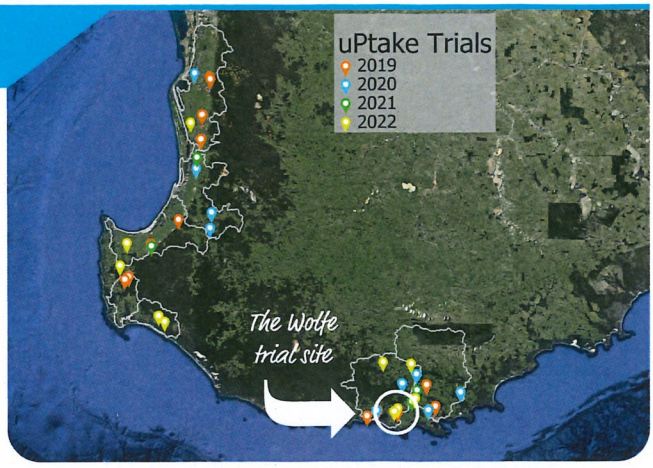
Department of **Water and Environmental Regulation**
Department of **Primary Industries and Regional Development**
GOVERNMENT OF WESTERN AUSTRALIA

uPtake
Trials - Innovation - Partnerships
Delivering better fertiliser outcomes

uPtake case study: Wilson Inlet catchment

The Wolfe trial

Scott Wolfe



Wolfe site

The award-winning uPtake project has increased farmer and industry confidence in the science behind phosphorus fertiliser recommendations by validating national critical soil test values for phosphorus (P) for south-west Western Australia (WA).

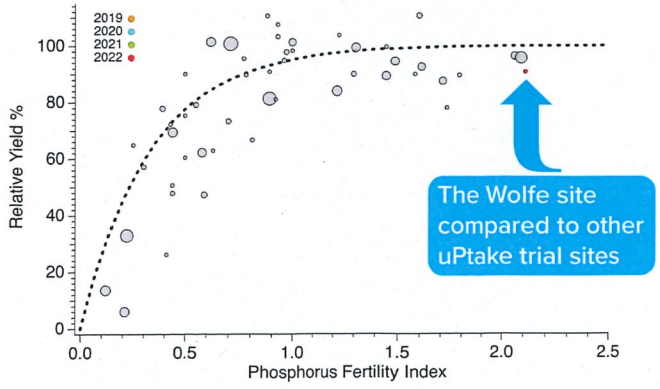
Scott Wolfe has been farming Angus Friesian Cross cattle for the past seven years on his farm, which adjoins the family farm he grew up on in the Wilson Inlet catchment.

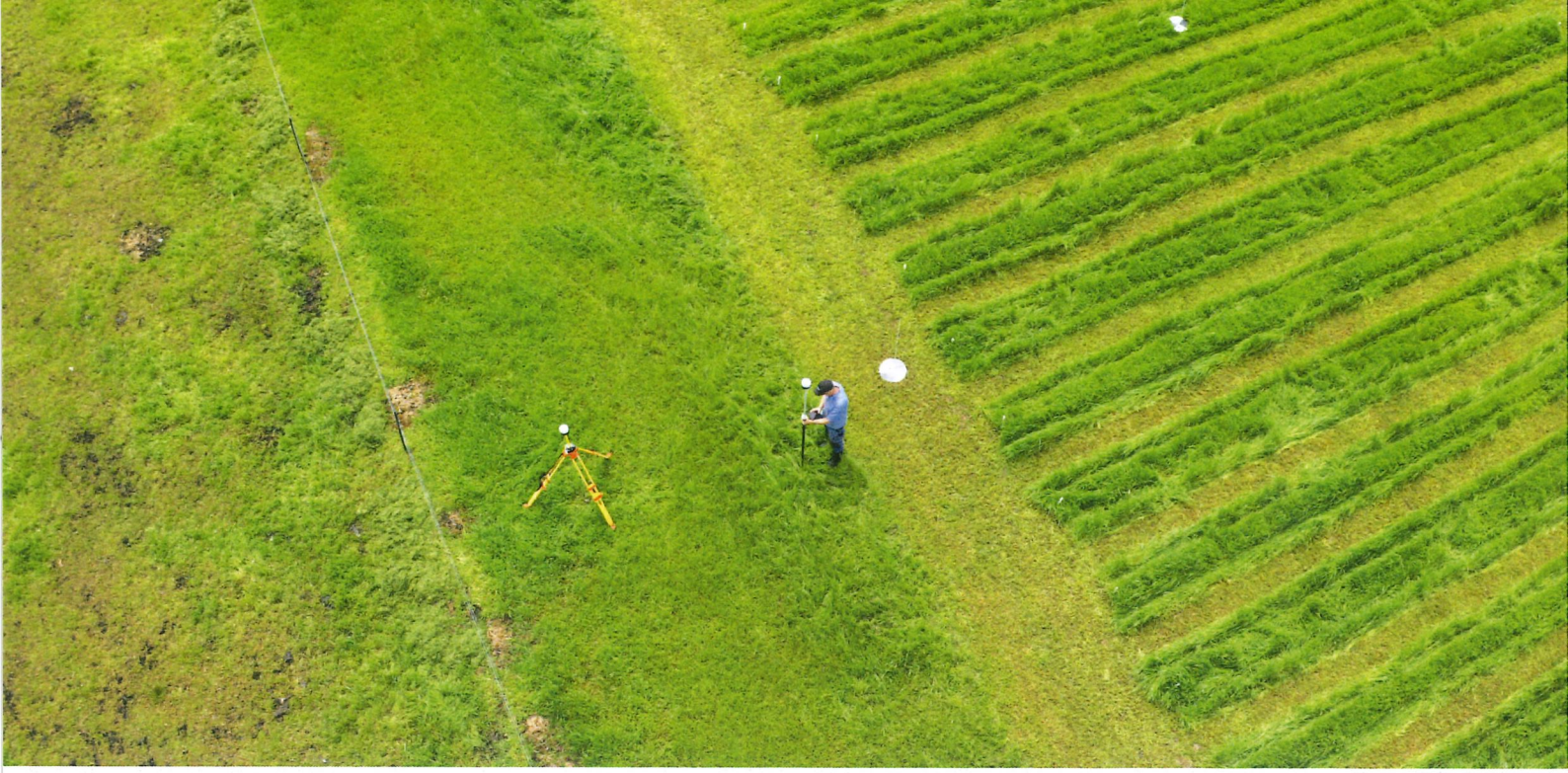
"Dad and I have been involved in the soil testing program for quite some time and are relatively confident in the results. Being part of the trials gave us the chance to double check the figures."
– Scott Wolfe

