

POTATO PROCESSING

I N T E R N A T I O N A L

Supporting the potato industry worldwide

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FRUIT2026
LOGISTICA
Special Coverage



Interview

Key Business
Outlooks
2026

Process

Potato Grading: The
First Constraint On
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Spotlight

Equipment Decisions
From Field Intake To
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11⁸ Key Business OUTLOOKS for 2026



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Setting The Context For 2026: From Raw Intake to Market Reality

Tudor Vintiloiu - Editor in chief
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The fresh produce and potato processing industries are entering 2026 in a state that can best be described as structurally alert. Cost volatility, regulatory pressure, labor constraints, and climate exposure are no longer background conditions; they are now design parameters.

Decisions made at farm, storage, or factory level increasingly reverberate across the entire value chain, from raw intake to retail shelf.

This is precisely why **FRUIT LOGISTICA 2026** remains such a relevant meeting point. Not because it is large, international, or well established - those are givens - but because it reflects, in real time, how the industry is responding. What emerges on the exhibition floor is less about novelty and more about adjustment: tighter control of raw material flows, greater reliance on automation, and a growing emphasis on predictability in handling, grading, storage, and logistics.

This *Fruit Logistica Special Issue of Potato Processing International* mirrors that reality. A significant share of the editorial content in this edition focuses deliberately on

Cost volatility, regulatory pressure, labor constraints, and climate exposure are no longer background conditions; they are now design parameters.

the raw side of processing: grading accuracy, intake and handling systems, packaging for retail, and the evolving role of storage and sprout suppression strategies. These are not peripheral topics. They are foundational to yield protection, product consistency, and downstream efficiency - especially in a context where raw

material variability is increasing rather than stabilizing. At the same time, the issue broadens its lens. We also provide an Eastern European market overview, with particular attention to trade dynamics linked to the Mercosur agreement - an external factor with tangible implications for sourcing, competitiveness, and market access.

Fruit Logistica brings these threads together in one place. Our editorial team will be in Berlin throughout the show, engaging with processors, equipment suppliers, logistics providers, and growers. We welcome the opportunity to meet readers, contributors, and partners - on the show floor or over a coffee - to exchange perspectives on where this industry is heading, and how it is adapting in practice, not theory. ●

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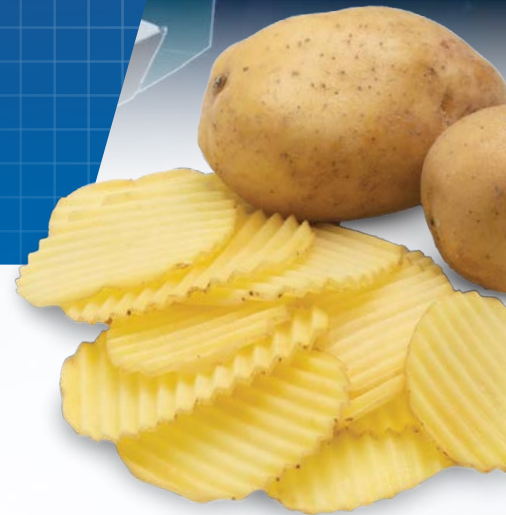


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FPS Commits To Global Capacity Expansion Across Multiple Regions

FPS Food Process Solutions has outlined a global expansion programme covering manufacturing, logistics, and technology infrastructure across the Americas, Europe, the Middle East and Africa, and China, with projects scheduled to come online through 2026. The Vancouver-based supplier said the programme is intended to strengthen local capacity and technical support for food

manufacturers worldwide. In MEA, FPS is opening a second site in central Morocco, which will function as a regional logistics centre for equipment, spare parts, and inventory, and is expected to be fully operational in January 2026. In North America, subsidiary GEM Equipment of Oregon is expanding its Mt Angel facility, adding 110,000 ft² of space for manufacturing, inventory, and office functions, with completion planned for spring 2026.

FPS is also opening a 29,000 ft² facility in São Paulo, Brazil, scheduled for summer 2026. In China, a new nine-floor site in Zhongshan, Guangdong will integrate food production platforms, equipment R&D, a global training centre, and a technological command centre enabling real-time remote equipment monitoring. European operations will expand with an enlargement of the Goes, Netherlands facility by the end of 2026.

Lamb Weston To Close Munro Plant And Consolidate Argentina Production



Lamb Weston Holdings has announced plans to close its potato processing facility in Munro, Argentina, and consolidate production at its Mar del Plata site. The decision was disclosed on 8 January 2026 as part of efforts to improve profitability and operational efficiency across the company's global manufacturing network.

According to the company, production currently carried out in Munro will be transferred to the Mar del Plata facility. Approximately 100 employees are expected to be affected by the closure, with severance packages to be provided in line with local legal requirements in Argentina. Lamb Weston did not disclose a specific timeline for the shutdown.

As part of the same announcement, the company also confirmed a temporary curtailment of one production line at a facility in the Netherlands. Lamb Weston framed both actions within its Focus to Win strategy, which guides investment decisions, operational adjustments, and cost management across its international operations.

McCain Divests South African Vegetable Operations To Refocus On Potatoes



McCain has agreed to sell its vegetable manufacturing operations in South Africa to Enduring Ventures, as the company sharpens its focus on potato-based products in the region. The transaction, announced on 18 December 2025, includes the Harvestime

brand and associated production assets and remains subject to regulatory approval. According to McCain Foods South Africa, the decision supports its ambition to concentrate on its potato business, where the company sees opportunities for innovation and growth. By streamlining its operations, McCain said it will be able to invest further in technology and product development for the South African market. Enduring Ventures confirmed the acquisition but did not disclose financial terms. McCain stated that the divestment will allow it to concentrate capital and operational resources on its core potato activities within South Africa. No additional operational changes were disclosed as part of the announcement.

Urschel Extends KRONEN Equipment Availability To Italy And Asia

Urschel is expanding the geographic reach of its processing portfolio by extending availability of KRONEN commercial solutions into Italy and additional Asian markets, effective 1 January 2026. The move follows earlier rollouts in the United States, Mexico, Pakistan, and China.

Under the expanded arrangement, KRONEN systems will be offered across Asia through Urschel Asia Pacific Pte. Ltd. and in Italy via Urschel International Ltd. Italy. According to the company, existing Urschel sales representatives in the newly added regions will continue to support both Urschel and KRONEN product inquiries, maintaining continuity of service. The KRONEN portfolio includes washers, dicers, slicers, dryers, and conveyors designed for the hygienic, safe, and efficient processing of fresh foods. Urschel said offering KRONEN solutions alongside its precision cutting machinery provides customers with access to a broader range of integrated processing options through its established global sales and support network.



NEW

PPM Technologies Launches FlavorWright All-In-One Gen 3 Seasoning System

PPM Technologies has introduced the third generation of its FlavorWright All-In-One seasoning system, combining liquid and dry seasoning in a single standardised unit. According to the company, the Gen 3 platform incorporates upgrades developed in response to feedback from processors using earlier versions. Design changes include a programmable visual alarm



beacon, internal routing of electrical wiring to support washdown, an extended Mini VF infeed conveyor, and optional forklift mounts to improve portability. The seasoning drum has been updated with enhanced magnetic

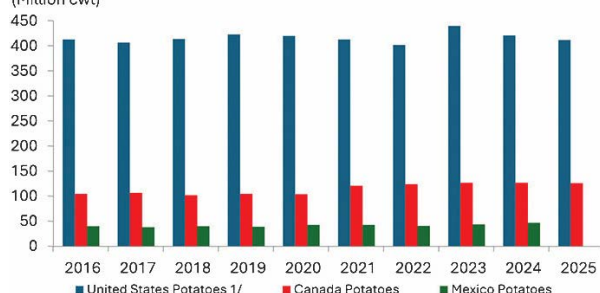
mounts to support higher-capacity applications and an angle indicator to aid repeatable setup. An optional stainless-steel drum is available for applications requiring higher durability or metal-detectable components. The system is built with food-grade materials and IP65-rated washdown capability, with quick-release components designed to support rapid changeovers. FlavorWright All-In-One Gen 3 is offered as a pre-engineered solution to reduce lead times and is supported globally by Duravant's Food Sorting and Handling Group, including remote commissioning options.

North American Potato Production Declines Slightly In 2025

North American potato production in 2025 is expected to decline modestly, driven primarily by reduced acreage in the United States, according to the North American Potatoes report released on 19 December by USDA National Agricultural Statistics Service. Combined production for the United States and Canada is estimated at 538 million hundredweight, down 2% from 2024.

U.S. production is forecast at 412 million cwt, reflecting lower planted and harvested area despite a record average yield of 461 cwt per acre. Canada's output is estimated at 125.8 million cwt, down around 1%, as increased acreage was offset by lower yields, according to Statistics Canada. The report aggregates official data from the United States, Canada, and Mexico. Mexico's 2024 production is listed at 46.8 million cwt, up 7% year on year. The report also notes that 2025 price and value estimates are not yet available. A minor narrative typo referencing Canada's 2024 volume does not affect the underlying tables or combined totals.

Potato Production - North America
(Million cwt)



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11 Key Business Outlooks for 2026

As the potato processing industry closes the books on 2025, the picture that emerges is one of adjustment rather than recovery. Cost pressure has not eased uniformly, raw material variability remains a defining constraint, and market conditions continue to diverge sharply by region. At the same time, investment decisions made over the past two years - particularly in automation, energy management, storage, and logistics - are beginning to show measurable effects on operational resilience. Against this backdrop, Potato Processing International presents the Key Business Outlooks 2026 interview series. This year's edition brings together 11 senior decision-makers from across the potato value chain, offering a clear-eyed assessment of how 2025 actually ended - not how it was expected to - and what that means for the year ahead from a business perspective. These conversations move beyond general optimism or

caution. Interviewees address pricing realities, margin pressure, capacity planning, and the practical limits of growth in mature markets, alongside opportunities emerging in specific regions and product segments. Several reflect on how strategy has shifted in response to regulatory developments, labour availability, and changing customer expectations, while others outline where capital expenditure is being prioritised - or deliberately paused.

Taken together, the 2026 outlooks provide a grounded snapshot of an industry recalibrating its assumptions. They do not offer a single forecast, but a set of informed perspectives on how leading companies are positioning themselves for a year defined less by expansion, and more by control, discipline, and selective opportunity. ●

By Tudor Vintiloiu



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Katrien De Nul,
Promotion Manager Potatoes,
VLAM



Some interviews have been shortened for print. Read them all in full at www.potatobusiness.com

Stefan Toepfl ,

Managing Director, Elea Technology GmbH



Looking back at 2025, which customer pressures proved structural rather than temporary, and how did they reshape your commercial or product strategy?

The shift toward sustainable, efficient, and high quality processing is now fundamental in the potato industry. Our PEF technology is at the heart of this change, helping processors improve product quality, cutting properties, and yield while reducing energy and water use - PEF replaces thermal preheating at just ~10% of the energy and water demand. These gains are immediate and lasting, allowing customers to sustain PEF benefits across their lines. This focus has driven us to invest in modular, scalable systems and expand our service and optimization offerings, so clients can fully realize and maintain long term advantages. With our move into our new headquarter and Home of PEF in 2025, we now offer upgraded test facilities for even more robust pilot and demonstration options.

As you plan for 2026, which market assumptions are you revising, and where do you see the greatest hesitation or uncertainty among your customers?

We're adjusting our expectations for digitalization and automation, as customers increasingly seek smart process control - exemplified by our PiCon system and inline tools like PEF Control and Cut Control. Yet, economic volatility and fluctuating raw material and energy prices create uncertainty about the pace of adoption. Varying investment climates and regulatory frameworks also play a role. Still, we believe PEF and related innovations will continue to gain traction as their practical benefits become clear in real world operations.

How do you expect investment behavior among processors to evolve in 2026, particularly regarding capacity expansion, efficiency upgrades, and automation?

Processors are prioritizing investments that boost efficiency, quality, and resilience. There's a clear move toward modular, scalable systems like our B Micro, suitable for diverse applications from snacks to freeze drying. Our B1000-850 model, with optimized energy use and improved transport systems, supports higher throughput and reliability. Enhanced remote maintenance, remote operation, and full process logging are now standard, making PEF solutions especially attractive for those seeking a competitive edge in a dynamic market.

Where did your strongest growth opportunities come from recently, and what did those projects reveal about changing customer priorities?

These markets, alongside ongoing projects in Europe and North America, show a clear need for solutions that go beyond equipment supply. Our value solutions - comprehensive support, training, and process optimization - have been decisive. Helping clients adapt to seasonal and varietal changes has delivered measurable financial benefits and reinforced the importance of flexible, full service partnerships.

How do you balance near-term customer demands with longer-term R&D investment, especially in a more cautious capital-spending environment?

We balance immediate customer needs with long term

innovation by maintaining close dialogue and delivering quick, practical improvements through PEF. At the same time, we invest in next generation technologies, with recent advances like PiCon and B Micro reflecting this approach. Pilot installations, analytical services, and remote support - now enhanced by our upgraded test hall - help demonstrate real world value, ensuring clients are ready for future opportunities.

Which developments in 2025 most disrupted your planning or sales pipeline, and how did your organization adapt?

Supply chain turbulence and energy price swings in 2025 delayed several projects and investment decisions. We responded by strengthening local support, expanding remote maintenance, and introducing flexible purchase options - including leasing and service/training contracts - to derisk adoption for customers. These measures preserved momentum and opened doors in emerging markets where smaller scale projects gathered pace.

Which external drivers - energy, labor availability, regulation, digitalization, or sustainability requirements - are most influencing equipment purchasing decisions today?

Energy costs, labor shortages, sustainability, and macroeconomic factors are shaping purchasing decisions. In late 2025, low raw material prices sharpened the focus on efficiency. Our PEF systems help processors cut energy use and automate processes, while regulatory trends toward digitalization further influence investment. Notably, in addition to reducing oil uptake PEF reduces starch leakage into process water, extends knife life and reduces energy use in frying, directly improving operational efficiency and sustainability.

How do you see the relationship between promised technological performance and real-world operational results evolving, and where do customers now demand clearer proof of value?

Processors increasingly demand real world proof that new technologies deliver results. We offer pilot installations, demonstrations, and analytical services so clients can validate PEF's benefits in practice. This hands-on approach builds trust and supports informed investment decisions. We invite processors to codesign pilots on their lines to document yield, energy, and water KPIs - making the value of innovation measurable and actionable. •





Bjorn Thumas,

Business Development Director, FAM STUMABO

launched SureTec 240P features the SureCut Unit (SCU), a unique concept, and has conquered the hearts of many operations/production managers. In both chips and French fries, customers are seeking new shapes, textures, and formats, while maintaining tight quality tolerances. These projects show that innovation is only embraced when it can be delivered reliably, at scale, and without introducing additional operational risk. Customers increasingly value partners who can translate differentiation into an industrial reality.

