

POTATO PROCESSING

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Supporting the potato industry worldwide

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2024 **FRUIT**
LOGISTICA
Special Coverage

Interview

AgriSto's Jon Heylen Explores
New Horizons in Potato
Product Development

Process

How Grading Ensures
Only Optimum Potatoes
Reach Processing Plants

Product

Dauphinoise,
Parmentier
and the Rest

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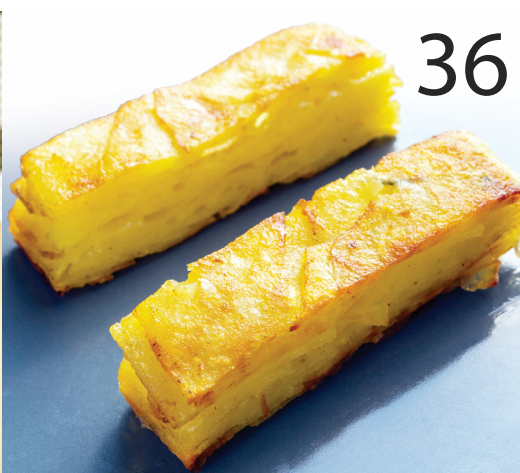
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2024 Is Here. All Aboard!

Tudor Vintiloiu - Editor in chief
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This special January/February edition not only marks the beginning of a new year but also serves as a comprehensive chronicle of the dynamic developments in the world of industrial potato processing. In this issue, we present an extended coverage of the Fruit Logistica trade show in Berlin, a global platform that has consistently fueled innovation and collaboration within the industry. The Fruit Logistica trade show is a vital pillar for the industry, offering a glimpse into the cutting-edge technologies, trends, and partnerships that will shape the trajectory of potato processing in the coming year. Our special coverage aims to capture the vibrant atmosphere of this international gathering, providing insights into the latest advancements, breakthroughs, and market dynamics that industry leaders are navigating. This edition features two exclusive interviews with industry professionals that share their perspectives on

It is our hope that the articles within these pages inspire you, challenge your perspectives, and spark new ideas that will propel the industry forward.

the challenges and opportunities in the potato processing landscape. Jon Heylen of Agristo, and Wouter Devlies from De Aardappelhoeve, explore the innovative strategies and sustainable practices that drive success in today's competitive market. Beyond these insightful interviews, our pages feature articles that aim to empower our readers with the information they need to make informed decisions and drive operational excellence. From in-

depth discussions on salt reduction strategies to an exploration of available cutting and grading technologies, this issue serves as a comprehensive knowledge hub. A spotlight on handling raw product is a reminder that the journey from field to fork has never been more relevant. As the demand for transparency and sustainability grows, understanding the intricacies of raw product handling becomes paramount. It is our hope that the articles within these pages inspire you, challenge your perspectives, and spark new ideas that will propel the industry forward. ●

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Key Technology Appoints New Vice President and General Manager

Harry van de Wiel has been promoted to Vice President and General Manager – NL at Key Technology. Van de Wiel, who is based in the Netherlands (NL), is in charge of developing and leading strategies to bring Key’s high-performance optical sorting, conveying, and other process automation systems, as well as world-class service, to food processors in Europe, the Middle East, and Africa (EMEA), as well as

China, India, and Southeast Asia. “Food processors and packers across these regions are facing a huge challenge – extreme weather is impacting the quality of field crops, increasing the prevalence of defects found in raw products. Now, processors and packers must work harder and smarter to adequately prepare their product for consumers. Our advanced sorters, graders, and other equipment are invaluable tools for managing product



quality, and great leadership at Key in EMEA and Asia helps fuel customer success. Harry is a strategic thinker with a big-picture perspective. He sees opportunities and creates a clear path forward. Add his strong professional background and technical knowledge, and Harry is the ideal person to lead Key in these important regions,” Jack Lee, Duravant Group President – Food Sorting and Handling Solutions, mentioned.

Altho Brets Announced an Investment in a New Potato Chips Factory

The French potato chip manufacturer Altho Brets recently revealed that it planned to begin building on the new production facility in the second half of 2024 and open by the end of 2025. According to company information, the investment will enable the company to meet the rising demand for potato chips in France through boosting its production capacity by 15,000 tonnes. Building the plant, which will be close to its current production in Pontivy Communauté in Brittany, would cost “nearly EUR100m” for Altho Brets, which is expanding its operations internationally under the Bret’s brand or with private labels. Production and logistics will be automated at the new facility. “This ambitious project of nearly EUR100m, in line with the values of our family group, will create more than 40 jobs by 2030, anchor Altho Brets in its territory in the long term and, above all, support our supermarket and catering customers in the growth of the French crisp market,” Laurent Cavard, Chairman and CEO of Altho, mentioned, cited by API.



New Reyco Systems Production and Maintenance Plant in Washington

The opening of Reyco Systems’ new production and maintenance plant in Eltopia, Washington, was recently announced. With the



help of this tactical move, Reyco hopes to improve customer relations by increasing face-to-face communication and speeding up repair turnaround times. “[...] Our goal with this expansion is to strategically position this Reyco talent closer to our customers in Eltopia, leveraging the great experience and skills inherent in the Columbia Basin. This move enables us to offer not only additional face-to-face engagement but also significantly shorter repair times, enhancing the overall service experience for our valued customers,” Clay Cooper, President of Reyco Systems, declared. Over 1,400 square meters make up the recently opened Reyco facility in Eltopia, which is furnished with equipment for welding, general shop tooling, fabrication, parts inventory, pump repairs, and office meetings. Situated on two hectares, the facility provides adequate area for future expansion plans, demonstrating Reyco Systems’ dedication to quality and long-term growth.

Grupo Apex has Acquired Patatas Lahera



The former Patatas Lahera plant in Alesón, in the La Rioja area of Spain, has been acquired by Grupo Apex, a manufacturer of Spanish snacks. After being closed since 2021, the plant will return in

December with the intention of producing French fries. Two industrial fryers, two packaging machines, and a continuous frying line will all be present in the new building. Grupo Apex intends to increase the number of lines by making more investments in 2024. Grupo Apex predicted in a statement that the change will result in “more than 50 direct jobs.” The company, which has ten sites in Spain, directly employs more than 550 staff. In Grupo Apex’s 2023 financial year, which ends in May, the company generated a turnover of EUR135m (USD147.5m). The purchase of this new factory aligns with Grupo Apex’s growth strategy, with which it continues to expand its industrial establishments across Spain, incorporating new capacities in the company’s production of chips and savory snacks. Grupo Apex’s portfolio includes brands such as Aspitos and Mikso.



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Calbee UK Buys Fabcon Pellet Frying Equipment

Modern frying equipment, including an indirect heating system designed, manufactured, and installed by Fabcon Food Systems has been implemented by Calbee in its Deeside facility as a result of a recent investment. The company's new line can make fried snacks from pellets or extruded goods. The fried goods are then combined with an already-existing distribution and seasoning system, which has been expanded to

include more stations. Additionally, platform extensions have been made to make room for the new electromagnetic vibratory conveyors and horizontal motion conveyors created by Fabcon. Calbee and Fabcon Food Systems have a long-standing collaboration that has allowed both businesses to collaborate closely on Calbee's growth ambitions. These plans included modifications to the Seabrooks Crisps Bradford plant and, more recently, the Calbee site in Deeside.



"Fabcon Food Systems is a long-standing, valued partner. Their collaborative approach, providing turnkey solutions in consultation with onsite teams, ensures optimal outcomes. Fabcon remains the Group's go-to supplier and we look forward to working with them in our future expansion projects," Daniel Woodwards, Managing Director of Calbee UK commented.

Vanmark Machine Parts Now Readily Available to EU Customers

Recently, Vanmark, an industrial potato and produce processing equipment manufacturer and part of Grote Company,

announced that parts for its machines will be stocked at Grote's facility in The Netherlands to better serve European Union (EU) customers.

"Now, Vanmark customers located in mainland Europe will be able to get parts much more quickly and without paying tariffs. This will be extremely beneficial to plants we work with within the EU and is yet another way we're trying to provide customers worldwide with the best cradle-to-grave experience," Mike Barber, sales manager, Vanmark, mentioned.

Parts are available for some of Vanmark's most widely used machines, including abrasive Peeler/Scrubber/Washers, which need replacement parts such as brushes, rolls, and bearings, and hydrocutters, which need new blades. These machines are designed for customers that manufacture products like french fries, potato chips, and handle produce processing for vegetables.



Shearer's Foods to Be Acquired by Clayton Dubilier & Rice

The American snack company Shearer's Foods will be acquired by local investors Clayton Dubilier & Rice (CD&R). For an undisclosed amount, CD&R has consented to purchase Shearer's from the Ontario Teachers' Pension Plan (OTPP) fund.

"We have deep admiration and respect for Shearer's, a leading business that shares our core values in a sector and operating model we know and understand well," John Compton, CD&R operating partner and a former CEO of PepsiCo North America, said.

CD&R partner JL Zrebiec added that his company's goal is to support the team in further scaling operations and capturing the many opportunities ahead to better serve Shearer's customers. As well as private-label snacks and cookies, Shearer's Foods, founded in the early 1900s, co-manufactures chips, tortillas, popcorn, and pork rinds. It also produces organic, gluten-free, and non-GMO kosher salty snacks, including kettle-cooked potato chips, cheese curls, and extruded snacks. The company has 17 manufacturing facilities across the US and Canada. Having initially invested in Shearer's in 2012, OTPP acquired an additional stake in 2015 from private equity firm Wind Point Partners to give the pension fund a majority ownership.



Agrico Passes the EUR400m Mark in Sales and Names New Chairman



A recent announcement made at the December 14, 2023 company's annual central members' meeting states that Agrico passed the EUR400m mark in sales, with EUR233m paid to the members.

During the meeting, the members discussed the financial statements for 2022-2023 and anticipated the upcoming harvest year. Sales of seed potatoes increased by almost 16%, or EUR34 million, over the prior year. Sales of table potatoes increased by almost +50% or EUR19m. The volume of seed potatoes increased by 4% and the volume of table potatoes increased by 6%, indicating that the increase is mostly the result of higher costs. As expected, the subsidiaries performed admirably, company representatives said. Higher sales at a few of our overseas businesses are responsible for the remaining EUR14m rise in turnover. At the event, Adrie Vermeulen resigned from his position as Agrico chairman. This marked the conclusion of Vermeulen's 12-year tenure of service as an Agrico board member. He has carried out these responsibilities as the cooperative's chairman for the past seven years. At the members' council meeting, Johan Barendregt was named chairman of the Agrico board and supervisory board.

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How Grading Ensures Only Optimum Potatoes Reach Processing Plants

The process of grading freshly harvested potatoes stands as a critical juncture, influencing the quality and efficiency of subsequent processing stages. As the demand for high-quality potato products continues to surge, farmers, growers, and industrial processors are increasingly turning their attention to advanced grading solutions to make sure only the right shape and size potato gets processed.

