 



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# CONFECTIONERY

**CONFERENCE**

chocolate, sweets, snacks & bakery

**2020**

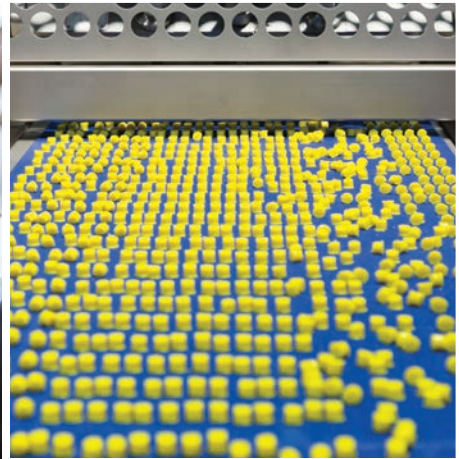


**Brussels, Belgium**  
**11 September 2020**

[confectioneryconference.com](http://confectioneryconference.com)

Organised by **CONFECTIONERY**  
PRODUCTION  
chocolate, sweets, snacks & bakery





Following many months' preparation and building anticipation from confectioners and retailers across the world, ProSweets proved to be a momentous success



**T**aking place on 2-5 February at Koelnmesse, Cologne, ProSweets made way for 260 exhibitors. Over 18,000 trade visitors from more than 100 countries were registered over the course of the four days of the trade fair.

The fair's focus was on future-oriented themes such as sustainable packing, resource-saving production, flexible machines and natural ingredients.

The combination with ISM meant end-products were on display, in addition to the very latest machinery and equipment and myriad professional services and supplies.

Set against an incredibly picture perfect backdrop of glorious colour it certainly didn't disappoint.

### STRIVE FOR QUALITY – WIDE SELECTION OF TECHNOLOGY

Manufacturers require fully-automated processing and packing machines that are easy to operate, clean and service. Downtimes need to be kept to a minimum and the overall equipment effectiveness to be increased.

Modular design is a key component to today's processor. The flexible and fast

conversion to suit different formats is a must so that they can achieve maximum machine efficiency.

Roboqbo brought its Universal Processing machine, the QBO Roboqbo, which creates food in the matter of minutes and leaves you mesmerised in the process. It can complete a huge variety of products from meat pie fillings to risotto, vibrant jams to soft cheeses while increasing all their natural properties, colours and flavours.

Proxes Chocolate used ProSweets to take chocolate production to another level with machinery for specific needs. Its aim is to be more solution driven and aspire to become the first choice when it comes to food processing equipment in the chocolate and pastry industry. The concept on offer is for process technology to suits all steps 'From Roasted Bean to Ganache' (Grinding, Conching, Fine Grinding, Ganache) and a variety of other sweet applications like paste, praline, glaze and doughs.

Proxes is combining: Stephan Machinery (Universal machines, Combitherm) and FrymaKoruma (Corundum stone mill) machines.

In the near future, it'll add also the

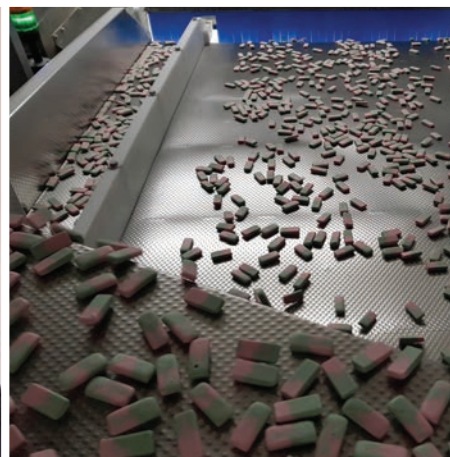
food processing machinery of Terlet to the sweet portfolio.

Handtmann Maschinenfabrik offered modular and flexible solutions for the production of confectionery, baked goods and snacks. The range includes portioning machines with different performance levels. These become complete process solutions for the production of a vast diversity of applications, from soft product consistencies to firm products. The outstanding feature of the Handtmann portioning machines is the accuracy due to a vane cell feed system.

Ammeraal Beltech's technical team used ProSweets to launch a range of specialist belts for confectionery and snacks. Ropanyl Premium Plus has flexible, non-stick, shrink-free, and non-fray performance at the heart of the model. It offers new levels of flexibility and belt tracking that, in use, the belts are able to reduce system and maintenance costs, and at the same time boost output.

Baker Perkins' JellyCook batch cooker feeds a ServoForm Mini depositor, which can accommodate products using gelatin, pectin, carrageenan or blends as the gelling agent can all be produced.

Bjorn Thumas, Tomra Food's VP busi-



ness development, product management food sorting & marcom food is finding many manufacturers are now turning to sensor-based sorting technology to achieve consistency in quality and reliability in separations.

“Our sorters are meeting with great success in the markets for their ability to provide a complete solution, and this year we have installed our sensor-based sorting systems in Germany, the United Kingdom and in the United States, where they are achieving excellent results for our customers.”

