

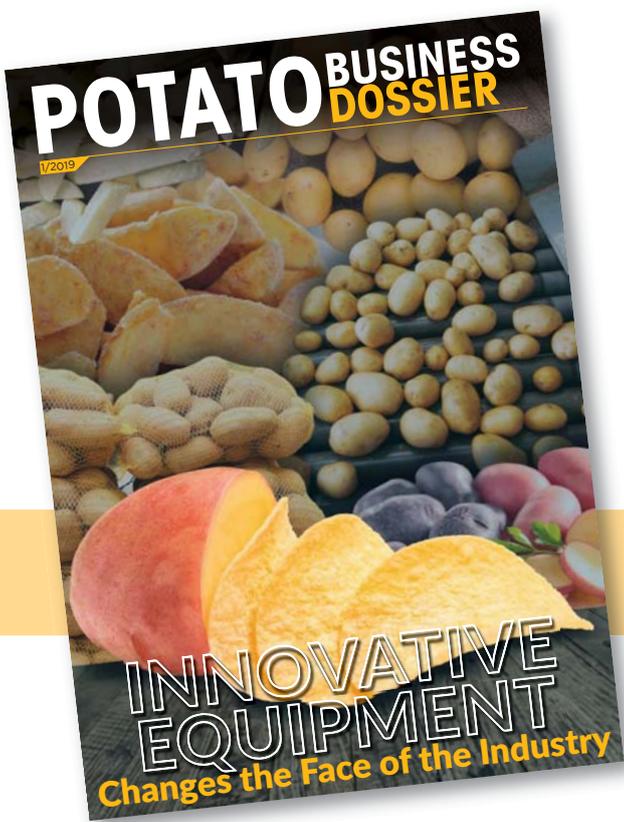
POTATO BUSINESS DOSSIER

1/2019



INNOVATIVE EQUIPMENT

Changes the Face of the Industry



content

ISSUE 1 - 2019



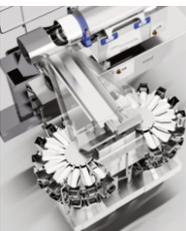
06 SORTING

The Expanded Role of Digital Sorters – The State of the Industry in 2019



10 SORTING

Potato Sorting Equipment and Processing in a Nutshell



14 CONVEYING

How Innovation Has Transformed the Product Handling Market



20 CONVEYING

The Most Popular Options



24 CUTTING

The Importance of Proficient Cutting Equipment



28 CUTTING

The Role of Cutting Equipment in Reducing Acrylamide Formation



34 PACKAGING

Snack Trends Need Packaging Efficiency



OutCut Your Competition

Explore Urschel Cutting Edge Advantages

As your partner in productivity, Urschel works with you to share new cutting technology, and discover profitable size reduction solutions that fit your end-goals.

Sanitary, stainless steel design, every machine is crafted to Urschel quality standards; backed by service and support for the life of your machine.

Operation at a push of a button – simplifies time and labor costs. Machines designed for continuous, uninterrupted production to promote the highest outputs. Urschel works

with you as your partner in productivity for the long-term with dedicated service and parts when you need them.

Different types of changeable cutting components, allow your machine to adjust and grow with your product line. Contact Urschel to discover how we can assist you with your operation.

AMPLIFY YOUR PRODUCTION WITH THE NEW
MicroAdjustable 14 Cutting Station Head (SL-14)
For the Model CC Slicer