By Tudor Vintiloiu

The grading process serves as the initial checkpoint, separating potatoes based on size, shape, and quality, ensuring that only the finest produce advances to the industrial processing stage. One of the key characteristics defining the modern grading solutions is their ability to streamline operations. Traditional grading methods were often time-consuming and labor-intensive, posing challenges for large-scale potato processing facilities. Today, innovative grading technologies leverage automation, utilizing cameras and sensors to swiftly and accurately categorize potatoes based on predefined criteria.

KEEPING UP WITH TECHNOLOGY

Key Technology recently introduced new features for their Rotary Sizing and Grading Systems. This versatile portfolio, which includes the Precision Size Grader (PSG), Rotary Size Grader (RSG) and Sliver Sizer Remover (SSR), enables vegetable, potato and fruit processors and packers to mechanically size and grade product while removing small pieces, debris and other targeted material. Available with newly optimized rollers, Lubed for Life bearings and drive covers, Key's Rotary Sizing and Grading Systems improve product quality control, increase yield, maximize sanitation and reduce maintenance.

"Our Rotary Sizing and Grading Systems have set the industry standard for decades. As the market leader, we're always developing new ways to improve our popular, field-proven equipment to optimize it for the modern age," said Jack Lee, Duravant Group President - Food Sorting and Handling Solutions. "By advancing our technology, we offer our customers the very best solutions for solving current as well as future production challenges." New grooved rollers on the SSR facilitate the same high throughput as traditional SSRs but with more precise product grading. PSGs retrofitted with the new grooved rollers achieve the same high





precision as traditional PSGs but with higher product separation efficiency. Ideal for wet potato strips and other cuts, with more applications in development, the grooved rollers are available as an option on new SSRs and as a field upgrade for installed SSRs and PSGs.

Key's Rotary Sizing and Grading Systems are available in widths from 61 to 201 cm (2 to 6.6 ft) and can achieve capacities less than 1.8 metric tons (4,000 lbs) to more than 20.4 metric tons (45,000 lbs) per hour. All systems are 100 percent metric. Featuring on-the-fly tuning, no pinch points, self-cleaning stainless-steel rollers and sealed stainless-steel bearings, these systems help customers enhance product quality and increase yield while reducing maintenance and improving sanitation.

ESSENTIAL FEATURES

Precision is essential to the grading process, and contemporary solutions excel in delivering consistent and reliable results. High-resolution cameras capture detailed images of each potato, allowing for meticulous evaluation of size, shape, and defects. This level of accuracy not only ensures that only the right potatoes progress to industrial processing but also minimizes waste, optimizing overall efficiency for farmers and processors alike. Flexibility is another key characteristic defining cutting-edge grading solutions. Recognizing the diverse

needs of the potato industry, these technologies offer customizable settings to accommodate variations in potato characteristics and market requirements. This adaptability ensures that grading solutions can be fine-tuned to align with the specific demands of different crops, empowering farmers to meet the ever-changing preferences of consumers. Moreover, the integration of data analytics has emerged as a game-changer in the grading landscape. Modern grading solutions are equipped with sophisticated software that not only facilitates real-time monitoring but also generates valuable insights. Processors can leverage this data to analyze trends, identify areas for improvement, and enhance overall operational efficiency. The ability to make informed decisions based on comprehensive data sets positions grading solutions as indispensable tools for today's potato industry.

DUAL FUNCTIONALITY AND PEAK EFFICIENCY

The **TOMRA 3A** is an optical sorter with dual functionality. It removes foreign materials from the crop before storage and classifies the potatoes by size after storage. It can be used as a standalone solution or integrated into mobile transloaders or mechanical crop cleaners.

Now that AI is embedded in the TOMRA 3A's image-processing, it evaluates pixels in a more sophisticated way when assessing

Photo: Key Technology



Photo: TOMRA



objects passing down the line, seeing how pixels are shaped against each other and looking at a cluster or an object as a whole before classifying and sorting. This makes it even better at distinguishing between potatoes and dirt clods or lumps, which other machines incorrectly see as potatoes. The TOMRA 3A's effectiveness is matched by speed: it detects and ejects up to 90% or more of all foreign materials – such as rocks, stones, soil clods, wood, bone, plastic, glass, metal, and rubber – while handling up to 100 tons of potatoes per hour. By scanning objects with near-infrared, the TOMRA 3A also removes green potatoes.

Introducing AI has also improved TOMRA 3A's ability to classify the product. Extensive validation tests have shown that, depending on flow, it can measure potatoes by width and length with 95.3% overall efficiency, output, and connectivity.

Marco Colombo, TOMRA's Global Category Director for Potatoes, said: "This machine was already best-in-class, and now it's even better. It delivers cleaner potatoes and higher yields while reducing dependence on manual labor at times of labor scarcity. It's also easy to use, clean, and maintain."

GRADING "ON-THE-GO"

Another grading solution that delivers on flexibility is what's known as a mobile grader. One example is the machine introduced by **Haith Group** in December 1963, which has become one of the company's best-selling machines, with more than 300 produced in the last six decades. The technology found in today's graders is significantly more advanced than that utilized in the 1960s. However, the focus on customization and meeting the customers' bespoke needs remains to this day.

Today's grader features a heavy-duty hopper, auto crop flow control, a choice of cleaning systems, touchscreen HMI control and shaft-mounted drives. Haith also provides a range of optional features, including soil extractors, optical sorter integration and stainless or mild steel construction. The latest mobile grader to leave



Photo: Haith

Haith's South Yorkshire factory was bought by BH Savidge & Son, which opted for Haith's flagship model - the PRO SF 2400s.

Capable of handling over 100 tonnes per hour either in a yard or in a field, the PRO SF 2400 features all of the standard options plus a galvanized gantry with anti-slip treatment for operator safety and gentle crop handling. Despite being 14m long, Haith's unique road kit and rear steering axle ensure the machine handles like a standard farm trailer. Ben Savidge is delighted with the grader's performance so far. "We worked with Rob Highfield in early 2023 to design the grader, having seen a similar one in Norfolk. We had previously had a high-capacity grader made by another firm, which we could not move and required very high power to run.

"We've known for a few years that we needed a mobile grader. This year, we needed to grade 2,000 tonnes more than last year and knew we would be working at our main base and another farm. As we wanted to invest in one machine to work at both sites and futureproof ourselves, the Haith mobile grader made perfect sense. By working with Haith, we have been able to build something exactly to our requirements. We are also confident in the quality of Haith's

work as we operate their bagging trailers. Everything is over-engineered, and we hope that this machine will last us for years to come; so far, it is doing the job of two machines on many other farms." Haith's mobile machines have always been popular with growers and packers looking for both performance and flexibility, but the company has been exceptionally pleased with sales and enquiries in the last four years. "I think there's definitely been a resurgence in interest in mobile machinery, whether that be grading or sorting. Mechanization and automation are increasingly important to growers and packers of all sizes, and the ability to move their machinery around is very popular now. We have a very healthy order book at the moment," says Duane Hill, Haith's managing director.

DRAWING THE LINE

When evaluating grading solutions, it's crucial to meticulously analyze the specific needs of your operation and carefully consider all machine features. There is no one-size-fits-all 'best' solution; rather, the focus should be on identifying optimum solutions that effectively cater to the unique requirements of your processing facility and align with your overall objectives. •

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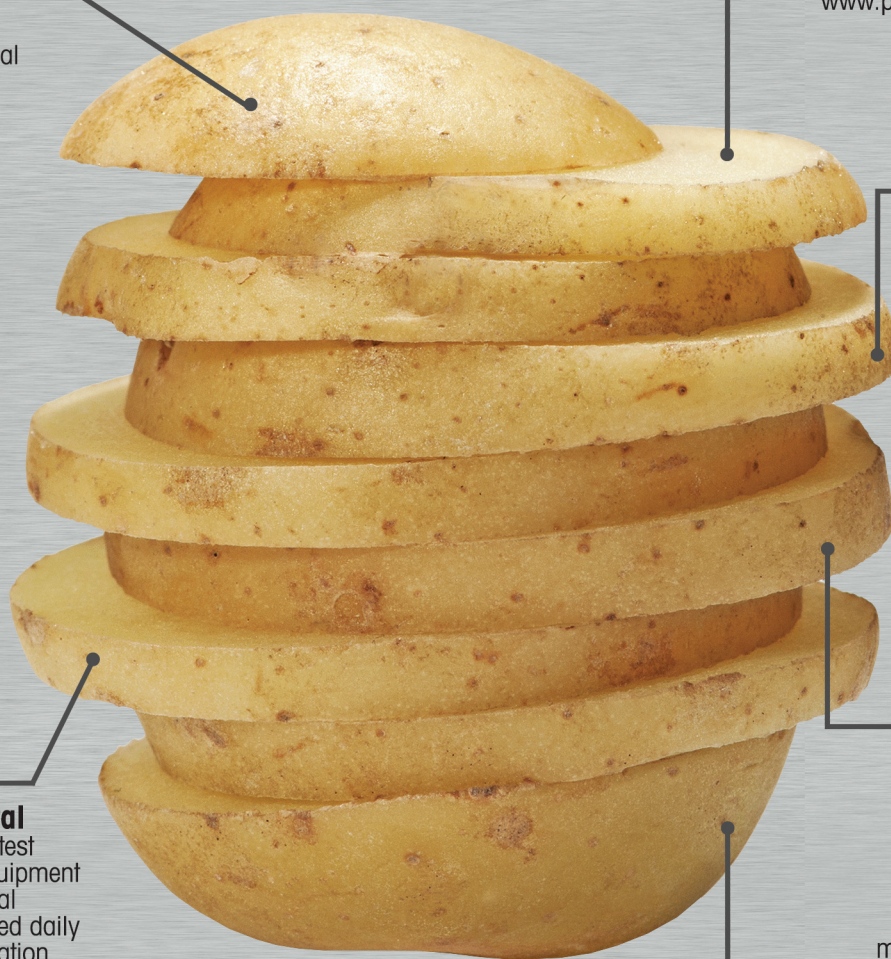
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Hydro Cutting: Meeting Industry Demands for Higher Output



Hydro cutters are machines which “shoot” tubers through knife blocks using water pressure. These hydro cutters have the ability to cut large amounts of tubers into perfectly long strips. The advantages compared to mechanical cutting are that hydro cutters can handle higher volumes of raw material and guarantee the desired longest strips. Switching between different strip and cut sizes is easy and can be done quickly. However, the strips always need to be cut lengthwise and a hydro cutter is therefore less flexible than a mechanical cutter.

By Tudor Vintiloiu

A mechanical cutter uses mechanical force to cut the potato in slices, strips, crinkle strips, dices or other shapes. The advantage of mechanical cutting is the flexibility in cutting different shapes, however, the capacities are in general lower compared to hydro cutting and the overall strip size cannot be guaranteed as it can be done using a hydro cutter.

Many processors have multiple cutting systems installed working simultaneously to keep up with production demands. With demands growing, the complete installation is designed to work around the clock to meet these capacities.

THE LONGEST STRIPS, THE HIGHEST OUTPUT

The heart of the hydro cutter is the knife block holder. This knife block holder consists of an orienting tube called a Venturi with a profiled polyurethane lining that inserts the potato lengthways into the knife block. Thanks to this precisely adjusted tube the tubers are lined up in just the way the longest strips can be cut.

