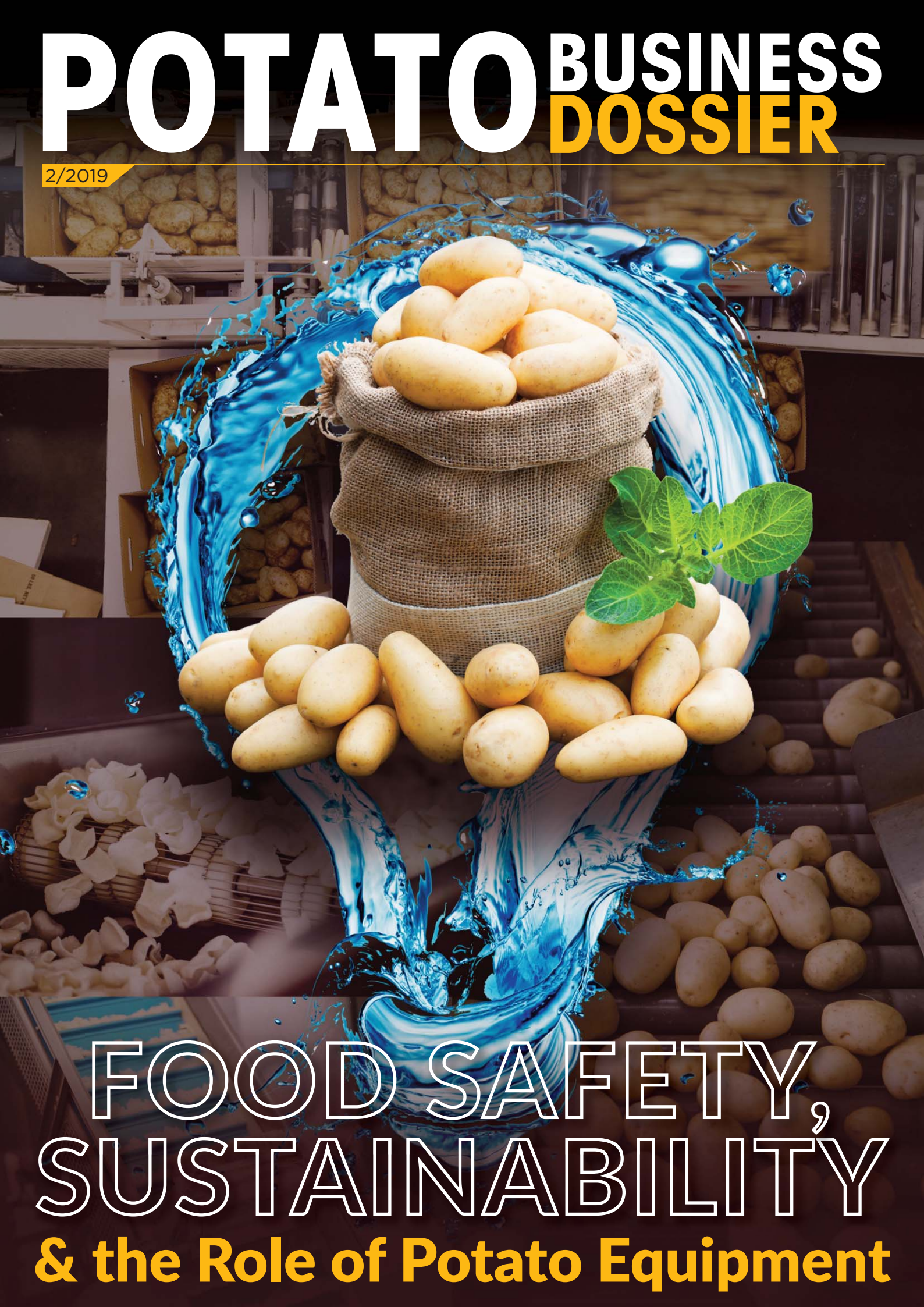
POTATO BUSINESS DOSSIER
2/2019



FOOD SAFETY, SUSTAINABILITY

& the Role of Potato Equipment

Urschel Dicers: Clean by Design

Research and development play a major role in the designing and manufacturing of Urschel food cutting equipment. Food safety is inherent in the overall process. Processors appreciate the high capacity output symbiotic with precision cutting action, but also key to the design and manufacturing are the crucially-engineered hygienic, sanitary elements.

By Mike Jacko, vice president of Applications & New Product Innovation

Cleanability of any commercial cutter is vital in food safety, as well as reducing technical issues, and maintaining ideal cut quality to provide end-product within the optimal targeted goal, resulting in increased profitability. Listening to potato processors and other food processors in developing cutting equipment is intrinsic. Commercially processed potatoes are an ever-growing global market. According to the Center of International Potatoes, factory-made French fries is estimated at 7 million tons a year. Delivering the best product to consumers at high profit margins requires many checks and balances by processors throughout production runs. Processors put their trust in durable, solid built manufacturing machinery in today's highly competitive potato industry. Potato processors are responsible for establishing and implementing cleaning protocols to fit their specific environment, so the purchasing of capital equipment, such as a commercial dicer, should be thoroughly evaluated to determine SSOPs (Sanitation Standard Operating Procedures). Any type of potato line, in terms of cutting machinery,

will need to address ongoing starch and potato-specific issues.