Which developments in 2025 most disrupted your planning or sales pipeline, and how did your organization adapt?

One of the most disruptive developments was the increased scrutiny customers placed on the gap between promised performance and real-world results. Decision making cycles became longer, and validation processes more rigorous. In response, we intensified early technical dialogue, worked more closely with integrators, and invested more time up front to ensure seamless integration. This approach reduced downstream issues and increased customer confidence. FAM STUMABO also strengthened its international presence with new facilities in Spain, Germany, and the US. The expansion reflects our continued investment in customer proximity and local service excellence, and, in North America, in establishing a direct presence. These developments significantly enhance our ability to respond quickly to customer needs and build closer, long term relationships across key global markets.

Which external drivers - energy, labor availability, regulation, digitalization, or sustainability requirements - are most influencing equipment purchasing decisions today?

Labor availability and sustainability-related efficiency are currently the most influential drivers. Ongoing workforce scarcity pushes processors toward intuitive equipment that can be operated with less specialized skill. Sustainability is increasingly approached through operational efficiency – reducing waste, re-work, and yield loss – rather than pursuing abstract targets. Digitalization supports these goals by delivering actionable insights and simplifying shop-floor decision-making.

How do you see the relationship between promised technological performance and real-world operational results evolving, and where do customers now demand clearer proof of value?

Customers increasingly demand proof that technology delivers as promised in real production environments, with little tolerance for performance gaps caused by complexity or poor integration. Value is measured through tangible outcomes: stable throughput, reduced waste, consistent quality, and lower operational stress. Suppliers who can clearly demonstrate these results gain a strong competitive advantage. FAM STUMABO locations feature on-site test labs, where our specialists assist customers in selecting the best machines for their operations through demonstrations and tests to validate feasibility and optimize the product. •

Looking back at 2025, which customer pressures proved structural rather than temporary, and how did they reshape your commercial or product strategy?

Several pressures that were initially viewed as temporary have clearly become part of the structural reality of food processing. Workforce scarcity, sustained energy costs, and the requirement to deliver consistent output across multiple shifts are now everyday constraints. Customers are far less tolerant of operational complexity and variability. This has further reinforced our strategic focus on solutions that simplify operations, reduce dependency on highly skilled operators, and deliver stable, repeatable results. Rather than reacting to short-term market signals, FAM STUMABO continues to prioritize reliability, ease of use, and measurable operational value.

As you plan for 2026, which market assumptions are you revising, and where do you see the greatest hesitation or uncertainty among your customers?

One assumption we are revisiting is the idea that investment behavior would simply revert to pre-2020 patterns. While underlying demand fundamentals remain strong, customers are more cautious and selective. The most significant hesitation we observe is not about whether to invest, but where to allocate capital. Processors are carefully weighing capacity expansion against efficiency and automation, with a clear preference for investments that stabilize operations and protect margins in a volatile environment.

How do you expect investment behavior among processors to evolve in 2026, particularly regarding capacity expansion, efficiency upgrades, and automation?

Investment is expected to remain disciplined. Capacity expansion will continue in growth regions such as Asia and Latin America, while globally, the emphasis will be on efficiency-driven projects. Processors are prioritizing solutions that reduce dependency on operators, minimize downtime, and deliver consistent quality. Investments with a clear, short term operational return are progressing most decisively.

Where did your strongest growth opportunities come from recently, and what did those projects reveal about changing customer priorities?

FAM STUMABO's strongest growth opportunities have come from projects that combine product differentiation with strict requirements for consistency. The recently

Justin Lai,

Vice President - Sales & Marketing, FPS Food Process Solutions



Looking back at 2025, which customer pressures proved structural rather than temporary, and how did they reshape your commercial or product strategy?

The reduction of internal engineering resources within customer organizations proved to be a structural shift rather than a temporary trend. This created a greater reliance on us for design and consulting services, requiring us to evolve beyond being an equipment supplier. In response, we invested in strategic hires and established partnerships to provide design engineering and utility services, complementing our equipment offerings and strengthening our position as a comprehensive solutions provider.

As you plan for 2026, which market assumptions are you revising, and where do you see the greatest hesitation or uncertainty among your customers?

We are adjusting our expectations for project activity in Europe. While demand for new potato processing projects was strong early in 2025, the past six months have seen significant slowdowns, with many projects delayed or placed on hold. The primary hesitation stems from concerns about oversupply and increased competition from Asia.

How do you expect investment behavior among processors to evolve in 2026, particularly regarding capacity expansion, efficiency upgrades, and automation?

We anticipate a continued slowdown in new facility construction. However, consolidation and process efficiency improvements will remain key investment drivers. Customers are prioritizing technologies and equipment that reduce reliance on manual labor, with automation and efficiency upgrades taking center stage.

Where did your strongest growth opportunities come from recently, and what did those projects reveal about changing customer priorities?

Our strongest growth has come from North Africa and the Middle East, where facilities tend to be smaller and produce a diverse range of products. These projects revealed a growing customer priority for flexibility and adaptability in design, prompting us to innovate and deliver solutions that accommodate multi-product operations.

How do you balance near-term customer demands with longer-term R&D investment, especially in a more cautious capital-spending environment?

The cautious capital-spending environment has created an opportunity to focus on R&D. By investing in new solutions now, we aim to stay ahead of the competition and be ready with advanced offerings when customers resume major investments.

Which developments in 2025 most disrupted your planning or sales pipeline, and how did your organization adapt?

The slowdown in Europe and a weaker summer for new capital equipment sales disrupted our pipeline. We adapted by leveraging our service group, which focuses on retrofits and rebuilds, effectively bridging the gap and maintaining revenue streams.

Which external drivers - energy, labor availability, regulation, digitalization, or sustainability requirements - are most influencing equipment purchasing decisions today?

Sustainability, energy efficiency, and labor availability are the most influential factors shaping equipment purchasing decisions today. Customers are increasingly prioritizing solutions that address these challenges.

From your perspective, which policy or regulatory developments would most support long-term technology investment in the potato processing sector?

Policies that promote and support digitalization would significantly accelerate technology investment in the potato processing sector, encouraging modernization and replacement of outdated equipment.

How do you see the relationship between promised technological performance and real-world operational results evolving, and where do customers now demand clearer proof of value?

Customers now demand clearer proof of value, with real-time metrics and process guarantees becoming standard expectations. Historically, KPIs were theoretical and rarely validated, but new technologies enable accountability and transparency throughout the production process.

What is your five-year vision for processing technology in the potato sector, and how does your company plan to remain relevant as customer expectations mature?

Our vision is to enable "lights-out" or dark factories, minimizing human interaction in potato processing facilities. This will involve deploying MES systems integrated with industry input and designing equipment that is flexible and reactive. We aim to remain relevant by positioning ourselves as an end-to-end solutions provider, supporting customers from concept to execution. •





Brian Barr,

Director of Sales, Heat and Control

Looking back at 2025, which customer pressures proved structural rather than temporary, and how did they reshape your commercial or product strategy.

2025 was definitely a challenging year for many industries, including the potato sector. Changes in consumer spending, shifts between the foodservice and retail markets, and the continued challenge of labour availability all required our customers to adapt their capital equipment spending.

To meet these market and customer pressures, we focused on helping our customers optimize their existing assets - achieving production needs while minimizing spend - while also driving innovation in automation and high-efficiency equipment solutions that improve operating metrics, reduce downtime, and lessen reliance on scarce labour resources.

As you plan for 2026, which market assumptions are you revising, and where do you see the greatest hesitation or uncertainty among your customers?

As our customers navigate changing market landscapes, we aren't so much revising assumptions as adapting to the evolving needs and timelines of our customers. Our focus is on having equipment and support solutions ready and on standby as plans change, allowing them to pivot as needed to meet shifting consumer demand.

How do you expect investment behavior among processors to evolve in 2026, particularly regarding capacity expansion, efficiency upgrades, and automation?

We're positive about the investment outlook for 2026. The market challenges of 2025 - and the resulting delayed investments - have left many processors operating with aging assets that can be less efficient and often require more operational staffing compared to current technology offerings.

As a result, we see our customers increasing investment in efficiency and automation projects that increase volume and operating efficiency while reducing labour dependency, maintenance requirements, and total cost of ownership. These investments will help processors achieve the aggressive ROI targets required in today's marketplace.

Where did your strongest growth opportunities come from recently, and what did those projects reveal about changing customer priorities?

With our wide portfolio of equipment solutions across

the potato industry, Heat and Control's growth opportunities span every segment of customer production. From potato handling, storage, washing, and cooking through to packaging, inspection, coating, and conveying - the clear and enduring priority is value. We help customers improve their products and processes with value-driven solutions. Recent prioritization has focused on systems to improve product quality and throughput, while also reducing operating costs and advancing sustainability initiatives. Strong examples of this value-based approach include our new Slice Wash Support Module (SWSM) and Process Recirculation Support Modules (PRSM) technologies. With water sustainability at their core, these technologies significantly reduce water usage while improving process time, operating costs, and overall efficiency.

Which external drivers - energy, labor availability, regulation, digitalization, or sustainability requirements - are most influencing equipment purchasing decisions today?

While Heat and Control's broad customer base faces varied decision drivers, labor availability, performance improvements, and sustainability have led purchasing decisions over the past several years.

To support customers facing workforce variability and labor availability challenges, we've focused on automation, HMI and operator-interface simplification, and formalized training programs. These efforts are designed to simplify equipment operation and minimize operator actions/requirements, while enhancing operator effectiveness through improved performance. Performance improvements are also a key driver in purchasing decisions. Increased throughput, higher operating efficiency, reduced downtime, and improved product quality all support customers in achieving their ROI objectives. Finally, and of growing importance, is sustainability. Our customers are highly conscious of the environmental impact of their operations. We offer multiple solutions that deliver improved performance while requiring less energy and water, helping customers meet both operational and environmental goals.

How do you see the relationship between promised technological performance and real-world operational results evolving, and where do customers now demand clearer proof of value?

We see a strong and growing focus on the alignment between promised technological performance and real-world operational results as a condition of sale. With cautious capital spending, customers must be confident that investments will deliver agreed performance levels and achieve - or exceed - quality and ROI targets. While we have invested heavily in global test systems and facilities to validate performance pre-purchase, we recognise that repeatable, real-world, in-plant performance is the true measure of success. For more than 75 years, Heat and Control has believed our success is defined by equipment performance in customer operations - not in our factories or test labs. •

Daniel Leighty,

Vice President of Sales, Key Technology



Looking back at 2025, which customer pressures proved structural rather than temporary, and how did they reshape your commercial or product strategy?

Several of the challenges that intensified in 2025 are clearly structural. Potato processors are under sustained pressure to lower operating costs, simplify operations and keep lines running as much as possible, even as internal resources continue to shrink. Their expectations around uptime, reliability and total cost of ownership have always been part of the equation, but these are now absolute requirements rather than differentiators.

In response, we've adjusted how we go to market and support customers globally. There's greater demand for direct engagement, localized service and parts availability, and solutions that can be deployed and supported closer to where production happens. That has reinforced our focus on standardized, scalable systems and regional capabilities that help customers operate more predictably in a volatile environment. At the same time, processors are placing greater emphasis on total cost of ownership, favoring solutions that deliver consistent performance with simpler technology rather than pushing the limits of sophistication.

What are your expectations for 2026, keeping in mind the legacy of 2024, but also the current challenges?

Looking ahead to 2026, we anticipate continued evolution in how potato processors approach major projects. When interest rates do ease, we expect to see a wave of capital investments currently on hold suddenly release into the market. This surge will make equipment procurement timing critical for processors to secure optimal project schedules. In the meantime, our focus remains on delivering solutions that provide compelling ROI and helping customers optimize their existing operations.

As you plan for 2026, which market assumptions are you revising, and where do you see the greatest hesitation or uncertainty among your customers?

One of the biggest assumptions we're revising is the pace at which large-scale capital investments will return in mature markets. While demand fundamentals remain strong, tariff uncertainty and persistent inflation continue to slow decision-making, especially for projects with long lead times or complex international sourcing. Customers aren't stepping away from investment altogether, but they are being more cautious and deliberate. We're seeing more phased projects, tighter scopes and greater scrutiny around payback and capital efficiency. That uncertainty is shaping how we work with customers as we help them prioritize investments that deliver near-term operational improvements while keeping longer-term expansion options open.

How do you expect investment behavior among processors to evolve in 2026, particularly regarding capacity expansion, efficiency upgrades, and automation?

In 2026, we expect most processors to focus less on headline capacity expansion and more on extracting additional throughput from existing assets. Unlocking hidden capacity through automation, improved sorting

accuracy and better process control is becoming the preferred path, especially when capital is constrained. Automation investments are also increasingly targeted at reducing labor dependency and improving consistency rather than fully replacing operators. Customers want solutions that stabilize operations, reduce variability and support higher uptime without introducing unnecessary complexity.

Where did your strongest growth opportunities come from recently, and what did those projects reveal about changing customer priorities?

Our strongest growth continues to come from emerging markets such as Brazil, India and China, where processors are building capacity to serve growing domestic demand. At the same time, we're seeing significant global shifts in where fries are produced and supplied, as processors reassess sourcing, export and production strategies to respond more quickly to changing market conditions and regional demand.

These projects tend to prioritize dependable operation, ease of use and local support rather than customization for its own sake. What they reveal is a broader change in processor priorities globally. Regardless of region, customers want equipment that performs consistently, can be supported locally and delivers value quickly. That mindset is increasingly influencing purchasing decisions even in more mature markets.

What is your five-year vision for processing technology in the potato sector, and how does your company plan to remain relevant as customer expectations mature?

Over the next five years, we expect potato processors to continue pushing for more localized support, predictable performance and equipment aligned with regional market conditions. That's already shaping how we go to market today.

We're making deliberate investments to bring service and parts closer to where our customers operate, including expanding our network of regional parts depots in several countries and building in-country service teams that can respond faster, reduce travel-related costs and have a deep familiarity with local regulatory and production requirements. We're also working more closely across the family of brands within Duravant, our parent company, to help customers get more value from each capital project. At the same time, building and supporting equipment closer to customers reduces exposure to tariffs, VAT and logistics complexity, which are now factored more directly into capital planning decisions.

As operating environments grow more complex and customer expectations continue to rise, the role of trusted technology providers will only become more important, and that's where we see our future. •





Valeria Lucinschi,

General & Operations, Kuipers Food Processing Machinery

Looking back at 2025, which customer pressures proved structural rather than temporary, and how did they reshape your commercial or product strategy?