The quality of the end product is for a large part determined by the way the raw product is cut. To ensure the best possible cut, a solid pre-sorting installation will make the difference to get the longest fries and the least amount of product waste.

Processors gain a lot by making sure that especially the smaller potatoes are sorted correctly. By using multiple hydro cutting systems with different sizes of inlets, the potatoes are transported to the matching size hydro cutter for the longest French fries.

AN EVOLVING INDUSTRY

Equipment designs are changing in response to processor demands and regulatory updates, including improvements in flexibility, durability, sanitary design, safety, user-friendly changeouts, cleaning and maintenance, as well as water and waste reduction. **Vanmark** utilizes Computational Fluid

Dynamics (CFD) software to predict water flow variables – from simple single-phase liquid (water in pipe) to multiphase and gas-solid (product in water) – empowering them to design more efficient and better performing equipment.

Vanmark's experts point out that cutting is most often knife-based, with the delivery to the knife surfaces being the biggest variable. The delivery system may range from a high-speed water flume delivering potatoes through a knife array as is often seen in French Fry processing, to rotating drum style delivery often seen in potato chip slicing, to multiple varieties of shredders and specialty cut units.

"In many applications, raw potatoes are first washed and peeled to remove foreign debris, such as rocks, sticks and vines, and skin. [...]

Product is then transferred to slicers for chips or cutters for French fries. Cutting is accomplished through mechanical or knife cutters.

Vanmark's high-speed hydrocutters pump product in water through a knife array into the desired shape. Product is then transferred downstream for further processing and packaging," Vanmark's representatives said.

"Vanmark has been a leader in hydrocutting equipment for decades. The largest French fry producers worldwide use hydrocutting as the standard because it offers high capacity and durable operation with minimal maintenance," they added. They reveal that in the last years, the company has focused on bringing the quality and durability of their cutting equipment, which has historically provided to large processors, to smaller ones, while being economical. This new equipment addresses lower processing rates, footprint constraints and utility consumption while being dependable and versatile.

KNIFEGUARD® IDENTIFIES KNIFE QUALITY

Monitoring the cutting time by means of an RFID tag system (radio frequency identification) is one of the more recent innovations of **Kiremko** in the field of hydro cutting. The processing lines are well equipped for massive quantities of

output and the hydro cutting systems support throughput in a number of ways. The knife blocks are equipped with RFID tags that measure operational hours of the knives and signal the operator when the cutting line is blocked. This system is called the KnifeGuard® and is one of the units that Kiremko has developed to guard and control the processing line.

The KnifeGuard® system provides lifespan measurements for the knife block and additionally shows when knives inside the block need sharpening and the number of times the knives have been sharpened. The RFID tags also checks if the orienting venturi tube matches the knife block and if it matches the desired program. Due to the cutting size recognition, the use of knife blocks with wrong cutting sizes is no longer possible and the chance of a batch of rejected fries due to cutting errors is eliminated. The KnifeGuard® provides processors with useful data that helps them improve their products and yield.

Kiremko supplies a suitable venturi tube for each product size. In order to obtain desirable cutting results, processors can choose from a number of different types of knife blocks with a wide choice of cutting dimensions. Special cutting blocks are continuously developed based on the wishes of customers. These blocks are modularly constructed out of different colours of PVC that distinguish the different throughput diameters.

A TYPICAL SETUP

Potato cutting for human consumption requires great accuracy, and is an important step in obtaining a perfect final product. To facilitate this, **Tummers Food Processing Solutions** assembles a high-quality cutting process based on customer requirements, with a series of innovative cutting technologies.

Step 1: Sorting

Because not all potatoes are the same size, they first enter a continuous sorter on arrival, regardless of their origin. This machine sorts the potatoes based on

their diameter and size. The Tummers Fresh Produce Pump then transports the products to the correct cutting head for each diameter. The number of cutting blocks and the blade dimensions selected also depend on the tonnage and the various diameters of the initial product.

Step 2: Cutting

The Fresh Produce Pump transports the sorted potatoes to the cutting block at the correct speed and without damage. Specially-developed technologies also ensure that individual potatoes are separated and reach the correct speed in steps, to guarantee that the cutting process operates optimally. The patented Tummers Fin aligner then ensures that the potatoes are perfectly centred before entering the cutting block, which avoids damaging them and ensures that the final product always has the optimal length, regardless of the dimensions or shape. The perfect alignment and the Tummers cutting block reduce the chance of "feathering", which results in an optimal product yield and minimal oil absorption during cooking.

Step 3: Dewatering & sliver sorting

The product, which is cut at high speed, is slowed down on a dewatering belt after the cutting process to prevent damage. A sorting machine subsequently separates the "slivers" that arise during the cutting process from the product with the desired size. Because the slivers can be reused in, for example, a flake or specialty line, none of your product is lost, which avoids wasting food.

Step 4: Water recycling

During the process, the pumping water that circulates within the cutting line is cleaned in a balance tank. Starch sinks to the bottom of the tank, and is removed for other applications, while the purified water is continuously fed back for reuse within the closed system. This water-saving and low-maintenance solution provides you with a controlled water level, with pumping water at a constant quality. •

Agristo's Jon Heylen Explores New Horizons in Potato Product Development

In this first edition of 2024, our focus turns to Agristo, a prominent player in the industry, as we engage in a candid conversation with Jon Heylen, the Commercial Director at Agristo in Belgium. This discussion navigates through Agristo's innovative approach to product development, their sustainability initiatives, the intricate relationships with farmers, and their resilient strategies in the face of market challenges. Join us as Jon Heylen provides a comprehensive overview of Agristo's journey, shedding light on the nuanced landscape of potato processing and the company's future outlook.

By Tudor Vintiloiu

Let's start by looking at your approach to new product development. The newly-launched Sidewinder (pictured) is a remarkable addition to the market. Can you provide more insight into how Agristo navigates the necessary steps to bring such groundbreaking products to fruition?
Certainly. The Sidewinder, as you mentioned, is a product we've introduced to the European market.



** Please note that this interview has been edited for clarity and conciseness.*

Together we cut your product to perfection

Our process involves a thorough assessment of where the product fits and how it aligns with our customers' goals. For instance, if a retailer is eager for innovation, we discuss the possibility of an exclusive launch with them. However, our core belief is not in exclusivity but in offering solutions that complement our customers' strategies and contribute to their overall success.

Moving on to sustainability, it's a buzzword in today's world. How does Agristo approach sustainability, specifically in terms of waste reduction and environmental consciousness?

Sustainability is ingrained in our operations. To minimize waste, we've implemented various measures. Starch separated during the potato cutting process, for example, doesn't burden our water purification system. Instead, we utilize it to generate biogas, which, in turn, is used to heat our fryers. Even potato peels find purpose as livestock feed, and plastics are recycled. The net result is that our waste is less than a tenth of a percent.

Shifting our focus back to your relationship with farmers, it's clear that Agristo sees them as partners. Can you elaborate on how your company supports farmers during challenging times, especially considering external factors like geopolitical events and regulatory changes?

Our relationship with farmers is at the core of our business model. While we don't provide coverage for extreme risks, we believe in maintaining open lines of communication to mitigate challenges. We support farmers by ensuring a stable supply chain through seed supply, planting advice, and agronomic assistance. It's crucial for us to foster honest and collaborative relationships, acknowledging the challenges farmers face and working together to navigate uncertainties successfully.

Looking at the broader business landscape, the past year has seen significant market volatility and rising energy costs. How has Agristo weathered these challenges, and what is the outlook for the upcoming years?

The last few years have indeed posed challenges, particularly due to the unprecedented impacts of the COVID-19 pandemic. Managing uncertainties arising from market dynamics and energy costs has been a continuous effort. In 2023, we observed certain areas normalizing, but challenges persist. The surge in potato prices has affected manufacturers differently based on their growth or shrinkage. As we look ahead, navigating uncertainties and adapting to market dynamics remain key priorities for Agristo.

Looking beyond the horizon to 2024, what are your anticipations for the market, and how does Agristo plan to position itself?

The players in the market today are likely to maintain their positions, especially in Europe and the U.S. The challenge lies in the potato landscape, where




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uncertainties such as weather volatility impact harvesting and overall supply. Despite these challenges, our priority remains growth. We aspire to double market growth and are investing in efficiency and research and development to stay ahead of the competition. The ongoing expansion of our capacity is a testament to our commitment to meeting market demands.

Now, considering the broader policy and regulatory environment, what would you like to see happen in 2024 that could positively impact your stakeholders and the industry?

From a policy perspective, a reasonable and food-centric approach is essential. We hope to see policies that prioritize providing affordable food while being environmentally conscious. While supporting initiatives like the Green

Deal, we also anticipate positive impacts on the entire value chain. However, balancing regulations to account for the unique aspects of the potato industry is crucial. It's not a one-size-fits-all scenario, and we hope policymakers consider the intricacies of our industry.

Before we conclude, is there anything else you'd like to share or highlight about the company's journey?

I'd like to emphasize that our success is intricately tied to our

people. As we approach the milestone of 900,000 tons, we recognize the complexity that comes with growth. Managing multiple production sites, ensuring the availability of skilled individuals, and the challenges of training them to be agile yet efficient are all critical aspects. Our people are our biggest asset, and while we are proud of our achievements, we acknowledge the ongoing need for agility and growth to navigate the evolving industry landscape successfully. •





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Handling Large Potato Quantities From the Storage to the Packaging Line

Most people consider potatoes to be a heavy, perishable good that requires expensive transportation. Moving potatoes from the storage line to the packaging line requires handling large quantities of goods each year.

By **Ionel Vaduva**

Improved handling techniques are of interest to operators of packing houses and potato storage facilities because they can help them reduce costs by making efficient use of labor, facilities, and equipment.

“Some of the methods available for handling table stock potatoes from the storage to the packing line are conveying, powered bulk scooping (with powered bulk scoopers/bucket loaders), conveyor scooping/in-trench conveying, and potato fluming,”

USDA’s ‘Handling potatoes from storage to packing line’ Marketing Research Report authors wrote.

Conveying Potatoes Into Storage -

The initial step in handling potatoes in storage is operating a bin loader to move potatoes from bulk trucks to the storage pile.

“A bin loader that will allow for efficient operation and reduce bruises should have an easily adjustable hopper height to keep the drop of potatoes from the truck to a

minimum, a hopper with sufficient capacity to prevent spilling, a short draper chain conveyor between the hopper and the boom conveyor to allow dirt to sift through,” the conveying experts from Agriculture Canada described. In addition, it should have a reel for storing extra cords, enough boom conveyor length (roughly twice the height of the pile), a wide swing range for the boom conveyor, and provisions for connecting convenient electrical outlets for the operator. It should also



never operate at an inclined angle higher than 45 degrees.

“Careful operation of the bin loader can prevent excessive damage and give higher returns to the grower. To reduce damage when using a bin loader, the storage owner should assign one man to operate the bin loader and supervise the unloading operation, should use a progressive bin filling procedure to prevent rolling, use straw-filled bags or baffle boards to prevent potatoes from rolling to the floor under the bin loader. This will greatly reduce floor crushing and speed the moving operation,” the document also reveals. Lastly, but just as importantly, the owner of the storage should make sure that all chain conveyors are rubberized, keep all drops to a maximum of eight inches, pad any metal sides or sharp edges, and have a sorter work next to the hopper to remove any stones or sick potatoes harvested from the field.