Vemag took to ProSweets with its Dream Team for bakeries, snack and confectionery production with the Robot500 with ASV811 – a compact solution for weight-accurate dividing of doughs and mixtures to the gram.

At the heart of this system is the Vemag double screw, which is based on a double-spindle principle. It guarantees extra gentle handling and conveying of doughs and mixtures that contain large pieces and chunks, such as nuts, dates or chocolate chips, throughout the process.

## SWEET INDULGENCE

There is a growing role for more colourful food and beverage products – an area GNT specialises in. GNT used the exhibition to highlight how its Exberry Coloring Foods can help confectionery and snack manufacturers meet the increasing demand for plant-based products.

At ProSweets Cologne, GNT’s key food and beverage colour trend for 2020, Shades of Aqua, too centre stage. Part of the Love Color initiative, vivid blues and greens provide various possibilities to

create “Instagrammable” products that immediately stand out from others.

“In the past, artificial colors have had negative associations, but with our natural shades of aqua, a story can be told and that story is that we are only using water to process the raw materials,” Maartje Hendrickx, GNT’s market development Manager, told *Food & Drink Technology*.

The company offered a range of ways to experience Exberry Coloring Foods. Visitors could sample confectionery-based “sushi” and discovered the colour strength of Exberry by adding different shades into plant-based yogurt.

## NATURE’S WAY

More and more consumers are looking for healthy added value in their food and beverages – a trend that is also seen in confectionery. At ProSweets, Doehler showcased concepts from delicious plant-based porridges to healthy snacks containing plant-based proteins, and even tender, creamy chocolate creations with crunchy fruit granules.

Paradise Fruits by Jahncke used the exhibition to debut its new range of freeze dried crunchy granulates.

Developed by Paradise Fruits’ Freeze Dried division, crunchy granulates are manufactured through a specially adapted freeze-drying process that allows customers the option of a one component recipe made of 100% fruit, or a combination with yoghurt or additional carriers.


The granulates are available in bespoke shapes and cut into sizes, ranging from 1mm to 10mm, making them ideal for use in chocolate, confectionery and baked goods.

Kurt Jahncke CEO of Paradise Fruits, tells *F&DT*: “They are the natural choice for manufacturers looking for a light-weight, nutritious and delicious ingredient to add flavour, colour and texture. The 100% pure fruit recipe retains many of the natural flavour and colour characteristics offered by fresh fruit, but in a format more suitable for snack and confectionery applications.”

Norevo’s range of ingredients focused on the production of sweets such as sugar-coated, chocolate-coated or compound-coated dragees, gums, jellies and chewy toffees.

The company also highlighted performers, which are used for stabilising, glazing, whitening and sealing of various types of pan-coated products. They also offer an alternative to shellac for sealing purposes.

Also looking at reformulation, Beneo highlighted its naturally-sourced sugar replacer, Isomalt, in a new sweets collection. The sugar-free candies are designed to “bring excitement and authenticity in the mouth,” the company says. Tapping into the functional foods trend, Beneo also showcased its cola-flavoured power chews with palatinose, a sucrose-based sugar alternative. The chews reduce glycemic response and are slow-release energy.

Barry Callebaut launched a 100 percent dairy-free chocolate – “Milk Chocolate” – as part of its new “Plant Craft Indulgence” range. According to the chocolate maker, this satisfies the growing demand for plant-based indulgence and is part of a wider portfolio of Plant Craft products ranging from chocolate, cocoa, nuts and fillings to decorations. 

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A definitive guide to the suppliers of equipment, ingredients and packaging solutions for the food and drink industry.

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**Location:** Athens, Greece

**Web:** [foodexpo.gr/en/](http://foodexpo.gr/en/)

30 March - 01 April

### Foodex

**Location:** NEC, Birmingham

**Web:** [foodex.co.uk](http://foodex.co.uk)

## APRIL 2020

01 April

### IFST Spring Conference SC20: The Appliance of Food Science

**Location:** London, UK

**Web:** [ifst.org/events/841/ifst-spring-conference-sc20-the-appliance-of-food-science](http://ifst.org/events/841/ifst-spring-conference-sc20-the-appliance-of-food-science)

01 April - 02 April

### Smart Food Matters

**Location:** London, UK

**Web:** [foodmatterslive.com/smartfood](http://foodmatterslive.com/smartfood)

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Int'l Milling Industry, Bakery, and Confectionery Fair

**Location:** Brno, Czech Republic

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21 April

### Campylobacter Seminar

**Location:** Campden BRI, UK

**Web:** <https://www.campdenbri.co.uk/campylobacter-seminar.php>

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### Safe production of Heat Preserved Foods

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02 May - 05 May **Interpack 2020**