ON THE OUTSIDE LOOKING IN

Stainless steel exteriors on Urschel cutting equipment withstand routine washdown procedures. Sloped sheet metal inhibits product and liquid collection to deter growth of unwanted microbes. Smooth, sanitary surfaces without any pits or cracks. Machine exteriors contain expert continuous welds polished to food-grade standards. Contact surfaces (exterior and interior) should be nonreactive, noncontaminating, noncorrosive, and, therefore, truly cleanable in a durable design.

While processors are incharge of their own SSOPs, it is advisable at the end of a run, that the dicer should be thoroughly washed down to prevent potential starch build-up, which, over time would prove much more difficult to remove. Failure to perform routine washdowns could result in starch build-up to a degree that may inhibit machine performance or accessibility to hinged and sliding panels.

Accessibility is vital to successful washdowns. Full access must be granted to all areas of the machine where starch or potato fragments may have collected. Hinged and sliding panels provide a sanitary approach, so sheet metal is safely out of the way without having to rest on the floor. Cleaning agents and methods may obtain full contact with these areas. Complete visual inspection is also mandated in a successful design.

GET IN THE ZONE

Distinct zones contribute to overall sanitation. The hygienic cutting zone path is completely separate from any mechanical components to avoid contamination between these two areas. The cutting zone offers complete access to assess a full visual review and opportunity to disengage all parts for thorough cleaning. This also provides the convenience to remove any potential potato fragments. Over time, potato fragments may collect throughout production runs, and if not kept in check, there is a potential for these to block infeed or impede the cutting process. Routinely checking the cutting zone path may result in less downtime and lend to cost-savings.

Similar to the exterior surfaces, the interior cutting zone is smooth and durable in design. Cutting parts fit tightly with product moving rapidly to mediate accumulation throughout the process. There are no exposed threads on any fasteners to limit niches.

Starch build-up in this area needs to be addressed routinely in the SSOP. All cutting parts should be taken apart, thoroughly cleaned and sanitized, and reassembled to the original tight tolerances. Failure to remove starch within these components can lead to reduced cutting action.

Many processors are choosing to replace older cutting machinery with newer equipment. In their analysis, retrofitting older capital equipment is usually more costly in terms of time and money, versus a new purchase.

Such factors as longer machine life, lower costs associated with cleaning (in terms of labor and time), potentially reduced water and chemical usage, and overall food safety and maintenance.

Inaccurate starch removal can also lead to a wide array of mechanical issues or tight tolerances of integral parts being compromised. Focused cleaning should be taken especially in critical knife areas. Ease of disassembly and reassembly of interior cutting zone parts with simple-to-use, provided tools offers time-saving efficiencies. Some interior cutting components themselves have built-in handles or cantilevered design. Visually checking these areas between routine cleanings may also be beneficial to guarantee quality of cuts and cutting. Sandy soil and an occasional rock inherent to potato processing will also need to be taken into consideration. Keeping knives sharp, routinely changing out knives, and being aware and prompt in the event of a crash.

TRENDING

A number of food processors are incorporating CIP (Clean in Place) procedures. While this may be acceptable, depending on your SSOP, emphasis should be on precleaning the overall machine surfaces, then ensuring any starch or residual is thoroughly removed. Best practices recommend complete disassembly and thorough cleaning/sanitizing of individual parts. Cleaning stations assist in proper cleaning procedures and offer many benefits. Many processors are choosing to replace older cutting machinery with newer equipment. In their analysis, retrofitting older capital equipment is usually more costly in terms of time and money, versus a new purchase. Long-term benefits more than pay for themselves compared to the initial investment. Such factors as longer machine life, lower costs associated with cleaning (in terms of labor and time), potentially reduced water and chemical usage, and overall food safety and maintenance.

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million tons a year is the estimated figure of factory-made French fries, by the Center of International Potatoes.

A RICH HISTORY

As the global leader in food cutting technology, Urschel continues to lead the world in the manufacturing and selling of commercial cutting equipment to the food processing and allied industries. The company continues to expand around the globe to grow alongside this ever-changing, dynamic industry, while maintaining its headquarters and manufacturing facility in northwest Indiana, centrally located in the heart of the United States.

Increases in productivity, energy-saving machinery, cleaner, more precise cuts, and developing new cut shapes, are just a few ways Urschel continues to rise to the demands of this dynamic industry. Throughout its 100-plus year history, Urschel has built on continuous research and development in determining the most innovative cutting methods combined with leading-edge manufacturing practices, and that is why we have retained 'Laboratories' as part of our company name. ■