

*Bakery, Confectionery and Speciality  
Ingredients Newsletter*



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## DuPont's Shelf-life Expertise

Source: [www.dupontnutritionandhealth.com/news](http://www.dupontnutritionandhealth.com/news)

Technology innovations are brought into our world every day, sometimes reshaping industries and altering business practices. But throughout the baking industry, these types of advancements are exceptionally rare.

DuPont Nutrition & Health has demonstrated its shelf-life expertise at the ASB BakingTech 2019 convention by showcasing its continual innovations with 'multi-hurdle' baking technology. DuPont also has introduced its new POWERFresh® 9705 enzyme solution.

### 'Hyper-extended' shelf life

The baking industry's new answer for attaining optimal shelf life for baked goods is three-pronged hurdle technology. David (Guilley) Guilfoyle, Innovation Manager of Bakery, Fats & Oils at DuPont Nutrition & Health, presented Pushing the Boundaries of Freshness Through Hurdle Technology. The presentation revealed how this technology uses antioxidants, antimicrobials

*Dear Readers,*

*Food and Beverages Additives Market is expected to witness a significant gain as rising urbanization and upgrading lifestyles result in growing demand for convenience and packaged eatable items. Ensuring the nutrition safety and quality is a major concern in the processed and packaged eatery items. To meet this demand, food and beverages additives are used. They are used to enhance and improve the color, taste, texture, and to maintain nutritional content and the freshness of items. This will result in enhancing the product demand in the future. Food and beverages additives market mainly include direct and indirect additives.*

*Demand for healthy eatables and drink is anticipated to support and grow the product market in the future. We are having more insight into this segment with our suppliers front and also current bakery trends in 2019. Enjoy the Read.*

*Vivek Upreti  
General Manager*

and anti-staling technologies in synergy to achieve prolonged characteristics throughout the shelf life.

“The latest development impacting baked goods is “hyper-extended” shelf life, where freshness is sustained over a period of time that pushes the boundaries of conventional methods,” Guilley said. “Our robust solutions can help your bakery explore this opportunity further and allow you to reap a harvest of benefits.”

### **New enzyme technology**

Further demonstrating its innovation in bakery ingredients, DuPont will introduce POWERFresh® 9705, a new effective way to address freshness and resilience throughout the shelf life of bakery products. The processing aid will help maintain softness and eating quality in a variety of bakery applications.

“POWERFresh® 9705 was developed through our understanding that bakers want to create soft baked goods that also withstand the distribution and storage processes,” said Joshua Zars, Regional Business Director of Food Enzymes with DuPont Industrial Biosciences. “Since this solution is quite robust in its applications, it helps the baker ensure that the customer has an enjoyable experience with their baked good.”

## **High-Potency, Multi-Strain Probiotic Formulations**

*Source: [www.dupontnutritionandhealth.com/news](http://www.dupontnutritionandhealth.com/news)*

DuPont Releases Clinical Study Results that Demonstrate Benefits of High-Potency, Multi-Strain Probiotic Formulations

*Nutrients Journal Publishes New Study Suggesting Higher Doses of a DuPont Multispecies Probiotic Formulation May Permit More Benefits for Healthy Adults Than Lower Doses.*

**KANTVIK, Finland, March 21, 2019** – Results from a clinical trial performed by Taverniti and colleagues from the University of Milan (IT) suggest that ingesting higher doses of multispecies probiotic formulations may permit higher, earlier and longer recovery of probiotics in feces of healthy adults.

The aim of the study, which was published in the journal *Nutrients* (Taverniti *et al.* *Nutrients* 11(2):285, 2019), was to understand the effect of bacterial count on the transient colonization in the human intestinal tract of four different DuPont probiotic strains administered in a single, commercially available, formulation. The four DuPont strains under investigation were (1) *Bifidobacterium lactis* BI-04®, (2) *Lactobacillus acidophilus* La-14®, (3) *Lactobacillus plantarum* SDZ-11 and (4) *Lactobacillus paracasei* SDZ-22. The study compared the formulation at two different doses; 7 billion and 70 billion colony forming units (CFU), with the goal of measuring cell recovery in feces after oral administration.