Looking back at 2025, several customer pressures proved to be structural rather than temporary. Ongoing global uncertainty reduced risk appetite, while a lack of internal knowledge, staff shortages, and rising costs made mistakes increasingly expensive. As a result, producers became more reluctant to take risks and increasingly chose to work with reliable partners they already knew and trusted.

Customers now expect support that goes beyond equipment alone - covering process knowledge, development, and long-term operational support. With expertise spanning equipment, processing, and product development, we are happy to help customers reduce risk and move forward with confidence in an uncertain environment.

As you plan for 2026, which market assumptions are you revising, and where do you see the greatest hesitation or uncertainty among your customers?

Across the potato processing industry, equipment challenges are becoming more complex: higher capacities, tighter energy and water constraints, food safety requirements, and reduced availability of skilled operators. This increases both technical and operational risk. As a result, customers hesitate less about whether they need new equipment, and more about how it will perform in practice, how complex it will be to run, and who will support it long term.

Our task this year is to clearly demonstrate that we are an all-around specialist and a reliable long-term partner, combining equipment, process knowledge, and development expertise. If this value is not communicated and proven convincingly, purchasing decisions risk becoming far more price-driven.

How do you expect investment behavior among processors to evolve in 2026, particularly regarding capacity expansion, efficiency upgrades, and automation?

Producers are increasingly pushing for higher throughput to secure long-term competitiveness and economies of scale. For example, where 250 kg/hour potato chips processing lines were commonly requested in the past, this capacity is now almost no longer sufficient and is rarely requested.

Despite the push toward larger and more automated lines, price sensitivity has not disappeared - especially in certain regions and market segments. Suppliers must find ways to reduce costs without compromising reliability or performance. This is definitely not an easy task.

Where did your strongest growth opportunities come from recently, and what did those projects reveal about changing customer priorities?

Our strongest growth opportunities in recent periods have come primarily from existing customers, rather than from new or opportunistic projects. In terms of markets, the majority of recent requests came from Europe and Asia, reflecting both continuity in our established regions and growing momentum in emerging ones.

Which external drivers - energy, labor availability, regulation, digitalization, or sustainability requirements - are most influencing equipment purchasing decisions today?

In a world of so much uncertainty, purchasing decisions have become more cautious and complex, and this is completely understandable - producers are certainly not to blame. In our case, no single dominant driver that applies to all customers. Overall, the purchasing decision today is shaped by a combination of external drivers, but the final weighting is always company and market specific.

How do you see the relationship between promised technological performance and real-world operational results evolving, and where do customers now demand clearer proof of value?

In Kuipers' case, particularly in 2025, most new projects came from existing customers. This created a stronger foundation of mutual understanding. As a result, discussions were more efficient and required less extensive proof or validation.

When it comes to new customers, the dynamic is different. The threshold to convince them has clearly increased.

The one area where customers demand clearer proof of value is in service. With ongoing challenges around internal knowledge gaps and staff turnover at customer sites, the role of the supplier increasingly extends beyond delivery.

What is your five-year vision for processing technology in the potato sector, and how does your company plan to remain relevant as customer expectations mature?

We plan to continue supporting moderate capacity increases that align with our core market and customer base. While overall capacities in the industry continue to grow, extreme scaling is not our primary focus nor our area of expertise.

Beyond equipment, we see a growing need to further strengthen our process and product knowledge. Over the next five years, Kuipers aims to continue developing and investing in this expertise, ensuring that we have comprehensive in-house knowledge covering the entire process - from A to Z. •

Wilfried Rombauts,

Market Unit Manager Potatoes, Optimum Sorting



Looking back at 2025, which customer pressures proved structural rather than temporary, and how did they reshape your commercial or product strategy?

Reflecting on 2025, it became clear that challenges like labor shortages, throughput efficiency, and consistent quality weren't temporary; they were structural. These realities underscored the vital role of Optimum Sorting's automated solutions.

Processors increasingly faced the challenge of doing more with fewer operators while maintaining stable quality. This drove strong demand for our optical sorting solutions in potatoes, vegetables, and several non-food markets, where accuracy, reliability, and capacity are critical. Our commercial focus shifted toward demonstrating performance per processed ton and long-term operational stability.

As you plan for 2026, which market assumptions are you revising, and where do you see the greatest hesitation or uncertainty among your customers?

As we look ahead to 2026, we are revising our market assumptions mainly around the timing and phasing of investments, not around their necessity. Across potatoes, vegetables, and non-food markets, customers remain convinced that automated sorting is essential, but they are more cautious in how and when they execute projects.

The greatest hesitation we see is linked to macroeconomic uncertainty, energy costs, and ongoing volatility in raw material availability. This makes customers more deliberate in decision-making, often opting for phased implementations rather than large, one-step investments.

How do you expect investment behavior among processors to evolve in 2026, particularly regarding capacity expansion, efficiency upgrades, and automation?

In 2026, we expect investment behavior among processors to continue shifting from pure capacity expansion toward efficiency upgrades and automation. Rather than adding more lines, many processors are focused on extracting more value from existing capacity. Automated sorting plays a central role in this shift. For Optimum Sorting, this trend confirms the demand for high-performance, scalable sorting solutions that can be integrated into existing processing lines and upgraded over time. Investments in 2026 will be driven less by volume growth alone and more by the need for resilience, predictability, and long-term operational efficiency.

Where did your strongest growth opportunities come from recently, and what did those projects reveal about changing customer priorities?

Our strongest growth opportunities recently came from automated sorting projects across potatoes, vegetables, and several non-food markets. These projects were typically driven by customers looking to improve efficiency, secure consistent quality, and reduce operational dependency on labour.

What these projects clearly revealed is a shift in customer priorities. Rather than focusing on individual

machine features, processors increasingly prioritise reliability, throughput stability, and predictable performance over time. Sorting machines are expected to operate as a stable backbone of the processing line, not as isolated pieces of equipment.

How do you balance near-term customer demands with longer-term R&D investment, especially in a more cautious capital-spending environment?

In today's cautious capital-spending environment, balancing short-term customer needs with long-term R&D investment is critical. At Optimum Sorting, we keep innovation closely tied to real operational requirements. Our R&D is driven by direct customer feedback from ongoing projects, ensuring developments deliver immediate, measurable gains in efficiency, yield, and ease of use - while laying the groundwork for future progress.

Which developments in 2025 most disrupted your planning or sales pipeline, and how did your organization adapt?

In 2025, geopolitical uncertainty and changing tariff conditions in the United States were the most disruptive factors for our planning and sales pipeline. These developments primarily affected project timing, investment approvals, and the structuring of contracts, rather than underlying demand for automated sorting solutions. Customers in the U.S. market became more cautious, often delaying final decisions or requesting alternative project phasing to manage financial risk. In response, Optimum Sorting adapted by increasing flexibility in our commercial approach and supporting customers with clearer cost breakdowns and predictable performance metrics for our sorting machines.

Which external drivers - energy, labor availability, regulation, digitalization, or sustainability requirements - are most influencing equipment purchasing decisions today?

Today, labour availability and energy efficiency are the most influential external drivers shaping equipment purchasing decisions. Across potatoes, vegetables, and non-food processing, customers are under constant pressure to maintain output levels with fewer skilled operators and tighter energy budgets.

This makes automated sorting machines that are easy to operate, energy-efficient, and reliable highly attractive. At the same time, digitalization is playing a growing supporting role, enabling better process control, performance monitoring, and consistent quality outcomes. •





Stefan Björk,

Managing Director, Rosenqvists Food Technologies

Where did your strongest growth opportunities come from recently, and what did those projects reveal about changing customer priorities?

Some of the biggest projects we have worked with recently supports international expansion for large key accounts. They work with a strategic choice for geographical diversification of setting up more production sites all over the world and Rosenqvists Food Technologies work hard to support their efforts.

How do you balance near-term customer demands with longer-term R&D investment, especially in a more cautious capital-spending environment?

Design is optimized for every single project at Rosenqvists Food Technologies. Whatever we can do to minimize waste and use fewer input resources is implemented in collaboration with our clients. Apart from this, we drive long-term R&D efforts for recovering energy in the chips line, AI utilization in automation and improve the solutions for thermal treatment.

Looking back at 2025, which customer pressures proved structural rather than temporary, and how did they reshape your commercial or product strategy?

We see clearly that clients value and expect efficiency, more than ever before. For us at Rosenqvists Food Technologies this means offering lowest total cost of ownership. The goal to produce more with fewer resources is at the heart of everything we do.

Solid machines and smart design might have been good enough a decade ago. Today, more than ever, we need to back this up with increased potato yield, reducing consumption of water, energy, oil, coating mix and seasoning, minimizing operator requirements, and extending production hours by avoiding downtime.

As you plan for 2026, which market assumptions are you revising, and where do you see the greatest hesitation or uncertainty among your customers?

Luckily, the markets for potato chips and frozen potato products are growing steadily year after year. The products are popular and gain attraction in more countries around the world. This underlining factor helps our clients to grow which consequently offer us more projects to work with. We are adapting towards a further diversified geographical spread for our customers.

From your perspective, which policy or regulatory developments would most support long-term technology investment in the potato processing sector?

The European Parliament, Council, and Commission have agreed on legislation for new genomic technologies (NGT), paving the way for innovations like Crispr/Cas9 to boost crop resilience, reduce chemical use and support sustainable production. What could this mean for potato processing? Could it unlock opportunities for bruise-resistance, lower levels of glycoalkaloids, or reduce acrylamide? We're excited to explore the possibilities.

What is your five-year vision for processing technology in the potato sector, and how does your company plan to remain relevant as customer expectations mature?

Offering the lowest total cost of ownership is our goal at Rosenqvists Food Technologies. We believe strongly that our process know-how can serve as a key factor for our clients to reach this goal. We will continue to innovate stronger designs for thermal treatment and automate based on key data. Every production hour counts, and every input resource needs to be utilized fully. During the coming five years, the expectation for efficient processing will be the game changer for a profitable producer of potato products and snacks. •



Eric Geling,

Chief Sales Officer – TNA Solutions

Looking back at 2025, which customer pressures proved structural rather than temporary, and how did they reshape your commercial or product strategy?

In 2025, a few 'temporary' pressures turned out to be long-term commitments. First: energy and utilities. For potato processors, the cost of energy in the form of electricity and thermal heat, consumables such as frying oil and process water, as well as emissions and CO2 footprint considerations, are now central to competitiveness, and this has proven itself to be an enduring trend towards more sustainable and efficient processing methods.

Second: labour availability and skills. The sector needs those ever more advanced and complex lines to be more intuitive to run, easier to maintain, and more automated by design.

Third: raw material variability - potatoes are a natural product, and variability in size, dry matter, and quality puts a premium on process control and waste reduction.

Commercially, this has reinforced our focus on complete line solutions and a customer-centric partnership model: integrating processing, distribution, seasoning, and packaging so the whole line performs as one entity. It has also accelerated our emphasis on sustainability and digitalisation.

As you plan for 2026, which market assumptions are you revising, and where do you see the greatest hesitation or uncertainty among your customers?

For 2026, I think many processors are revising the assumption that input volatility will normalise quickly, whether that's utilities or logistics. A second assumption being challenged is the pace and shape of demand: in many markets, french fries and potato snacks remain incredibly resilient, but customers are watching consumer affordability and channel mix closely. These trends include, particularly in snacks, moving from single flavour to multiple flavours produced at the same time, packed in ever smaller bags and the trend of moving into multi-bags.

Where we see hesitation is in greenfield capacity bets without flexibility. The projects moving fastest tend to be phased expansions, removal of bottlenecks, and upgrades that protect margins now while leaving a clear pathway to scale. That's pushing the conversation toward modularity and proof-backed ROI.

How do you expect investment behaviour among processors to evolve in 2026, particularly regarding capacity expansion, efficiency upgrades, and automation?

In 2026, we expect a split approach. Capacity expansion will continue, particularly where french fries and potato snack demand is rising, but many investments will come in stages, with capacity added in steps rather than betting everything upfront. In parallel, we're seeing a strong pull toward efficiency upgrades and automation: reducing energy and water use, improving yield, and simplifying operations where labour is constrained.

Which developments in 2025 most disrupted your planning or sales pipeline, and how did your organization adapt?

Two things stood out in 2025: the knock-on effects of supply chain uncertainty - especially around lead times and availability of components - and the continued pressure on operating costs. For potato processors, there's also the reality that raw material variability can quickly cascade into yield and quality issues if process control isn't robust.

We adapted by strengthening how we plan projects end-to-end, from design and commissioning through aftermarket, and leaning into global-local support so customers aren't waiting on one distant hub for critical parts or expertise. We also continue to invest in digital tools that help reduce project risk, compress timelines, and improve readiness at start-up.

Which external drivers - energy, labour availability, regulation, digitalization, or sustainability requirements - are most influencing equipment purchasing decisions today?

All five matter and differ somewhat to the different markets we serve across the globe, but energy, labour and sustainability are the most immediate budget shapers, while regulation and digitalisation increasingly determine what good looks like.

Energy and water are obvious in potato processing because washing, peeling, drying, and frying are resource-intensive - so efficiency and recovery are part of the commercial case. Labour shortages are pushing customers toward sensor-based automation and simpler, standardised interfaces that reduce training time and human error.

What is your five-year vision for processing technology in the potato sector, and how does your company plan to remain relevant as customer expectations mature?

Our five-year view is that potato processing becomes more flexible, more data-driven, and more resource-efficient - because that's what the market is demanding. Globally, processing intensity varies dramatically: in mature markets, most production is processed. For example, in the US, around 64% of 2023 production was processed, with frozen fries the largest share.

Meanwhile, major producers like India still have relatively low processing ratios - a signal of long-run growth potential as capacity modernises. •





Alan Major,

Chief Sales Officer, Urschel Laboratories

configurations, all of which continue to exceed industry expectations. In 2026, Urschel will be building on this momentum by pursuing new opportunities and further developing ventures already in progress. New endeavors and advancements are on Urschel's horizon this year.

How do you balance near-term customer demands with longer-term R&D investment, especially in a more cautious capital-spending environment?

Customers rely on Urschel to build on existing cutting methods for machines already in the field. Our commitment to Urschel customers has been a cornerstone strength to our company for over 100 years. Customer satisfaction is always a part of Urschel's process – they remain our main priority, and we handle all their requests internally through our ongoing global network of sales and support. Furthermore, Urschel's long-term R&D investment is very strategic and targeted into specific products and markets. This process starts with market analysis. Once that is identified, a plan is implemented to develop, and then a new product is born near term.

Which developments in 2025 most disrupted your planning or sales pipeline, and how did your organization adapt?

As a business that exports a large percentage of our equipment internationally, tariffs have been the most impactful for Urschel's business operations throughout 2025 and held the most significance when shaping our approach to 2026. However, I'm still overall very happy with Urschel's adaptability to overcome these obstacles. Although this scenario has been a long-term uncertainty, our operating results and sales performance have remained strong.

