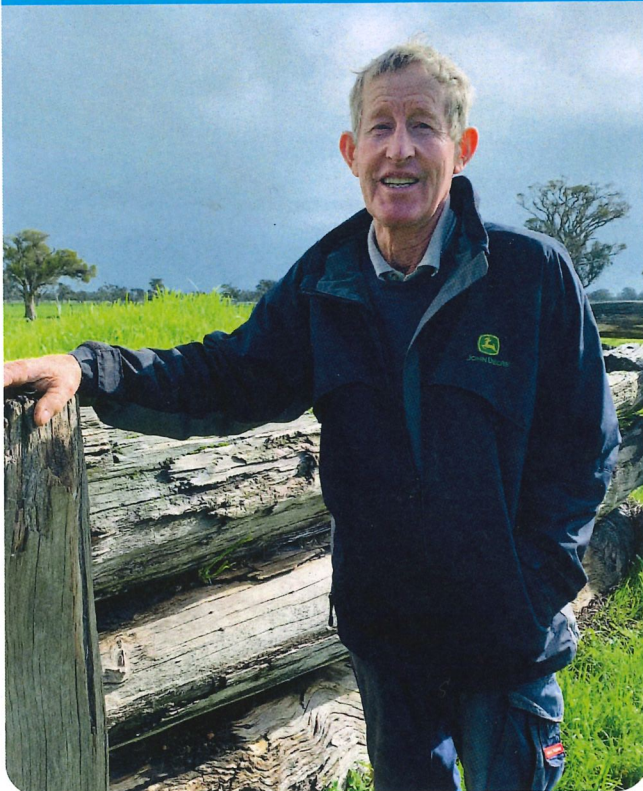
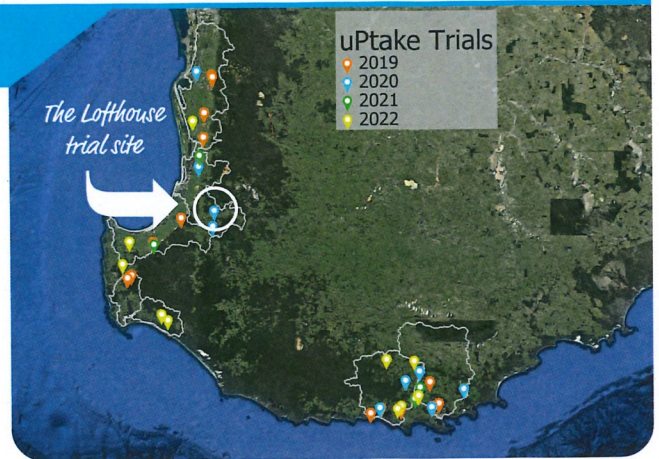


uPtake case study: Leschenault catchment

The Lofthouse trial



Peter Lofthouse



Lofthouse site

The Lofthouse trial was undertaken in 2021 and represented sites with a high P buffering index (PBI) and high P fertility index.

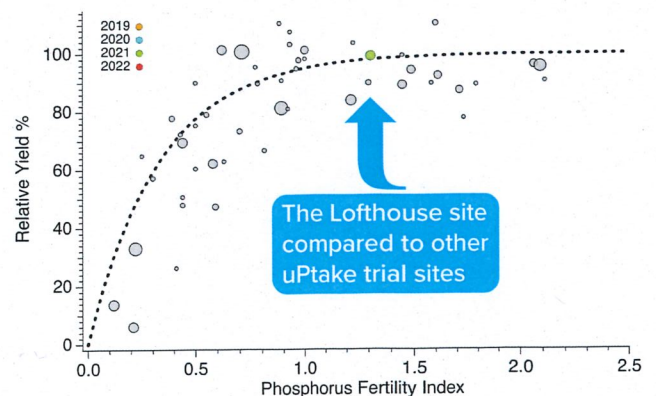
The award-winning uPtake project has increased farmer and industry confidence in the science behind phosphorus fertiliser recommendations by validating national critical soil test values for phosphorus (P) for south-west Western Australia (WA).

Peter and Marion Lofthouse farm a 250-hectare property in the heart of Wokalup that has been in Peter's family for more than 50 years. Previously a dairy farm, the Lofthouse family now runs a beef operation, supplying steers to the local abattoir.

"We've been soil testing for more than 40 years and were happy to be part of the trials as we thought it was a good learning opportunity for farmers and the Department of Agriculture."
– Peter Lofthouse

Site characteristics

	2021
Phosphorus buffering index	212
P fertility index	1.31





Lofthouse site

Key findings

The Lofthouse trial showed no pasture response to the addition of P (blue bars below).

This result was expected and consistent with national data because of the site’s high soil PBI (212) and P fertility index (1.31).

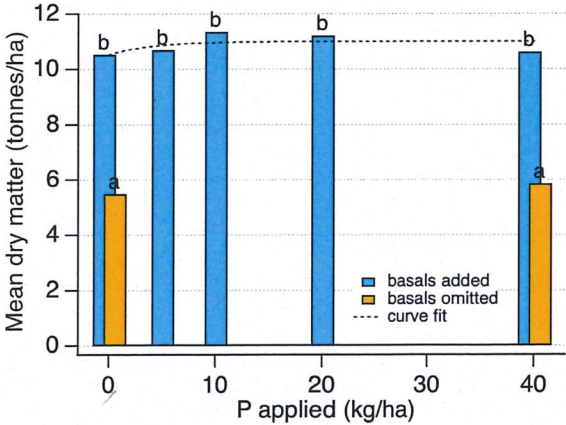
There was a significant increase in pasture production with the addition of basal nutrients (nitrogen, potassium, sulphur, and some trace elements shown by blue bars) compared to treatments without basal nutrients (orange bars).

The two-fold increase in yield with basal nutrients both in the treatment with no P applied and the 40 kilograms per hectare treatment showed that the pasture response was from nutrients other than P.

Key learnings

“The Lofthouse site showed that there is no production or economic gain to applying P when the soil has a P fertility index greater than 1.0. Significant increases in yield were, however, achieved by applying basal nutrients, highlighting the importance of soil testing to identify nutrients that may be limiting production.” – David Weaver, Principal Research Scientist, Department of Primary Industries and Regional Development

“We found that we had an adequate bank of P with no economic benefit of putting on more. What did surprise us was how far you can push production by applying the correct nutrients rather than just applying phosphorus. You really have no idea what you need if you don’t soil test.” – Peter Lofthouse



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