Government of South Australia

MEDIA RELEASE

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Soil acidity issues on Eyre Peninsula

Natural Resources Eyre Peninsula and Primary Industries and Regions SA are working together on the problem of soil acidity in the lower Eyre Peninsula, where the ironstone and sandy soils are inherently prone to acidification.

Primary Industries and Regions SA Soil and Land Management Consultant Brett Masters said acidification was a major issue for lower Eyre Peninsula farming regions with about 170,000ha of the region's ironstone and sandy soils prone to the problem.

"Soil acidification is a natural process that can be accelerated by agricultural processes such as product removal and high use of nitrogenous fertiliser," Mr Masters said.

"Soil sampling by Natural Resources Eyre Peninsula on 30 paddocks across the region first in 2010 and again in 2014-15 indicates that acidification is happening faster than historically estimated, due to current farming practices and recent seasonal conditions.

"Lime applications are the most cost-effective way to treat acid soils, but lime sales figures suggest that while there has been an increase in the amount of lime applied by landholders in the past two years to address this issue, this is still only 40 per cent of the total amount required to address annual acidification in the region.

"Where surface pH values are currently below 5.5 ($CaCl_2$), landholders should aim to apply enough lime to bring pH above this value.

"However, where the calculated lime requirement is more than 3.5 t/ha, we recommend splitting that rate into two applications several years apart to avoid issues such as manganese tie-up, or herbicide damage to crops due to increased plant back periods."

Mr Masters said once land managers had increased surface pH to more than 5.5 ($CaCl_2$), they should plan strategic lime applications to maintain pH above this target.

"It's encouraging to hear some farmers say, 'I applied lime to treat soil acidity on this paddock four years ago and (recognising that soil acidification is an ongoing process) it probably needs another application now'," Mr Masters said.

"However, subsurface acidity is also an increasing problem in the region. Results from the NREP monitoring program have also shown a rise in the number of sites where subsurface pH values were below the critical value of 5.0.

Communications and Engagement Officer – Katrina Pobke - 0488 005 880

“Subsurface acidity can be difficult to treat with surface lime applications, as unless mixed deeper into soil profile with cultivation it can take more than four years for lime to move into these subsurface layers.

“If surface pH is maintained above 5.5, surface lime applications do have the capacity, over time, to effect change in the subsurface.”

Natural Resources Eyre Peninsula Farming Officer Mary Crawford said there was a concerted effort to raise awareness of the impacts of soil acidity on lower Eyre Peninsula through trials, demonstrations and workshops delivered in partnership between NREP and PIRSA.

“Funding from the Australian Government’s National Landcare Programme has also enabled new technology for mapping soil acidity across paddocks to be trialled on Eyre Peninsula,” Ms Crawford said.

“This map enables farmers to develop a variable lime prescription map based on pH zones, resulting in more cost effective lime applications.

“Land managers have also recognised the need for sampling transects to be taken in soil/management zones rather than across whole paddocks.”

For more information on treating and preventing soil acidification please call Brett Masters, phone 0428 105 184 or email brett.masters@sa.gov.au

To read about sub-surface soil acidification visit agbureau.com.au for the factsheet ‘Identification and treatment of sub-surface soil acidity’ and for a round-up of acid soils information relevant to Eyre Peninsula visit: www.naturalresources.sa.gov.au/eyrepeninsula/land-and-water/sustainable-agriculture/soil-health