

The future for soil acidity

Time to *Re-Lime* Lime

The present

Soil acidity has been confirmed as a major constraint in the Avon River Basin.

Many farmers participated in the Avon Catchment Council Soil Acidity Project conducted by The Department of Agriculture and Food Western Australia and Precision SoilTech via subsidised soil sampling.

The good news is that 15% of sites are above pH targets and a further 59% could meet the targets by 2020...*if the recommended amounts of lime are applied.*

The targets

The pH targets of 5.5 in the surface and 4.8 in the subsurface have been chosen because at these levels pH is eliminated as a constraint to productive agriculture in the south west of WA.

Maintaining pH above 5.5 in the surface allows alkalinity to treat subsurface acidity and keeping subsurface above 4.8 prevents reduced root growth caused by aluminium toxicity.

The Avon Catchment Council soil pH targets for the Avon River Basin are achievable by the year 2020, with adequate lime use.

The future

The future for soil acidity in WA depends on actions taken by farmers now.

For the soil pH targets to be achieved by 2020, good management of soil acidity is required:

- Soil test pH to 30 cm in 10 cm increments
- Obtain lime Product Information Sheets from www.limewa.com.au
- Use the Lime Comparison Calculator to determine the most cost effective lime source based on neutralising value and particle size www.soilquality.org.au
- Apply recommended rates of lime
- Monitor soil pH and re-lime as necessary

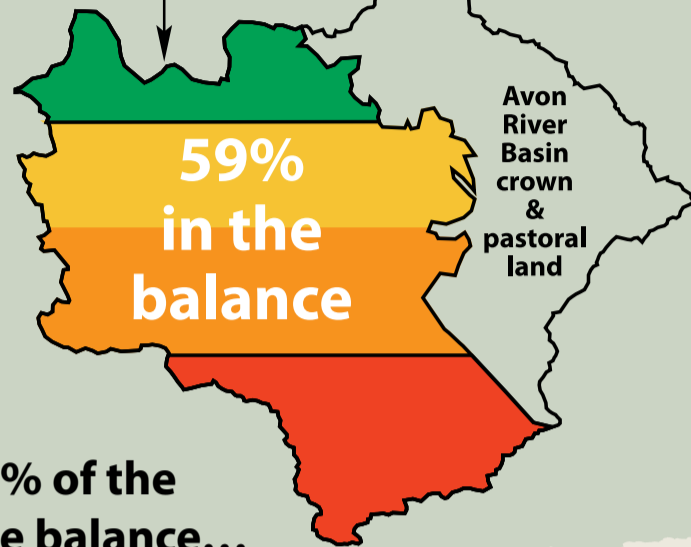
If insufficient lime is applied:

- The problem will continue to worsen,
- The cost of amelioration will continue to increase, while
- The capacity to pay for those increased costs will decrease.

2008 soil pH

- 15% of sites meet pH profile targets
- 26% acid throughout profile
- 32% have topsoil acidity, 27% have topsoil and midsoil acidity.
With good management, these sites can meet targets by 2020.

Avon River Basin
broadacre agriculture



The 2020 outlook for 59% of the Avon River Basin is in the balance...

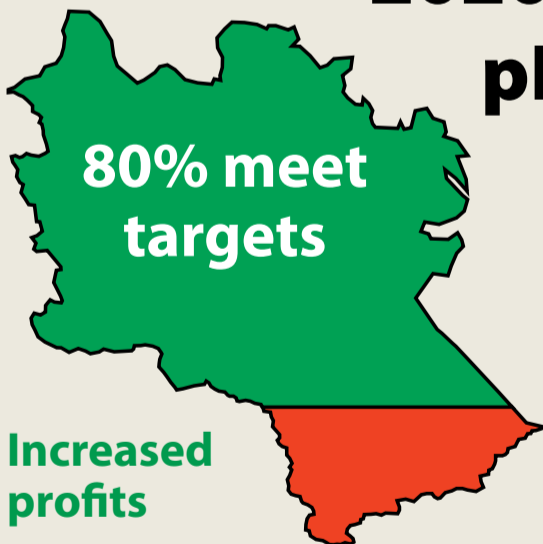
Which way will you go?

Soil acidity managed

- Soil tested at 0–10, 10–20 & 20–30 cm,
- Lime applied as required,
- Soil pH monitored, and
- Liming program adjusted as required.

Insufficient liming

Predicted
2020 soil
pH



- Increased profits
- Sustainable production



- Production lost
- Restricted rotation choices
- Increased off-site effects

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The Avon Catchment Council has set a target $\text{pH}_{\text{CaCl}_2}$ of 5.5 for topsoils and 4.8 for subsurface soils in the Avon River Basin by 2020.

This article is produced by the Avon Catchment Council Soil Acidity Project, a collaborative project between the Department of Agriculture and Food Western Australia (DAFWA) and Precision SoilTech. The project is funded by the Avon Catchment Council with investment from the Western Australian and Australian Governments through the National Action Plan for Salinity and Water Quality. For more information on soil acidity or liming, please contact Chris Gazey, DAFWA, 9690 2000, or your advisor.