The Wolfe trial was undertaken in 2022.

Site characteristics

	2022
Phosphorus buffering index (PBI)	1.0
P fertility index	2.11





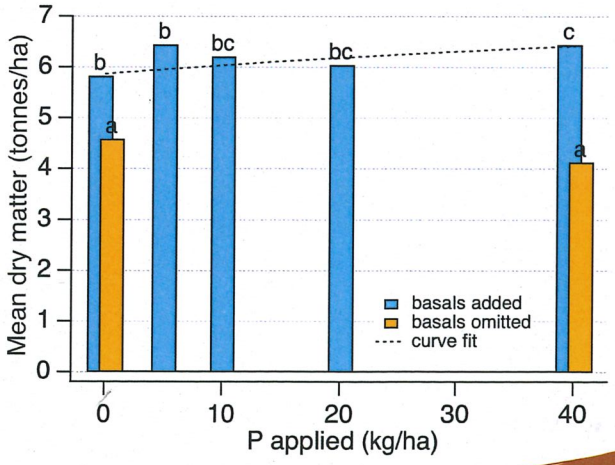
Wolfe site

Key findings

The Wolfe trial showed a slight pasture response to P application but only at the highest P rate of 40 kilograms per hectare (kg/ha) (blue bars below).

The national data predicted that there would be very little response to P at this site because of the high P fertility index (2.11). The small pasture response to P application (about 5 per cent), at the highest P rate of 40 kg/ha would not provide a good return on investment for farmers.

There was a significant increase in pasture production with the addition of basal nutrients (nitrogen, potassium, sulphur, and some trace elements shown by blue bars) compared to treatments without basal nutrients (orange bars).



Key learnings

"The response to P at this site was approximately 5 per cent and only at the highest rate of P. This P rate is likely to be uneconomical, whilst also presenting significant potential for P loss to the environment, particularly from soils with a low PBI." – David Weaver, Principal Research Scientist, Department of Primary Industries and Regional Development

"It was great to validate the information we have got from soil testing on our own farm; it really means we can trust the results. I found the pasture response to the other nutrients really interesting. It has made me rethink how we apply nutrients other than P and reinforced the importance of soil testing." – Scott Wolfe

More information

This trial was among 52 trials established over four years across south-west WA. Together, the results from the trials validated that national critical soil test values for P are relevant to south-west WA soils and contemporary pasture species.

Learn more at estuaries.dwer.wa.gov.au/uptake

Supported by

Australian Government | National Landcare Program | Soil Wise | Healthy Estuaries WA

uPtake and Soil Wise are jointly funded through the State Government's Healthy Estuaries WA and the Australian Government's National Landcare Program.