Powered Bulk Scooping - To remove potatoes from bins and transfer them to the flow-regulating hopper, this system needs a powered bulk scoop. It also needs a uniform-flow hopper to receive potatoes at this irregular delivery rate and feed them uniformly to the packing line. Finally, it needs a draper-chain elevator to lift potatoes from the hopper discharge to the packing line.

“The powered bulk scoop picks up potatoes from the bins, transfers the loads to the receiving end of the packing line, and deposits them in a hopper. The scoop is loaded by directing it into the potato pile on the floor and raising the bucket up and away from the pile. A typical hopper unit should be large enough to hold several scoop-fulls of potatoes and to provide a uniform flow to the packing line,” the North American and Canadian potato experts wrote in their manual.

Bucket Loader - The most widely used equipment for emptying storage facilities is a bucket loader. Forklifts, industrial loaders, electric loaders, and specially designed loaders are among the numerous loader types. The bucket should be made wider rather than deeper to

enhance capacity. Crushing the potatoes on the floor will cause less harm if there are skirts or shields to keep them from rolling under the machine. When scooping potatoes, it is best to avoid forcing the bucket into a firm mound and to only pick up the loose potatoes at the bottom of the pile.

Potato Fluming – Potatoes are moved from one location to another by use of water passing through a flume or sluice that separates the two locations. The design of the flume system must allow for the appropriate amounts of water and potatoes to be added at the receiving end, removed from the flume at the other end, and disposed of.

The typical components of the system are lateral flumes that run underneath the potato piles in the bins, a main flume into which the laterals discharge, a sump that separates the potatoes from the water, an elevator or conveyor that feeds the potatoes into the packing line uniformly, a centrifugal pump that circulates the water, and sections of pipe and hose that allow the water to flow from the pump to the bins for sluicing. The pump is also utilized to routinely remove the dirt and debris that was left in the sump after fluming, using a straightforward set of valves.

“Using the rubber coil hose section of the system, a worker directs the flow of water at the bulk potato pile to flush the tubers into the open flume where flowing water carries them to the sump-elevator section of the system. As the work progresses, the worker removes the flume covers near the pile to expose the flume for receiving potatoes,” USDA’s authors also explained. Each unit of the system varies in size and capacity according to the rate of delivery desired.

The flume’s slope and section must be designed to prevent potatoes from being harmed by high velocity or excessive soil settling and clogging. The flume’s sides and bottom ought to be as smooth as feasible. Sufficient potato movement and minimal water flow require homogeneity in the form and slope of the flume and floor. when the floor has a 1:180 bottom slope and a fairly constant slope toward the mains.

Conveyor Scooping - This is made up of a metal scoop that tapers to meet the back of an inclined belt conveyor. An electric motor powers the undercarriage wheels, enabling the shovel to push the potatoes onto the first conveyor and the scoop beneath the pile. A telescopic conveyor subsequently transports the potatoes to a bulk truck or the grading line. The machine can work in tight spaces and around posts because it can pivot between the scoop and the telescopic conveyor, ensuring that potatoes are always delivered to the same location. One individual, seated on the machine, performs the entire operation.

In-Trench Conveying - The basic unit in this system is a narrow, cleated-belt conveyor with flexible sides. This unit is placed in the air ducts that pass beneath the potato piles in the bins. The horizontal part of the unit fits into the duct to receive the tubers and the inclined section raises them two or three feet to the level of the hopper on the next item of equipment, usually the hopper of a movable grading table.

“Boards over the duct are removed individually as the unloading progresses, allowing the potatoes to flow from the pile onto the horizontal belt section. Most of the potatoes in the bin will flow to the conveyor, or they can be easily moved to it. Those remaining, however, must be hand-forked to it. Progress is in approximately 6-foot intervals since the unit must be moved forward after all the potatoes immediately above and to the sides of the in-trench section are removed,” the ‘Handling potatoes from storage to packing line’ manual shows.

Potato grading - It is important to choose this kind of equipment carefully to make sure that it has enough capacity and that every component will yield the highest possible output. The components required for handling and grading are contingent upon the nature and quantity of the output. A supply system of some kind, machinery for sizing, washing, or other cleaning equipment, tables for grading or sorting, packing equipment, and, lastly, transporting and handling



equipment for packaged table stock and other potato grades make up the majority of table potato systems. Potatoes for processing and seeding often need to be transported, sized, and graded, but they don't need complex cleaning and packaging machinery.

Hopper - For all unloading techniques other than fluming, a hopper serving as a reservoir to provide a steady flow to the grading line should be utilized. The hopper's wide-open top makes it simple to fill with a bucket loader. The grading line is fed at the appropriate rate by a tiny conveyor at the bottom that has a variable speed drive. It is recommended to cushion the hopper's interior and rubberize the chain.

THE DOUBLE L SCOOP STORAGE-EMPTYING MACHINE

The Double L scoop storage-emptying machine is a type of conveyor scooper with incorporated powered bulk scooping machinery features. A key-element of this scoop's storage-emptying machine's is that the left and right wheels on the snout are controlled by independent hydrostatic drive systems. "That's a technical way of saying that the operator can control each wheel independently, giving the scoop incredible maneuverability," the engineers mentioned. Its remarkable turning radius comes in handy in narrow storages, they added. "Every time the operator re-positions the scoop snout, there is a possibility of product damage when the snout comes in contact with the pile. Ideally, operators should need to move the snout as little as possible. With a longer snout, the operator drives

deeper into the product pile and can unload the cellar at full capacity for minutes without repositioning the machine," the Double L's experts explained. They added that few cellar floors are completely level. There are even fewer scoops that can adjust to the inconsistencies in the relief of the storage floor. The snout on the Double L Scoop can pitch up or down to compensate for any dips and bumps in the customer's storage. "Wheel fenders do a great job nudging product out of the path of the drive wheels. As the operator uses Vari-Pitch to pitch the snout up or down, the hydraulic wheel fenders automatically adjust their position to remain level with the ground. The left and right wheels on the snout are controlled by independent hydrostatic drive systems. That's a technical way of saying that the operator can control each wheel independently, giving the scoop incredible maneuverability. Its remarkable turning radius comes in handy in narrow storages. Unloading storage may take hours, so an operator's comfort for that period should be a consideration. The captain's chair has armrests and good back support. Beyond its creature comforts, it also positions machine controls literally at your fingertips," the Double L Scoop engineers explained.

FLUMES ARE IDEAL FOR TRANSFERRING POTATOES OVER LONGER DISTANCES

Vanmark's Flume Systems transfer product in the early stages of processing, while also separating dirt and debris and gently washing the product. "Flumes are ideal for transferring over longer distances, in any

direction or angle, based on your facility's footprint and equipment layout. It is customized to your operation through several available configurations, including open trough and closed models. The closed (pipe) model is available as a siphon or pump system. With its multiple functions, available options, and minimal maintenance – Flume Systems are the perfect, custom-fit product transferring solution for your potato and produce operation," the company's engineers wrote on their website.

Main characteristics of Vanmark's Flume Systems - Transfer product over long, winding distances while separating dirt and debris and gently cleaning product. Tailored to customer's facility and equipment set-up. Customized to the beneficiaries' application and transferring needs through available open trough and closed (pipe) configurations. Siphon or pump product from in-feed to exit. Optional debris removal accessories include rock, dirt, sand traps, and skimming systems for buoyant debris. User-friendly operation, with minimal maintenance. Wyma's Flume Conveyors are a low-maintenance option for transporting produce over long distances and around corners. They provide a very low maintenance, hygienic option for transporting produce over long distances and around corners to one, or many destinations using flow dividers to control produce flow. "Produce may be de-watered before the next process, or in some cases fed directly into the next machine with flume water. Water can be managed in a closed loop with a filter and recycling system or as part of a whole-line water management system," Wyma's experts explained. This particular machinery is suitable for all types of fresh produce. There are four standard sizes available. •



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ProLink Condition Monitoring System in Potato Processing

Proper maintenance of critical machines in potato processing plants is essential for a smooth production process as the output of an entire production line depends on them.

Preventive manual maintenance - such as routine inspections, cleaning or bearing exchange at regular intervals – is performed in many plants, but this approach may turn out costly in numerous ways sooner or later:

- it requires maintenance experts with profound condition monitoring know-how.
- it is not reliable as you will only detect a damage if it is already there. If a problem starts developing right after a scheduled maintenance interval, possibly even due to damage caused by improper dismantling or mounting techniques, you will not become aware of the problem until the next scheduled maintenance interval or until the respective equipment breaks down completely.
- it turns out to be unnecessary use of resources in many cases. Preventive maintenance means that you exchange parts at fixed intervals – no matter if necessary or not, but “just to be safe”. This ties up maintenance personnel for time-consuming dismantling and mounting work and money is spent on spare parts although the

ones in use are still functioning perfectly well and could have been used much longer.

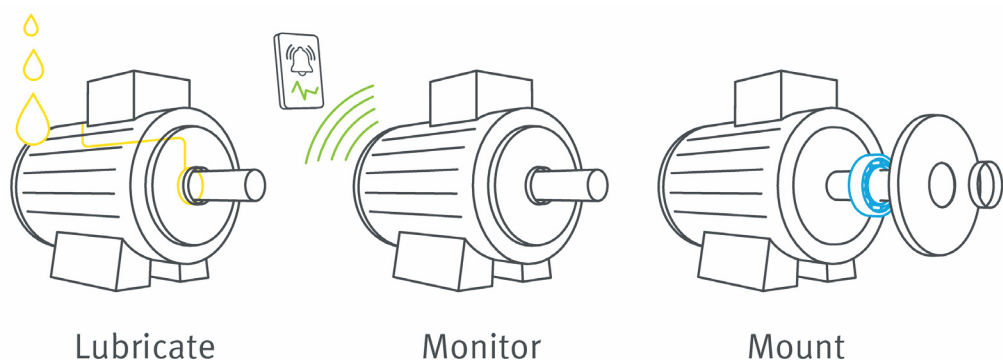
For the above-mentioned reasons, a well-known global potato processor recently decided to change their maintenance strategy from preventive to predictive maintenance and looked for a condition monitoring solution for several of their extruders. In particular, the bearing block was identified as one of the most critical parts, as it has to bear a lot of force during operation. They decided to go with Schaeffler’s ProLink CMS, a multi-channel condition monitoring system (CMS) that monitors the condition of machines and equipment by means of vibration measurement.

How it works: every rotating asset generates vibrations at typical vibration levels. ProLink CMS measures vibration parameters and is designed to observe assets such as bearings, gears or motors – you could say the system knows what’s “normal” machine behaviour. Sensors continuously record the assets’ vibrations and the ProLink CMS informs the user in case of excessive overall vibration

conditions as well as component specific vibrations. The user can keep an eye on the data gathered by the system via the SmartWeb user interface on his PC. No expert knowledge is required, and no complicated analysis needs to be done to understand the trend. In case a change in vibration level should be recorded by the system, e.g. due to misalignment, wear, or bearing failure, ProLink CMS not only notices those changes in vibration level and issues an alarm, but also helps you to identify the probable cause of it thus continue component-related monitoring so you can take appropriate action.

