

Fighting diseases, infection and contamination is a constant struggle for the agriculture industry but a new disinfectant by Chilean startup BM iTek called Dacetix provides an eco-friendly solution.

The groundbreaking nature of this disinfectant, as treated produce doesn't have to be rinsed after application, means that growers can streamline their sanitary procedures and be environmentally friendly while doing it.

Microbiologist and creator of Dacetix Luis Aguilar explained to FreshFruitPortal.com that the disinfectant can be used on various crops - including plums and blueberries to fight the problematic botrytis fungi. It can be applied directly to crops before being sent to retailers for consumption.

The disinfectant's relevance to the fruit and veggie industry is widespread as the solution solves an array of issues that previous disinfectants fail to address. U.S.'s Food and Drug Administration (FDA) has approved the solution as "generally recognized as safe" - or GRAS - something that the company says is critical in getting the product necessary recognition before commercial roll out.

Currently in the process of being approved by Chile's public health authority, the startup anticipates that its disinfectant will roll out officially during the second half of 2020. The disinfectant's GRAS certification means that the solution is non-toxic and fit for human consumption.

Aguilar went on to outline the specific implications of this step of approval with the FDA, saying, "to be GRAS certified just means that it's non-toxic and it can be put directly on produce, coming into contact with the product's skin without having to be cleaned afterwards".

## **Developing a formula from the ground up**

He then told us about the long process of developing the eco-forward disinfectant. Beginning in 2016, Aguilar gathered funds to start the process of improving Dacetix's formula. The motivation behind his desire to make the formula sustainable came from his work in his masters program at Chile's University of Concepcion.

There, he "searched for different kinds of compounds that could be used efficiently against bio-organisms that could act as a shield for the fruit- something that would have different bacteria on the surface of the produce, making them more compatible with compounds

found in anti-microbials".

Then, he decided to focus on compounds that had the ability to attack critical pathogens in the fruit and vegetable industry like listeria and salmonella.

"After a lot of researching, what I found were two compounds approved by GRAS, because the objective was to create something that could have direct contact with the produce and differentiate itself from other substances like bleach that are toxic for food," detailed Aguilar.

The result of his findings was Dacetix, a solution that is now included in various projects across Chile - including partnerships with Corfo and Fondef - and will be commercialized by BM iTek.

Currently, Dacetix also works alongside [Know Hub Chile](#), a company that works to make universities in the country centers for science research and innovation. Through Know Hub, Dacetix created its current partnership with BM iTek and Excell.

While wrapping up our interview, Aguilar expressed his gratitude to the team at BM iTek for their work in the lab and doing market research.

"We appreciate the support that we have received from various institutions and from our very own team, especially Nathaly and Marjorie - two women in our scientific team who do important work - that have really helped in getting the business going," he concluded.

*Photo: Know Hub Chile*