NEWS/BUSINESS

Bioionix partners with cheesemakers to eliminate pathogens and spoilage organisms

By Rena Archwamety

MCFARLAND, Wis. — Food safety is a top concern for all cheesemakers, who employ a range of technologies to assist in minimizing product contamination. Bioionix, a technology platform company based in McFarland, Wisconsin, offers electrolytic systems to eliminate threats of foodborne pathogens, mold, microbials and other contaminants from cheese brine and other liquids used in food processing.

Rather than adding chemicals or

pasteurizing the brine, the Bioionix system uses catalysts to directly disinfect water or brine by generating a combination of reactive disinfection species directly from the liquid.

'We put low voltage electricity into the system, generating oxidants right from the salt and brine solution," says Pete Marsnik, CEO, Bioionix. "Our process provides continuous process control monitoring that's correlated to the actual disinfection strength in the brine. This ensures the process always has a residual disinfection without overdosing. This is important to quality

"The industry was telling us they needed a smaller unit, better pricing, and something easier to clean."

> John Van Arsdale **BIOIONIX**

Innovative ATM machine sells more than 1,300 pizzas at the Ohio State University

By Trina La Susa

COLUMBUS, Ohio — The Ohio State University recently introduced a Pizza ATM as its latest dining option. Since its debut in January, the university has sold more than 1,364 pizzas through the ATM.

Pizzas for the vending machine are pre-made in a neighboring kitchen and come with either cheese or pepperoni toppings. They are then transferred to the Pizza ATM, where they are stored in a refrigeration unit.

When a pizza is ordered, the ATM pulls the pre-made pizzas from the refrigerated storage unit and inserts the pizza box containing the pre-made pizza into an internal oven for fresh baking and distribution. It typically takes about three to four minutes to cook the pizza.

"Cheese has became a critical component of the pepperoni pizza as it is being utilized as a 'weight' to hold down the pepperoni. During product testing, the high fan speed in the oven was blowing the pepperoni all over the place, so our chefs had to find a solution, and using additional cheese on top of the pepperoni was it! Not only does it make the pizza cheesier it keeps the toppings in place," says Abby Hertzfeld, associate director of operations, Department of Student Life Dining Services at Ohio State.

Hertzfeld says that quality cheese is a major component of all great pizza, and ATM pizza is no different. The pizzas are made using a local Mozzarella and Provolone shredded blend produced by Miceli's Dairy in Cleveland, Ohio.

Each ATM pizza has approximately 6-7 ounces of the cheese blend added to the top of an Ohio-made crust and pizza sauce. Hertzfeld calls the cheese pizza an "all Ohio pizza" because of its 100 percent, locally-sourced ingredients

When a pizza is first produced and placed into a proprietary box in the refrigeration unit of the machine, a computer tracks the type of pizza being added to the machine to stamp the slot with a time and date for freshness.

Each pizza has a 72-hour shelf life, and if a pizza is not sold before the 72hour mark, the machine will no longer dispense that pizza. The computer system also can send text messages and emails indicating if a pizza is getting close to the end of its shelf life to determine if the pizza should be sold at a discounted rate, though this feature has not yet been tested.

The pizza ATM holds 70 pizzas and it is filled one to two times a day.

The new Pizza ATM is located at the Ohio State University campus on the second floor of Morrill Tower. It is currently open from 11 a.m. to 10 p.m. for student meal plan holders and 11 a.m. to 4 p.m. for general use. One 10-inch pizza sells for \$8.

Hertzfeld says there are plans to extend the flavor variety being offered in the ATM after the university's spring break. **CMN**

assurance and food safety monitoring, and is a reason why global brands are among our repeat customer base."

Bioionix, which was founded in 2006, first introduced this technology through a plate-frame design, which was well-accepted by the industry and produced excellent results in reducing yeast and mold counts, says John Van Arsdale, senior sales manager, Bioionix. However, the initial system was fairly large and expensive.

Recently, the company launched its second-generation electrochemical platform, the Bioionix Coaxial Sanitary (CXS), a tubular design that is about one-third the size of the original system and priced about 40 percent lower. Made up of a series of cylinders, the CXS platform is fully scalable with the ability to treat anything from five gallons to more than 300 gallons per minute. It is designed to 3-A sanitation standards for clean in place (CIP) and can be integrated inline and into existing plant processes.

"The industry was telling us they needed a smaller unit, better pricing, and something easier to clean," Van Arsdale says. "Our response is a

scalable, modular design. The new system doesn't take up a lot of floor space, and it also is designed so it can mount on the wall. It's the same electrochemistry configured in a different format."

The company already has had success, and with the new CXS design, Bioionix sees significant growth opportunity and is planning to expand its technical engineering, sales support and distribution networks this year.

"Over the last several years, we have had dozens of successful applications in multiple facilities from family-owned to Fortune 500 companies with multiple applications and international reach, Marsnik says. "With the CXS design, our plans are to grow significantly in the next two years."

The company is marketing its system at trade shows with the slogan, "Bioionix: Because nobody likes to test positive." Customer experiences back up this claim.

"One of the best endorsements we've had recently was one of our cheese customers who told our technician this was the first summer they had with no yeast or mold issues on a brine system we installed last winter," Van Arsdale says.

Marsnik adds that it all comes back to food safety.

"Early on, it was the whole basis of the company — we were solving difficult disinfection problems, but it really is about food safety," he says. "It's about the safety of the end user customers, employees, the plant and their brand. It can be a quiet technology, but it's very important for the end result." CMN