Which external drivers - energy, labor availability, regulation, digitalization, or sustainability requirements - are most influencing equipment purchasing decisions today?

Labor availability and costs have affected our customers' business significantly within the last five years. Automation equipment, reliability, and simplicity of design are key components in Urschel customers decision making process, and they are areas that we prioritize and address to meet customer needs.

What is your five-year vision for processing technology in the potato sector, and how does your company plan to remain relevant as customer expectations mature?

Continuing to provide and expand Urschel's inventory of quality potato cutting solutions to best benefit the potato sector always remains a primary goal. As Urschel has been producing processing equipment in the potato industry for over 100 years, we are constantly analyzing the marketplace as a business. We continue to look at where we can further meet our customer's needs and where we can present value in product development. •

Looking back at 2025, which customer pressures proved structural rather than temporary, and how did they reshape your commercial or product strategy?

We were pleased to see that customer demands remained unchanged, and there were no real additional structural processes that were not prevalent in the past. In 2026, Urschel will continue to look for and pursue customer needs as they arise with new product development.

As you plan for 2026, which market assumptions are you revising, and where do you see the greatest hesitation or uncertainty among your customers?

The uncertainty of business costs and climate due to tariffs was a primary concern when developing Urschel's 2026 plan, as each of the tariffs have varied by size, location, and political situation within each country. While I always try to remain optimistic with most markets, Asia is an ongoing concern.

How do you expect investment behavior among processors to evolve in 2026, particularly regarding capacity expansion, efficiency upgrades, and automation?

I'm optimistic about Urschel's increased investment in the U.S. market, Europe, and in general, with the Asian markets somewhat down overall. In 2025, Urschel expanded its product portfolio through acquiring a percentage of German-based KRONEN GmbH. This was a major investment through our company that will benefit leading markets around the world. Additionally, Urschel is constantly pursuing ways to provide quality, efficient potato processing solutions to processors everywhere.

Where did your strongest growth opportunities come from recently, and what did those projects reveal about changing customer priorities?

As the global leader in food cutting technology, Urschel remains a predominant force in the potato processing industry. While many aspects of our business stay consistent from year to year, Urschel's growth in particularly the potato chip cutting sector continues to thrive with the prolonged success of our SL-14 slicing heads. Many processors seeking higher capacities pair the SL-14 head with the 32-inch enclosure on Urschel's CC build. Urschel additionally continues to support hydrocutting systems globally through manufacturing and providing durable water knife heads and

Katrien De Nul,

Promotion Manager Potatoes, VLAM



How has VLAM's role in promoting Belgian potatoes evolved over the past year, and what are your main priorities for the sector today?

Rather than only promoting product availability or quality in export communication, VLAM has placed greater emphasis on the added value of Belgian potatoes and potato products. While maintaining strong international presence through participation at trade fairs and promotion activities, we have increasingly focused on addressing changing market conditions and consumer expectations.

What are the key attributes that differentiate Belgian potatoes and potato products in international markets, and how does VLAM reinforce this positioning?

Belgian potato products are primarily differentiated by their strong processing expertise, their focus on frozen and convenience products, and their reliable supply chain. VLAM reinforces this positioning by increasing the international visibility of Belgian potato products at a professional level. For processed potatoes, this includes a strong presence at international trade fairs, targeted PR activities and digital communication, mainly through LinkedIn.

Which export or focus markets are currently most important for Belgian potatoes, and how are your promotional strategies adapting to these regions?

For fresh potatoes, VLAM supports companies mainly through participation in leading European trade fairs, i.e. Fruit Logistica in Berlin and Fruit Attraction in Madrid.

For processed potatoes, the UK remains one of the most important markets. Here, promotional efforts focus on communicating the high quality, wide product range and the sustainable production methods of Belgian potato products. In addition, VLAM is taking first steps in the Norwegian market. Although this is a relatively small market, it is not self-sufficient in potatoes and places a strong emphasis on quality, which creates opportunities for Belgian processed potato products. Outside Europe, Asia and South-America are considered key growth regions. In Asian markets in particular, VLAM has invested strongly through participation in international trade fairs and sector events, responding to the growing demand for potato products.

How does VLAM collaborate with industry organisations and private-sector partners to strengthen the global visibility of Belgian potatoes?

Through joint participation in international trade fairs, VLAM supports the visibility and positioning of Belgian potato products. This collaboration allows us to represent the sector with one clear voice, while supporting companies in reaching international clients.

Which consumer trends are most influencing how Belgian potatoes are promoted today, and how is VLAM responding to them?

One of the most important trends is convenience.

Consumers increasingly seek quick, easy and versatile meal solutions that fit into busy lifestyles. This trend supports the growing demand for frozen and prepared potato products. VLAM responds to this by highlighting the versatility and ease of use of Belgian potato products in its promotional activities.

Health awareness is another significant trend. VLAM therefore places greater emphasis on nutritional information, providing correct information about the nutritional value of potatoes and their role in healthy, balanced meals, both for fresh and processed products. Also, consumers increasingly expect transparency about how their food is produced. In response, VLAM has integrated sustainability more structurally into its communication, highlighting efforts made by the Belgian and European potato sector in areas such as sustainable production and efficient processing.

What were the main challenges in promoting Belgian potatoes in 2025, and how did VLAM address them?

In 2025, the main challenges in promoting Belgian potatoes were not related to product quality or international demand, but rather to changing perceptions and consumption patterns within a rapidly evolving food environment. While the sector faced structural challenges such as high production volumes and ongoing market pressure, the promotional challenge for VLAM was to maintain relevance and value perception among both consumers and professional buyers.

On the domestic market, a major challenge was the continued shift in consumer habits. Home consumption of fresh potatoes has been declining, while competition from alternative meal components and convenience foods has increased. In response, VLAM placed greater emphasis on usage moments and contemporary consumption patterns.

Looking ahead to 2026 and beyond, what is VLAM's vision for strengthening the global profile of Belgian potatoes?

Looking ahead to 2026 and beyond, VLAM aims to further strengthen the global image of Belgian potatoes by reinforcing Belgium's positioning as a leading and future-oriented potato processing country. This includes a continued focus on key and growth markets, close alignment with evolving consumer and foodservice trends, and a strong emphasis on quality, expertise and sustainability. •





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Potato Grading: The First Constraint On Processing Performance

Grading accuracy directly determines usable yield, line stability, and compliance risk in industrial potato processing. Size distribution, shape conformity, and defect separation at intake influence peeling losses, cutting efficiency, thermal treatment uniformity, oil uptake, and finished product consistency. Variability that passes through grading propagates downstream as inefficiency, quality deviation, and avoidable cost.

By Tudor Vintiloiu



In processing environments, grading functions as a control point rather than a preparatory step. The objective is not classification for trade presentation but conditioning raw material to the tolerances required by mechanical, thermal, and chemical unit operations that follow. Peeling systems, cutters, slicers, fryers, dryers, and freezing tunnels are all designed around defined dimensional and quality windows. When grading fails to enforce those windows consistently, equipment operates outside optimal parameters.

Size variation increases peel loss through over-peeling of small tubers and under-peeling of oversized ones. Irregular shapes destabilize cutting geometry, leading to increased fines, edge defects, and higher trim rates. Internal and external defects that escape grading introduce variability in moisture migration, starch gelatinization, and color development during frying or dehydration. The cumulative effect is reduced yield predictability and higher rework or downgrade volumes. From an operational standpoint, grading quality affects line

balancing. Inconsistent grading forces processors to slow downstream equipment, increase buffer capacity, or accept higher reject rates later in the process, where value has already been added. Grading therefore defines not only raw material quality, but effective plant capacity.

TECHNICAL CONSTRAINTS GOVERNING GRADING PERFORMANCE

Industrial potato grading operates under three primary constraints: measurement fidelity, throughput compatibility, and system robustness. Measurement fidelity requires accurate, repeatable assessment of three-dimensional size, shape, and surface condition at line speed. Mechanical sizers provide coarse dimensional separation but cannot resolve shape irregularities or surface defects with sufficient precision for modern processing requirements. Vision-based systems address this limitation by capturing multi-angle images and deriving volumetric and morphological parameters in real time. Throughput compatibility is equally critical. Processing plants handling tens of tonnes per hour require grading systems that match or exceed upstream intake capacity without becoming a bottleneck. Imaging resolution, processing speed, ejector response time, and lane configuration all



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impose limits on achievable throughput. Systems that perform well in isolation can underperform once integrated into continuous, high-density material flows. System robustness determines operational uptime. Optical components are sensitive to dust, soil residue, vibration, and moisture. Grading systems must maintain accuracy under variable field conditions and seasonal crop variability while allowing for rapid cleaning, calibration, and maintenance. Any degradation in sensor performance increases false rejects or false accepts, both of which carry cost implications.

REGULATORY CONTEXT AND SPECIFICATION COMPLIANCE

Although grading for processing is primarily driven by internal performance requirements, regulatory standards establish baseline definitions that influence procurement contracts and audit expectations. In the United States, USDA grades for potatoes for processing define requirements for firmness, freedom from defects, and minimum size thresholds. These standards are routinely referenced in grower contracts and quality assurance protocols, even when product is destined for further industrial transformation rather than the fresh market.

In export-oriented operations, grading outputs must also align with destination market specifications and food safety frameworks such as HACCP and ISO 22000. Documented grading data supports traceability, lot segregation, and verification during customer or regulatory audits. Inadequate grading records increase compliance exposure, particularly when defects linked to raw material quality emerge downstream. It is important to separate regulatory grading definitions from operational grading targets. Processors often impose tighter internal criteria than those required by commodity standards in order to protect yield and finished product performance.

COST, YIELD, AND ENERGY IMPLICATIONS

Grading decisions directly affect cost structure. Aggressive defect removal improves downstream consistency but increases raw material loss. Lenient grading preserves mass yield but shifts cost to later stages through higher trim rates, reprocessing, or downgraded finished product. The optimal balance depends on product category, margin structure, and customer tolerance. Energy consumption is also influenced by grading quality. Uniform size distribution improves heat transfer efficiency in blanching,

frying, drying, and freezing operations. Variability forces operators to extend dwell times or increase energy input to accommodate worst-case units, raising specific energy consumption per tonne of finished product. Capital and operating costs must be evaluated together. Advanced grading systems require higher upfront investment and ongoing maintenance but can reduce waste, stabilize throughput, and improve overall equipment effectiveness across the line. The economic justification lies in system-level performance, not standalone equipment cost.

EVOLUTION FROM MECHANICAL TO SENSOR-BASED GRADING

Mechanical roller and screen graders remain in use, primarily for pre-grading or low-complexity applications. Their role is limited to coarse size separation and load reduction ahead of more precise systems. They cannot address shape irregularity or defect detection with sufficient resolution for high-value processing streams. Optical grading systems now dominate industrial applications. These systems use high-speed cameras, controlled lighting, and increasingly, multi-spectral or hyperspectral sensing to evaluate surface condition and structural anomalies. By inspecting each tuber individually, they enable consistent enforcement of grading criteria at full line speed.

Hyperspectral approaches extend detection beyond visible defects, allowing identification of internal quality issues correlated with spectral signatures. While not universally deployed, these technologies are being integrated into commercial systems where defect risk justifies the added complexity.

COMMERCIAL GRADING SOLUTIONS IN INDUSTRIAL USE

Several established equipment suppliers offer grading systems developed specifically for high-throughput potato processing environments, where dimensional

consistency and defect control must be maintained at line speed. TOMRA Food supplies optical sorting and grading platforms used in potato operations serving fresh, frozen, and snack product segments. According to the company's technical documentation, these systems use camera-based inspection to evaluate size, shape, and visible defects, with rejection performed by model-specific ejection mechanisms depending on application and configuration. **TOMRA** systems are commonly installed as part of integrated sorting sections that may also include foreign material removal and downstream trim inspection, rather than operating as standalone grading units. **Ellips** offers grading systems based on individual product carriers that rotate each potato under a camera array, enabling full-surface image capture. The manufacturer states that this inspection method supports volumetric estimation and shape assessment, allowing potatoes to be classified by size and form rather than by single-axis diameter alone. Such systems are typically specified where tight control of size distribution and shape uniformity is required to support downstream cutting and portioning operations. **Newtec** provides optical grading solutions that combine size, shape, and surface quality assessment with integrated weighing. The company positions these systems for operations that need to

separate potatoes into multiple size and quality categories in a single pass, enabling parallel routing of raw material to different processing or fresh market streams from the same intake flow. In industrial installations, these grading systems are rarely deployed in isolation. They are integrated into grading sections that include pre-cleaning, brushing, inspection, and automated routing. Overall performance is governed less by the nominal capability of individual machines than by how effectively grading accuracy, conveyor speeds, buffer capacity, and downstream equipment tolerances are aligned within the processing line.

OPERATIONAL INTEGRATION AND DATA UTILIZATION

Modern grading systems generate large volumes of data on size distribution, defect rates, and reject volumes. When integrated into plant control systems, this data supports real-time process adjustment and longer-term performance analysis. Operators can correlate grading outputs with yield loss, energy consumption, and finished product quality, enabling evidence-based optimization. Data integrity is critical. Inaccurate grading data undermines both operational decisions and compliance documentation. Systems must therefore be validated regularly, with calibration protocols aligned to crop variability and seasonal changes.

CONCLUSION

Grading performance defines the boundary conditions under which the rest of the potato processing line operates. It constrains yield, stabilizes throughput, and limits quality risk before value is added. As processing lines become more automated and margins tighter, grading systems must function as reliable, data-driven control points rather than simple sorting devices. Equipment selection and grading strategy should therefore be evaluated in terms of system-level impact, not isolated classification accuracy. •



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Fruit Logistica 2026 Sets The Agenda For A Data-Driven Fresh Produce Chain

From 4 to 6 February 2026, Berlin once again becomes the focal point of the global fresh produce industry as FRUIT LOGISTICA 2026 opens its doors. For processors, technology suppliers, logistics specialists, and growers, the event remains less a showcase of scale and more a working environment where structural shifts in the fruit and vegetable supply chain become visible.