Thanks to its modular setup, ProLink CMS can monitor several machines, like extruders simultaneously, exchanging information via OPC/UA or Profinet. In the future, extruder maintenance at this potato processing plant can be scheduled based on the actual condition of the components that are being monitored, thus reducing money spent on spare parts, reducing the risk of bearing damage occurred during mounting or dismantling, and reducing time spent on unnecessary repairs and thus freeing up maintenance personnel for other tasks. •

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You do not need to be a condition monitoring expert to know how your machines are doing. The ProLink CMS condition monitoring system with free web-based software is there for you. Thanks to pre-configuration, alarm messages are issued automatically and guide you to the possible root cause so you can plan your next steps.



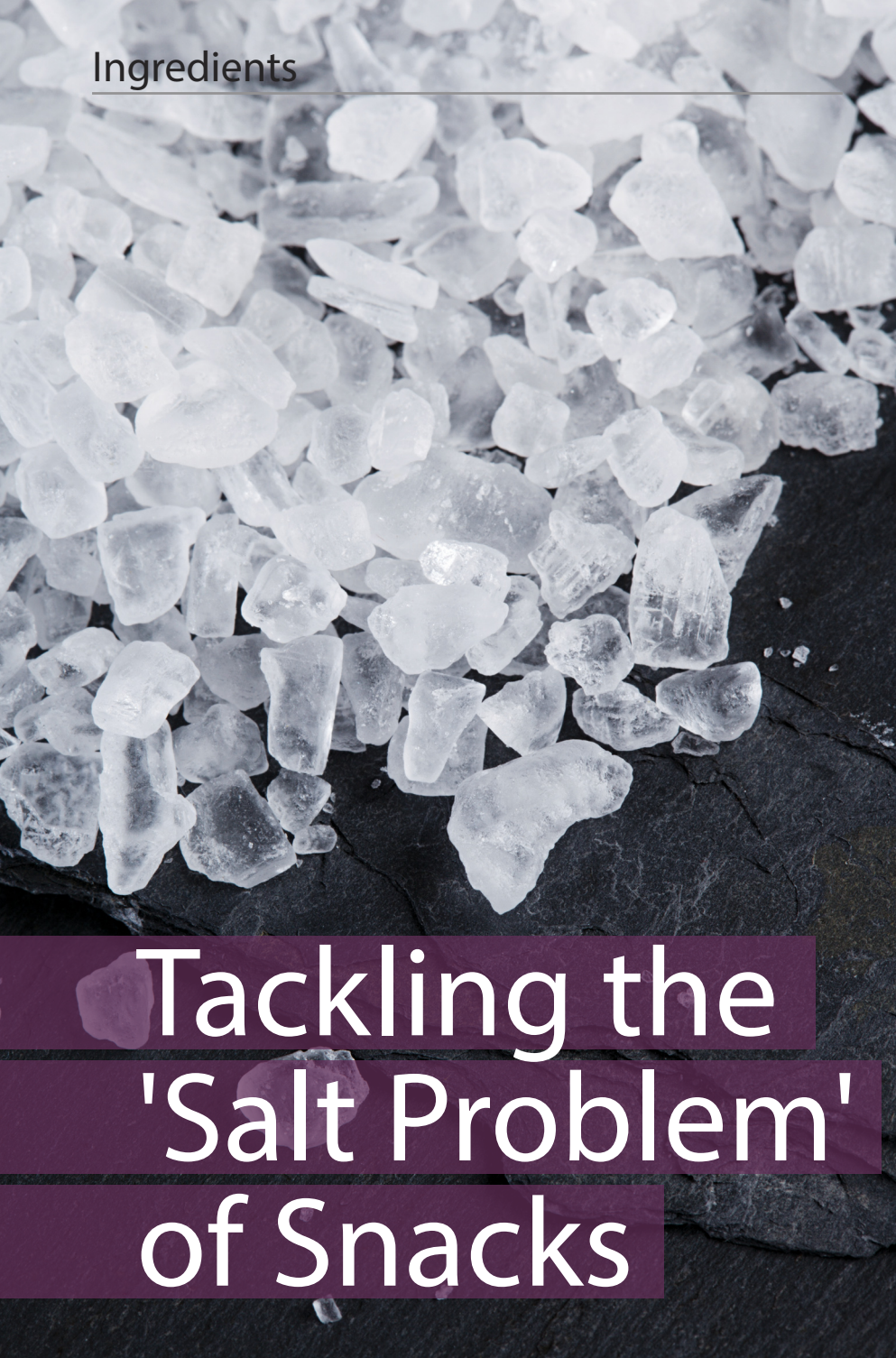
Your benefit: Less unscheduled repairs or unnecessary exchange, and cost saving on materials.

A good choice: The modular ProLink CMS system can monitor up to 16 measuring points each independently from another.



medias.schaeffler.de/en/monitor/prolinkcms

SCHAEFFLER



Tackling the 'Salt Problem' of Snacks

The global average salt intake is estimated to be 10.8 grams per day, more than double the WHO recommendation of less than 5 grams of salt per day (one teaspoon). Eating too much salt makes it the top risk factor for diet and nutrition-related deaths. More evidence is emerging documenting links between high sodium intake and increased risk of a myriad of health conditions.

Nowadays, two major salt reduction strategies are commonly used in the food industry. The first one is direct salt reduction, while the other is changing the structure of salt. However, reducing salt consumption can largely affect the taste of food,

including reduced taste and defects in taste. In addition, salt acts as a preservative by altering the availability of water in foods, impacts the texture of foods by altering the structure of proteins, and provides nutrient elements needed by the body. The changed structure of salts, such as preparing hollow salt particles and redesigning the size of salt particles, requires advanced processing technology.

FASTER RELEASE

A University of Nottingham research, published in the journal *Food & Function*, follows an investigation into how salt is released from chips into the mouth. Though focused on

A global report on sodium intake reduction by the World Health Organization shows that the world is off-track to achieve its global target of reducing sodium intake by 30% by 2025. Sodium, an essential nutrient, increases the risk of heart disease, stroke and premature death when eaten in excess. The main source of sodium is table salt (sodium chloride), but it is also contained in other condiments such as sodium glutamate.

By Tudor Vintiloiu

chips, the research is relevant to salt reduction in all snack foods.

Ian Fisk, a lecturer in the division of food sciences, says: "The 'salt burst' from chips is only released into the mouth 20 seconds after chewing begins. This means that in many cases the chip may have already been swallowed before the majority of the salty taste is detected.

"Our aim is to develop a series of technologies that accelerate the delivery of salt to the tongue by moving the burst from 20 seconds to within the time that you normally chew and swallow. This would mean that less salt would be needed to get the same amount of taste."

One way to achieve this is to create smaller salt crystals. A good example of an innovation in this direction is the micro-sized particles developed by MicroSalt®, which are approximately 100x smaller and taste much saltier than typical salt crystals as well as being free from any substitutes or bitter aftertaste.

This allows consumers to reduce their sodium intake by half, without compromising on flavor. MicroSalt's large surface area compared to its size triggers a physiological response in taste

receptors, where the faster something dissolves on the tongue, the stronger its taste is perceived by the brain. This allows consumers to reduce sodium intake by 50% while still maintaining full flavor. Unlike other solutions, MicroSalt® is not a salt alternative like potassium chloride, which often tastes bitter or metallic, it is a true non-gmo and kosher salt. Microsalt's fast dissolving salt crystals produce an intense sensation of saltiness in the brain. MicroSalt® maintains great flavor while also allowing consumers to use less salt and sodium to get the same level of saltiness. The benefit of the micro-sized crystals is that they dissolve virtually immediately as they touch your tongue, delivering a perceived preakness of saltiness with much less sodium. In comparison, regular table salt dissolves much slower, making consumers ingest salt that is never tasted.

SALT BUBBLES

Tate & Lyle's SODA-LO is another example of a ground breaking, salt reduction ingredient that tastes, labels and functions like salt because it is salt. With SODA-LO, food manufacturers can reduce salt levels by 25% to 50% in various applications without sacrificing taste. Soda-Lo, which is engineered using a patented process that re-crystallizes salt to create free-flowing, microscopic hollow balls just 5-10 microns in size, offers formulators a distinct advantage over other sodium reduction strategies as it can still be listed as 'salt' on food labels. It is a well-known fact that the smaller the crystals, the higher the salt perception. However, simply grinding salt to make the particles smaller does not deliver as the tiny particles quickly lose their free-flowing properties and stick together.

By contrast, Soda-Lo has been engineered by its creator Dr. Stephen Minter in such a way that re-crystallizes salt to create free-flowing, microscopic hollow balls that are a fraction of the size of standard salt (c.200-500 microns), and can deliver an intense, salty hit on the taste buds. The technology turns standard salt crystals into free-flowing crystalline microspheres. These smaller, lower-density crystals efficiently deliver salty taste by maximizing surface area relative to volume. SODA-LO Salt Microspheres make it possible to enjoy clean salt taste while consuming lower levels of sodium. Because SODA-LO is made from real salt, it has none of the bitter aftertaste or off-flavors associated with some other salt compounds or substitutes. "Studies show that consumers associate products labeled as low-salt as having inferior taste," said



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Andy Hoffman, director of health and wellness innovation, Tate & Lyle. "Having a salt reduction alternative that's made from real salt and delivers on that taste expectation could be the first step towards breaking that link in people's mind that a low-salt product is a bland one."

