

Trials to shed new light on soil health

INCREASED PASTURE

productivity through alternative soil management techniques is the focus of a three-year research and capacity-building, landholder-driven project being delivered by Queensland Primary Industries and Fisheries (QPIF). The project comes in response to a surge of farmers desperate for alternative methods to restore and maintain soil health.

The research trials began in the 2008-09 summer season on demonstration sites across 12 properties in Baralaba, Biloela, Calliope, Kingaroy and Mareeba and make up the research component of the Healthy Soils: Healthy Future Project led by QPIF extension officer Valeria Berry.

The research comes amid growing concern from both farmers and the wider community for the decreasing health and productivity of farm soils and the environmental harm caused by continued use of chemicals and synthetic fertilisers.

Ms Berry says the farm trials will assess the impact of new and alternative management practices on soil health and deliver much-needed solutions to farmers.

“Many farmers have reached a point in which they can no longer progress because of the rundown state of their pasture and the degradation of soil due to unsustainable conventional soil management practices,” Ms Berry says. “The project has been driven by a community of farmers who are thinking long-term and outside the square and need viable and research-based solutions to the many problems they are facing in regard to soil condition and reduced pasture productivity.”

While it is still too early to reveal any conclusive results from the trials and demonstrations, Ms Berry says the first round of interim findings will be available in less than a year. She says the QPIF trials are expected to reveal that soil health can be dealt with in the long term by improving soil biological activity through the use of biological products and other alternative management techniques that reduce the dependence on synthetic fertilisers.

“At this stage in the research project it is still too early for any clear results but we are



Noel Moretti, Dr Elaine Ingham and QPIF officer Valeria Berri attend a field day (also pictured below).

benchmarking and concentrating on the different products under observation to ascertain the quality of the products being tested.”

What's being tested?

The trials examine productivity issues linked to soil fertility decline, soil organic carbon loss, plant-available nutrients, water-holding capacity, soil compaction and erosion. The aim is to address these issues by applying biological soil management techniques to enhance the regenerative process of the soil. One of the techniques under observation involves ‘pasture cropping’, a technique that



consists of planting a winter cereal crop into a dormant pasture.

Biological soil treatments are analysed prior to application and include compost teas, biodynamic preparations and food sources such as hydrolysed fish (fish by-product), kelp and humic acid to promote the activity of existing soil micro-organisms.

Soil Foodweb support

Ms Berry recently hosted a Healthy Soils: Healthy Future workshop in Biloela, attended by 80 predominantly Central Queensland cattle producers. The workshop offered training and advice on the various methods under observation as well as a presentation on the quality of products by internationally recognised United States soil microbiologist and president of Soil Foodweb Inc, Dr Elaine Ingham.

While Dr Ingham supports the use of biological products to enhance the regenerative process of the soil, she

recommends that producers have samples of compost tea formulations tested by a qualified laboratory to ensure an adequate variety of desired micro-organisms.

“It is also essential to have soil samples analysed to benchmark what is present and then simply adjust biological management practices to support the role of specific soil organisms to enhance plant nutrient availability,” Dr Ingham says.

Soil Foodweb (Lismore), in northern New South Wales, will be in charge of testing the biological products being applied while also identifying the diversity and quality of existing biological activity.

The Healthy Soils project is funded through the Caring for Our Country: Landcare Sustainable Practices Program and is a collaboration between QPIF, the Fitzroy Basin Association, the Northern Gulf Resource Management Group and Landcare groups. To finance the farm trials an additional \$507,000 funding grant was provided by the National Landcare Program. 🌱

For more information regarding the research contact Valeria Berry, phone: (07) 4992 9156.



Growers tell their own story

"ORGANICA Australia manufactures high quality affordable crop nutrients, microbiological liquids and foliar sprays certified for organic farming systems that have made a huge difference to my farm's soil, produce taste and profits. My crops are healthy, insect and disease pressure is almost nil and yields and quality have improved dramatically over the last 12 months. I get top prices, and my produce is always in high demand." *Carl Hermiston certified organic farm owner N.T.*

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***I was sceptical at first, but when I saw the results!**

- Brix levels were up overnight with 1 application of PhosSiCal
- Organica's Liquid and solid Nitrogen made all the difference to yields.
- Nitrogen infused with N fixing microbes (Humaboost-N) lets nature put nitrogen back into my soils for free.
- I have developed great confidence in Organica's products over the years.
- What a great product Fish'n'Kelp is. My crops changed colour overnight

Growers Comments

Liquid N12:0:3

Liquid 12% Nitrogen,
3% Potassium + Trace
12% as Liquid

Phos-S- Si-Cal

Liquid- 18% Phosphorous,
3% Sulphur- 2% Silica
- 20% Calcium + Trace

New Product

HUMABOOST-N

3% Nitrogen infused Humates
+ Silica + Amino acids + omega's
+ Micronutrients + N Fixing
Biology.

They said it couldn't be done! When I wanted to grow **cut flowers** and **tomatoes** in the same greenhouses (10,000 sq.m.) using only organic certified inputs. With a lot of help from Organica I was able to eliminate the use of nitrates, MAP, Glyphosates etc. using a base pre-plant trickle fert program of N 12, Phos-S-Si-Cal (Phos. Sulphur, Silica Calcium.), Humaboost (Humates, sugars containing N fixing Biology) and Fish'n'Kelp. I planted 2 weeks later and continued to trickle feed with Greenfert N12 and High K only. Leaf analysis showed adequate nutrition for the full crop cycle. The good news - flowers. My seconds went from 30% to 6%, bunch weight was 15% heavier, flower size was 20% larger, flower and leaf color was magnificent and

the best result, vase life almost double!
In my tomatoes a similar result especially the colour, flavour and fruit fill. Fruit density was approx 9% higher. The few pests we had were controlled with Pyganic and diseases were virtually non-existent when we sprayed regularly with Organica Leafcoat. Overall I am very happy with the results as are my customers who are prepared to pay a premium for my produce.
Grant Turner Boyland Blooms Canungra Q.



Cattle Coat

Cattlecoat back rubber oil has saved my animals from the torment of flying annoyances for 4 years. Cattlecoat deodorises the cattle, completely changing their odour. They settle down immediately after they are sprayed or use the backrubbers - even the horses use the rubbers for relief.

I can now see a great improvement in my rye grasspastures using Liquid N12+Si from Organica, says Ian Shadbolt, Trickle Creek 4 Organics.



Australian Owned for 3 Generations

I had no idea Organica Sunblok crop paint could reduce fruit temperature and sunburn on my eggplant and capsicums. The added bonus, it extended my season by over a month, midday fruit temperature was 14 deg C Cooler. Comes off easily in a simple bath of Sunclear. Spray on shade cloth, a great product.
Mr. B. Gratton Vic.



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Weeds were a major problem on my vineyard especially grasses. Organica's Horticultural Vinegar Soil Acidifier has helped cut down the weeding and the cost. Even large weeds are less of a problem I simply spray the base of the weed. Pumping a knapsack sure beats chipping.
Joseph Hinchley S.A.