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**Verdant's HarvestHold utilizes breakthrough method to extend freshness and shelf life**

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By

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Verdant Technologies has recently launched its seemingly simple solution to preserve harvest quality and extend the shelf life of fresh produce and flowers along the entire supply chain.

While simple in application, the company's HarvestHold technology is the product of 20 years of research that has resulted in more than 200 patents involved in taking the benefits of controlled atmosphere storage and delivering it directly to produce and florals at the carton level. CEO Gordon Robertson explained that Verdant Technologies has created the ability to take the compound used in controlled atmosphere storage, 1-MCP (1methylcyclopropene), and print it on thin gauge PET plastic, which can then be added to a carton of produce while it is being packed. A sheet of HarvestHold is simply cut from a HarvestHold dispenser and placed inside the carton. The 1-MCP on the HarvestHold sheet is activated by the natural respiration of the fresh produce or flowers and humidity and begins to offer the same suspension of the aging process that 1-MCP offers in controlled atmosphere storage.



Gordon Robertson

“We have taken the technology down to the box level to make application simpler and more streamlined with grower operations,” said Robertson, in explaining Verdant’s value proposition. And just like in storage, 1-MCP on the HarvestHold sheet acts like a lock and key in turning off the ethylene receptors that would typically start the clock ticking on the product’s shelf life.

Robertson noted that just like in CA storage, each produce or floral item reacts differently to 1-MCP so the extension of shelf life with the use of the sheet also varies. It could be an extra four days or an extra 20 days, he said. “The beauty of our product is in our breakthrough 1-MCP method that delivers consistent results and reliable freshness,” he said, noting that HarvestHold’s portability allows for maximum flexibility of use in the supply chain.

Shippers of tomatoes from Mexico can put a sheet in the carton in their Culiacan packing shed to preserve the freshness of the product during its five- or six-day trip to the U.S. East Coast. Robertson said it also has great applicability for producers sending product to receivers via an ocean liner that might take 20 days.

Verdant is in full production of HarvestHold and has launched direct sales in the United States, Mexico and Colombia, and continues to work with grower-shippers to trial and demonstrate the efficacy and value in each product. Currently, the company is marketing to both floral and fresh produce producers with its HarvestHold Bloom and HarvestHold Fresh products.

While extension of shelf-life is one of the major drivers of value, Robertson noted that HarvestHold

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can add value in many other ways. For example, in trials with broccoli, he said shippers can greatly reduce the amount of top ice they have to use to keep the product fresh. “It might be half the ice, or it might be no ice at all,” he said, calculating that every pound of ice that is eliminated will reduce the cost of freight on the product and make the supply chain more sustainable with less water usage.

Similarly, he said the use of HarvestHold might allow an air shipment of sensitive produce to travel by truck or sea, again greatly reducing transportation costs.

Of course, the ultimate savings realized by extending shelf-life is a reduction in waste at the retail or foodservice level. “It’s been estimated that 40 percent of fruits and vegetables are thrown away,” Robertson said. “That’s a multi trillion dollar loss along the supply chain and major negative impacts on the environment.”

He added that suspending the aging process also reduces weight loss, allowing for a greater ring at retail when an item is sold by the pound.

Verdant, which became part of Gulftech family of companies earlier this year, is touting HarvestHold’s ability to improve the bottom line for grower-shippers. “It’s all about value generation,” said Robertson, “and increasing the value of every piece of produce for everyone from growers to consumers.”

Ultimately, the value is in the ability of HarvestHold to bring quality to the supply chain and ultimately the end consumer. Produce and floral producers, he said “are in business to try and delight consumers. When they do that, consumers buy more product and have a better experience with what they purchase. We have a winning solution to improve that consumer experience.”

He also listed some of the practical aspects of HarvestHold including that it is non-invasive to operations, creates no storage issues and can be applied at numerous locations throughout the packing and handling process, adding virtually no additional labor. Robertson added that HarvestHold lessens the impact of the perishable supply chain on our planet by its ability to reduce waste and costs.

The purchase by Gulftech has enhanced Verdant’s ability to bring this product to market, while continuing its research on continually improving both the product and delivery method. Robertson said the sales focus is currently on the grower community as HarvestHold offers the greatest level of protection when applied immediately after harvest before the aging process begins. It is the respiration of the fresh product and humidity that activates the HarvestHold application. “That could start as quickly as 45 minutes after you have packed the fruit,” he said. “The entire application typically, occurs in the first 24-48 hours.”

He noted that the company, which is headquartered in White Bear Lake, MN, is already working with growers and receiving great feedback. “We are very encouraged by what we are hearing in the marketplace,” he said. “We don’t hear ‘No’. Mostly, we are hearing, ‘Hey, this really works, what we have tried historically just didn’t work in our supply chain.’”