URSCHEL®
The Global Leader in Food Cutting Technology

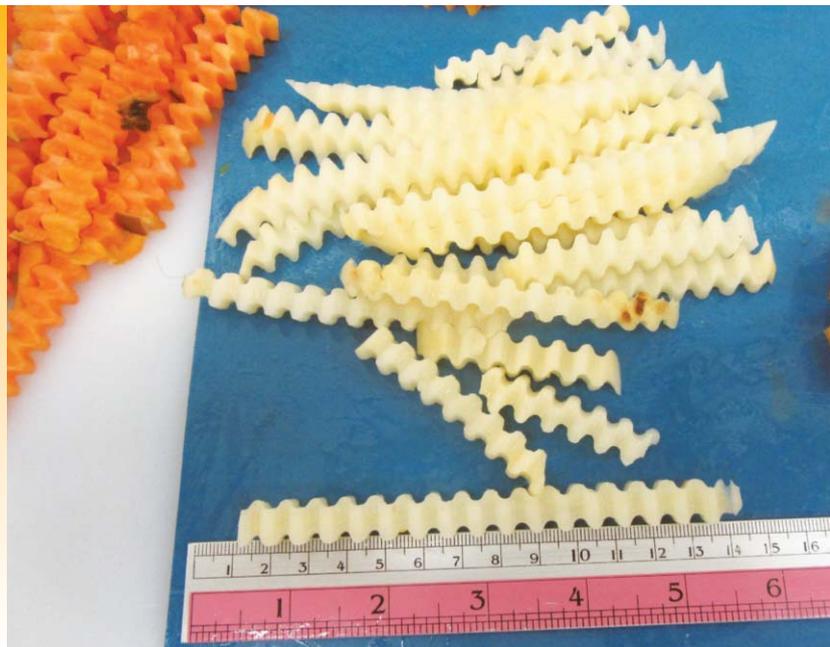
Set-up a free test-cut of your product:
info@urschel.com | www.urschel.com



The Importance of Proficient Cutting Equipment

Traveling in and out of potato processing plants around the world, several trends emerge. The industry continues to grow. Expansions. Modernizations. Increases in efficiency and sanitation. Time savings equates to cost savings. Robust and timely replacement parts. Quick changeovers. New processing methods. Expedient sanitation with greater accessibility. Increased competition. Niche markets.

by Mike Jacko,
vice president of Applications
& New Product Innovation, Urschel





We are seeing expansions, modernization of lines, new potato French fry, and dicing plants. Versatility in processing runs the gamut.

INCREASED HEALTHY EATING POTATO FRENCH FRY OPTIONS

French fry coating technology that offers fast crispness and heat retention when baking. Dicing, shredding, and flaking plants are all doing well. Some old plants are condensing into 'super' larger plants. As new plants continue to emerge and modernization continues, older equipment is being replaced. Growth in two and three-dimensional cutting is on the rise and new dicers have been designed to fulfill new requirements. Stainless steel, sanitary design is, of course, standard. Surfaces on machinery are sloped. Hinged panels provide full access to simplify maintenance and sanitation. Cutting zone and mechanical zones are completely separate to facilitate washdowns and routine maintenance.

DEMANDING CUSTOMERS

Customers are demanding more in a design than ever before. Cutting principles are more precise to produce tighter, increased in-spec results, dedicated to increasing usable product. Components are constructed with ease of use elements, such as built-in handles, while also being able to withstand rugged production environments. Tools that accompany machines are also designed to expedite routine procedures. It all relates to time and cost savings. There are expansions focusing on lattice cuts and batter coated products. New Pulse Electric Field technology is being incorporated to condition potatoes prior to slicing/dicing. Other plants are less specialized, cutting a bit of everything, while being more specialized in cutting

certain SKUs. Today's cutting equipment is designed with greater flexibility. Oftentimes, one machine has the capability to deliver one-, two-, or three-dimensional cutting. This way, as customer SKUs increase, a customer can simply purchase additional parts for an existing machine, expanding the spectrum of cutting abilities.

In North America, large facilities are emerging in the Pacific Northwest, Mid-North, and Northeast. Because of expanding franchises, lattice/waffle fries are showing consistent growth. The unique look and texture, from our Model CCL, continues to be popular among consumers, both on fries and chips. Research and development is ongoing within the potato industry as niche markets and high volume production accelerate.

