



Newsletter

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Soil testing worthwhile on Fleurieu dairy farms

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An intensive soil testing program this summer has given farmers a much better understanding of soil fertility on their properties, helping them to reduce and/or better direct fertiliser expenses this coming year.

After participating in Dairy Landcare surveys, The Mount Jagged Dairy Discussion Group was able to access Landcare funding for up to 20 soil tests on each member farm. This work has provided a really detailed record of soil fertility on each farm, with some surprising results for all concerned.

Greg Mitchell, agronomist with FP-AG, coordinated the soil testing work and reported that soil acidity remains a problem on many farms. "We know that strong acidity can reduce the availability of certain soil nutrients and is sometimes responsible for increased availability of the plant toxin aluminium in soils," Greg said. "If anything, acidity problems were worse on farms applying high inputs of nitrogen fertilizers, and where paddocks are cut for hay and silage every year."

"Farmers have identified their most acidic paddocks and, in spite of poor milk returns, will treat these areas with lime. But because lime only works slowly, several farmers will defer this expense until the end of the year and address any other soil fertility issues now," he said.

Greg reported that 8% of paddocks tested moderately saline, mainly involving wet low-lying paddocks and some irrigation areas. Farmers were responding to these salinity problems by switching from full to partial irrigation practices, and some will be oversowing their saline paddocks with balansa clover. Greg explains "balansa clover grows well in the year of sowing but normally fails to persist in Fleurieu pastures because of poor seedling growth in autumn. However it is tolerant of waterlogging and moderate salinity, and should persist and improve overall productivity in these situations".

Most participants had increased phosphorus (P) fertiliser inputs in the last few years, and have usually been rewarded with good soil test levels and stronger pasture growth. Indeed the soil test results indicated that several farmers could now reduce or suspend P fertiliser inputs for a year or two, without compromising on growth. This will help to limit fertilizer expenses and help minimise the risks of P nutrient loss into the environment.

In contrast, sulphur (S) was frequently deficient in surveyed paddocks. Greg was surprised by this result because most farms were applying solid rates of S fertiliser, and because deficiencies were found on both sandy and heavier soil types. "These farmers were applying 20 to 35 kg S per ha, often split between autumn and spring applications, and we are not sure whether the lower soil test levels are due to S leaching or maybe increased S removal as we drive pasture growth with nitrogen inputs," he said.

"But the soil testing has allowed farmers to identify where S deficiencies exist, and many will reducing their P fertilizer inputs and redirecting those funds into sulphur. Some farmers will also apply sulphur more frequently onto pastures, substituting their urea applications with fertilizer to supply both N and S."

For more information, contact Greg Mitchell (0417 814 037). The soil testing program was supported with Landcare funding, provided through DairySA. Participating farmers are grateful to Monique White (Dairying for Tomorrow coordinator) for making arrangements for this program.

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