By Tudor Vintiloiu



With more than 2,500 exhibitors expected from around 90 countries, Fruit Logistica continues to cover the entire value chain - from primary production to post-harvest handling, processing, packaging, and global distribution. Italy, the Netherlands, Spain, Germany, and France remain the strongest exhibitor nations, while participation from Asia, Africa, and the Middle East continues to expand, reflecting the increasingly global nature of sourcing, processing, and trade. The show's structure is built around three tightly connected segments: Fresh Produce, Machinery & Technology, and Logistics. Together, they form a practical map of how value is created, protected, and transported in today's produce industry. For visitors, the relevance lies not in any single hall, but in how these segments intersect - where production challenges meet automation, and where processing capacity depends on reliable, increasingly digital logistics. Technology and automation are

expected to feature prominently across the exhibition. According to Fruit Logistica's Trend Report 2026, artificial intelligence and automation are already reshaping production efficiency, quality grading, logistics optimization, and retail forecasting. Exhibitors across machinery, post-harvest, and logistics halls are positioning solutions that address labor constraints, quality consistency, and resource efficiency, with particular attention to AI-based grading, predictive crop modelling, and intelligent cold-chain management. This focus on applied innovation is reinforced by the event's extensive stage and forum programme. Six dedicated platforms - including the Fresh Produce Forum, Farming Forward, the Logistics Hub, the Future Lab, the Insights Stage, and the Podcast Studio - will host more than 200 speakers across over 100 sessions. Topics range from breeding strategies and controlled-environment agriculture to automation, climate resilience, and global trade dynamics. For visitors navigating a dense exhibition floor, these stages provide structured insight into where investment, regulation, and technology adoption are heading. A central reference point for innovation remains the FRUIT LOGISTICA Innovation Award (FLIA), which marks its 20th anniversary in 2026. With two categories - Fresh Produce and Technology - the award highlights new varieties as well as technical solutions that improve efficiency, sustainability, and commercial viability. Finalists

will be presented across the halls, with trade visitors voting during the first two days before the award ceremony on Friday, 6 February. Rather than a marketing exercise, the FLIA has become a practical indicator of where the industry itself sees future value. Start-ups also play an increasingly visible role. In Startup World, located in Hall 3.1, 18 young companies from 11 countries will present solutions ranging from AI-based quality control and disease detection to automation and sustainable packaging materials. Short pitch sessions on the Farming Forward Stage are designed to give decision-makers rapid exposure to emerging technologies that are moving from pilot phase toward commercial deployment. For show visitors, Fruit Logistica 2026 offers more than product discovery. It provides a compressed view of how the fresh produce industry is reorganizing itself around data, automation, and resilience - under pressure from climate volatility, labor availability, cost structures, and regulatory demands. In that sense, the exhibition floor becomes a working reference for the year ahead. As this special issue demonstrates in the following pages, Fruit Logistica is not only about who is present, but about how the industry is responding. The Key Exhibitors Guide that follows reflects this diversity - across processing, handling, storage, packaging, and logistics - mirroring the interconnected reality of the modern fresh produce supply chain. •

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FAM STUMABO focuses on the development of industrial cutting machines and the manufacturing of precision knives for the food industry. We provide customers with the solutions they need for the cutting, slicing, and dicing of fruit, vegetables, potatoes, and nuts. Over the past 60 years, we have established long-lasting, close cooperation with highly reliable, influential companies, customers, and partners in the industrial food processing market. We are present on all continents, with customer experience centers, stocks, and services. Together, we cut your potato product to perfection!



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Optimum Sorting specializes in developing optical sorting technology, serving both food and non-food markets worldwide. They aim to optimize sorting efficiency, enabling their customers to maximize productivity and minimize (food) waste. From the moment their journey began in 2017, they've been guided by innovation and a steadfast dedication to their customers. Their high-end sorting technology is developed and built in-house, enhanced with deep learning algorithms and AI. To advance this expertise, they collaborate with leading institutions and universities. Their teams operate worldwide, with offices in Belgium, the Netherlands, Thailand and the United States.



Provisur

Hall 2.1/Booth B -14/www.provisur.com

Provisur, a leading manufacturer of industrial food processing equipment, will present a range of innovative machines at Fruit Logistica. The Provisur booth will highlight the company's modular production systems for potato mash, fruit compote and juice, including advanced refiners such as the STS®, Barracuda®, and Hoegger®. Hoegger refiners deliver maximum yield and reduce operating costs to create potato mash out of soft and cooked potatoes. Known worldwide in potato processing, Hoegger, STS and Barracuda machines are also well suited for separating the hard and soft particles of fruit. Since December 2025, Provisur has been part of Fortifi Foodprocessing Solutions Group, headquartered in Texas.



Tolsma

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.



Tosca

Hall 6.2/Booth D-90/www.toscaltd.com

Tosca is a global leader in reusable plastic packaging and performance pooling solutions. Committed to driving sustainability and innovation across industries, Tosca focuses on supplying innovative packaging solutions for a wide variety of sectors. Tosca's end-to-end pooling capabilities offer a smart and sustainable solution for growers, suppliers, and retailers. By utilising reusable plastic containers and pallets, Tosca not only reduces costs but also enhances supply chain performance.



Tummers Food Processing Solutions

Hall 6.1/Booth B-54/www.tummers.nl

At Tummers Food Processing Solutions, we pride ourselves on being at the forefront of innovation in potato processing technology. With almost five decades of expertise, we develop advanced, sustainable solutions that revolutionize the industry. Our top of the market machinery, including next-generation drum dryers, new blanching systems and zero-emission steam peeling system, significantly enhance efficiency while reducing environmental impact. We tailor our turnkey solutions to maximize productivity and minimize costs, delivering precision, reliability, and value to our global clients. Our commitment to sustainability and innovation drives us to shape the future of food processing!



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Wyma Solutions

Hall 2.1/Booth D-41/www.wymasolutions.com

Wyma returns to Fruit Logistica 2026 with a stand designed to offer visitors a different way to experience post-harvest solutions. Located in Hall 2.1, Stand D-41, the space focuses on comfort, conversation, and clarity, with informal seating, a private meeting room, and a professional barista. A key highlight is Wyma's mixed reality experience, developed with **Fracture Reality**, allowing visitors to step inside complete processing lines and explore system flow, scale, and integration from infeed to outfeed. Wyma's team will be on hand throughout the show to discuss new projects, upgrades, and future planning.



By **Fortifi**
THE BEST FROM EVERY HARVEST

Beyond the Fryer: How Cut Design Determines French Fry Performance

Designing fries to retain heat, crispness, and texture under real foodservice conditions

French fries are no longer judged at the moment they leave the fryer. In today's foodservice and quick-service environments, they are expected to perform under conditions that were once considered secondary: holding cabinets, kitchen delays, staggered service times, and extended waits before consumption.

By Bjorn Thumas, Business Development Director at FAM STUMABO and Emerson Jimémez Barajas, Blade Manufacturing Operations & Food R&D Director at FAM STUMABO

Whether served in a restaurant, handed over a counter or delivered to a customer's door, fries must arrive hot, crisp, and consistent. This shift reflects broader changes in how foodservice operates. Faster service expectations, tighter kitchen workflows, and the continued growth of delivery have fundamentally altered when and how fries are eaten. As a result, quality cannot be defined at a single point in time. It must be designed to last. While coatings, frying techniques, and recipes often dominate discussions of French fry performance, one critical factor remains underappreciated: how the potato is cut. Long before fries enter the fryer, the cut design already determines how heat is retained and how texture evolves after frying. FAM STUMABO, a leader in cutting and slicing solutions, works closely with processors worldwide to address these challenges. By combining cutting precision, application expertise, and long-term customer collaboration, the company supports manufacturers in designing French fry products that perform consistently under real-world foodservice conditions.

WHEN REAL FOODSERVICE CONDITIONS REDEFINE FRY QUALITY

In the past, French fry quality was primarily assessed at the fryer exit. Color, initial crispness, and visual uniformity were the key benchmarks. Today, these criteria tell only part of the story. In real foodservice environments, fries often spend several minutes between frying and consumption. They may rest in holding cabinets, wait on pass-through counters, or sit plated alongside other menu items before reaching the consumer. During this time, temperature drops, steam builds up, and texture begins to change. As Bjorn Thumas, Business Development Director at FAM STUMABO, explains, consistency has become non-negotiable. Consumers do not forgive variation – regardless of the shift, the time of day or the operating conditions. They expect the same eating experience every time. This reality forces processors to rethink where quality is truly defined and controlled. If fries are expected to retain heat and texture beyond the fryer, those characteristics must be built into the product from the very beginning.

WHY THE CUT DECIDES CRISPNESS, OIL UPTAKE, AND PROCESS STABILITY

Once a French fry leaves the fryer, a series of physical processes immediately begins. Heat dissipates, moisture migrates from the core to the surface, and the fry's internal structure either supports or undermines its ability to remain crisp. Cut design plays a decisive role in all of this. One particularly critical





factor is cell integrity. During cutting, the way potato tissue is separated determines how many cells are damaged and how much internal moisture and starch are exposed at the surface. Excessive cell damage accelerates softening during holding, allowing moisture to move more freely and compromising surface crispness. By contrast, a clean, controlled cut helps preserve internal structure. A clean, precise cut prevents feathering. Less feathering means less exposed surface, so fries absorb less oil and come out more consistent. That consistency directly lowers the risk of acrylamide formation. Uniform cutting also stabilises the rest of the process. Blanchers and fryers run more evenly, the line behaves more predictably, and operators face fewer fluctuations or corrections. Shape matters too. Certain cuts

hold coatings or batter better, delivering extra crunch and improving heat retention. This also creates more grip for seasoning, so flavours stick where they should - on the fry, not in the fryer. This is where cutting heads, blade design, and manufacturing precision become central to product performance. Cutting solutions developed specifically for French fry applications are not only about dimensional accuracy; they also address surface quality and internal integrity, which directly affect post-frying behavior.

FROM BLADE DESIGN TO BITE EXPERIENCE

Texture is often reduced to a single attribute: crunch. In reality, it is a complex sensory experience shaped by bite resistance, fracture behavior, and mouthfeel - all of which continue to evolve after frying.

From a processing perspective, texture is engineered long before the fryer. The geometry of the cut, the interaction between blade and potato, and the consistency of the cutting process all influence how a fry behaves when eaten. Certain geometries create structural elements that support a firmer bite and longer holding times, while others promote a lighter fracture and faster breakdown in the mouth. This is also where shapes take on a functional role. Beyond visual differentiation, shapes can influence heat retention, or how fries perform during holding. When treated as functional design tools rather than purely marketing features, shapes become an additional lever for processors seeking to optimize post-frying performance. As Emerson Jiménez Barajas, Blade Manufacturing Operations & Food R&D Director at FAM STUMABO, notes, blade design and cut quality directly affect the surface and internal cell structures. These elements play a key role not only in how texture develops, but in how stable it remains once the fry leaves the fryer.

CUTTING: THE FIRST PERFORMANCE DECISION

Drawing on decades of experience in French fry cutting applications, FAM STUMABO continues to develop cutting solutions that help processors move beyond fryer-focused thinking toward a more holistic, performance-driven approach. By treating cutting as a form of texture and performance engineering, processors gain greater control over what happens after frying, where consumer satisfaction is ultimately decided.

As foodservice environments continue to evolve, the ability to design fries that perform reliably beyond the fryer will become an increasingly important competitive advantage. In this context, cutting is no longer a purely mechanical step. It is where French fry performance truly begins, and where processors can gain lasting control over quality in an increasingly demanding foodservice world. •

Equipment Decisions From Field Intake To Processing Readiness

Raw potato handling upstream of processing is the point at which agricultural variability is converted into something a factory can live with. Before grading, peeling, or cutting begins, the handling system must absorb irregular deliveries, uneven field conditions, and fluctuating volumes without forcing constant intervention or redesign.

By Tudor Vintiloiu

For new processors in particular, this stage determines whether the plant operates as a controlled industrial system or as a series of reactive fixes. The equipment we looked at spans the path from field reception to a processing-ready feed. It is discussed strictly as infrastructure: receiving, conveying, cleaning, buffering, and short-term storage.

RECEIVING FROM THE FIELD: INTAKE AS REGULATION, NOT SPEED

Potato intake is defined by asymmetry. Field logistics dictate when and how potatoes arrive, not the processing line. Loads differ in contamination, moisture, and fill level; delivery peaks often compress into narrow time windows. The purpose of receiving equipment is therefore not to maximize unloading speed but to regulate flow. According to Dewulf, intake systems in the Miedema portfolio

are designed to combine reception with buffering and controlled discharge, allowing downstream operations to draw product at a consistent rate even when deliveries fluctuate. Bijlsma Hercules positions receiving hoppers similarly, emphasizing their role as flow-management devices rather than simple unloading points. Wyma Solutions integrates intake directly into handling line concepts, where reception is treated as the first stabilizing stage. For new plants, the most frequent design error is overestimating the importance of peak unloading capacity. High-capacity intake without proportional buffering creates short, intense surges that overwhelm conveyors and washers, forcing manual throttling. Moderately sized intake paired with buffering typically produces more predictable operation and lower labor volatility, even if trucks wait longer during peak periods.

INTAKE CONFIGURATION: BULK VERSUS CONTAINERIZED RECEIVING

The physical form in which potatoes arrive has immediate implications for intake design. Bulk deliveries prioritize speed and simplicity, while box or bin-based intake emphasizes control and segregation. Bijlsma Hercules and Wyma Solutions both supply box and bin tipping systems intended to integrate with receiving hoppers. According to the companies, these configurations reduce drop height and allow more controlled feeding into downstream handling. Containerized intake is slower per unit of volume, but it supports better lot separation and traceability, which can matter for processors working with multiple growers or varieties. For new processors, the choice is rarely technical. It is dictated by grower practice, transport availability, and seasonal logistics.





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Designing intake around how product actually arrives avoids costly retrofits later.

PRIMARY CONVEYANCE: CONTROLLING COMPLEXITY BEFORE IT ACCUMULATES

Between receiving and cleaning, potatoes move through a zone where complexity accumulates easily and invisibly. Every elevation change, transfer point, or directional shift introduces maintenance, sanitation, and damage risk.

According to Wyma Solutions, intake lines are typically arranged to minimize unnecessary transfers and keep early conveyance compact. Dewulf similarly presents intake layouts where reception, preliminary cleaning, and onward transport are closely coupled. The underlying logic is not proprietary: fewer transitions mean fewer failure points. From an investment standpoint, this is where restraint pays dividends. Straightforward conveyor paths with standardized components are easier to maintain

and adapt than segmented networks built for theoretical flexibility. For startups, accepting a simpler layout often preserves more long-term options than installing elaborate routing that later constrains expansion.

EARLY DEBRIS AND SOIL REMOVAL: PROTECTING THE REST OF THE PLANT

Soil, stones, and clods arriving from the field are not quality variables; they are mechanical and hygienic liabilities. Removing them early reduces wear on washers, lowers contamination of water systems, and simplifies sanitation. Bijlsma Hercules positions receiving hoppers that can be combined with cleaning elements to manage heavy contamination immediately after intake. Wyma Solutions places dry debris removal ahead of wet buffering in its handling concepts. Dewulf similarly allows early cleaning as part of reception and buffering systems. New processors sometimes defer this investment to reduce upfront cost. The consequence is rarely

immediate failure; instead, it appears later as accelerated wear, higher maintenance, and more frequent stoppages. Plants that skip early debris removal often reintroduce it later once downstream costs become visible.

