

CASE STUDY

BELEHRIS

ESTATES

Family owned and operated almond producer, Belehris Estates is on the outskirts of Renmark, in South Australia's productive Riverland region. Set on the banks of the Murray River, Renmark is best known for being Australia's first irrigation settlement.

Today it grows a diverse range of high-value crops including citrus, almonds, table grapes and stone fruit. With a family background in fruit production and viticulture, Jim Belehris established Belehris Estates in 1996, specifically targeting almonds. The mechanised harvesting processes and shelf-stability of the product aligned with Jim's vision. Almonds are produced from 60 hectares of trees ranging from three to 30 years old. Annual production for domestic and export consumption is estimated at 300 tonnes. Another 2000 tonnes is processed under contract at the on-site packhouse.

The emergence of a serious pathogen

In 2023, after months of persistent spring-summer rain, Jim was at his wit's end trying to control Phytophthora – a soilborne pathogen that can lead to root rot, crown rot and trunk cankers in almonds due to water logging and the lack of root system diversity associated with a monoculture orchard environment. The disease had occurred in pockets over three of four sites and Jim was out of options. By chance, banana grower Frank Sciacca of Far North Queensland (founder of the Ecoganic sustainable farming system behind red-tipped bananas), saw Jim's issue. Frank knew Metagen had successfully reduced Phytophthora in avocados and other soilborne diseases such as sclerotinia in lettuce by focusing on soil health improvements. In these cases, disease suppression was the result of stimulating the growth of beneficial native soil biology through Digestor application.



“It was a very stressful time. I didn’t know how bad the problem was going to get and if it was going to wipe out the entire orchards and my life’s work.

Jim Belehris
Belehris Estates

When traditional treatment failed

Jim first noticed Phytophthora appear in the orchard in 2022, after a wet spring. At that point, he was not overly concerned and treated the disease with a systemic fungicide. However, the fungicide did not address the problem.

“The trees never looked right, yields went backwards, and the size of the product went down,” Jim says.

It was not until 2023, after a second successive spring of persistent rain, there was serious proliferation of Phytophthora at Belehris Estates and throughout the industry, which spans more than 62,000 hectares in several states. Jim was desperate for a solution.

“It was occurring in pockets across three out of four properties as the root zone was too wet for too long. It was very concerning and there weren’t any good chemical options around,” he says.

“There was also a high likelihood of the disease developing a resistance to the fungicide. I thought if the fungicide didn’t work nothing would work.”

Beating Phytophthora in the orchard

Jim had used biostimulants in the past and struggled to trust them. Then **Metagen founder Shane Fitzgerald** heard his story and sent him three drums of Digestor to trial.

“I treated one property – the worst affected and had enough to treat the bottom half of another. At the original site, the problem stopped – and it stopped everywhere else too.

“Every year we plant a ground cover in the inter-rows, and it was not until harvest that I noticed that where the bottom half had been treated with Digestor, growth was above my knee. In the untreated section, it was just above my ankle.”

The growth was so thick, the slasher choked.

After more successful trials, Digestor is now a trusted part of Belehris Estates’ program and is used to treat the entire 80 hectares. After losing 30 or 40 trees a year at the height of the disease, there has been a complete turnaround.

“It’s an expensive product, but it is very good value. I’ve seen it made, and I trust Shane and Metagen. I don’t have the worry of what’s going to happen to the trees. Every tree here has been hand-planted, hand-pruned and harvested. These trees are looked after as though they are our children. I can’t afford to lose trees – and pulling them out is not easy.



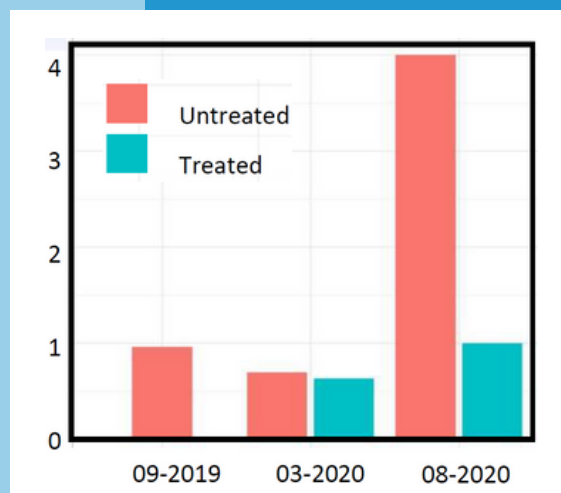
“Digestor also activates a lot of good things in the soil, and I believe my almonds are a better quality with a longer shelf life than before. When you’re aiming for a point of difference and chasing repeat business, it’s worth the investment.”