**Location:** Dusseldorf, Germany.

**Web:** [interpack.com/](http://interpack.com/)

11 May - 14 May **Cibus**

**Location:** Parma, Italy

**Web:** [cibus.it/en/](http://cibus.it/en/)

12 May - 14 May **VitaFoods**

**Location:** Geneva, Switzerland

**Web:** [vitafoods.eu.com](http://vitafoods.eu.com)

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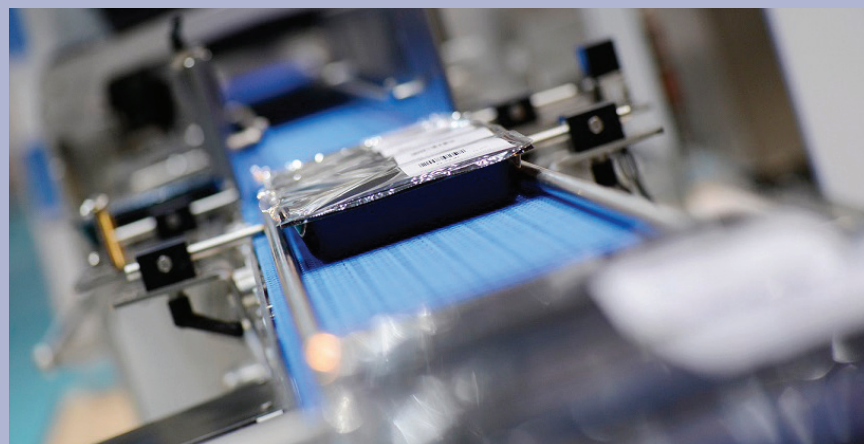
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# Sixty seconds with ...

## Hannah McCollum



**Hannah McCollum,**  
founder,  
ChicP

**Describe yourself in three words.**

Weird, wonderful and a bit witty :)

**What are your biggest professional achievements?**

Starting my business that is still running successfully after four years.

Winning the West London Green Circular Award 2020

**How did you get to this point?**

A lot of hard work, being ambitious and believing in the product. Perseverance, the help of other people – and a lot of networking and weekends.

**What have been the biggest challenges you have faced in setting up ChicP?**

Finding a manufacturer and dealing with a short shelf-life product – which we have now managed to get to a shelf life of 24 days. Before that it was 12 and virtually impossible to work with.

**What does a typical day look like?**

I usually do some sort of exercise before work. I'll then jump on my bike and meet my colleagues. We work remotely; it gives us the flexibility to be near where we have meetings, an event or a sampling. We usually have the first few hours together – we discuss what needs doing and get on with our tasks.

In the afternoons I'm sometimes settled somewhere else depending on my meetings, but carry on with sales, NPD, events etc. Some evenings I'll carry on working, but I also have a busy social life, which I prioritise.

**What have been the highlights to-date?**

Supplying Wimbledon and launching with Wholefoods in our first year. This

year – launching a whole new range of product (our veggie bites!), which is hugely exciting. They are very nutritious and absolutely delicious and there's nothing out there like this using British veg and produced at such high quality.

**What is your pet hate?**

People not answering you

**Give us a prediction for the food industry over the next 12 months.**

- More food tech and plant-based foods replacing meat products with 3D.
- Sugar free products will continue to develop and sugary products will continue to decrease their sugar quantities.
- Food grown indoors, in cities and underground, resulting in foraging type foods.
- I hope trends will also be more focused on seasonality and locality – but that's my wish :)
- Products with protein alternatives.

**What technology do you use for your hummus?**

Very large blending machines and conveyor belts for packaging plus special depositing machines for putting the hummus into the pots

**Hummus now, what next?**

Our veggie bites... Not long so keep an eye out!



Hannah is a London based food entrepreneur who wants to change attitudes towards food waste. Hannah's business ChicP recycles imperfect vegetables, that would be considered waste, into award-winning, super sustainable hummus...

**If you weren't in your current position, what else might you be doing?**

Sustainability consulting/the environment/renewable energy or events and travel.



**The future...**


Focus on something to do with the environment and conservation as well as future of farming (along with training to be a sports masseuse and continuing to be a chef – which I will always do) – [Ed: Hannah is, in her own words, a qualified cook].



**Tell us something about yourself that few people know?**

I'm a grade 8 Clarinetist.

**Do you relax?**

YES. I didn't for the first two years, but now I've learnt how important it is and I also really enjoy it. It's absolutely key for health, balance, performance at work – and just being able to switch off. 

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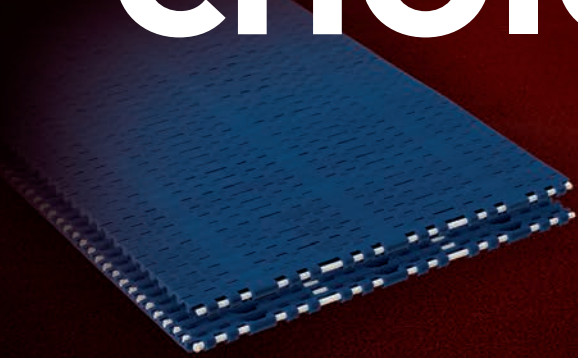
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