TRANSITION TO WET HANDLING: EXPANDING OPERATIONAL OBLIGATIONS

Once potatoes enter wet handling, the scope of operation changes. Water loops, sanitation protocols, and cleaning regimes expand the plant's operational envelope. According to Wyma Solutions, wet hoppers serve dual roles as buffers and soaking stages, stabilizing feed into washing and separation. Flume-based systems are used to separate stones and heavy debris that cannot be removed effectively in dry stages. Wet handling should be introduced deliberately. While it can reduce mechanical stress and improve cleaning effectiveness, it also increases water management demands and sanitation exposure. For smaller plants,



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limiting wet handling to essential stages can reduce complexity without compromising readiness for processing.

WASHING AS A BOUNDARY, NOT A PROCESSING STEP

Washing sits at the boundary between handling and processing readiness. Its purpose upstream is preparation, not refinement. Wyma Solutions describes washing as part of a sequence that prepares potatoes for inspection, grading, or cutting, rather than as an optimization stage. Dewulf and Bijlsma Hercules similarly frame washing as a necessary conditioning step whose design must align with intake variability.

Over-sizing washing capacity to accommodate rare peak loads often results in underutilized equipment and inflated water systems. Designing washing around realistic average intake, supported by buffering, generally produces better operational balance.

BUFFER STORAGE: DECOUPLING REALITY FROM RHYTHM

Buffer storage is the most important stabilizing element in raw handling. It decouples irregular intake from continuous processing demand. According to Dewulf, intake and storage solutions are designed to allow controlled discharge toward

processing, absorbing fluctuations upstream. Bijlsma Hercules treats storage and handling as a unified system rather than discrete stages. Wyma Solutions positions both wet and dry buffers as flow-regulating elements. For new processors, minimal buffering is technically viable but operationally fragile. Without buffer capacity, every delivery delay propagates directly into processing downtime. Even limited buffering can dramatically reduce operator intervention and stabilize shift planning.

CAPACITY MATCHING: DESIGNING BACKWARDS WITHOUT OVERBUILDING

Handling capacity should exceed processing demand enough to prevent starvation, but not so much that it becomes idle infrastructure. The challenge is alignment, not maximization. All three suppliers discussed here present their handling systems as modular. According to them, intake and buffering can be expanded incrementally as processing grows. This allows new plants to start conservatively and scale without wholesale replacement. The most effective future-proofing strategy is spatial. Leaving room for additional buffers, parallel conveyors, or upgraded washers preserves flexibility at lower cost than installing surplus capacity upfront.

PERSONNEL AND AUTOMATION: WHERE STABILITY MATTERS MORE THAN REDUCTION

Raw handling is labor-intensive, particularly at intake during peak delivery windows. Automation can reduce manual rehandling but does not eliminate staffing needs. According to Wyma Solutions, automation in handling is intended to stabilize flow and reduce manual intervention rather than replace operators entirely. Dewulf and Bijlsma Hercules present systems that still require oversight, especially under variable field conditions. For early-stage processors, selective automation at receiving and buffering usually delivers the highest return. Automating every transfer point before intake variability is understood often creates technical dependency without proportional benefit.

WHAT CAN BE DEFERRED, AND WHAT CANNOT

For new businesses, not every handling element must be installed on day one. Buffer storage, basic cleaning, and controlled intake are difficult to defer without operational consequences. More advanced automation, redundant routing, or expanded washing capacity can often be postponed until intake patterns and growth trajectories are clearer. The key is sequencing. Installing infrastructure that stabilizes flow



first allows later optimization to be targeted rather than speculative.

INFRASTRUCTURE FIRST, OPTIMIZATION LATER

Raw potato handling upstream of processing is successful when it

disappears into the background of daily operation. Its purpose is not to differentiate product, but to make processing predictable. By treating intake, cleaning, conveyance, and buffering as a coherent infrastructure layer - and by sizing it around realistic

supply behavior rather than theoretical peaks - new processors preserve flexibility and reduce the risk of early over-capitalization. When designed conservatively, raw handling supports processing without constraining it. •



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Mercosur, Imports, And Inflation: A New Reality For Eastern Europe's Potato Sector

The fresh potato market in Eastern Europe is undergoing one of the most complex transitions in decades. Long considered a domestically anchored staple sector, it is now increasingly shaped by cross-border trade flows, weather-driven supply shocks, changing consumer habits, and political decisions taken at EU level.

By Tudor Vintiloiu

In 2025 and early 2026, these forces have converged with unusual intensity, exposing structural weaknesses while redefining how prices are formed across the region.

While potatoes remain a strategic crop from the Baltic states to the Black Sea, the balance between local production, imports, exports, and policy intervention has become more fragile. Short-term shortages in major producing countries are colliding with long-term declines in fresh consumption, while the proposed EU–Mercosur trade agreement has elevated agricultural trade policy into a central market risk.

WEATHER SHOCKS AND REGIONAL SUPPLY IMBALANCES

Production volatility remains the primary catalyst behind recent market disruption. According to data from Russia’s Federal Statistics Service reported by national and international media, Russia’s total potato harvest fell to 17.8 million tonnes in 2024, following adverse weather conditions including spring frosts and prolonged rainfall. Output from the organized sector dropped to 7.3 million tonnes, roughly 1.5 million tonnes below the 2023 peak. Estimates for the 2025 harvest remain constrained at around 7.5–7.6 million tonnes.

These shortages translated directly into price inflation. According to the Federal Statistics Service, retail potato prices in Russia rose by more than 50% in the early months of 2025, after nearly doubling during 2024. In response, the Russian government approved duty-free imports of potatoes, carrots, and apples until July 31, 2025. Agriculture Minister Oksana Lut commented publicly on the situation, stating: “We expect potato prices to start falling. In July, we’ll begin harvesting our early crops, plus we’ve got ongoing imports from Egypt and Uzbekistan.”

Russia’s supply gap quickly rippled across neighboring markets. Belarus, tightly integrated into Russian trade flows, experienced domestic shortages as growers redirected volumes eastward to benefit from

higher prices. According to reporting by the Belarusian Ministry of Agriculture and state news agency BelTA, Minsk lifted its ban on importing potatoes and other key vegetables from EU member states on May 27, 2025, citing the need to stabilize domestic supply amid rising food inflation.

UKRAINE: IMPORT DEPENDENCE INCREASES AS EXPORTS RETREAT

Ukraine’s trade figures illustrate how exposed the regional fresh potato market has become. According to data from the State Customs Service of Ukraine published by EastFruit, the country imported 123,140 tonnes of potatoes between January and October 2025. This represented a 5.1-fold increase compared with the same period of 2024. Import value rose to USD 66.086 million, up from USD 13.69 million a year earlier. Poland accounted for 36.9% of import value, followed by Egypt with 13.7% and the Netherlands with 11.6%.

Exports moved in the opposite direction. According to Interfax-Ukraine, Ukrainian potato shipments declined by 13.4% year-on-year to 2,140 tonnes in the first ten months of 2025. Despite lower volumes, export revenues increased by 2.4% to USD 521,000. Moldova remained the main destination, taking 58.5% of exports, followed by Azerbaijan with 38.6%. Monthly data highlights the volatility. According to EastFruit, Ukraine imported just 359 tonnes of potatoes in October 2025, down more than elevenfold from 4,090 tonnes a year earlier. During the same month, exports increased 4.6 times to 269 tonnes. These sharp swings underline how seasonal availability, logistics, and pricing differentials increasingly dictate trade flows.

KAZAKHSTAN’S ROLE AS A REGIONAL STABILIZER

With Russian output constrained, Kazakhstan has emerged as a critical supplier to neighboring markets. According to statements by Prime Minister Olzhas Bektenov cited by

APK Novosti and reported by EastFruit, Kazakhstan planted potatoes on 131,200 hectares in 2025. Average yields reached 22.6 tonnes per hectare, pushing total production above 2.9 million tonnes. As of early December 2025, Kazakhstan had exported 407,000 tonnes of potatoes, more than 90% of which were shipped to Uzbekistan. Imports during the first ten months of the year totaled 201,500 tonnes. Authorities confirmed that Russia’s reduced harvest was limiting its



export capacity and increasing demand for Kazakh potatoes across Central Asia.

To prevent domestic shortages, the government is closely monitoring export flows. According to EastFruit, Kazakhstan operates 977 vegetable storage facilities with a combined capacity of 2.5 million tonnes and has secured domestic supply contracts covering 146,800 tonnes, slightly above estimated national needs. Officials have indicated that temporary export restrictions or quotas could be introduced if market imbalances intensify.



STORAGE CAPACITY AND SEASONAL PRICE FORMATION

Storage infrastructure plays an increasingly decisive role in price formation across Eastern Europe. Countries with limited modern storage and high energy costs remain heavily exposed to post-harvest price pressure, forcing producers to sell immediately after harvest and rely on imports later in the season.

Where monitored storage systems and supply contracts exist, governments retain greater flexibility to smooth market volatility. Kazakhstan's traceability-based stock monitoring contrasts sharply with the more fragmented storage landscape seen in parts of Eastern and Southeastern Europe, where storage losses and financing costs continue to undermine long-term supply planning.

STRUCTURAL DECLINE IN FRESH POTATO CONSUMPTION

Overlaying supply-side pressures is a structural decline in fresh potato

consumption across Europe. According to AgroTimes, consumer demand is shifting decisively toward convenience-oriented formats. Alberto Duque, president of the Interprofessional Potato Association of Castile and Leon, described the change clearly: "Today, people do not consume so many fresh potatoes that need to be peeled and washed at home. Instead, they eat more potatoes of the 4th and 5th ranges, which are already prepared or even semi-cooked." He also noted that inefficiencies and high production costs are distorting trade within the EU, stating: "We buy a lot of potatoes from France, and in Spain we have left the highest production costs." Although yields have improved over the past two decades, total potato-growing area in EU countries continues to decline due to low profitability. France, Belgium, Germany, the Netherlands, and Poland remain the bloc's largest producers, but even these markets are increasingly oriented toward processing rather than fresh consumption.

PROCESSOR CONTRACTS AND MARKET EXPOSURE

In Western Europe, long-term contracts with processors provide growers with a degree of income stability and planning security. In

much of Eastern Europe, fresh-market exposure remains dominant. Where contracts exist, they are often indexed to volatile reference prices or renegotiated under inflationary pressure, limiting their protective effect. This imbalance leaves growers vulnerable on both sides of the cycle: during shortages, contracted producers may miss out on spot-market price spikes, while uncontracted growers face severe price erosion in surplus years. The result is chronic underinvestment in storage, grading, and quality differentiation.

MERCOSUR: TRADE POLICY BECOMES A MARKET VARIABLE

Trade policy has emerged as the most significant strategic uncertainty facing Europe's agricultural markets. In December 2025, farmers staged large-scale protests in Brussels against the proposed EU-Mercosur trade agreement. According to Copa-Cogeca, more than 150 tractors blocked central streets, with up to 10,000 protesters expected in the European quarter. Belgian dairy farmer Maxime Mabilie told reporters during the demonstrations: "We're here to say no to Mercosur," accusing European Commission President Ursula von



der Leyen of attempting to “force the deal through.” Although potatoes are not a primary Mercosur export, protesters fear that increased imports of cheaper agricultural products produced under less stringent environmental and pesticide regulations would undermine European farmgate prices more broadly. French President Emmanuel Macron publicly stated that “we are not ready” and that the agreement “cannot be signed” in its current form. France has coordinated opposition with Poland, Belgium, Austria, and Ireland, while Germany and Spain continue to push for ratification, arguing that the agreement would strengthen the EU’s geopolitical position. According to international reporting, the EU–Mercosur deal would create a free-trade area covering roughly 700–800 million people and around a quarter of global GDP. For Eastern European growers, the concern is less about immediate potato imports from South America and more about regulatory asymmetry and downward price pressure across agricultural markets.

SUBSIDIES, REGULATION, AND OUTLOOK

EU subsidies remain a critical stabilizing factor for potato growers



in Eastern Europe. However, ongoing Common Agricultural Policy reforms and budgetary constraints have introduced uncertainty around long-term support mechanisms. Farmers protesting in Brussels also denounced CAP reforms, arguing that liberalized trade combined with reduced subsidies would undermine domestic production. Florian Poncelet of the Belgian farm union FJA summed up the sentiment during the protests, stating: “We’d like to be finally listened to.”

Looking ahead, Eastern Europe’s fresh potato market faces a period of structural adjustment. Short-term supply shortages in Russia and Belarus have temporarily supported prices, but deeper challenges remain: declining fresh consumption, uneven storage infrastructure, and growing exposure to trade policy decisions. Whether or not the EU–Mercosur agreement is ultimately ratified, the debate has already highlighted how trade policy, once peripheral to the potato sector, has become a central force shaping its future. •

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Surface Science: Engineering Salt Delivery In Modern Snacks

Salt defines the sensory identity of potato chips and savory snacks. It sharpens flavor, enhances crunch perception, and stabilizes shelf life.

By Tudor Vintiloiu

Yet sodium reduction targets, consumer health awareness, and cost pressures have forced processors to rethink how they deliver the same hit of saltiness with far less sodium. The result is a technological shift not in the recipe, but on the surface of each chip.

THE PHYSICS OF PERCEPTION

Traditional salting of potato chips relies on mechanical tumbling or vibratory feeders that dust coarse salt crystals onto the hot product after frying. It is an imprecise process: only part of the salt adheres to the surface, while the rest becomes airborne dust or seasoning loss on conveyors and packaging lines. As a result, processors often over-apply salt to ensure the consumer experiences sufficient saltiness - driving both sodium levels and costs upward. Research and industrial trials show that perceived saltiness depends less on total sodium content and more on where and how salt is deposited. Smaller crystals dissolve faster on the tongue, releasing more sodium ions per gram. Likewise, improving adhesion ensures more of the applied salt

reaches the consumer instead of the factory floor. These physical principles have given rise to a wave of innovations that treat salt application as a precision engineering problem rather than a matter of taste formulation.

MICRONIZED SODIUM: MAXIMIZING CONTACT

Among the most visible of these solutions is MicroSalt®, a patented form of micronized sodium chloride. Its crystals are dramatically smaller - typically less than a hundredth the size of standard table salt. The increased surface area accelerates dissolution in the mouth, allowing snack manufacturers to achieve the same flavor intensity with as much as 50% less sodium. Because the ingredient is still chemically salt, labeling remains straightforward, with no unfamiliar additives. The technology was originally developed for chips and extruded snacks, where surface coating is critical. Fine particles adhere better to oil residues left from frying, resulting in uniform coverage even on ridged or irregular products. The smaller crystals also minimize the gritty texture sometimes associated





with coarse salt grains on light snacks such as crisps or air-puffed products. As a result, processors can use less salt, reduce airborne waste, and maintain consumer satisfaction - a rare combination in sodium reduction strategies.

