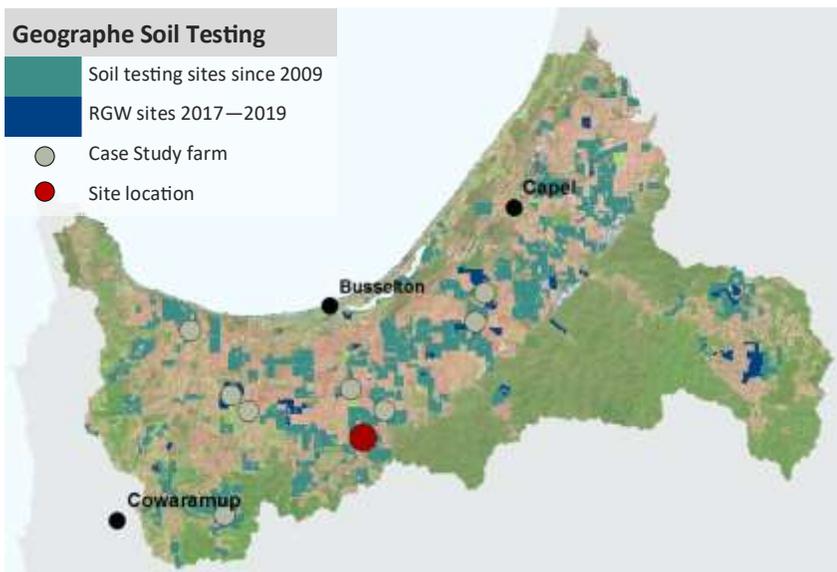


MOST SIGNIFICANT CHANGE

- Cattle live weight increased by 50kg and yielded additional \$41,000 profit after improved pasture and fertiliser management.
- Almost nil phosphorus applied for 3 seasons.
- Increased value in agronomic advice.

Case Study Farmer - ROSS PRATER

Boosting beef production after soil testing



LOCATION

Walsall

LANDSCAPE

Whicher Range

ENTERPRISE

Beef farm/feedlot

PROPERTY SIZE

96 hectares



Background

Cockatoo Valley Beef is a 96 hectare farm run by Ross Prater on the picturesque Whicher Range, 18 kilometres south of Busselton. The property supports 348 head of cattle and a feedlot that supplies high quality local beef to Woolworths.

Ross' long term goal is to improve pastures and increase stocking rates using rotational grazing. He knows that improving the soil is key to better pastures.

"About five years ago I was able to secure a contract with Woolworths to produce and deliver quality beef for the local market, and that prompted me to look very closely at the economics of farming."

Soil testing and tissue testing

Ross got involved in GeoCatch's soil testing project in 2017 to get a better understanding of what his soil needs were for good pasture.

Soil testing across Ross' whole farm in 2017 showed that the soil phosphorus (P) levels were adequate, however soil pH was low.

"I was actually quite surprised to see how much residual fertiliser was in the soil from previous practices, where we just threw out Super every year like we have been doing forever."

In response to his soil test results Ross:

AVERAGE SOIL TEST RESULTS 2017			
TARGET PRODUCTION: 90% of maximum			
High	Medium	High	Low
P	K	S	pH

- cancelled his standard 30 tonnes of Super and instead ordered 300 tonnes of lime to boost pH levels.
- didn't apply P fertiliser in autumn that year.
- applied 2 tonne/ha of manure; nutrient analysis of his manure revealed that it met or exceeded P requirements of his soil.
- applied urea to boost grass production.

Follow-up tissue testing of pasture in spring showed that P and potassium (K) were marginal, however further soil testing showed little difference in P, K and sulphur (S) levels. It also showed an increase in pH in response to the liming.

Agronomic support

Ross had access to an independent agronomist as part of the project.

"The most beneficial thing has been having access to Graham, the agronomist, and being able to throw ideas past him."

Table 1: Four-year Fertiliser Investment

	2016	2017	2018	2019 (planned)
Super (t)	25	0	1.5	0
Urea (t)	0	2.5	2	0
NKS2:1 (t)	0	0	20	22
Lime (t)	0	300	0	0
pH (average)		4.5	5.2	5.2
Cost	\$12,000	\$11,500	\$13,800	\$13,200
Soil test	N	Whole farm	Targeted	Targeted
Tissue test	N	N	Targeted	Targeted

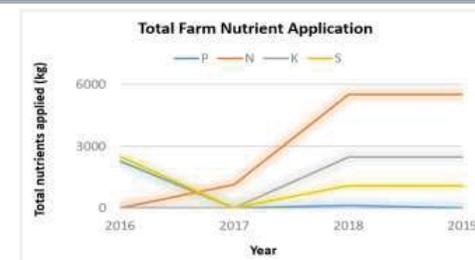
Based on the agronomist's advice, Ross applied NKS2:1 at 100 kg/ha the following autumn and applied P only to paddocks where soil tests showed it was needed.

Outcomes

As a result of soil testing and agronomic advice, Ross targeted his fertiliser application to nutrients that were needed (Table 1).

Ross saw positive results from his changed fertiliser practices quite quickly. His pastures were doing better and he felt he had feed in front of him when neighbouring farmers didn't (in what was a tough season).

The results of both the soil and tissue testing supported his decisions. While he spent more on fertiliser, Ross received greater returns and increased productivity.



Ross' cattle were up to 50kg heavier than average going into the feedlot, as a result of his improved pasture and fertiliser management, which equated to an additional \$41,000 profit.

Improved production is the driving factor behind Ross' wide scale changes to his pasture and fertiliser management.

More significant changes...

- Better pasture production, through changes to fertiliser and pasture management, allowed Ross to **spend less on feed** and resulted in a 20-25% live weight gain per head and subsequent **greater profit margin**.
- Ross now has **greater confidence to change his fertiliser practices** after seeing positive results from a transition away from applying Superphosphate every year.
- Ross considered reverting back to his standard blanket application of Super. He credits the opportunity of having **access to an independent agronomist** and increased **soil nutrient knowledge** for changing the way he runs his farm for the better.

Lessons learned

Engaging in soil testing was a critical first step in Ross changing his fertiliser practices. Continued support and soil testing analysis has ensured Ross remains confident in making fertiliser decisions.

Ross believes in being proactive and has taken every opportunity to learn more about his soil and ways to improve his pasture.

“I’d always had a dream to be a lot more scientific with farming. Every decision now is based on science and results.”

Ross believes the ability to measure the outcomes of his changed practices was critical. It is this knowledge that empowers and motivates him to continue improving his fertiliser practices.

Where to from here?

Ross is already spreading the word; enlisting his neighbour to be involved in the 2019 soil testing program. He plans to invest in soil testing at least every second year and access independent agronomic advice, as he has seen the direct economic benefit this has had to his farm business. Ross is committed to leaving the land in a better condition than when he started farming.

The Best Practice Fertiliser project is delivered in partnership with the Department of Primary Industries and Regional Development and is part of the Revitalising Geographe Waterways program. The project works directly with farmers and industry to improve fertiliser management through soil testing, nutrient mapping, workshops and access to agronomic advice to ensure fertiliser and profits stay on the farm and out of Geographe waterways.

