Agricultural land

Soil acidity

South Australia's
Environmental trend and condition report card 2018

STATEWIDE

Trend Getting worse

Condition Fair

Reliability Very good

Trend

Since 2005, the trend in agricultural soil acidity has been getting worse.

A soil is acidic if its pH is below 5.5. Increasing soil acidity can be counteracted by adding lime to the soil. If not enough lime is applied over time, the soil will become more acidic. The amount of lime used each year to manage acidic soils is monitored to help estimate the trend in soil acidity.

Since 2005, soil acidity has continued to increase (worsen) in each of the six key agricultural regions (Eyre Peninsula [EP], Northern and Yorke [NY], Adelaide and Mount Lofty Ranges [AMLR], South Australian Murray–Darling Basin [SAMDB] and South East [SE]) (top figure).

The area of land with acidic soils is also increasing.

Condition

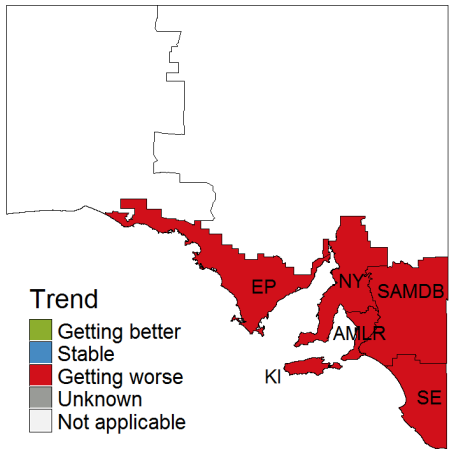
Soil acidity is fair, with two-thirds of acid-prone soils in the agricultural areas of the state being acidic.

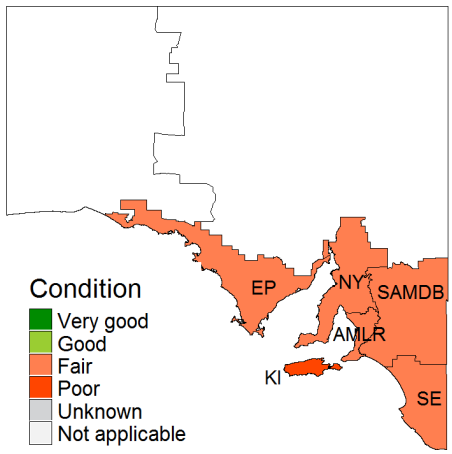
The condition rating for soil acidity depends on the amount (proportion) of acid-prone soils that are currently acidic.

Statewide, 67% of acid-prone agricultural soils are currently acidic, giving a fair condition rating. Most of the agricultural regions have a fair condition rating for soil acidity (bottom figure).

Adequate application of lime is required to overcome increasing acidity and maintain the productivity of important agricultural land in South Australia.

Soil acidity is getting worse across South Australia. Lime is needed to help maintain agricultural productivity





Why is agricultural land important?

Agricultural land supports food and fibre production through crops and livestock, with South Australian agriculture valued at $4.5 billion annually.

Soil acidity reduces the growth and production of most agricultural plants. The annual loss of agricultural production in South Australia due to soil acidity is estimated at $88 million.

What are the pressures?

About 20% of the state's agricultural land has soils that are prone to acidity.

Agricultural production accelerates soil acidification. Acidification rates are increasing because of higher agricultural productivity and greater use of nitrogen fertilisers.

Soil acidification is a complex chemical process, and its effects are not always recognised or understood.

Treatment of acidic soils relies on the availability of good-quality and affordable lime, which varies at times and between regions.

What is being done?

Soil mapping information and soil test data are used to estimate the extent and severity of soil acidity.

The state government works with industry to increase awareness, detection and treatment of soil acidity.

The Managing Soil Acidification Action Plan guides activities to improve management of soil acidity.

Technology is now available to map pH variation within paddocks, so that lime can be applied where it is needed.

For further information see: technical information

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Government of South Australia