



Planning Ahead for a Healthy Expansion

Modernizing and upscaling operations to meet the latest spike in consumer demand is no easy task for any processor, and to ensure its success, a few things should be considered. Certain manual processing steps may be proven and effective, but they may not be enough to keep up with an increasingly stringent regulatory environment and fierce industry competition.

By Tudor Vintiloiu

When increasing production capacity, potato processors need to fully understand inefficiencies in their supply chain and identify bottlenecks. Before strategically growing production, producers must bring their systems up to date so they can handle the additional throughput. Scaling entails more than just gaining more throughput and speed. Finding the ability to control

various core elements like sorting parameters and process adjustments in real-time is crucial. According to experts, it's important to invest upfront in a strong supply chain plan in order to prevent disruptions caused by seasonality, changing consumer preferences and global crises. Producers should consider if they have enough equipment and personnel to manage increased production and if products have enough shelf life to sustain the timeframe of production.

AUTOMATION

One way to streamline production and grow the business is to automate key processes in the manufacturing operation. Major actors in the sector have been dealing with automation for years, thereby making the technology more available and affordable. Smaller players might not have had the financial strength to invest in such technology in the past, but as the equipment needed becomes more user-friendly and

affordable, the time for smaller companies to invest in automated systems is already here. Tuber processing technology has in many cases not been changed radically over the last decades, so modernizing older equipment might be a more affordable way to automatize production. Labor costs are reduced by investing a fraction of the cost compared to new equipment. The modernized machines might not be as future-proof as newer machines, but it gives companies without the financial strength to invest in new machines the possibility to compete with modern automated production lines. The cost of modernizing the system controls is most likely not going to be anywhere near the cost of buying a new system. If the system already in use is estimated to last for a long time, a profitable solution would be to replace the system control with modern equipment, thereby giving the company a more cost-efficient way to modernize and automate its production line. The age of digitization has introduced a new era; one where the latest technology, such as the IoT (Internet-of-Things) is transforming how companies operate. These technological

advances have the potential to improve not only the potato processing industry's efficiency but also the consumer experience. Maintenance and repairs are made simpler through IoT, as a fault can easily be identified by the intuitive user interface (UI) and addressed quickly by staff. Beyond operational benefits, IoT can ease the burden administrative jobs put on staff, while also creating a training experience that is standardized, effective, and fast. Through IoT, employees can, for instance, access automatically generated reports via tablets, or use a smartwatch to manage issues along the supply chain. Eliminating variations in training and ensuring that every new employee learns the same information, in the same way, can also have a positive impact on productivity. A processor can be constantly connected to a solution provider's expertise. The actors in this sector already have the sensors in place, collecting data. Cloud-based management, or the digital relationship, can enable a back-and-forth flow of information analytics between the processor and the provider. Both can see a dashboard that centralizes and synthesizes data in real-time for

meaningful insights. IoT data management interconnects information to help customers realize new business models, optimize internal processes and achieve major cost savings. It allows customers to take advantage of process knowledge, full time, and make it sustainable.

DATA ANALYSIS

The collection of any data should be backed by a concrete purpose, Urschel's experts point out. The gathering of data is futile without a comprehensive plan. Mega-processors can analyze the solid nature of the potatoes, water use, starch loss, cut quality, and multiple comparables to increase cut quality, evaluate the sharpness and life of different knife blades, and determine cost analysis across the production line.

As a processor grows in volume, the customer may choose to invest with the help of a line builder to increase electronic sensors and gather analytics at each step of the line. Analysis of data to determine an upgrade in technology may be simple or more complex. For example, in the case of several kettle chip processors who performed a side-by-side comparison for kettle fill times



between the Urschel standard 8-station head versus the MicroAdjustable SL14-station head. Calculations based on several batches and fill times were easily achieved. Further cost analysis and comparison of maintenance procedures and time yielded upgrading to a newer technology - the 14-station head - as a logical next step to improve the line. Upgrading technology in one area of the line may lead to changing out of other stations. For example, standard chippers updating to the SL14 slicing head, in some cases, purchased larger capacity downstream equipment, such as fryers. Cost efficiencies are linked to some variables, the company's engineers added. Items listed on a spreadsheet, will reveal the cost of oil and potatoes, is closely linked to the type of potato being processed. Potatoes sold for chips/crisps are more expensive than those sold for fries. "Could this change in the future?" Urschel's representatives asked themselves. Fry producers repurpose scrap into a multitude of other value-added potato products. Building on these products will continue to deliver strong profits in subsequent years. The Comitrol Processor series line by Urschel will remain a popular option for the