### **Study Design**

In the study, 40 healthy adults of both genders aged between 18 and 60 were randomly divided into two equal groups. A single-blind, two-arm parallel microbiological pilot study was then conducted in which the volunteers, depending on which group they were assigned to, consumed either the 7 billion or 70 billion CFU formulation daily for two weeks. They were then monitored for a follow-up period of an additional two weeks. For the duration of the study, the volunteers were instructed to follow their usual diet (without the intake of any other probiotic products) and to collect 19 fecal samples in total, in accordance with the study design. These samples were then tested for probiotic recovery.

### **Multiple Strains at Higher Potency Equals Earlier, Longer and Higher Recovery**

The study found the first day of detection of the four probiotic strains was earlier in the high dose group when compared to that of the low dose group. Furthermore, on the last day of probiotic consumption, viable cells of all four probiotic strains were recovered from those consuming the 70 billion CFU dose, whereas recovery was not successful for five volunteers who consumed the 7 billion CFU dose.

During the follow-up period of two weeks after consumption stopped, viable recovery was significantly higher and detectable longer in those who consumed the higher dose formulation than those who consumed the lower dose one. This demonstrates that higher

doses of bacterial cells in probiotic formulations may allow for a higher, earlier and longer recovery time suggesting that higher doses may lead to an earlier and more stable transient colonization. In addition, the study shows that strains belonging to diverse taxa may be combined in a single formulation and be selectively quantified upon digestion.

“Higher doses of probiotics result in higher levels of fecal recovery; this has been shown before. What is fascinating with the Taverniti study is they show a higher dose also leads to an earlier and longer detection of the consumed probiotics; suggesting a more stable ‘colonization’. This begs the question if a higher probiotic dose also leads to earlier and more reliable health benefits,” stated Arthur Ouwehand, Ph.D., Technical Fellow, DuPont Nutrition & Health.

Valerie Delahaye, Global Leader of Dietary Supplements for DuPont Nutrition & Health, adds, "Since we are experiencing a clear trend toward multi-strain and higher potency probiotic formulations in many markets around the world, it is encouraging to see study results which may assist in better understanding the benefits of these formulations from a consumer perspective.

## AAK creates new flaked fats

Source: <https://www.foodbev.com>

AAK aims to help food manufacturers create artisanal-style pizzas with a new range of flaked fats that are said to enhance crust taste and texture – as well as offer easy handling during the production process.

The company said the products provide a simple way to improve the mouthfeel of crusts in both thin and deep pan pizzas.

Visual appeal is also said to be improved, as the fats create air pockets in pizzas and a more open dough structure.

Rasa Moorthamer, business development director at AAK, said: “Today’s consumers want pizzas with artisan quality, taste and texture. Our expertise in vegetable oils and fats ensure our flaked fats give the premium pizza experience consumers are looking for.

“This versatile solution allows for the creation of a tasty product that can make production simpler, while opening the door to unique sensory experiences, whether the pizza is sold frozen, chilled, fresh, or as a dry-mix.”



The flaked fats are said to provide a simple way to improve mouthfeel of crusts in both thin and deep pan pizzas.

Sweden-headquartered AAK said that if using flavoured flakes, the taste is encapsulated in the flake until the pizza is baked and the fat starts to melt, resulting in an enhanced flavour.

Finally, the flaked fats are said to reduce oiling out – the oil migration from the crust that can make home-delivery boxes soggy. Preventing oiling out can allow for a better crust texture and has the extra benefit that consumers’ hands will get less greasy if they pick up their pizza to eat.

Last week, AAK announced it will invest around SEK 300 million (\$31.9 million) to increase capacity at its facility in Zhangjiagang, China, adding additional capacity in the bakery segment to meet demand for its high-end bakery solutions.

The expansion will also include a processing plant for the company’s special nutrition unit, focusing on the production of infant nutrition solution INFAT, sold through Advanced Lipids, a joint venture between AAK and IFF.

## Baking Trends in 2019

Source: [www.entrepreneur.com](http://www.entrepreneur.com)

2019 is going to be the year of adventure for bread manufacturers across the world and GCC will be no exception. Consumers are increasingly pressed for time but still, want to cut down on their calorie intake. Hence, bread makers will be aiming to make their go-to staples more memorable, vivid and colourful.

