

A natural vibe at Woodstock

A TRIAL comparing conventional and biological farming methods in northern Victoria hopes to reveal if cutting fertiliser use will help soil health.

The three-year trial on one pasture and five cropping paddocks at Woodstock, near Bendigo, began seven months ago.

Biological farming advocates say soil biology (bacteria, fungi, earthworms, etc) can create a healthy soil and disease-resistant crops with minimal insect damage.

It does not strictly ban synthetic chemicals and fertilisers, but suggests that once soils are healthy, crops and pastures can be grown successfully with much lower amounts of them.

The Woodstock experiment is examining whether one method produces greater long-term soil-building benefits.

"Farmers are keen to see if they can farm successfully with reduced chemical inputs," project manager Judy Crocker said.

"We want to get information about how to look at root nodes, check soil structure and how to 'see' crops."

A recent field day allowed farmers to examine the soil

At a glance

Biological farming
Special feature: Cutting costs
District: North central Victoria
Report:
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profile and check on progress on three of the trial's six sites on farms owned by Howard Hepburn, Nick, Irene and Bill Punton and Steven and Peter Stone.

Each site included a plot grown with conventional doses of chemicals, fertilisers and weed treatments, plus a biologically-farmed plot treated with a biological compost (containing lime, reactive phosphate rock, rock dust, molasses and minerals) applied at 625kg/ha.

Gairdner barley grower Howard Hepburn sprayed microbes on chook manure three months before spreading it on the biologically-farmed part of his paddock at 2.96 cubic metres/ha.

Eight tonnes of biological compost was also spread over that same 15ha site before sowing. Mono ammonium

phosphate and NutriSmart were applied at sowing.

On the conventional site, he used untreated chook manure and MAP (at 75kg/ha) but no compost.

Nick Punton and his parents, Irene and Bill, who have been farming for 30 years, are comparing conventional and biological approaches on a late June-sown rosella wheat crop.

The paddock had been sown to pasture for the past six years.

The Puntons applied a chook manure-rice hull mix at five cubic metres a hectare (\$5.40/cubic metre delivered), which was treated with microbes. They also dressed the rosella wheat seed with a biological inoculant containing fish, seaweed and compost extract.

"That's to establish the micro-organisms on the plant so that after harvest they will be there to eat and break down the stubble," Irene said.

"We are trying to get the straw incorporated into the soil.

"Mostly, in the past we've burnt our stubbles because we don't have the machinery to plant through the thick stubbles.



Moisture seekers: Irene and Nick Punton amid the red ferrous soils below their wheat crop.

"We hope the micro-organisms will digest that stubble before the next crop to return the nutrients to the soil instead of losing them."

Brothers Steven and Peter Stone are growing lupins on their trial site.

"On the conventional site, we've left the stubble standing and direct-drilled with moonah lupins," Peter said.

"We sowed the seed at 100kg/ha with 80kg/ha of MAP.

"On the biological site, we sowed the same lupins at the

same sowing rate with an 80kg/ha application of MAP and NutriSmart in a 30:70 ratio."

Peter said the seed was dressed with the fish-seaweed-compost extract inoculant and the paddock top-dressed with the compost before sowing.

"At the moment, we are slightly ahead with our conventional crop but it's going to be interesting to see at harvest time if we get enough rain to get us there," Peter said.

Department of Primary Industries scientist Richard MacE-

wan cautioned farmers that soil structures and compaction could limit growth.

"The interest in getting more biological management into the soils is important," he said.

"My concern is that it's seen as a cure-all and soil is an extremely complex system.

"There are engineering aspects that need to be looked at in terms of the equipment we use as much as there's a need to look at making sure the right microbial mixes and fungi are there."