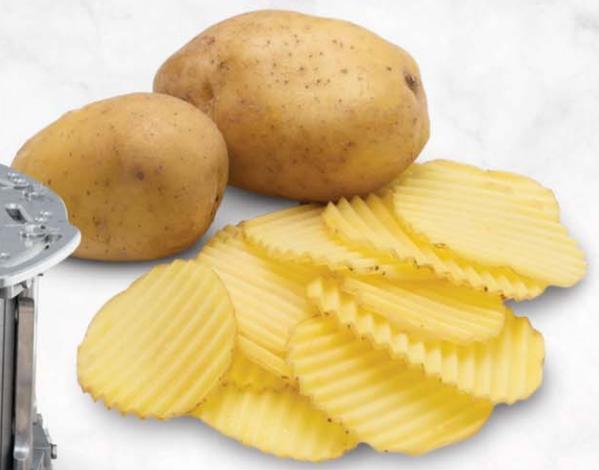
further reduction of potatoes. With several different models from which to choose, products may be reduced to coarse or fine purees. The line focuses on particle size reduction. A reduction head in a fixed position works with a high-speed impeller that precisely and incrementally shears the product to a specified target size. More customers are becoming aware of the overall analysis of plant line operations. Processors may choose to embrace the gathering of analytical data. The more data that is gathered, the more in-depth decisions may be possible to increase plant efficiencies. The goals may be straightforward or more elaborate. The first step is to determine what types of improvements are necessary and to ascertain how to quantify the various objectives.

AN EXCITING FUTURE

The processes of producing a frozen French fry or a potato chip are the same today as they were 40-50 years ago. During these years, important improvements have been introduced such as multi-flow frying systems, 3-step washing systems, multi-turbulent blanching, pulse electric field technology, possibility of defatting products

and other. Alternatives to frying in vegetable oil can today offer options, such as hot air expansion or salt roasting. Rosenqvists, as well as other suppliers, can certainly offer more versatile processing solutions, which are safe and easy to use and secures a satisfactory level of food safety. Thanks to this evolution, new innovative products are launched to meet consumers' interest in new products. We can see the interest in new raw materials, re-discovering traditional organic ingredients and a continued focus on health aspects. But the question how we will produce a French fry or potato chip forty years from now is a tough one? "The honest answer is that I don't know", says Sales Manager Fredrik Rönnerberg at Rosenqvists Food Technologies. "We work in a very exciting industry and we will see what the next steps will be. We will most probably see more usage of large data collections and automatic systems supporting our clients to optimize processing operations and maintenance. I believe we can do more to lower cost, monitoring and maintaining product quality and save both energy and water. In the end, our job is to make it easy and efficient to use our processing equipment." •





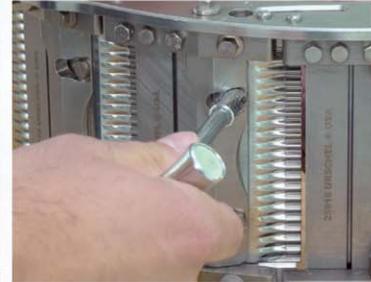
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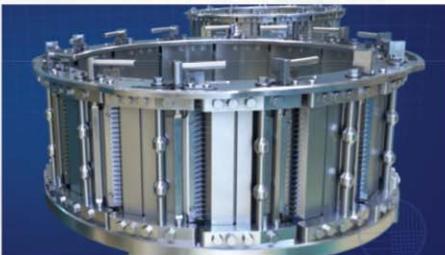


TIGHTEN

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