NICHE AND TRADITIONAL

As niche markets continue to rise, the potato also brings with it nostalgia and tradition. Mashed potatoes, a long-time comfort food, returns to the forefront on refrigerated shelves in retail stores. This time it is packaged in single-serve containers by Bob Evans as part of their refrigerated sides collection. Other nostalgic potato products like tator tots, often shortened to 'tots' in popular culture, have also experienced a re-emergence. Restaurants around North America are introducing nacho options, such as loaded tator tot nachos, also called 'Totchos'. Among other places, these are a favorite at Disneyland and at Ruby Tuesday restaurants. Cheese, tator tots, and other toppings are melded together and served piping hot. Small flake cuts comprise each tator tot and are specially formed into the shape desired of the final product. Flake cutting can be produced via Comitrol line using cutting heads, or by using a grating screen on the Model CC. Flake cut particles can be designed to be uniform in consistency, or purposefully non-uniform, depending on the desired end-goal.



With improvements over the years like the double ring, double adjustment head, the CC continues to be the go-to choice of the potato chip/crisp industry.



In Europe, we have noticed some condensing of products and companies running only the most common size/shapes of product, and fresh French fries for local frites shops. Local, small processors vacuum pack fresh fries in 5 lb. bags. The trend is to supply what is most popular within the marketplace to answer consumer demand. Demand continues in the unique lattice cut, which is produced on the Urschel Model CC-L. The sweet potato market continues its growth with the crinkle style French fry produced on the Diversacut 2110A. This is aided by the health trend that is prevalent in all countries in Europe and increased demand in those market segments. Manufactures in the chips industry have concentrated on increased capacity/efficiency as a result of the new SL-14 slicing head instead of different shapes. Facing increased costs, many European processors are turning to fabricated chips. Preground potato flakes processed into chips/crisps are less expensive to produce than a traditional sliced potato chip. These are manufactured using Comitrol processors.


We are seeing expansions, modernization of lines, new potato French fry, and dicing plants. Versatility in processing runs the gamut.



Asia continues to be an emerging marketplace for potato processing. Here, a potato dish may be seen as a main meal, instead of an appetizer or complementary dish. Fast food expansion is on the rise, especially in Southeast Asia and India. Potatoes are also part of traditional religious fasting periods. Small shreds are pan fried and eaten in limited quantities. As for the market for crisps/chips, commercially processed potato chips/crisps have seen a decrease in sales overall. Consumers are opting to purchase local snack options produced by batch methods.

FAST-PACED

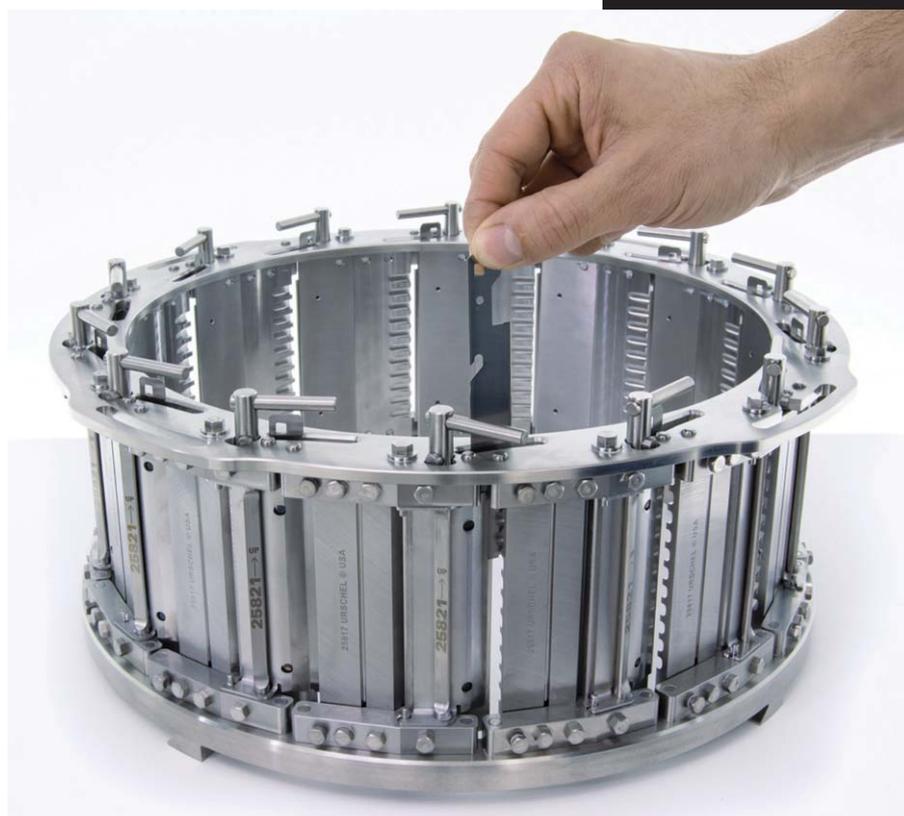
Jagabee products are also on the rise. Thick, flat lightly salted potato sticks. These are a cross between French fries and mashed potatoes. Another unique potato slab cut is part of the processing involves vacuum frying. The grab-and-go container is uniquely packaged to be easily microwaved to bring out a buttery soy sauce flavor. In Brazil, potato sticks remain a popular snack. This is a slimmer stick version of the chip/crisp, and another product produced with a Model CC Slicer, but set-up for julienne strips. Uniform cutting is essential in providing consistent fry times to promote golden brown sticks.