RE-ENGINEERED SALT GEOMETRY

Another notable approach comes from SODA-LO®, an engineered salt created through a proprietary recrystallization process that forms microscopic, hollow spheres of sodium chloride. These structures deliver the same salty punch at lower dosages because their porous geometry increases the surface area exposed to saliva. Like micronized salt, they dissolve almost instantly upon contact with the tongue, amplifying the perceived intensity of the flavor. Snack processors can blend SODA-LO with standard NaCl and seasoning powders, applying it through existing equipment. The advantage lies in maintaining the same sensory signature while achieving up to 40–50% sodium reduction across different snack formats. For potato chips, where flavor uniformity is critical, the spherical particles spread evenly within seasonings and resist clumping under humidity, improving stability and flow in high-speed dosing systems.

PRECISION APPLICATION: ELECTROSTATIC SEASONING

Even with optimized salt particles, adhesion determines efficiency. A growing number of manufacturers are therefore adopting electrostatic seasoning systems - technology borrowed from industrial powder coating - to ensure more salt sticks to each chip. By giving the snack a mild positive charge and ionizing the seasoning powder negatively, the system creates an electrostatic attraction that draws the salt directly onto the product surface. This “wraparound effect” ensures near-complete coverage and reduces seasoning loss by 15–30%. Because each particle of salt is targeted precisely where it matters, processors can achieve the same sensory impact

with significantly lower sodium application. Electrostatic systems also improve hygiene by minimizing airborne dust and reduce the load on dust collectors and sanitation crews - a win for both food safety and worker comfort.

In combination with fine-particle or hollow-sphere salt technologies, electrostatic application represents a tangible leap in efficiency: the physical science of adhesion, particle charge, and surface area replacing the old practice of over-salting for insurance.

TOWARD SMARTER SEASONING LINES

The convergence of these innovations is reshaping how snack manufacturers think about salt. Rather than altering formulations or resorting to complex flavor modulators, they are refining the physics of delivery - treating salt as a functional coating whose performance can be optimized by particle size, morphology, and electrostatic precision. For potato chip producers, the economic benefits are as compelling as the nutritional ones. Less wasted seasoning means lower material costs, cleaner equipment, and more consistent flavor from bag to bag. As regulatory targets tighten worldwide and consumers continue to expect indulgent flavor without compromise, surface science may prove to be the most practical route to a healthier snack. •



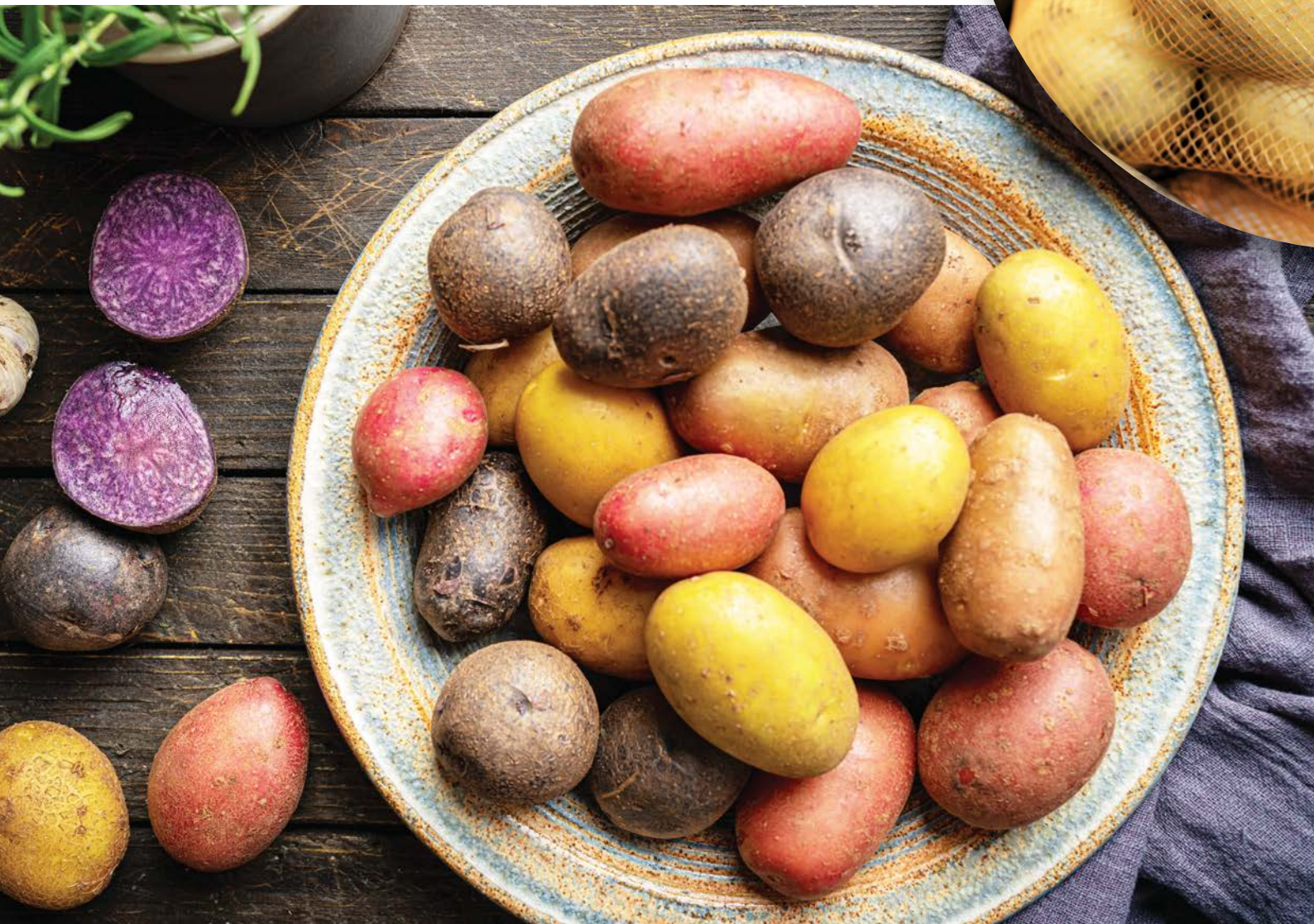
Trying Not to Spoil Things



Jonathan Thomas

Global demand for table fresh potatoes (i.e. those grown and sold for direct consumption, rather than processing applications) remains high. When purchased for direct consumption, a wide range of cooking techniques is used for potatoes, although these can differ according to local culture and cuisine.

By Jonathan Thomas





Some of the most common include boiling, roasting, baking and mashing, all of which result in different tastes and textures, as well as incorporating various other foods within the cooking process. Additionally, table fresh potatoes have a variety of attributes and qualities, which impacts upon how they are transported, stored and packaged. Global supply has kept up with demand in recent years. In 2025, the global harvest was predicted to reach a record high of almost 400 million tonnes, according to data from the Food and Agriculture Organization (FAO). The previous year, worldwide production amounted to more than 390 million tonnes, up by 1% from 2023 and representing an increase of around 6% compared with levels in 2014. Much of the recent increase in worldwide supply can be attributed to increased yields and has occurred

despite a small reduction in harvested areas. Average yields increased to nearly 23 tonnes per hectare, while the harvested area for potatoes amounted to more than 17 million hectares.

In 2024, the Asian region accounted for almost 53% of total potato production, as well as around 54% of the harvested area. China remains the world's leading supplier of potatoes, with output increasing by 1.2% in 2024 to more than 93 million tonnes, while annual production in India (the world's second largest supplier) is now believed to be approaching 60 million tonnes. Indian potato production is concentrated in its northern states such as Uttar Pradesh, Bihar and West Bengal, which benefit from favorable climate conditions and fertile soils.

The world's other leading potato producing nations include Ukraine, the US, Russia, Bangladesh, Germany, Poland and the Netherlands. During 2024, production growth by region was especially high in South America and Oceania, up by around 9% in both instances. Average yields per hectare vary throughout the world – in 2024, these were highest in North America (48.2 tonnes) and Oceania (42.7 tonnes). Output has also increased in France of late, with annual potato production now exceeding 10 million tonnes for the first time.

Some of the most well-developed infrastructure for potato production exists in regions such as Europe and North America. Europe continues to lead the way in terms of production of high-yield potato varieties and sustainable farming practices. In these parts of the world, innovations are emerging geared towards improving potato output and production efficiency – examples have included the application of AI technologies to predict potential disease outbreaks and climatic disruptions in advance, as well as drone-assisted monitoring of potato fields. Elsewhere in the world, investment in agricultural technology is taking place in regions such as Africa.

POPULAR POTATOES & DISHES

A wide range of table fresh potatoes are used for cooking purposes, in the

retail, industrial and foodservice sectors. One of the key attributes is starch, which breaks down into sugars during the cooking process. A high starch content (typically 20-25%) results in a light and fluffy interior for potatoes, as well as a low moisture content and a crispy exterior when cooking foods such as chips and French fries. Medium starch potatoes have a starch content ranging from 15% to 20%, as well as a moderate moisture content, and are especially well-suited to applications such as roasting and mashing. The starch content for low starch potatoes falls to 10-15%, resulting in a firm texture and a smooth, creamy mouthfeel. These are often used in the preparation of foods such as boiled potatoes and potato salads, as they hold their shape well.

In markets such as the UK, high starch potatoes such as Maris Piper and King Edward are common choices when cooking. Other popular potatoes with consumers include medium starch types such as Yukon Gold and Desiree, as well as low starch varieties such as Jersey Royal, Charlotte and Wilja. The market also encompasses red and purple potatoes (e.g. Purple Majesty and Red Rooster) resulting from the presence of anthocyanin pigments. Frequently, these less common potatoes offer unusual tastes (e.g. earthy/nutty) or textures (e.g. waxy), thereby catering towards more discerning consumers seeking something different.

As befits a staple food, demand for potato-based dishes amongst the world's population remains high. Not only are potatoes convenient, versatile and affordable, but they offer a range of health benefits. For example, potatoes are rich in vitamin C, calcium and potassium, as well as having links with improved digestive health. Furthermore, they are also ideally positioned to capitalize on the recent growth in popularity of plant-based diets in many parts of the world, as more people eschew meat due to concerns over animal welfare and for various health reasons. Globally, there are currently thought to be around 88 million vegans at present, equivalent to 1.1% of the total population, although some sources claim the percentage is closer



fresh potatoes, in the wake of research carried out that indicated consumers

wasted an average of GBP387 of food per annum.

The discount retailer urged shoppers to store potatoes in the fridge or, alternatively, a cool and dark environment (which has been shown to make them last up to three times longer), or even to freeze them.

To reduce the likelihood of spoilage and therefore food waste, retailers should store fresh potatoes in cool, dark and well-ventilated areas, ideally at a temperature of between 7-10°C. Potatoes should also be stored away from direct sunlight, since this helps to prevent them from greening, as well as separately from other types of fruit and vegetables – for example, onions release ethylene gas, which makes potatoes spoil quicker. It is also recommended that fresh potatoes are not kept in sealed containers, as these can trap moisture and gas, thereby accelerating spoilage.

Many food and grocery retailers follow a 'first-in, first-out' (FIFO) rotation system as far as fresh produce is concerned. This ensures that older potatoes are sold before their newer equivalents. Other merchandising trends apparent within the potato sector include offering a variety of different potato varieties and packaging sizes to address the wide range of consumer demands, as well as pairing fresh potatoes in-store with complementary items, examples of which include herbs and seasoning blends. Much of the packaging which appears in the retail market for fresh potatoes focuses upon extension of shelf-life and eliminating the risk of spoilage. Modified atmosphere packaging (MAP) is used for fresh produce items largely for this reason, as potatoes react relatively quickly to air, heat, moisture and microbes. The use of plastic films in packaging can also assist in reducing moisture in packaging, with materials such as

to 3%. Globally, the share of the total population taken by vegans is highest in India and Mexico, at around 9%, decreasing to 5% in Israel and Canada. India also has a high percentage of vegetarians, at 30% of the population. The number of flexitarians (i.e. people who primarily follow a plant-based diet but occasionally eat meat or fish) is also increasing in many parts of the world. One of the most popular potato-based dishes in many western markets is fish and chips, especially in countries such as the UK, Ireland, Australia and New Zealand. Consumer penetration of fish and chips in these places remains high, although the number of specialist outlets in the UK continues to decline and the dish faces strong competition from rivals such as ethnic foods. Although opinions differ, varieties such as King Edward and Maris Piper are considered the best potatoes for making chips, due to their high starch and low moisture levels – this results in a crisp exterior and a light and fluffy interior. For similar reasons, starchy potatoes are also considered a suitable option for dishes such as wedges. Mashed potato also occupies a strong position in consumer diets, regarded as a versatile and comforting side dish. It is frequently paired with

sausage in Bangers & Mash or used as an ingredient for dishes such as Shepherd's Pie and Colcannon (an Irish recipe made from mashed potatoes and either cabbage or kale). Varieties such as Maris Piper, King Edward and Russet are widely regarded as the most suitable for making mashed potato, mostly on account of their floury and fluffy nature, although qualities such as flavor and texture also come into consideration. These types are also widely used in the preparation of dishes and foods such as Jacket and Roast Potatoes.

RETAILING & PACKAGING

Retailers throughout much of the developed world have specific guidelines regarding the optimal stocking and storing of potatoes. Much of this is geared to preventing spoilage or damage, which can lead to food waste – in the UK, for example, it is estimated that over 8 million potatoes purchased by households are thrown away every day, equivalent to 41% of total volume. Around 750,000 tonnes of potatoes become food waste in the UK every year, while they represent the third most wasted food in the country, trailing only bread and milk. During May 2025, Aldi's UK business issued advice for shoppers purchasing

polypropylene (PP) and low-density polyethylene (LDPE) popular options. Furthermore, the adverse effect of light on potatoes means that packaging formats often incorporate darker colors, such as black and green.

