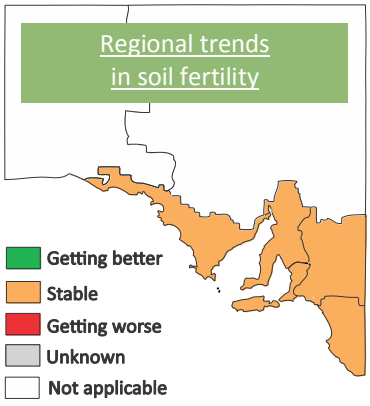
2016 State Report Card

Is soil fertility improving in our agricultural areas?

Healthy soil provides us with food and fibre through our crops and livestock. Healthy soil provides nutrients for crops and pastures, stores and cycles water and carbon, and resists erosion.

Essential nutrients, such as phosphorus and some trace elements, are naturally low in South Australian soils. In agricultural areas, land managers apply fertiliser to replenish the nutrients in their soils and optimise soil fertility. Surveys by the ABS indicate that about seven million hectares of land across all South Australian NRM regions was fertilised by 8230 different agricultural businesses in 2014–15.

To inform their fertiliser strategies, about two-thirds of South Australian land managers test the nutrient levels in their soils. This report card presents results from some of these tests.



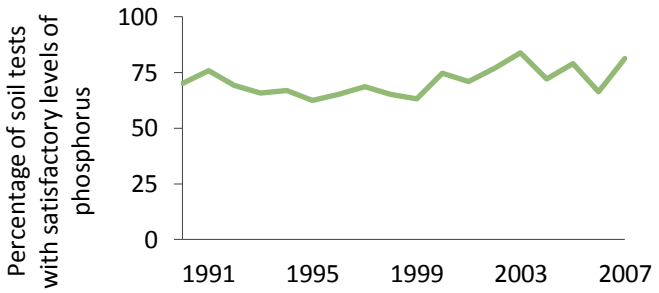
State target

Improve soil and land condition

Trend (2003–07)	Stable	Ongoing efforts will be needed to increase the fertility of our soils

The recommended phosphorous levels in different soil types is around 20–30 parts per million. The percentage of soil test with Phosphorus levels above 20 ppm varied slightly over the five years to 2007, but both recent and long term trends indicate that phosphorus levels have been stable between 1990 and 2007 (map above and graph on right).

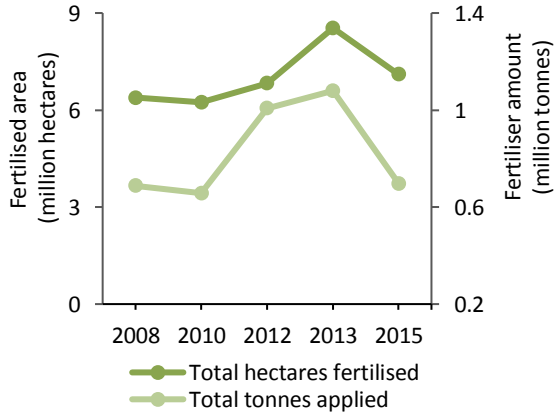
Between 2008 and 2013, the amount of fertiliser applied and the area of land fertilised increased each year. In 2015, fertiliser use reduced but remains higher than 2008 usage (graph below).



Where we are at (2007)	Good	Satisfactory phosphorus levels were found in 81 per cent of soil tests

Current soil phosphorus levels are unknown. In 2007, 81 per cent of our agricultural soils had satisfactory levels of phosphorus. Such soil testing is no longer coordinated by state government. Total fertiliser application rates including phosphorus based fertilisers are at similar rates to 2008 which indicates land managers are still managing their soil fertility.

Because fertiliser costs are increasing, land managers use better technology to improve fertiliser application. For example, many land managers use GPS-guided, variable-rate fertiliser applicators to distribute fertiliser in their paddocks, and use rates based on nutrient removal. Using fertiliser efficiently helps to optimise the productivity of agricultural soils, reduces waste and minimises environmental impacts such as nutrient runoff into streams and coastal systems, seepage into groundwater and by reducing emissions associated with fertiliser production.



Reliability of information	★★☆☆☆	Fair

Further information:

Technical information for this report card, Soil and land condition monitoring trends in South Australia

Government of South Australia