



***Your farm's soil fertility***  
***What's the real picture?***

Leading the way in agriculture  
0800 100 123 [www.ravensdown.co.nz](http://www.ravensdown.co.nz)



# Soil Fertility

## Put your soil fertility under the microscope

When it comes to soil fertility not all paddocks are created equal. Factors such as soil type, topography, animal behaviour, paddock history and fertiliser spreading patterns can create wide variation. Yet historically fertiliser applications have been relatively uniform in rate and type.

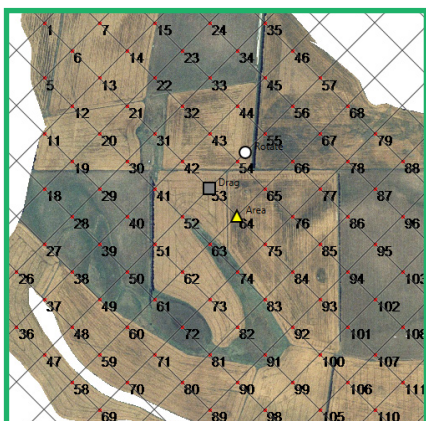
**Ravensdown's precision agriculture service enables you to dig deeper to build a picture of nutrient variation within each paddock.**

## Meaningful insight from whole-farm testing

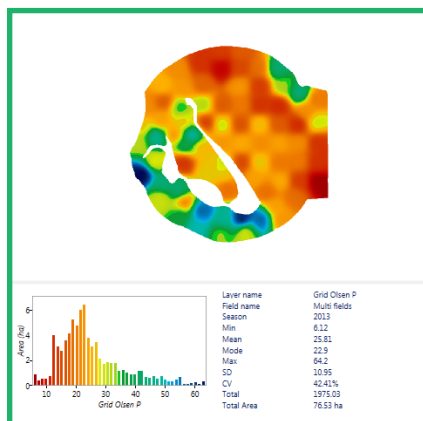
Working together with you and your Agri Manager, Agrioptics, our precision agriculture partner collects multiple soil samples from geo-referenced sampling points.

These samples are then sent to ARL, our scientific testing laboratory for analysis. Agrioptics compiles the results and uses them to create a highly accurate picture of your soil's nutrient variability.

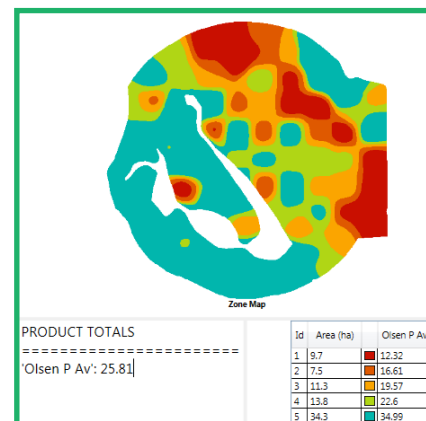
Your Agri Manager then creates fertiliser recommendations specific to the needs of each individual paddock or zone – where to maintain, where to increase, what mix, where to cutback. This information is then supplied digitally as a variable rate spreading file to your spreader for application.



Geo referenced sampling points



Grid Olsen P map



Grid soil sampling map



Variable rate spreading as seen in a spreading truck

# Soil Fertility

## Focus on the benefits

- Smarter fertiliser placement
- Greater crop/pasture consistency
- Financial savings through targeted application
- Mitigate possible environmental impact

For more information on Ravensdown's precision agricultural service talk to your Agri Manager or call our Customer Centre on 0800 100 123.

## Whole-farm testing yields immediate results

**Fact Box: Eric & Maxine Watson, Rangitata Holdings**  
**Wakanui, Ashburton**  
**490ha arable farm**

**A move to whole-farm testing provided immediate benefits to Wakanui farmers Eric and Maxine Watson, changing the amount of lime being applied to most paddocks on their 490ha arable property. The testing, utilising 365 samples, was first carried out in 2012 and repeated in 2014.**

With crops such as red beet, spinach, radish, pak choi, barley and beans being more sensitive to the pH of the soil, the correct amount of lime is vital. One of the key goals of the testing was to even out the pH level across the paddocks, many of which were formed by amalgamating smaller paddocks, leading to variations in pH.

This was never going to be corrected by blanket applications of lime. Only by adding lime in measured quantities to the areas which needed it, could an even pH be achieved.

"Originally, when we did random soil testing, the results suggested there was no problem with the pH at least in some paddocks. It was only when the detailed testing was carried out that the need for differing rates of lime became apparent," Eric says.

Eric says that while traditionally they might have spread lime at an average of 4T/ha over the whole paddock, with variable spreading the rate ranged from 6T/ha to none based on soil tests ranging from below 5.5 pH to more than 6 pH.

As well as creating a uniformity of pH, Eric is working

at achieving better uniformity of Olsen P, potash and sulphur. This can only be achieved by precision

application. So far Eric has used the two rounds of results to improve the application of lime, phosphate, sulphur and potash across the property.

In one 56ha paddock the Olsen P levels ranged from less than 10 to 25 plus. Superphosphate rates ranged from 650kg/ha to 375kg/ha (on 38.4ha) and another 17ha also received 200kg of Sulphur Super 20.

"We only saved \$400 in total with the lime, but gained maximum benefit from more even pH levels. However, we saved \$40/ha with the fertiliser," Eric says.

"Working the land every year you notice differences but now we have more data to help us manage these differences," he says. "We're also better positioned to manage the demands for improved environmental management."



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