One colourful way in which bread can amplify its nutrition content is by mixing vegetables with the dough to produce an artistic product that looks as good as it tastes. Brightly coloured veggies such as carrot, beetroot or legumes can help make themselves more visible to the eye and act as a strong boost towards positive nutrition. Bread makers should take care not to overdo the colours though. Baking the bread at the correct temperatures is important to get the texture just right.

According to the Mintel Global New Products Database, vegetable bread is a high-end food in Europe and made up for 6% of all new bread launches in 2017. Finland saw a new flat rye bread that is made up of beetroot, carrot and parsnip to the extent of 30% of the loaf. Brazil has its own Veg Super thin toasts that boast of flamboyant orange, green and pink hues from carrot, spinach and beetroot, while the USA launched Spinach Soft Tacos that uses apples, psyllium (a variety of fibre made from the husks of the *Plantago ovata* plant seeds) apart from spinach and onions.

Vegetable based bread is a great idea that diversifies ready-to-go food menus without crisscrossing to different sections of the grocery.

## Beverage themed bread

Bakers have noted that an overwhelmingly large percentage of warm beverage drinkers in metropolitan locations combine their coffee occasions with a sweet bakery item. This Christmas, a Christmas Gingerbread Latte cake that won the first prize in the Christmas Cakes, Pastries and Tarts category at the British Baker's Christmas Stars Competition. India, too, will soon see Coffee-themed pastries flavoured with real crushed cocoa beans that will leave consumers with a seamless café experience.

Cakes offer a great opportunity for sculpturally-minded chefs keen to display their creativity at the form, space and disorder. However, adapting wildly raucous themes to beverage habits is sure to be a hit with the busy office-going crowd.

## World Fusion bread

Street food stalls and ethnic restaurants have turned chic with world cuisine assimilating a potpourri of global bread usage traditions. In particular, cultures that use sauces to condiment a dour meal, such as Mexican, Spanish, Middle Eastern and, of course, Indian, are proving to be a great hit with consumers everywhere. Vendors that offer a dip along with their bread offerings offer fun and adventure with customizable food experiments.

The name 'Coconut & Pepper tortillas may sound like a mouthful but its delectable coconut flavour and a sprinkling of pepper on top of a soft yet thin flatbread crust makes it a genuinely delicious snack. The Finest Ras El Hanout flatbread is absolutely bursting with North African aromas with rich fillings of apricots and raisins with a blend of nine different spices.



## Cocoa supply and demand scenario- market review

Source: ICCO

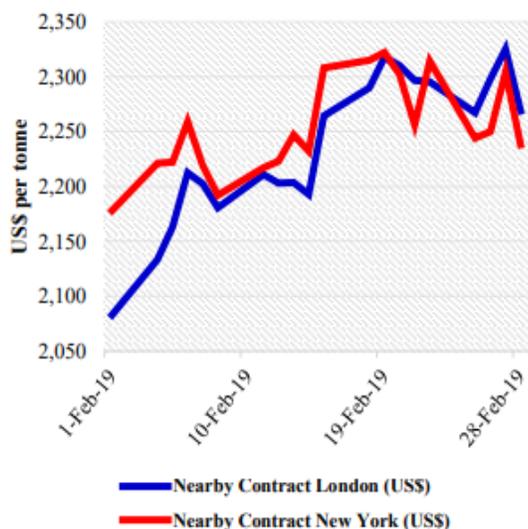
This review of the cocoa market situation reports on the prices of the nearby futures contracts listed on ICE Europe (London) and U.S. (New York) during the month of February 2019. It aims to highlight key insights on expected market developments and the effect of the exchange rates on cocoa prices. Chart I shows the development of the futures prices on the London and New York markets at the London closing time. Both prices are expressed in US dollars. The London market is pricing at par African origins, whereas New York prices are at par Southeast Asian origins. Hence, under the same conditions, one would expect the futures prices in London to be higher than in New York.