SALT ENHANCERS AND REPLACEMENTS

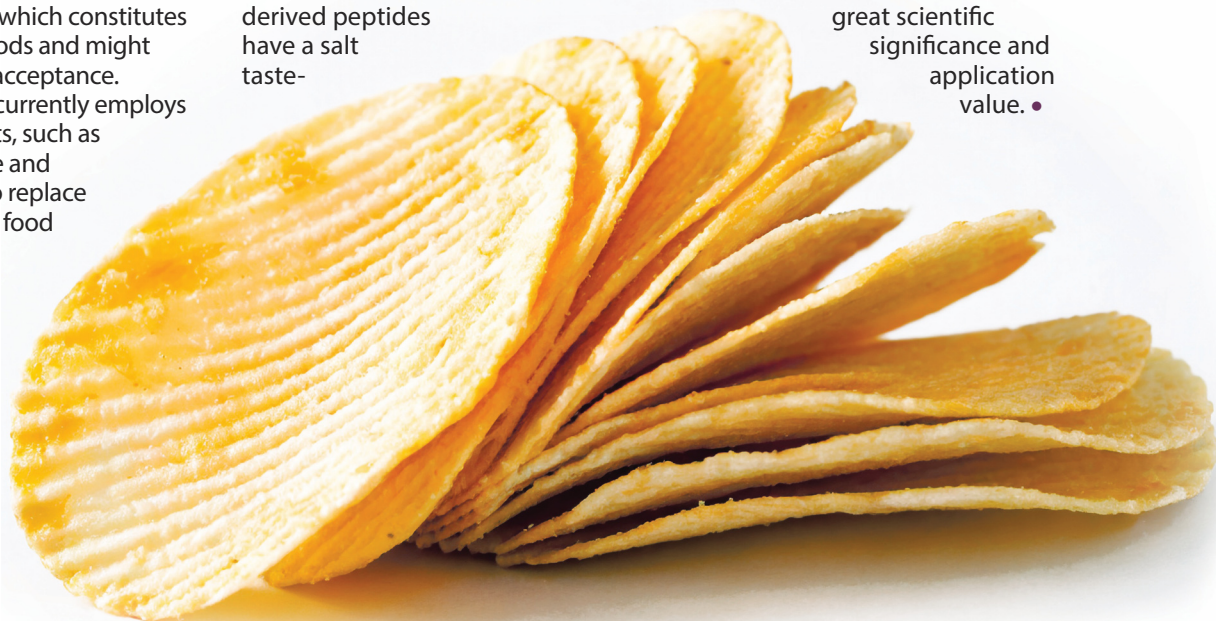
So far there has been limited success in the direct salt reduction in UK and EU countries. For instance, the partial replacement of 30% sodium chloride with potassium chloride did not significantly affect the sensory characteristics of toast bread. However, excessive usage of sodium chloride substitutes can elicit bitter and metallic taste, which constitutes flavor defects in foods and might impact consumer acceptance. The food industry currently employs certain mineral salts, such as potassium chloride and calcium chloride to replace sodium chloride in food formulations, but there are some studies that have reported the excessive intake of potassium can also lead to acute toxicity. Additionally, another effective way to reduce

usage of salt is to use taste enhancers. Currently, the commonly used taste enhancers include monosodium glutamate (MSG), nucleotide phosphates (IMP/GMP), herbs and spice mixtures, certain basic amino acids and salty peptides. Salt enhancers do not give a salty taste themselves. They improve the human perception of salt already present in the product, which, in theory, would allow less salt to pass, from this perspective. However, MSG and IMP/GMP still contain sodium ions, and their excessive intake is still detrimental to cardiovascular health.

FUTURE DIRECTIONS

In recent years, several studies have revealed that some food-derived peptides have a salt taste-

enhancing effect, including salty peptides and salt taste-enhancing peptides. For example, some Maillard reacted peptides can enhance the perception of salt taste when mixed with salt, and achieve the same saltiness intensity under the low concentration of salt, thereby reducing sodium chloride intake. Furthermore, some peptides have been employed as taste enhancers to reduce salt intake and improve food flavor. It has been shown that γ -glutamyl peptides can increase salt, umami and kokumi taste when mixed in food formulation with sodium chloride. Therefore, the employment of salty peptides and salt taste-enhancing peptides is an important research direction, which has great scientific significance and application value. •





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2024: Higher Costs, Tough Conditions, and High Expectations

The Dutch Arable Farming Union has again calculated the expected cost price of consumption potatoes for the coming season. The cost price shows a slight increase compared to the expected cost price for the 2023 harvest. The comparison of the desired yield price for the grower with the contract prices of French fries potatoes from the 2023 harvest shows that the contract prices for the 2024 harvest must still increase by at least 2.5 to 3 cents to cover costs for the grower.

By Tudor Vintiloiu

The NAV Working Group on Consumption Potatoes (WCA) has been carrying out these cost price calculations in the same way every year since 2010. This method calculates an average cost price for companies that grow ware potatoes on clay and for companies on sandy soil. Two delivery times are included: off the field in September and out of the shed at the end of March/beginning of April. In the calculation for the 2024 harvest, a number of cost items have increased (labor, land costs and crop protection) and a number have decreased (fertilizers, electricity and fuel). The end result is that the expected cost price for the 2024 harvest is at a slightly higher level than that of the 2023

season. For clay soil, the cost price ex VAT in the field is 18.8 cents/kg and for delivery from the shed it is 24.2 cents/kg. For sandy soil, the cost price ex VAT excl. land is 15.5 cents/kg and for delivery from the shed it is 20.2 cents/kg.

RISK PREMIUM OF 15%

The NAV always charges a premium of 15% on top of the basic cost price for the risk that the grower takes to achieve the desired yield price for the grower in order to continue growing potatoes in the future. The experience of the 2023 season shows that this risk premium on the basic cost price is essential. And this will only become more important in the future due to more extreme weather and the disappearance of crop protection

products. This brings the desired yield price for the grower for field delivery on clay soil ex VAT to 21.6 cents/kg and for delivery from the barn ex VAT to 27.8 cents/kg. For sand, this is 17.8 cents/kg for land delivery ex VAT and 23.3 cents/kg for delivery from the barn ex VAT.

CONTRACT PRICES FOR 2024 MUST INCREASE BY 10%

The Consumer Potato Producers Organization has developed a Contract Tool with which contract prices from different buyers can be compared. This shows that for the 2023 harvest, the average contract price for delivery at the end of September across the various varieties averaged 18.5 cents/kg and for delivery at the end of March at 24.5 cents/kg. We therefore see

that the contract prices for the 2024 harvest will certainly have to increase by another 2 to 3 cents (approx. 10%) to make the cultivation cost-covering and future-proof for the grower. Currently, potato processing plants in the EU are experiencing an acute shortage of raw material. The situation is similar in the fresh potato market. The main reason is prolonged rains in the main potato-producing countries in Northern Europe, which led to the impossibility of harvesting products in the optimal time frame. As a result, both processors and supermarkets are forced to continue purchasing products from southern EU countries, which drives up prices in these regions. "The worst affected regions have been the Netherlands and Belgium with the NEPG stating that 15% and 11% of the Dutch and Belgian crops were still in the ground at the end of 2023. Although the harvest has continued market sources have commented that with the wet weather in December, they expect a proportion of the remaining crop to have been abandoned," the latest Mintec report reveals.

STORAGE CHALLENGES

There is another problem – a ban imposed in the EU on the use of any chemicals that prevent potato

sprouting during storage. This requires storing potatoes at a lower temperature, but this type of storage is not as effective. Therefore, in addition to the increase in storage costs by 2-4 times, EU potato growers also talk about a sharp increase in potato losses during storage, because the buyers have not lowered potato quality requirements. It should be noted that Europe has practically banned all anti-sprouting agents that allowed producers to preserve the potatoes in their warehouses in an optimal state for a long period, and therefore, their preservation is now carried out in refrigerated chambers, of difficult access for producers due to their high cost. "To this we must add that it is much more difficult and more expensive to control germination. We estimate that it is up to 300% more expensive than before, and with much less effectiveness. It is a difficult problem to address, because while I consider it good for something toxic to be eliminated, if the rest of the world considers

that it is not, you start to doubt. It also ends up making it harder for us to keep the product in good condition," says Guillermo Mantecón, a potato producer and member of Prodeleco, according to FreshPlaza.

OUTLOOK

Adverse weather conditions have taken a toll on this year's potato harvest, yielding results below initial expectations. The incessant rainfall has exacerbated the situation, adversely affecting the quality and storage outlook of both the current crop and seed potatoes. Consequently, a concerning scenario is unfolding, with implications for the quality and availability of seeds in the upcoming season. Complicating matters is the global surge in demand for processed potato products, placing an unprecedented strain on efforts to maintain competitive pricing. The confluence of these factors poses significant challenges for the potato industry, warranting careful consideration and strategic planning to navigate the evolving landscape. •



FRUIT LOGISTICA 2024

Puts Potatoes in the Spotlight of Fresh Produce Innovation

Fruit Logistica is gearing up for its annual showcase of groundbreaking innovations as it returns to Berlin from February 7 to 9, 2024. With the motto "The heartbeat of the Fresh Produce Business," the event promises to be a hub of creativity, featuring 20 dynamic startups and a series of world premieres.

By Tudor Vintiloiu



Under the theme 'Disrupt Agriculture,' the much-anticipated Fruit Logistica Startup Day on February 9, 2024, in Hall 5.1, will unveil the visions of 20 startups. These pioneers are set to introduce revolutionary products and solutions that range from plant health-monitoring robots to temperature-sensitive color-changing labels and AI-driven irrigation systems. The goal is clear – to harness cutting-edge technologies that transform and elevate the fresh produce industry. In addition to the startup showcase, Fruit Logistica 2024 will present a range of world premieres. Notable among these innovations are eco-friendly packaging and labels designed with reduced plastic content, promoting recyclability and biodegradability. AI technologies are taking center stage in the agricultural and sorting machinery, enhancing efficiency and precision.

POTATO VARIETIES REDEFINING THE GAME

A key highlight of Fruit Logistica 2024 will be the introduction of novel potato varieties that are not only pleasing to the palate but are also tailored to streamline the production process. Resilience to common plant diseases and enhanced storage capabilities are among the features that these new varieties bring to the table, promising a more robust and sustainable potato cultivation.

INNOVATIVE POTATO PROCESSING TECHNOLOGIES

Potato processing is an evolving field, and Fruit Logistica recognizes the importance of staying ahead of the curve. Expect to see cutting-edge technologies in potato sorting, packaging, and preservation. Whether it's state-of-the-art sorting machines or eco-friendly packaging solutions, the event will offer a glimpse into the future of potato processing.

INDUSTRY INSIGHTS AND EXPERT KNOWLEDGE

Fruit Logistica isn't just about showcasing products; it's a hub for

knowledge exchange. Attendees will have the opportunity to delve into the latest industry insights through informative sessions and discussions. Experts in the potato processing sector will share their experiences, trends, and predictions, providing a comprehensive view of the current state and future trajectory of the industry.

NETWORKING OPPORTUNITIES FOR POTATO PROFESSIONALS

The event serves as a networking haven for professionals in the potato processing business. With industry leaders, suppliers, and stakeholders in attendance, Fruit Logistica 2024 offers a unique platform to establish connections, explore collaborations, and stay abreast of the latest market trends in the potato sector.

"Feel the heartbeat of innovation at FRUIT LOGISTICA 2024," say the organizers, emphasizing the event's commitment to driving progress in the fresh produce business.

To delve deeper into the offerings of the 2,600 exhibitors from 90 countries, and to tap into expert knowledge across five stages, trade visitors are encouraged to explore Fruit Logistica Online – the comprehensive exhibitor and event database.

In a bid to enhance the overall experience, FRUIT LOGISTICA 2024 introduces new ways to attend the

event. Trade visitors can elevate their experience with a Gold Upgrade ticket, granting access to a special lounge and post-show refreshments. Moreover, a new Friday Ticket option offers reduced-rate access to the show's final day.

In addition to the highly prized FRUIT LOGISTICA Innovation Award (FLIA), a FLIA Technology will be presented for the first time in recognition of innovations in the field of Machinery & Technology. Each of the nominated products will be displayed at FRUIT LOGISTICA 2024 in a dedicated FLIA exhibition area between halls 20 and 21, as well as in a special FLIA Technology exhibition area between Halls 1.1 and 2.1. To experience technical innovations, trade visitors have the chance to participate in guided tours to the exhibition booths of the FLIA Technology nominees. Over almost two decades, FLIA has established itself as the fresh produce industry's number one award. Voted for exclusively by visitors to the show, each year's winning products, services, or technologies benefit from widespread recognition on what is the sector's largest international stage.