Some of the most popular packaging formats within the table fresh potatoes market include plastic film bags, folding boxes, paper bags, woven and net bags and paper-based film. The most suitable packaging applications combine ventilation (to prevent the buildup of humidity), moisture control and protection from light. In contrast, airtight plastic packaging is regarded as unsuitable, as it traps moisture and encourages spoilage. In the US market, consumer bags now account for up to 50% of fresh potato packaging for the Idaho-based producer Eagle Eye Produce. Sustainability also continues to influence packaging design for fresh potatoes. This remains a key consumer concern – a 2024 report by

Aquapack on packaging for FMCG brands in the UK found that 37% of respondents were very concerned about the use of plastic packaging and the presence of microplastics in oceans, while 63% were quite concerned. Furthermore, 92% planned to stop using plastic in their consumer packaging and switch to paper instead. Some of the reasons for this intended move included reputational damage for their brands (70%) and a possible loss of market share to competitors (60%). Across the world, there have been moves to improve sustainability in packaging for fresh potatoes. In 2023, the Australian potato producer Mitolo Family Farms announced a partnership with supermarket group Coles and packaging manufacturer Detpack to create a new recyclable paper bag for fresh potatoes, which reduced plastic use by 64%. More recently, Walmart and Emerald Packaging brought out a new type of packaging for the US potato industry

in October 2025. This consisted of a new plastic bag with a post-recycled content (PCR) of 30%, the first of its kind on the market. The move formed part of Walmart’s Project Cigaton, which aims to cut greenhouse gas emissions throughout its global supply chain by one billion tonnes by 2030. Another area of innovation within the market has been the adoption of on-pack promotions to engage with consumers. At the start of 2025, new packaging was introduced in the UK market for the Albert Bartlett range of fresh and chilled potatoes, which carried imagery from the acclaimed A Minecraft film released shortly afterwards. The new packaging also incorporated a promotion with a QR code, offering consumers the chance to win various merchandise and prizes related to the new film. Fresh potatoes featuring the new packaging included Original Rooster and Butter Gold varieties. •



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PIONEERING INNOVATION SINCE 1950

Sprout Suppressants: Storage Decisions With Processing Consequences

Sprout suppression is no longer a secondary consideration in processing potato storage. Since the withdrawal of chlorpropham (CIPC), storage strategy has become a determinant of processing performance, regulatory compliance, and available capacity.

By Tudor Vintiloiu

Choices related to sprout inhibitors, temperature regimes, ventilation discipline, and atmospheric control now directly influence fry color stability, intake flexibility, and the economic viability of long-term storage. For processors operating year-round supply models, storage is a controlled system with limited tolerance for error. Variability introduced during storage is carried forward to the processing line, where it manifests as inconsistent fry color, restricted blending options, higher rejection rates, and

reduced throughput. At the same time, storage operators are navigating tighter residue monitoring, higher energy costs, and infrastructure constraints inherited from the CIPC era. The result is a storage environment where sprout control is no longer about suppressing growth alone, but about managing risk across the entire processing chain.

VENTILATION AND CO₂ MANAGEMENT AS OPERATIONAL CONSTRAINTS

Regardless of the sprout suppression method used, ventilation has become a critical operational requirement in processing potato storage. Respiration-driven CO₂ accumulation occurs in all stores, but the use of gas-based sprout suppression systems and gas-tight infrastructure increases the need for disciplined degassing before intake. Elevated CO₂ concentrations affect tuber condition and can interfere with sugar management, increasing the likelihood of fry color deviation. From an operational standpoint, CO₂ levels must also be reduced to ensure safe working conditions during loading and inspection.

For processors working to tight delivery windows, the need to ventilate stores prior to dispatch introduces a non-negotiable conditioning phase that must be

planned into supply schedules. This requirement has practical implications. Stores designed for ethylene or other atmospheric treatments cannot be switched rapidly from storage to intake without sufficient purge time. In peak processing periods, inadequate ventilation capacity can become a bottleneck, limiting the speed at which stored volumes can be released to the factory.

TEMPERATURE STRATEGY AND ITS IMPACT ON PROCESSING QUALITY

Temperature remains one of the most influential variables in sprout control, but also one of the most sensitive from a processing perspective. Lower storage temperatures reduce sprout pressure and can extend storage duration, but they increase the risk of cold-induced sweetening. For processors, the accumulation of reducing sugars during storage translates directly into darker fry color and greater difficulty meeting customer specifications. As a result, most processing potatoes in Europe are stored at temperatures that deliberately trade some sprout pressure for sugar stability. This approach reduces the severity of reconditioning requirements later in the season but increases reliance on sprout suppressants to maintain control over longer storage periods. Where refrigeration is used aggressively as a primary sprout control tool, energy consumption rises sharply and the need for temperature reconditioning becomes more pronounced. Rewarming phases introduce additional handling complexity and reduce operational flexibility. In practice, refrigeration alone rarely provides a viable long-term solution for processing potatoes without supplementary sprout inhibition.

CIPC AS A LEGACY CONSTRAINT ON STORAGE CAPACITY

Although CIPC no longer plays an active role in sprout suppression, its regulatory and infrastructural legacy continues to shape storage strategy

across Europe and the UK. Persistent residues in stores with a history of CIPC use have required regulators to introduce temporary Maximum Residue Levels (tMRLs) to prevent large-scale loss of storage capacity. In the UK, the CIPC Residues Monitoring Group has repeatedly highlighted the importance of continued residue monitoring. Data submitted to the Health and Safety Executive's Chemical Regulation Division shows that while detectable residues are declining, they have not yet disappeared entirely from all historically treated stores. Adrian Cunnington, Chair of the CIPC Residues Monitoring Group, has warned of the consequences of losing regulatory flexibility: "It is hard to overstate the challenge if we lost our storage capacity; it would be devastating for the industry." His statement reflects a broader concern shared across the sector. Without sufficient data to justify temporary thresholds, regulators could revert to default detection limits that would render many stores unusable, regardless of current sprout control practices. Belgian monitoring data points in the same direction. According to Belgapom, 92% of warehouse samples taken during the 2023–2024 storage season contained no measurable trace of CIPC, with remaining residues below the applicable tMRL. While this confirms a downward trend, it also explains why regulators continue to rely on structured monitoring programmes rather than declaring the issue resolved.

THE POST-CIPC SPROUT SUPPRESSION LANDSCAPE

1,4-DMN-Based Products

1,4-dimethylnaphthalene (1,4-DMN) has become one of the most widely adopted chemical sprout suppressants for processing potatoes in Europe. Applied via thermal fogging, it reinforces natural dormancy mechanisms rather than destroying sprout tissue.

From a processing standpoint, DMN's key advantage is its compatibility with established temperature regimes and its

relatively neutral impact on fry color when applied correctly. However, it requires repeated applications over long storage periods, and its performance is sensitive to airflow patterns, store loading density, and application timing. Inconsistent application can result in uneven sprout control, creating variability within lots that complicates intake management.

Ethylene-Based Systems

Ethylene-based sprout suppression has gained traction as a residue-free alternative, particularly in the UK. Ethylene suppresses sprout elongation rather than initiation and must be maintained at controlled concentrations throughout the storage period. Biofresh Safestore has been a prominent supplier of ethylene systems for potato storage. According to Jeremy Barraclough, Operations Director, "Since we completed our first Safestore system installation in 2004, we have gone on to install systems treating more than half a million tonnes of potatoes at farms and potato stores across the UK, Europe and further afield." For processors, ethylene's residue-free profile reduces regulatory exposure, but its use imposes specific infrastructure and management requirements. Gas-tight stores, continuous monitoring, and careful ventilation planning are essential. Ethylene can also influence sugar dynamics if storage conditions are not tightly controlled, making disciplined temperature management critical.

Essential Oils

And Short-Term Solutions

Essential oil-based suppressants, including spearmint-derived products, are used in some regions as supplementary or short-term solutions. Their rapid degradation and limited persistence make them less suited to long-duration storage for processing varieties, particularly where consistent fry color must be maintained across extended supply windows.

CONTROLLED ATMOSPHERE TECHNOLOGIES AND PROCESSING OUTCOMES

Beyond chemical suppressants,

controlled atmosphere technologies are increasingly positioned as part of integrated storage strategies. Systems such as Restrain's InhibitR™ use targeted atmospheric control to suppress sprouting without leaving chemical residues.

Independent research commissioned by Restrain and conducted by the Chambre d'Agriculture du Nord-Pas-de-Calais examined fry color performance in processing potatoes stored under conventional DMN treatment and those managed using InhibitR™ technology. The study covered two processing varieties, Fontane and Markies, across four commercial stores in northern France.

The research found no statistical difference in fry color between the two treatments across multiple assessments during the storage season. Fry color indices remained within processor specifications, even during periods of elevated sugar levels, with both systems returning to target values by late storage. The Chambre d'Agriculture concluded that InhibitR™ performed equivalently to DMN in maintaining fry color and long-term storage quality.

For processors evaluating alternatives, such data is critical. Fry color equivalence removes one of the main barriers to adopting non-chemical systems, shifting the decision towards infrastructure cost, operational complexity, and compatibility with existing storage assets.

REFRIGERATION VERSUS SPROUT SUPPRESSION: AN INTEGRATED APPROACH

In operational terms, refrigeration and sprout suppression are not competing strategies but interdependent tools. Refrigeration reduces metabolic activity and slows sprout development, while suppressants address the residual risk that temperature control alone cannot eliminate.

Excessive reliance on refrigeration increases energy exposure and heightens the risk of cold-induced sweetening. Excessive reliance on suppressants increases application frequency, cost, and regulatory scrutiny. Most processing storage



programmes therefore adopt a balanced approach, combining moderate temperatures with carefully selected sprout control technologies aligned to variety and storage duration.

Energy price volatility has intensified this calculation. In some cases, operators are reassessing whether slightly higher storage temperatures combined with more active sprout suppression offer a better cost and risk profile than deep cooling strategies.

INFRASTRUCTURE INVESTMENT AND THE ROLE OF RESEARCH

As regulatory scrutiny increases, data-backed validation has become central to storage decision-making. New research facilities are being developed to support this shift. In Germany, DormFresh and TASC International have established a high-tech potato storage research center designed to conduct controlled trials on sprout inhibitors and storage conditions.

Lars Willem Köpp, Managing Director of TASC International (Germany), described the facility's role as "bridging product development with commercial reality," emphasizing the need for solutions that perform consistently under commercial processing conditions rather than only in experimental settings.

Such facilities reflect a broader industry shift toward evidence-based storage management, where sprout control strategies are evaluated not only on efficacy, but on their downstream impact on processing quality and operational resilience.

INTERNATIONAL CONTEXT BEYOND EUROPE

While Europe has led regulatory change, similar pressures are emerging in other processing regions. In the United States and Canada, processors are diversifying sprout control strategies in response to customer requirements and export market expectations. In Australia, where storage durations are often shorter, European developments continue to influence technology adoption for processing varieties destined for frozen and snack markets. Across regions, the common thread is the growing recognition that storage decisions must be aligned with processing outcomes rather than treated as isolated post-harvest practices.

STORAGE AS A PROCESSING VARIABLE

In the post-CIPC environment, sprout control has become a processing variable rather than a background storage function. The interaction between temperature, atmosphere, ventilation, and suppression technology determines whether potatoes arrive at the processing line within specification or introduce variability that must be managed downstream. There is no single replacement for CIPC, and none is likely to emerge. Instead, processors and storage operators are assembling integrated systems tailored to variety, storage duration, energy cost, and regulatory exposure. Those systems that succeed will be the ones that deliver predictable processing performance while preserving storage capacity in an increasingly constrained regulatory landscape. •

2026 FEATURE PLANNING

1

JANUARY/FEBRUARY

Ad closing 14.01/Publishing 28.01



FRUIT LOGISTICA SPECIAL EDITION

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
PEF Applications and Advantages

Spotlight

Raw Product Handling

Markets

Eastern Europe

Products

Freshly Packed Potatoes: Delivering Quality from Field to Shelf

Ingredients

Salt

Storage Special

Potato Monitoring & Quality Assurance
Sprout Suppressants in Storage

Trade shows: Fruit Logistica, 04-06 February 2026

2

MARCH/APRIL

Ad closing 09.04/Publishing 23.04



FRUIT LOGISTICA SPECIAL EDITION

Key Exhibitors Road Map and Event Agenda

Processes

Cutting Accuracy and Equipment Reliability
Process Monitoring

Expert View

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

Spotlight

Smart Production/IoT/Industry 4.0

Markets

North America

Products

Specialty Potato Products: Catering to Gourmet and Niche Markets

Ingredients

Better for you/Clean Label

Storage Special

Automated Climate Control
Sensors and Data Gathering

Trade shows: Interpack, 07-13 May 2026

3

MAY/JUNE

Ad closing 20.05/Publishing 03.06



SNACKEX SPECIAL EDITION

Key Exhibitors Road Map and Event Agenda

Processes

Efficient Freezing Technology
Starch and By-products Processing

Expert View

Complete Lines for Processing, Cutting and Hydrocutting
Batch vs. Continuous Frying

Spotlight

Food Safety

Markets

APAC/ANZAC

Products

Chips and Crisps: Meeting Consumer Cravings with New Flavors & Formats

Ingredients

Frying Oils

Storage Special

Power Saving and Sustainability
Disease Management

Trade shows: Snackex, 17-18 June 2026

4

JULY/AUGUST

Ad closing 12.08/Publishing 26.08



POTATO EUROPE SPECIAL EDITION

Key Exhibitors Road Map and Event Agenda

Processes

Conveying Systems and Belts
Seasoning & Coating

Expert View

Drying Technology Advancements
Remote Maintenance and Customer Service

Spotlight

Supply Chain Management & Logistics

Markets

South America

Products

Potato Flakes: The Unsung Hero of Convenience Foods

Ingredients

Seasonings for Chips and Fries

Storage Special

Storage Challenges and Cost-saving Solutions
Handling Potatoes to & from Storage

Trade shows: PotatoEurope, 09-10 September 2026

5

SEPTEMBER/OCTOBER

Ad closing 16.10/Publishing 23.10



INTERPOM SPECIAL EDITION

Key Exhibitors Road Map and Event Agenda

Processes

Blanching, Frying
PEF Systems

Expert View

IQF Freezing for French Fries
Pulsed Electric Field (PEF) Processing

Spotlight

The Road to Sustainability

Markets

Western Europe

Products

Frozen French Fries: The Everlasting Favorite in Foodservice & Retail

Ingredients

Batters/Coatings

Storage Special

Storage Design and Construction
Potato Monitoring & Quality Assurance

Trade shows: Interpom, 29 November - 01 December 2026

6

NOVEMBER/DECEMBER

Ad closing 11.11/Publishing 25.11

Processes

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

Expert View

Sustainability in Production
Conveying And Product Transport

Spotlight

Increasing Production Capacity
Future-proofing Processing Operation

Markets

Global Market Predictions for 2027

Products

Extruded Potato Snacks: Shaping the Future of Healthy Snacking

Ingredients

Stabilizers/Functional additives

Storage Special

Store Preparation and Hygiene
Bulk vs. Boxed Storage

Trade shows: Preview of 2027 Event Calendar



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