Nevertheless, in May 2017, changes in the grading rules for ICE Europe led to a substantial increase in both the share of Bulk Delivery Units (BDUs), which are more expensive to grade/re-grade, and cocoa beans of less sought origin. While continuing to monitor the effect of

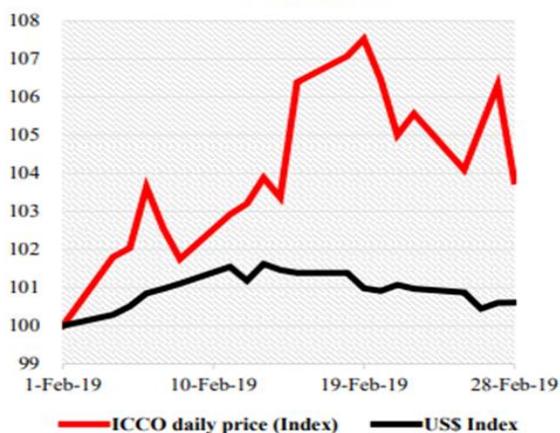
the change in the grading rule in the London market, signs of the return to normal market configuration started to appear during the last trading week of the month being reviewed. This partly resulted from data showing that, during February, among the seven Cameroonian Original BDUs (7,000 tonnes) submitted for grading, two (2,000 tonnes) failed. Chart II depicts the change in the ICCO daily price index and the US dollar index in February.

By comparing these two developments, one can extricate the impact of the US dollar exchange rate on the development of the US dollar-denominated ICCO daily price index. Finally, Chart III illustrates bi-weekly averages of the first position prices and cocoa butter ratios on the London (ICE Futures Europe) and New York (ICE Futures U.S.) markets since the beginning of the 2018/19 cocoa year.

**Chart I: Cocoa bean prices for the nearby futures contract on the London (ICE Futures Europe) and New York (ICE Futures U.S.) markets in US\$ per tonne February 2019**



**Chart II: ICCO daily price index and U.S. dollar index February 2019**



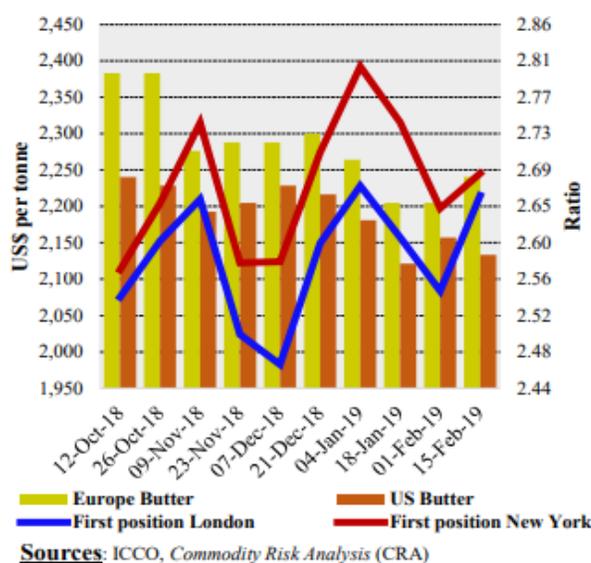
Notes: The US dollar index is a measure of the value of the United States dollar relative to a basket of six major foreign currencies.

## Price movements

During February, the nearby cocoa contract prices perked up on both the London and New York markets as seen in Chart I. This upward trend was in reaction to prospects of an increasing demand coupled with adverse weather conditions that occurred in some West African cocoa growing regions. Subsequently, compared to prices at the start of the month, futures prices rallied by 9% from US\$2,083 to US\$2,269 per tonne in London and by 3% from US\$2,178 to US\$2,238 per tonne in New York by the end of February. Over the period 1-19 February, concerns over the impact of above normal temperatures in West Africa led to a substantial hike in prices in both London and New York. In particular, the

dry and hot climate conditions that prevailed in the main cocoa cultivating areas in Ghana led market participants and forecasters to consider a downward revision to their prediction for the 2018/19 crop size in the country. In addition, Harmattan winds in Nigeria's main cocoa producing areas heightened the negative impact of unfavourable weather conditions on production. As a result, the nearby contract prices increased from US\$2,083 per tonne to US\$2,318 per tonne in London whereas in New York, they rose from US\$2,178 per tonne to US\$2,322 per tonne. However, it is worth noting that, this bullish stance did not continue and from 20 February onwards, projections suggesting that the top cocoa supplier was racing toward another record level in cocoa production resulted in a downward turn in prices. Thereafter, the front-month contract prices plummeted by 2% from US\$2,310 per tonne to US\$2,269 per tonne in London and by 3% from US\$2,302 per tonne to US\$2,238 per tonne in New York. Finally, the strengthening of the US dollar – by nearly 1% - during the month of February had a negligible impact on the soar observed in the US-denominated cocoa price (Chart II).

