

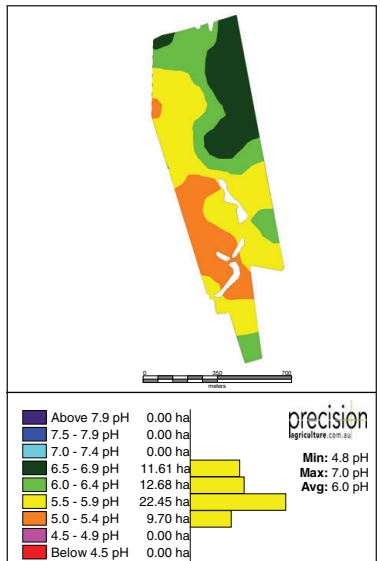
Production benefits Laura farm margins improve after pH mapping

Acid soils project waters down costs

By PAULA THOMPSON

MID North farmer Anthony Lines says a project aimed at providing low-cost solutions to acid soils offers significant production benefits for his Laura farm, including better gross margins.

The fifth-generation cropper runs the Lines MultiAg business at his Pine Park property with his wife Christine and children Bradley, Ashley and Rebecca.



PH MAPS: Maps showing different pH zones in a paddock on Anthony Lines' farm.

Key points

- Cost saving of about 30pc or more
- Boost for poorer performing areas
- Two-year project delivered by Rural Solutions SA

Mr Lines said the project, *Innovative and cost-effective solutions to the treatment of acid soils in SA* – supported through the Advisory Board of Agriculture, funded by the federal government and delivered by Rural Solutions SA over two years – offered valuable farm data.

“The project involves using a Veris pH detector on a Can-Am ATV to do soil pH measurement and data collection,” he said.

“It’s aimed at showing farmers how they can save money out of treating acidic soils.

“After all the sampling and data collection has been done, farmers get a pH map, showing the pH zones across their paddock and this shows where lime should be applied and those areas that do not require lime.”

Mr Lines has done the sums on what the project means to him.

“Usually I would spend \$15 a tonne on lime, but freight would be about \$20/t and the spreading cost would be about \$5/t,” he said.

“All up, I’d be spending about \$40/t. So, spreading lime at a rate of 2.5t a hectare would cost \$100/ha.

“If I’m liming the whole of a 100ha paddock, the cost would be about \$10,000.”

But by using the pH mapping services of Precision Agriculture from Vic through the project, significant cost-savings can be made.

“Through the mapping and working out where I really need the lime, I can save about 30 per cent of the usual cost,” he said.

“The reduced liming cost is \$3000 and the cost of the test is \$7.50/ha.”

Mr Lines tries to keep his soils at a pH above 5.5 or about 6.5.

“It’s harder to raise the pH up again, the lower you let the pH go,” he said.

“So, to get the pH up from, say 4.5, it would take at least 3t/ha of lime – a significant cost.

“By having a regular liming program, we can keep our soil as close as possible to the ideal.

“It’s a part of our yearly budget we always set aside funds for.

“Usually we would put out between 100t and 200t of lime a year on our worst paddocks.

“It’s something that’s really important to look at for the future of the farm. Ideally, I’d like to bring up the pH in all of the worst-performing areas of the farm.”

Liming offered great benefits to farm productivity but cost and quality was an issue.

“Nutralime, a byproduct from the Penrice Soda Ash manufacturing from Osborne in Adelaide, was one of the best lime products sources, but this is no longer available as the Soda Ash plant closed down last year,” Mr Lines said.

There were other sources throughout the region.

“One thing we’ve really had to look at is product effectiveness



LAND SOLUTIONS (above): Anthony Lines at his Laura property with his dog Diesel. He says it is important to keep soil pH as close as possible to ideal levels.



IN ACTION (left): Precision Agriculture's Brendan Torpy, Vic, using the Veris pH detector.

Behind the headline

SA has more than 1.9 million hectares of agricultural land susceptible to acidification that degrades the soil and reduces crop and pasture growth. Many of the soils in acid-prone areas have a pH less than 5 in the 0-10-centimetre layer, and subsurface soil acidity is also becoming an issue. Lime is the most effective and economical method for the treatment and prevention of acid soils, but in recent years its cost and freight charges have increased. Previously the amount of lime required for a paddock had generally been based on a single soil test and the lime applied at a uniform blanket rate across the whole paddock. A more accurate determination of soil pH across a paddock is warranted so that money is not wasted applying lime to areas where it is not required. This is why promoting soil pH mapping and the *Innovative and cost-effective solutions to the treatment of acid soils in SA* project is so important for the state's farmers.

versus how far away it is to source,” Mr Lines said.

“We’ve had to weigh up how well the product works, with where it comes from, as freight is the biggest cost involved with liming.”

Mr Lines usually sows 2400ha annually at his Laura home base and on land at Napperby and Nelshaby.

He said that after 10 years of continuous cropping it was especially important to monitor the soil pH and keep the soil pH as near as possible to its ideal, so the soil did not become run-down.

Mr Lines uses a legume rotation – either beans or peas – then two wheats, a barley and then an export hay.

“It’s a rotation that works for us,” he said.

“Hay cleans up any ryegrass issues and it’s the most profitable rotation we’ve come up with so far.”

The past three seasons had been very good at Laura.

“But before that, the 10-year average was below average,” he said.

“I’ve kept in mind that the more crops you pull off, the more the pH in your soil is lowering – that’s another reason why the project is so important.”

Rural Solutions SA’s Andrew Harding has been working with the Laura Agricultural Bureau on the project.

“It’s great to have an active bureau, helping all the farmers in the area along,” Mr Lines said.

“Nelshaby has got a really active bureau as well, so it’s great to be able to feed off each other.

“My bureau membership fee will be recouped many times over, just by being part of this project.”

The statewide project finishes in March 2016.

• **Details:** Rural Solutions SA senior consultant Andrew Harding, Clare, 08 8842 6231 or 0417 886 835.

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