



USE OF ELECTRONIC COLD-PASTEURIZTION™ (ECP™) AS A MEANS OF REDUCING MOVEMENT & DEVELOPMENT OF PLANT PESTS AND PATHOGENS

CHIP STARNS CO-FOUNDER & EXECUTIVE VICE PRESIDENT





CHANGING TRADE PATTENS FOR PLANTS AND PLANT PRODUCTS

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DEFEAT HUNGER

1 in 9 people in the world can't get enough to eat—that's more than 800 million suffering from hunger.

Yet each year, an estimated one third of all food produced – equivalent to 1.3 billion tonnes worth around \$1 trillion – is lost or wasted



IMPROVE NUTRITION

In 2017, some 3.9 million deaths worldwide were attributable to not eating enough fruit and vegetables.

Produce imports are important for supplying the nutrition needs of countries that do not produce enough fruit and vegetables domestically.



FAO estimates that annually between 20 to 40 percent of global crop production are lost to pests.

Each year, plant diseases cost the global economy around \$220 billion, and invasive insects around US\$70 billion.



Inferior treatment methods such as chemical fumigation and hot water treatment adversely impact food quality and cause vast quantities of safe food to spoil, creating billions of dollars in economic loss

METHYL BROMIDE

Highly toxic, ozone-depleting gas that can require premature harvesting and cause spotting. The process induces heat and breaks the cold-chain.

HOT WATER BATH

Hot Water Bath can adversely impact taste, damage appearance & potentially serve as a breeding ground for other pathogens, while breaking the cold chain.

TOXIC CHEMICALS

Eliminating the need for toxic chemicals and reducing the amount of food waste sent to landfills can help ease the impact of climate change.







REVEAM



ECP[™] technology delivers a gentle shower of ionizing electrons that sterilize insects, eliminate mold, bacteria and kill pathogens and parasites that cause food-borne illnesses and spoilage. Cases of fresh produce pass through the electron beam (E-beam) in milliseconds on a high-speed conveyor.







ECP[™] enables new export markets, by eliminating the risk of early-stage insects and pathogens that create trade barriers.







ECP[™] enables significant shelf-life extension, helping to reduce food waste and loss



CONFIDENTIAL











The spread of Anthracnose is neutralized using ECP[™], enabling better quality and reducing waste.











TECHNICAL ASSISTANCE FOR SPECIALTY CROPS

• Finalizing international study with USDA for treating invasive Pecan Weevil using ECP[™] and opening export market to Mexico

















USDA PEACH STUDY

• Funded by the USDA and state of Texas "Emerging Technology Fund", partnered with Texas A&M University and the National Center for Electron Beam Research Center at TAMU to conduct a study on peaches titled *"Effect of Irradiation on Shelf-life and Quality of Fresh Whole Peaches."*













DEPARTMENT OF HORTICULTURE: UNIVERSITY OF GEORGIA

- Internationally published study for treating blueberries with ECP[™] for increased U.S. export in conjunction with University of Georgia
- Titled *"Effect of Electronic Cold-Pasteurization™ (ECP™) on Fruit Quality & Postharvest Diseases during Blueberry Storage" (2018)*







A SAFE, COMPREHENSIVE POST-HARVEST SOLUTION

- Product treated in less then a second
- Chemical-free, heat-free process
- No harm to taste, color, odor or texture
- USDA-approved & FDA-approved
- Supported by the FAO, WHO, IAEA among many others
- Product treated in final packaging
- Faster-to-market processes





ECP™ technology in action at our McAllen, Texas USA treatment facility







The Rio Grande Valley Electronic Cold-Pasteurization[™] (ECP[™]) Center in McAllen, Texas USA

- State-of-the-art E-beam center
- 100,000 sq. ft. climate-controlled facility
- 175+ direct jobs created, 600+ indirect jobs created



International Organization for Standardization













UN SUSTAINABLE DEVELOPMENT GOALS







Reveam aims to support the UN Sustainable Development Goals by not only addressing persistent food insecurity issues, but also by looking towards the future to see where other applications of ECP[™] can reduce harm and improve outcomes across the globe.











THANK YOU

REVEAM.COM

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