



COMBATING ROOT ROT: Die-back in macadamia trees at Brooklet. Healthy trees are seen in the background.

PHOTO: JAMIE BROWN

HEALTHY MACADAMIA TREES

GETTING THE GOOD SOIL

Probiotic compost increases microbial activity and can revive orchards suffering from root rot

■ **Jamie Brown**

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FACED with a portion of his macadamia trees in a declining state, Pacific Farms' managing director David MacRae considered advice from outside the square.

So he sourced an organic microbial elixir that promised to restore vitality.

Sounds like snake oil, doesn't it?

In fact, the products promoted by Austrian company Multikraft Probiotics Australia, with a processing plant in Murwillumbah and another planned for Bundaberg, have worked minor miracles for a range of growers on a wide array of food crops. The key issue with Pacific Farms, as with many macadamia growers following years of wet weather, is die-back, or root rot, from the soil-borne water mould *Phytophthora*.

But a trial of Multikraft's probiotic culture reversed the die-back dramatically on the company's oldest farm at Maleny in the Sunshine Coast hinterland.

At this farm, planted 50 years ago by CSR, the greying branches in the crowns of trees were merely thought to be a by-product of old age.

"We thought the trees had gone into decline," David



■ Adrian Zorzo and David MacRae, of Pacific Farms, with Conor O'Brien, of Multikraft Probiotics Australia.

said.

Indeed they had but, by following advice from Multikraft CEO Conor O'Brien, the timely application of microbial activity into the soil, as well as foliar applications and plenty of organic mulch – enhanced with similar probiotic cultures – turned the trees around in just one season.

"In our first year we had 100% increase in nut yield from that plantation," David said. "It turns out we have been raping and pillaging the soil for the past 30 years and we have been giving nothing back.

"Our use of chemical fertiliser has burned the soil.

"The waste from our industry was worthless. Burning it was the only solution to its disposal."

Now, under the sustainable farming model promoted by Multikraft, wood waste from trimmed trees is chipped – to the size of a 50 cent piece – to which is added macadamia husk and chicken manure.

The roughly arranged pile is sprinkled with probiotics and the "waste" left to ferment in ways similar to sauerkraut.

With just one turn of the compost pile after four weeks, the compost is orchard-ready after two months.

In the case of the Maleny plantation, David said in the second year of recuperation, the trees that had been critical before the application of probiotics showed a further doubling of production.

"This is a program we now firmly believe in," said David, who plans to spend the next

18 months working with Pacific Farms' 100 grower-suppliers to take up a similar soil-saving program.

And with the current offer from Pacific Farms for nut-in-shell at a record high, David suggested that growers spend their improving return on soil health for long-term profit.

"It is time to invest in the farm," he said. "And it is very important to do it now."

While the results of Pacific Farm's Maleny plantation were remarkable – and there are similar results from other agricultural activities world-wide – Multikraft CEO Conor O'Brien said he didn't want to scare producers with stories that harked back to the snake oil days.

"We suggest that with our system producers should

turning, cutting the cost of labour and fuel.

"We are able to reduce chemical fertilisers by having our microbes in the soil to make the nutrients available for the plants," Conor said.

"This combined with improving the soil structure, through a combination of composting and liquid soil application reduces run-off and leaching."

Further north, at Bundaberg, lychee grower Craig van Rooyen said the Multikraft product had many benefits, including improved soil health.

"The big benefit for me is all about soil health. This product encourages that because it's adding good microbes into soil," he said.

AT A GLANCE

Multikraft is a pioneer of antibiotic-free stockfeed and first introduced its range of probiotic soil conditioners to Australia three years ago.

Scientists have identified more than 50 types of microbes in Multikraft's base culture.

The system works to reduce odour from composting because nutrient is not being lost to the atmosphere.

A typical soil application involved using 50litres of culture per hectare of land.

For more information visit www.multikraft.com.au