Agronomy Solutions

PRECISION NUTRIENT MANAGEMENT NEWSLETTER

Autumn 2014

Yield Mapping shows need for Precision Soil Testing

With harvest well underway and more harvesters now fitted with mapping capability, we are taking lots of calls from growers who identify areas of poor performance during harvest. Usually with barley patchy yields can be caused by many things but the most common is acid soil and poor soil drainage. With variable rate soil testing these areas can easily be located and prescription maps made up to address any problem areas. We would expect this method to improve future crop yields and in many cases results in fertiliser savings.

The harvest is a busy time and soil testing for next season's crop is not top of the to do list. We encourage farmers to plan ahead to book in any soil testing and get testing completed as soon as possible after harvest to allow time for lime and fertilisers to be applied and also time for the lime to start to work on the soil. Our approach to a farm testing policy would be to comprehensively test the fields on a rotational basis every 3-5 years depending on the soil type. We will then produce fertiliser plans and prescription maps for the subsequent years following testing. These maps are based on the crops being grown and the expected yield of the crops.

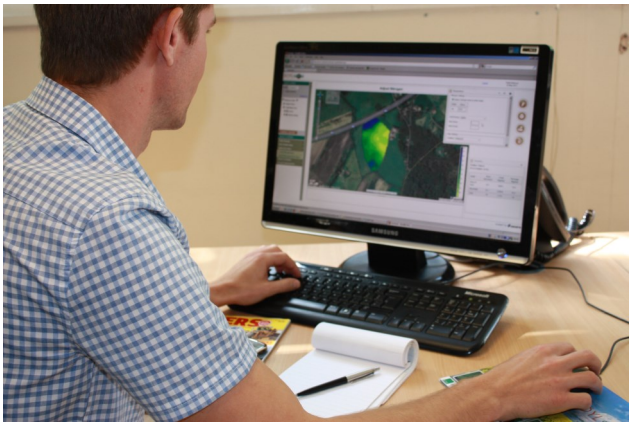
Agronomy Solutions have been New Zealand's pioneers in this technology and partnered with the UK leading precision soil testing company are well placed to complete your soil testing requirements.

A reminder of how our system works :- With the start of a new cropping year after harvest we thought that now is a good time to remind growers how to get the most out of previous fields that have been tested. Our system works by gently correcting soils over a period of time, with the exception of pH that is corrected in the year of testing. With Phosphate, Potassium and Magnesium the aim of our system is to correct soils gently by supplying maintenance fertiliser based on the potential yield of intended crop when the soil is at a desired level. With soils that are below desired levels we supply maintenance with the addition of build up fertiliser to slowly increase the soil nutrients in the direction of the target level. With areas of paddocks that tests show have excessive nutrients in the soil we would recommend applying sub maintenance to allow soil tests to slowly decline to desired levels over a period of time.

When to Retest – Retesting soil is very much based around managing and maintaining soil pH at a desired level. Light sandy soils under irrigation will leak lime from the soil profile faster than heavy clay soils hence the need for testing and correcting soil pH being more frequent. We would recommend testing light soils every 3 years and heavy clay soils every 5 years.

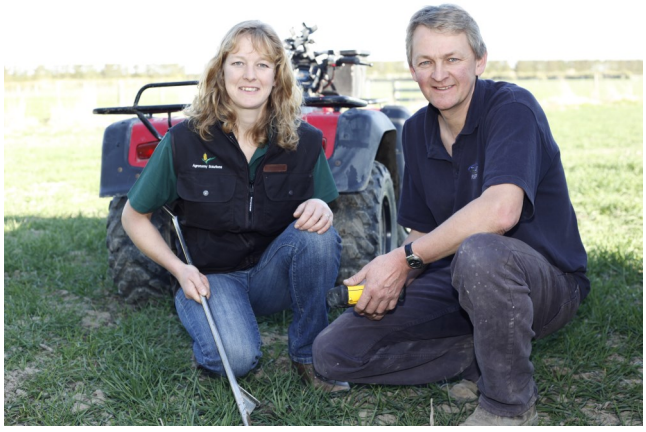
Will savings be made on fertiliser ??- This is very much dependent on the farm and how it has been managed in the past. What can be guaranteed is that you will be very much more efficient with your fertiliser use and only be applying what the crop is going to need after the soil has delivered what it can from residual nutrients in the soil fertiliser pool. With farms that have areas of high levels of nutrient in them significant savings can be made but you can rest easily knowing that any areas that are deficient have been addressed and will not suffer from savings in fertiliser. This is much more precise and thorough than the conventional way of a single test and basing decisions on that one result.

Soil pH and sensitive crops - It is a good idea to plan well ahead and address pH issues at least a year before planting crops that are very sensitive to soil acidity. Carrots, Onions Beets, Peas and Barley will all fall over very quickly if soil is slightly acidic. Our advice is to plan ahead and soil test so that you can correct any issues well in advance of these crops being planted. This will give time for the lime to work and correct the soil. If time is short then applying lime prior to planting can still be beneficial especially if it is worked into the seedbed.



Rotational soil Testing - Testing a proportion of your farm each year is the is the best way to manage Nutrients and Soil Ph. This insures that all issues are picked up before the negative effects of Acid soil and deficient Nutrients effect growing crops. Managing testing in this way spreads out testing costs and spreads the lime costs evenly from year to year. If you have a light soil type you would aim to test 33% of the farm a year and return every third year, and with a heavy soil type test 20% of the farm and return every 5 years.

Working to a budget- with our system of rigorous testing it allows us to spread the fertiliser budget around the farm without putting the crop at risk if the budget spend is less than the crops true requirement. By targeting the low areas and reducing applications on high areas the fertiliser will go much further with every area benefiting proportionally.



Action- Contact the Agronomy solutions as soon as possible with a list of paddocks that you would like sampled. Also include details of intended crop, expected yield and whether straw will be removed or incorporated. This will help speed up the process. Fertiliser plans and new variable rate maps can then be made up so that they are ready and waiting when you need them. This can also be done with the help of your Fertiliser Adviser or Company Rep.

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