Fruit Logistica stands as the paramount trade show for the global fresh produce business, representing the entire value chain of the fruit and vegetable sector. In 2023, more than 2,600 exhibitors from 92 countries showcased their products, services, and technical solutions, attracting 63,500 buyers and trade visitors from 140 countries. •

"Feel the heartbeat of innovation at FRUIT LOGISTICA 2024!"
The organisers



EIMA ENGINEERING

Hall 1.1, Booth D-22

www.eima.de

EIMA ENGINEERING has over 40 years of experience and specializes in technical and engineering services of machines and plants for the potato and vegetable industry. The portfolio covers de-stoning, washing, peeling, calibrating, cutting, blanching and frying, with different machines, depending on the product, process sequence and customer specifications. EIMA ENGINEERING plans, develops and manufactures all machines, equipment and control systems in-house. 100% made in Germany at the highest industrial level.



FAM STUMABO

Hall 2.1 – Stand B-10

www.fam.be | info@fam.be

FAM focuses on developing industrial cutting machines for the food industry, by providing customers with the solutions they need for the cutting, slicing, and dicing of vegetables, fruits, potato chips and French fries. Over the past 60 years, we established long-lasting close cooperation with highly influential companies, customers, and partners. We are present in all continents, with customer experience centers, stocks, and service. A big contributing factor to our quality is the close partnership with our sister company Stumabo International, manufacturer of precision knives for the food industry.



Key Technology

Hall: 6.1 Booth A-60

www.key.net

Key Technology is a global leader in the design and manufacture of automation systems including digital sorters, conveyors and other processing equipment. Applying processing knowledge and application expertise, Key helps customers in the food processing and other industries improve quality, increase yield and reduce cost. Key manufactures its products in Walla Walla, Washington, Redmond, Oregon, USA, and in Beusichem, the Netherlands. Key offers customer demonstration and testing services at five locations including Walla Walla and Beusichem as well as Hasselt, Belgium; Sacramento, California and Melbourne, Australia. Key is a Duravant Company.



Raytec Vision SpA

Hall 1.1 Booth B- 50

www.raytecvision.com

Raytec Vision is a leading expert in optical sorting technology for food as well as X-Ray inspection for packaged products, providing a wide range of machines for safety and quality control. Raytec Vision SpA was founded in 2001 in Parma, considered the main center of the Italian food valley. The company's mission is aimed at achieving the highest quality standards in the food sector with the support of innovative machines, such as optical sorters for raw materials and for processed products, as well as x-ray inspection machines for packaged and unpackaged products.



Sipal

Hall 6.2 Booth D-30

www.sipal.fr

Sipal, partner with CMPA, is a French family-owned group specialised in the production and distribution of fresh conventional aromatic herbs.

The expertise of our quality department is attested by the certifications Global Gap, GRASP, BRC Food, IFS Food, QS and SMETA for CMPA and Global GAP COC for Sipal.

The Sipal/CMPA partnership enables us today to offer you high-quality fresh herbs thanks to our know-how and our 25 years of experience in two areas: agricultural production, selection/distribution of the finest herbs.



Tolsma-Grisnich

Hall 1.1 Stand C21

www.tolsmagrisnich.com

Tolsma-Grisnich has been a pioneer for more than 75 years and leading specialist in the efficient storage and primary processing of potatoes, onions, and carrots. From the international potato capital Emmeloord, Tolsma-Grisnich serves its customers with smart, innovative, and concept-oriented solutions with which they demonstrably distinguish themselves. With high-quality customized solutions and intensive process supervision, Tolsma-Grisnich relieves its clients of all their worries and guarantees them the highest return.



TOMRA Food

Hall 4.1 Stand B41

www.tomra.com

TOMRA Food designs and manufactures sensor-based sorting machines and integrated post-harvest solutions transforming global food production to maximize food safety and minimize food loss, by making sure Every Resource Counts. The company has more than 12,800 units installed at food growers, packers and processors around the world for Confectionery, Fruit, Dried fruit, Grains and Seeds, Potatoes, Proteins, Nuts, and Vegetables. These solutions include advanced grading, sorting, peeling and analytical technology to help businesses improve returns, gain operational efficiencies, and ensure a safe food supply.

TOMRA Food operates centers of excellence, regional offices and manufacturing locations within the United States, Europe, South America, Asia, Africa and Australasia.



Urschel Cutting Technology

HALL 1.1 Booth C-30

www.urschel.com



URSCHEL®

The Global Leader in Food Cutting Technology

Visit Urschel to see the latest in food cutting technology. Explore the new laser cut Model CC Slicer frame. This bold, improved design offers increased sanitation and flexibility. See the E TranSlicer® Cutter and the Sprint 2® Dicer both with built-in conveyors - ideal for complete discharge of product into totes. Learn more about the Affinity® Integra CD-L Dicer and the processing of sticky fruits. Also on display, the Comitrol® Processor Model 1700 for optimal milling of pastes and purees. Successful processors partner with Urschel to deliver intelligent cutting solutions.

Dauphinoise, Parmentier and the Rest



Jonathan Thomas

Prepared and pre-cooked potatoes are sold throughout most parts of the world via retail and foodservice channels, although consumption has traditionally been heaviest in western countries where competition from other meal accompaniments such as rice and noodles has been less stiff.

By Jonathan Thomas

The category is relatively broad – according to the ranges of some leading suppliers, the market incorporates products such as cooked potatoes (e.g. roast or jacket), mashed potatoes, potato wedges, potato slices, potato cubes, sauté potatoes and other specialist varieties such as rostis and Dauphinoise and Parmentier Potatoes. As well as meal accompaniments, many of these prepared potato products are now being consumed during snacking and other informal eating occasions.

EATING TRENDS

Eating habits in the home have a major impact upon demand for prepared and pre-cooked potatoes. Until the arrival of the pandemic, the amount of time spent preparing meals was in long-term decline, while consumers in the younger age groups were more inclined to replace formal meals with snacking or to eat whenever they were hungry. The number of in-home meals underwent a significant increase during the pandemic, with the closure of much of the foodservice industry, although qualities such as convenience remained important. It seems the trend towards more home cooking from scratch has

faded in the years since the pandemic, as more informal eating patterns have resumed. In the UK, many consumers would like to eat together in the evening but claim to be prevented from doing so by factors such as time pressures and finding the experience stressful. According to a survey by meal kit supplier Hello Fresh, almost a quarter (24%) of families sit down for a shared evening meal together only once a week or less. This figure declines to 13% in Belfast (where 38% of households eat an evening meal together virtually every day) but increases to around a third in cities such as Glasgow and Newcastle. The research also found that the tendency to eat meals together as a household tends to decrease as household income levels drop. Separate data from John Lewis indicates that almost 60% of UK consumers would like the family to sit together for meals, although half find it much easier to obtain frozen foods rather than cooking from scratch, while 28% are likely to opt for a ready meal. According to research from Sainsburys, 55% of UK consumers cite time as the main barrier to dining together as a household. These findings indicate that convenience is likely to remain a key selling point for prepared potatoes for some time.

Meanwhile, research from Premier Foods suggests that the cooking repertoire of many UK households remains somewhat limited, despite the growth in popularity of many ethnic cuisines. The survey found that almost 60% of the UK population rotates through a range of just six meals for dinner in the evening, while 46% have the same meals on the same night every week. Demand for prepared potatoes from customers within the foodservice industry is believed to have been adversely affected by the recent fall in expenditure levels. According to data from the NPD Group, total foodservice expenditure in Europe declined by 6% to EUR292bn in 2022, due to factors such as strong competition from online grocery retailing, the prevalence of hybrid working patterns, lower consumer confidence as the economic situation has worsened and people spending more time at home. In response to these trends, many foodservice operators have been using menu engineering tactics to attract consumers and thereby drive expenditure. Some of these have included dishes geared towards price-conscious and vegetarian/vegan consumers, as well as meals inspired by ethnic cuisine.

However, one of the brighter spots within the foodservice industry has been the continued growth of the food delivery market, driven by the high demand for restaurant quality meals eaten in the home.

According to NPD Group, the share of all meals prepared within the European foodservice industry taken by this sector in volume terms is now approaching 20%, with expenditure having increased from EUR3bn in 2019 to almost EUR9bn in 2022.

MARKET OVERVIEW

The market for prepared and/or pre-cooked potatoes continues to expand, both in Europe and further afield. According to Aviko, some of the highest margins to be made within the foodservice industry are from premium and innovative products, which stand out on menus and cater towards the consumer desire for different taste profiles and formats. At the retail

level, the market has also benefited from the fact that more people now appear to be purchasing potatoes in smaller packaging formats, both to minimize food waste as well as to reduce their grocery bills.

This trend has increased the appeal of baking and salad potatoes, many of which are sold in ready-to-cook format. Until the uncertain economic environment affected purchasing patterns, more consumers also appeared inclined to seek out more premium varieties of prepared potatoes, such as Maris Piper. Prices for Maris Piper potatoes have increased in many countries of late, caused by declining production resulting from growers leaving the industry as costs have escalated – in the UK, for example, output of Maris Piper potatoes has fallen by an estimated 1 million units per annum in recent years. Nevertheless, recent innovation and NPD suggests that consumer interest in new flavors for

prepared potatoes remains high, while their convenient nature is also widely appreciated.

In recent months, the market has also benefited from the fact that potatoes are viewed as a cost-effective meal option for consumers seeking to reduce expenditure levels. Consumer health concerns also represent a major driver within the category – for example, more prepared and pre-cooked products made from sweet potatoes are now apparent. Roast potatoes represent one of the most popular forms of pre-cooked or ready-to-cook varieties, especially in markets such as the UK where the Sunday roast continues to represent one of the population's favorite meals. According to a 2021 survey carried out in the UK by Premier Foods, roast dinner emerged as the country's favorite meal option, ahead of fish and chips, pizza, spaghetti bolognese and steak and chips. Other meals in





the top 20 list featuring potatoes included sausage and mash (at number 8), shepherd's pie (at number 9), cottage pie (at number 11) and jacket potatoes (at number 19).

Consumption of roast potatoes in the UK is especially high at times of the year such as Christmas. Research carried out in late 2023 by Instaprint (which surveyed the opinions of 1,000 adults) found that 86% planned to include roast potatoes in their upcoming Christmas dinner, a figure which ranked higher than other key meal components such as turkey (64%), stuffing (78%), carrots (77%) and gravy (81%).

