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CI?an Works offers quick food-safety solution

By

Tim Linden

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Born of necessity because of a *Listeria* outbreak in the apple industry, a Canadian-based company has developed and is offering a 30-second innovative waterless technology to kill up to 99.99 percent of pathogens on virtually any fruit or vegetable.



Michele Visser

The [Clean Works](#) process uses vaporized hydrogen peroxide, ozone and ultraviolet light to eliminate the harmful pathogens and mold. Michele Visser, vice president of sales and marketing for the company, which is headquartered in St. Catharine's, ON, said the food-safety solution is very versatile offering the opportunity for utilization by growers, shippers, processors, wholesalers and retailers. "The Clean Works process can be done at any step of the fresh produce supply chain, from grower to retailer, and on all kinds of produce, from apples to zucchini," she said. "It can also be used to decontaminate the bins and containers used for transport and storage."

The need to find such a solution was hatched in 2015 by Paul Moyer of Moyer Apple Products in Beamsville, ON. He shared that at the time a caramel apple supplier was hit with a devastating outbreak of *Listeria*, although it was not Moyer's products that were involved it dramatically impacted his business. The company partnered with Court Holdings Co. to find an innovative solution that ensures food safety for any type of food product. Court Holdings, a global manufacturer with a focus on innovation, brought the expertise to design processes and scale production. Thus, Clean Works was established. The group worked with Keith Warriner at the University of Guelph in Ontario to develop a solution.



Paul Moyer

By 2017, Clean Works and the University of Guelph had developed the ground-breaking commercialized sterilization product for use on any type of food. The patented process is what is called the CI?an Flow process to kill the harmful pathogens and mold. The continuous flow process uses a specific combination of hydrogen peroxide, ozone and UV light to decontaminate produce. The process takes less than 30 seconds, leaves no residue and has no impact on flavor profile.

The Food Science Department at the University of Guelph, which is a leading agricultural and agri-food institution, validated the process through testing. In fact, Visser said all published results have been validated by third-party labs, including the University of Guelph and Safe Food Alliance.

She noted that Clean Works was awarded the 2019 Food Safety Innovation from the International Association for Food Protection.

“CI?an Works’ dramatic innovation has been in market across North America for over five years with growers, packers, shippers and retailers. Due to increase food-safety and shelf-life extension, our commercial partners have seen substantial growth in their business and ROI in less than a year.” Visser added.

The process has the additional advantage of deactivating mold spores, which extends shelf life. Visser said trials have revealed significant improvement. “Arugula has seen a 14-day increase in shelf-life and a citrus packer is seeing a minimum 12 percent decrease in decay,” she said.

CI?an Works believes the conveyor and batch processes can integrate with virtually any operation, including grading, drying or pre-cooling. And the firm said it is “reliably scalable from the small farm to the industrial processor.”

One of the top advantages of the CI?an Batch and CI?an Flow processes is that it is waterless. Moyer, who is co-owner of the company, said water is a scientifically proven source of cross-contamination, and an ongoing cost to operations.

He added that this food-safety solution is available at a very affordable cost. “Cl?an Flow systems cost less than the water wash system you currently use,” Moyer said. “Equipment and materials are managed for you by Cl?an Works for convenience and quality control.”

[Tim Linden](#)

About Tim Linden |

Tim Linden grew up in a produce family as both his father and grandfather spent their business careers on the wholesale terminal markets in San Francisco and Los Angeles.

Tim graduated from San Diego State University in 1974 with a degree in journalism. Shortly thereafter he began his career at The Packer where he stayed for eight years, leaving in 1983 to join Western Growers as editor of its monthly magazine. In 1986, Tim launched Champ Publishing as an agricultural publishing specialty company.

Today he is a contract publisher for several trade associations and writes extensively on all aspects of the produce business. He began writing for The Produce News in 1997, and currently wears the title of Editor at Large.

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