Jim Belehris
Belehris Estates

Learnings from avocados – why Digestor works on Phytophthora

A 2021 Metagen trial aimed to relate improvements in soil health with the incidence of Phytophthora in the soils of avocado orchards and to determine if a link existed between improvements in soil health and tree health/disease impacts.

The trial treated 20 one-year-old replanted trees on a site that was fallowed in 2015 due to Phytophthora incidence.

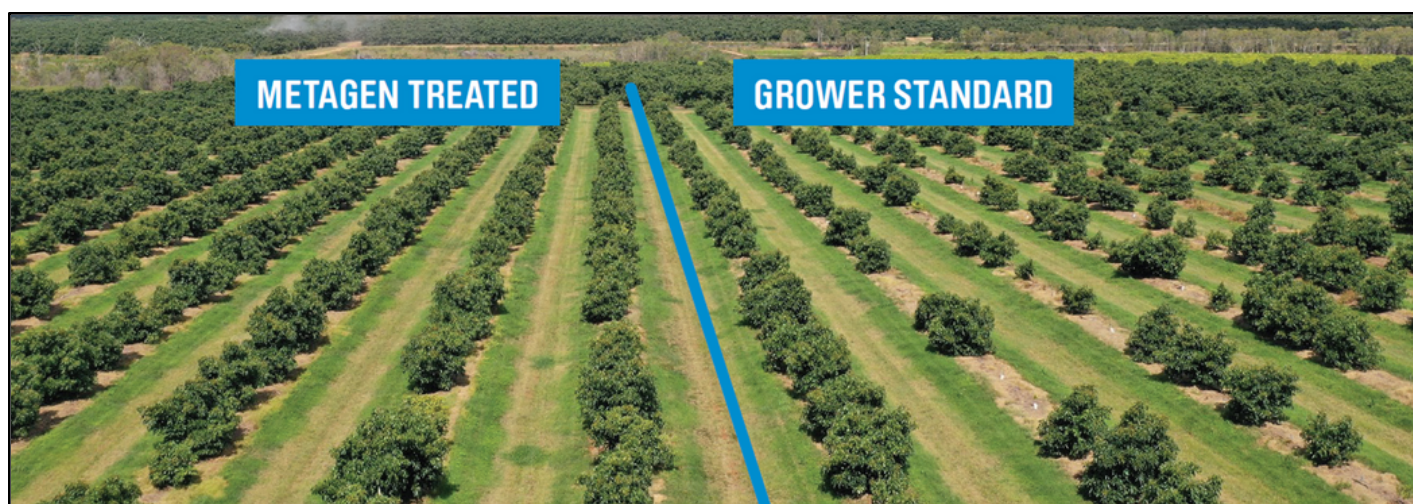


Phytophthora abundance over three timepoints in Avocados.

“Our results showed a significant reduction in the abundance of *Phytophthora cinnamomi* was observed over the course of the trial in the biostimulant-treated site,”

Shane Fitzgerald

Director of Grower Services - Metagen



““There was significant increase in the abundance of beneficial fungi. Earthworms were also observed in the treated site.

“Biostimulant-treated trees also exhibited a highly significant increase in tree health in the form of increased canopy volume.”



Business founder and director of grower services at Metagen, Shane Fitzgerald.

Trial outcomes are transferable to almonds and other orchard crops, he says.

Microbially formulated to improve crop and soil health, yield and production quality, Digestor is primarily used on soils in horticulture, tree crops, grapes and dicot root systems. Soil treatment is formulated to improve nutrient availability, nitrogen cycling and phosphorus release.

“Digestor improves soil health and improved soil health controls the disease. Activating the beneficials in the soil suppresses the disease,” Shane says.

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