These findings were backed up by a similar UK survey carried out in

2023 by NFU Mutual. This research found that 74% of respondents considered roast potatoes an essential part of a Christmas dinner, ahead of gravy (58%), pigs in blankets (45%), brussels sprouts (37%) and a farm-reared turkey (37%). Furthermore, almost one in three consumers expressed a preference for convenient and/or easy-cooking products to make the preparation process simpler. The recent rise in the cost of living has resulted in more people eschewing pre-prepared products, while many consumers prefer to prepare roast potatoes from scratch. That said, a sizeable market still exists for pre-prepared varieties, which are usually sold in frozen or chilled format. Many of

the prepared roast potatoes sold via retail channels under brands such as McCain and Aunt Bessie's (which forms part of Nomad Foods) make use of meat-based ingredients such as beef dripping or duck or goose fat, which can impart new and interesting flavors during the roasting process. Goose fat has the added advantage of being able to withstand higher temperatures than regular cooking oils, with the result that roast potatoes turn out especially crispy and crunchy. This appears to be a popular selling point for many consumers – McCain, for example, sells triple cooked roast potatoes, which are promoted as offering extra crispiness. To cater towards vegetarian or vegan consumers, prepared roast potatoes flavored with ingredients such as rosemary or garlic are also available. Another leading sector within the European market for prepared potatoes encompasses specialist varieties, examples of which include Dauphinoise and Parmentier potatoes. The former recipe is believed to originate from the Dauphine region in the south-east of France, with the potatoes traditionally served with various meats or in salads. In the UK market, chilled Potato Dauphinoise is available from retailers such as Waitrose and Marks & Spencer in own-label form. These incorporate sliced potatoes in a cream, cheese and garlic puree sauce, topped with parsley and Emmental cheese. On a related note, cheese remains one of the most popular accompaniments for prepared potatoes, used as it is in a wide range of recipes and meals. Although a range of cheeses are used in this way, it is generally recognized that varieties with a sharper taste or flavor (examples of which include Parmesan, Gruyere and some of the stronger Cheddars) are usually the best option for cooking with potatoes. In the UK, the Cathedral City brand (which is owned by Saputo Dairy) leads the Cheddar cheese category and includes potato-based products such as Cheesy Potato

Dauphinoise and Cheesy Potato Gratins. In 2022, the Cathedral City brand was worth GBP288m at the retail level and was purchased by 44% of UK households. Elsewhere, Aviko's UK foodservice range includes Cream & Cheese Potato Gratin. Other dairy foods such as milk, cream and butter are frequently used to add flavor to products such as mashed potatoes. Meanwhile, Parmentier potatoes are becoming an increasing popular side dish in many western markets, competing against the more traditional varieties such as roast potatoes and French fries. This form of potato is named after the pharmacist Antoine-Augustin Parmentier, who is widely regarded as helping to promote the popularity of potatoes in France. Parmentier potatoes are cubed potatoes flavored with rosemary and garlic, which are available in the own-label sector, as well as from manufacturers such as Albert Bartlett.

Interest in more novel flavors for prepared products such as baby potatoes (which can be used in a range of different meal options) also appears to be growing. In the foodservice industry, Aviko UK's range includes flavored baby potatoes such as Lemon Pepper and Wild Garlic, highlighting the widening consumer demand for different taste profiles. In a similar vein, retailer Waitrose offers Minted Baby Potatoes and Gunpowder Baby Potatoes, the latter of which are created using a spice blend inspired by the cuisines of southern India. It seems likely that the rising popularity of ethnic foods and 'street food' cuisine will continue to influence NPD within the prepared potatoes market, both for chilled and frozen products, while it is worth remembering

that curry sauce is a popular accompaniment to chips and French fries in several countries. Flavor innovation is also apparent within sectors of the market such as diced/cubed potatoes, mashed potatoes and potato wedges. As is the case with other types of prepared potatoes, some of the more widely used ingredients in these categories include herbs such as rosemary and garlic, as well as various spices (e.g. paprika, parsley and thyme) and black pepper. A recent addition to the Lamb Weston foodservice range of potato wedges in the EMEA region was Brewer's Wedges, which are described as featuring a unique crispy hop-based coating. These wedges have been developed using the traditional association between beer and potato-based products such as chips and/or crisps, as well as presenting a more sophisticated gourmet image. •



De Aardappelhoeve Bets on Sustainable Storage Solutions for Local Crop Quality

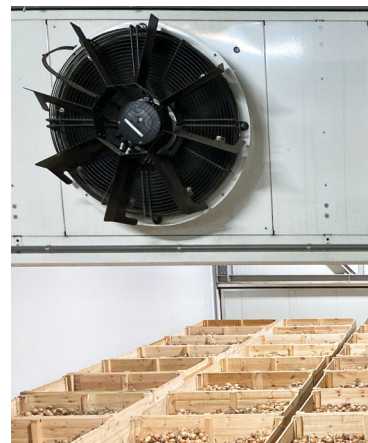
In this exclusive interview, Potato Processing International magazine has talked to Wouter Devlies, Agronomist at De Aardappelhoeve in Belgium. Mr. Devlies, a respected expert in the field, provides valuable insights into the intricate dynamics of sustainable agriculture, innovative storage solutions, and the ongoing challenges within the potato processing industry.

By Tudor Vintiloiu

De Aardappelhoeve, acknowledged for its dedication to innovation and sustainability, is represented by Mr. Devlies, who provides insights into the practical approaches of local crop cultivation and the application of advanced storage technologies at their modern facility. This interview sheds light on the strategic planning and commitment required to meet consumer expectations while navigating the intricate regulatory landscape and sustainability standards.

Could you explain the focus on using local crops and the sustainability aspect of your storage solutions?

We prioritize supplying our clients with local crops, particularly Belgian crops, due to the increasing demand for sustainability. Instead of importing from other countries, we aim to grow potatoes and onions locally. Storing them is a challenge, especially for the fresh market, where we have a 'Belgian season' and resort to importation only when necessary. Our goal is to store crops for up to 12 months, ensuring a steady supply.



** Please note that this interview has been edited for clarity and conciseness.*



Tell us about the storage facility and its significance.

To achieve our goal of storing crops for an extended period, we invested in a state-of-the-art warehouse. This facility allows us to store potatoes and onions in a way that maintains their quality. We distinguish between storage for the French fry industry, which can last 12 months, and the fresh market, which follows a 'Belgian season'. The new storage enables us to supply one client with 12 months of Belgian crop, which is a significant achievement.

How do you manage the packaging and distribution of these crops?

We start packing our crops in August and aim to continue until the first of July, providing Belgian crop with minimal importation. Our focus is on small-size packaging, ranging from 400 grams to five kilograms. Quality is paramount for us, and we work with various potato varieties, ensuring good skin color and suitable cooking types. Our cold stores play a crucial role in maintaining the quality of the packed crops.

Could you provide details about the refrigerated storage and its features?

The latest addition to our storage facilities, completed in 2021, has a capacity of 8,000 tons and utilizes refrigeration for preservation. All our storages use wooden boxes to ensure careful handling and facilitate traceability. Our unique approach involves grading crops directly after harvesting, allowing us to manage stock efficiently and fulfill diverse client orders.

How do you handle challenges like wet and muddy crops during harvesting?

Swift drying is essential to prevent bacterial infections and fungus. Despite challenges like this year's wet conditions, we focus on high-capacity ventilation to dry the crops quickly. Monitoring CO₂ levels, temperature, and humidity is crucial, and a daily inspection ensures optimal storage conditions. We avoid using sprout suppressants due to concerns about residues and cross-contamination, relying on cold store temperature and climate adaptation for sprout control.





What are the challenges posed by changing regulations and sustainability standards?

With evolving regulations and the ban on certain products like CIPC, European producers face challenges in maintaining quality standards. Extreme weather conditions, combined with stringent legislation, make it difficult for farmers to

adapt. The awareness of these challenges needs to increase, acknowledging the impact on both farmers and the industry.

Do you foresee consumers compromising on quality in the future?

While consumers may need to become more aware of natural

occurrences like sprouts on potatoes, finding a balance is crucial. Challenges such as the ban on sprout inhibitors and the need for reduced pesticide use present difficulties in ensuring prolonged shelf life. Striking a balance between quality, sustainability, and regulatory compliance is an ongoing challenge. ●



2024 FEATURE PLANNING

1

JANUARY/FEBRUARY

Ad closing 16.01/Publishing 30.01



Key Exhibitors Road Map and Event Agenda

Processes

Sorting and Grading, Pre-cleaning, Washing, De-stoning
Energy and Water Saving

Expert View

Cutting / Slicing / Dicing
Drying - Innovation in Belt and Drum Dryers

Spotlight

Raw Product Handling

Markets

Eastern Europe

Products

Freshly Packed Potatoes

Ingredients

Salt

Storage Special

Potato Monitoring & Quality Assurance
Sprout Suppressants in Storage

Trade shows: Fruit Logistica 07-09 Feb 2024

2

MARCH/APRIL

Ad closing 20.02/Publishing 05.03



Key Exhibitors Road Map and Event Agenda

Processes

Cutting Accuracy and Equipment Reliability
Process Monitoring

Expert View

PEF Applications and Advantages
Sustainability in Production

Spotlight

Smart Production/IoT/Industry 4.0

Markets

Western Europe

Products

Extruded Potato Products

Ingredients

Better for you/Clean Label

Storage Special

Automated Climate Control
Sensors and Data Gathering

Trade shows: Anuga FoodTec 19-22 March 2024

3

MAY/JUNE

Ad closing 22.05/Publishing 05.06



Key Exhibitors Road Map and Event Agenda

Processes

Blanching, Frying
PEF Systems

Expert View

Automation - Ensuring a Reliable and Flexible Production Flow
Optical Sorting - Increasing Yields, Reducing Waste

Spotlight

Food Safety

Markets

North America

Products

Chips and Potato-based Snacks

Ingredients

Frying Oils

Storage Special

Power Saving and Sustainability
Disease Management

Trade shows: SnackEx 19-20 Jun 2024

4

JULY/AUGUST

Ad closing 17.07/Publishing 28.07

Processes

Conveying Systems and Belts
Seasoning & Coating

Expert View

Drying Technology Advancements
IQF Freezing for French Fries

Spotlight

Supply Chain Management & Logistics

Markets

South America

Products

Flakes & Mashed Potatoes

Ingredients

Seasonings for Chips and Fries

Storage Special

Storage Challenges and Cost-saving Solutions
Potato Monitoring & Quality Assurance

Trade shows: World Potato Congress, Adelaide 23-26 June 2024

5

SEPTEMBER/OCTOBER

Ad closing 04.09/Publishing 15.09



Key Exhibitors Road Map and Event Agenda

Processes

Efficient Freezing Technology
Starch and By-products Processing

Expert View

Remote Maintenance and Customer Service
Complete Lines for Processing
Conveying And Product Transport

Spotlight

The Road to Sustainability

Markets

APAC/ANZAC

Products

French Fries in Retail and Foodservice

Ingredients

Batters/Coatings

Storage Special

Storage Design and Construction
Handling Potatoes to & from Storage

Trade shows: Interpom 24-26 Nov 2024

6

NOVEMBER/DECEMBER

Ad closing 07.11/Publishing 18.11

KEY SUPPLIERS GUIDE

Processes

Oil Filtration Systems & De-fattening
Turnkey Projects
Waste Management / Upscaling

Expert View

Batch vs. Continuous Frying
Cutting vs. Hydrocutting
Pulsed Electric Field (PEF) Processing

Spotlight

Increasing Production Capacity/Future-proofing Processing Operation

Markets

Global Market Predictions for 2025

Products

Potato Seasoning and Flavor Trends

Ingredients

Stabilizers/Functional additives

Storage Special

Store Preparation and Hygiene
Bulk vs. Boxed Storage

Trade shows: Gulfood Manufacturing, Dubai 5 - 7 November 2024



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