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HOW MUCH VALUE DO WE PLACE ON SOIL HEALTH IN THE CANE INDUSTRY?

And how much should we place on it?

"Nitrogen is important for productivity, however improved soil biology will achieve healthier soils which will result in better yields, benefiting both the farm business and the environment."

As far back as I can remember, I have avidly watched agriculture and gardening TV shows. Landline, Burkes Backyard and Gardening Australia were all compulsory viewing.

Soil health and improving the soil was a common theme on these shows. Their messages resonated with me in my garden. You can tell when it's working, you see worms, the soil has better structure and the plants respond.

Translate the information up a few dozen times and it resonates for farming too.

Recently I visited **Matti Kangas** on his Abergowrie cane farm as he wanted to show me what he is doing to improve his soil using microbes. Before we dug into the technical nature of his process, he showed me a woodchip heap, disturbed the top 15 centimetres and pointed out a white, stringy root-like substance.

"Do you know what that is?" he asked. I thought back to the gardening shows and the articles I'd read about soils.

I said, "It's the fungus in the soil". "Hyphae," Matti interjected. He believes hyphae doesn't occur in cane roots much anymore and is partly the issue behind productivity decline.

He then showed me how he makes his liquid fertiliser based on the Bokashi method which is an anaerobic fermentation process using microbes.

First, he shreds his organic starting material and adds it to a 1,000L shuttle in a batch process with starting microbes. He lets that ferment and transfers it to a larger tank. He adds BB1 fertiliser and applies his product at 15-20 litres per hectare, three to four time per year.

Does it work? Matti is convinced there is something in it and believes his soil health is improving.

Travelling around his farm, I could see the soil structure was good and couldn't help be enthused by his passion for what he is doing.

The passion for soil health is also evident on **Simon Mattsson**'s farm in Mackay.

A few weeks ago I attended the third annual Soil Health Field Day (see the last edition of *Australian Canegrower*).

As Simon notes, the major issues for Mackay soils are a lack of carbon and plant available calcium as well as compaction resulting in poor soil microbial activity.

To improve these limitations, he is trialling a multi-species planting of alternate crops such as sunflowers, annual applications of calcium and other soil ameliorants, the inclusion of micro-nutrients in his fertilising program, composting and other forms of organic farming.

Both of these growers agree that nitrogen is important for productivity, however improved soil biology will also achieve healthier soils which will result in better yields and a benefit to both the farm business and the environment.

So how much value do we place on soil health in the cane industry?

The focus seems to be around nitrogen - the amounts applied and the efficiency with which it is used by the cane.

Recently a cane nitrogen management workshop was held in Townsville, with over 60 people attending from the cane industry, research, extension and government.

The workshop discussed and mapped out the research and adoption needs for improving nitrogen use efficiency. Most discussion centred on the need for greater adoption of Six Easy Steps, the process for improving Six Easy Steps as new R&D results become available and the effect of yield constraints.

The need to focus on soil health and not just nitrogen and the importance of good agronomic practices also came through strongly.

So I'm picking up the theme of focusing on improving soil health as important as this underpins the productivity, viability and future value of the cane industry.

There are many different approaches, however the underlying principles remain the same whether it be the veggie patch or the cane block. ■