**Chart III: Bi-weekly averages of first position prices and cocoa butter ratios in the London (ICE Futures Europe) and New York (ICE Futures U.S.) markets October 2018 – February 2019**



Sources: ICCO, Commodity Risk Analysis (CRA)

As shown in Chart III, cocoa butter ratios have generally followed a downward trend in both Europe and the United States since the beginning of the 2018/19 cocoa year. During this period, cocoa butter ratios retreated by 4% from 2.80 to 2.68 in Europe and by 3% from 2.68

to 2.59 in the United States. On the other hand, compared to the level reached at the start of the crop year, the nearby contract firmed by 8% year-on-year in both London and the United States. Prices increased from US\$2,028 per tonne to US\$2,197 per tonne in London while they moved from US\$2,071 per tonne to US\$2,234 per tonne in the New York. It can be noted that cocoa butter ratios are inversely related to cocoa beans prices. With the 2018/19 main crop drawing to a close, arrivals data show that, Côte d'Ivoire is about to top its record cocoa production established during the 2016/17 crop year at 2.020 million tonnes. As at 10th March 2019, cumulative arrivals at Ivorian ports were seen at 1.587 million tonnes, up from 1.441 million tonnes recorded during the same period last season. In Ghana, production is expected to remain stable despite a drought, as the country continues with the implementation of its Production Enhancement Programmes (PEP). Over the same timeframe, Nigeria's output is expected to move downward by 10,000 tonnes to 245,000 tonnes. The first forecasts for the 2018/19 crop season published by the ICCO Secretariat in its latest issue of the Quarterly Bulletin of Cocoa Statistics reveal an anticipated increase in world cocoa grindings of 2.6% compared to the previous crop season. Grindings are expected to reach a record, settling at 4.712 million tonnes, up by 118,000 tonnes. This higher forecast reflects the unabated increase in demand which is mirrored by the steady growth in cocoa processing in origin countries as well as an increase in the demand for chocolates with high cocoa content. It is projected that processing activities will grow by 1.6% to 1.737 million tonnes in Europe and by 4.3% to 1.096 million tonnes in Asia and Oceania whereas an increase of 1.9% to 981,000 tonnes is anticipated in Africa. In the Americas, with the operations of Ferrero in Canada, processing activities are forecast to expand by 3.1% to 899,000 tonnes as compared to the level attained in the same period of the previous season.

## Recycled Bread; the next big thing?

Source: Christopher Foxall

So last week marked an event between University College Birmingham, Birmingham City University and

Aston University for #BrumGoesGreen2019 which had students looking at more sustainable ways of living in Birmingham.

Within the Bakery department at UCB we looked at other ways of using bread that is left over at the end of the day. There are of course well known methods to do this such as making bread pudding however we heard about something new that is being done GAIL's Bakery through a story by British Baker last year where bread is made into a porridge with water and then added to a new bread dough. We thought this sounded really interesting and decided to experiment in order to look at new ways of being sustainable.



The results were really good so we thought we would share for others interest. The old bread was used at 30% on flour weight, however we believe that this could be used at a much higher ratio as long as the flour is strong enough to hold it. Picture below of the whole process from old bread to finished product. We also added a new stencil to it and dusted with spinach powder. The flavour was more intense than a standard loaf. Although the experiment was successful, we also accept that this may not be feasible for larger bakeries due to the traceability issues that this raises. After-all, it would be challenging for bakeries track which stale bread loaves were used in each new batch of recycled bread. Food for thought though! Comments welcome!

Images below include processing dough and video of the bread scoring. **#Sustainability #Bread #RecycledBread #Recycling**



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