In the chipping/crisp industry worldwide, there appears to be increased competition in salty snacks. Smaller brands are competing with the big guys. Kettle cooked products are very popular. Other vegetables, not just potatoes, are being cut and put into bags. The Urschel Model CC Slicer continues to be the mainstay in this arena, but the E TranSlicer equipped with a MicroSlice wheel may be a better fit especially for the large sweet potato, cassava, taro, and parsnip type veggies. Customers are looking for a machine with components that work with their fast-paced line. Small and large

companies want a robust machine that will hold precision slice tolerances throughout production runs with guarantees of parts and service when they need them. The ability to make changes 'on the fly' to be responsive to the needs of their environment. In both the French fry and 'salty snack' chip sectors, customers are asking for different cuts. While the majority of items are produced on the Model CC, customers are exploring a wide range of shapes such as thinner flat, V, or crinkle strips; nuggets or long shreds produced on the DiversaCut. We are always discovering new shapes. Vegetable 'noodle' cut alternatives appear to be ever expansive. From riced cuts to slender, long strips, and even the latest thicker 'fettucine noodle' and various 'bow-tie' cuts. Consumers are looking for healthy food that fits into their fast-paced lifestyle, and potato processors are providing new options, transforming and adapting the every-day potato into trendy selections. With improvements over the years like the double ring, double adjustment head, the CC continues to be the go-to



In Europe, we have noticed some condensing of products and companies running only the most common size/shapes of product, and fresh French fries for local frites shops.





Photos Urschel



choice of the potato chip/crisp industry. Customers are always looking to improve sanitation and time efficiencies. The evolution of this machine is evident with the recent MicroAdjustable SL-14 line of cutting heads and grooved impellers. Customers are replacing their standard 8-station heads with the newly designed 14-station heads, discovering nearly twice the capacity. Sanitation and knife changeovers have never been faster and more efficient. The sanitary, stainless steel design eases washdowns, while the knife stations with handled knives are quickly replaced in minutes. Changeover of heads is also efficiently accomplished with a self-locking lower ring. User-friendly, this head produces high quality slices in a robust design, while weighing-in at only 16 kg. The Model CC offers a wide variety of slices, julienne strips, and grating options. Sanitary, stainless steel design, the DiversaCut line by Urschel features a compact cutting zone enabling precision cutting to increase product in your targeted parameters. This decreases waste and improves cost savings. The cutting zone is completely separate from the mechanical zone. New types of vegetable 'noodle' cuts are produced on this three-dimensional line of equipment. This machine is also widely used for potato dices and a wide range of crinkle and flat strips for fries. Operation at the push of a button. Hinged access panels facilitate routine maintenance and offer full access to every zone of the machine – mechanical area and cutting path area. The DiversaCut 2110A Dicer produces high capacity output. Cutting stations define the type of cut. A full complement of slices, strips, and dices in flat or crinkle styles is available. The dicer accepts infeed measuring up to 10" (254 mm) in any dimension, offering cost savings by eliminating the need to precut. ■