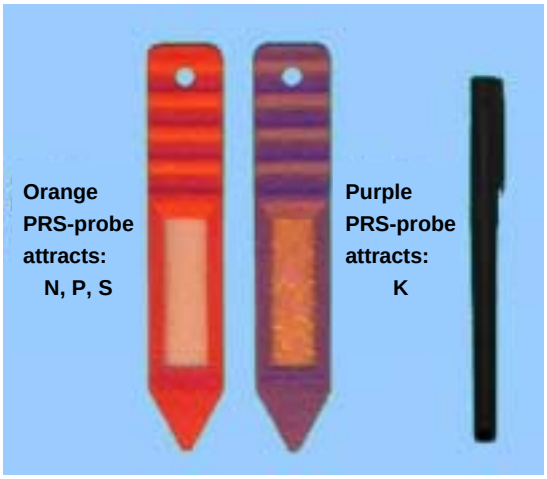
Issue 2000-1

Technical Update:

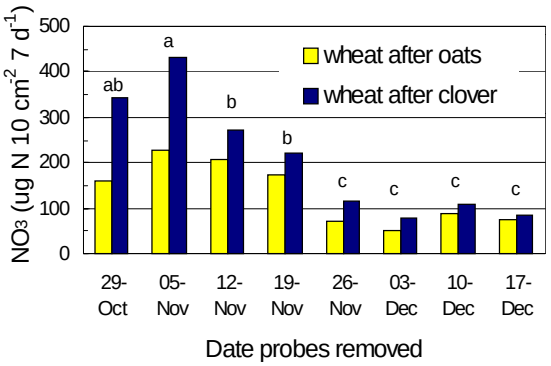
Get PRS™ probes working for you…



Researchers are using PRS probes in many different studies to measure a variety of soil nutrients, increasing their understanding of nutrient dynamics. Consider leasing PRS probes to measure another "piece of the puzzle" of the nutrient supply power of your soils.

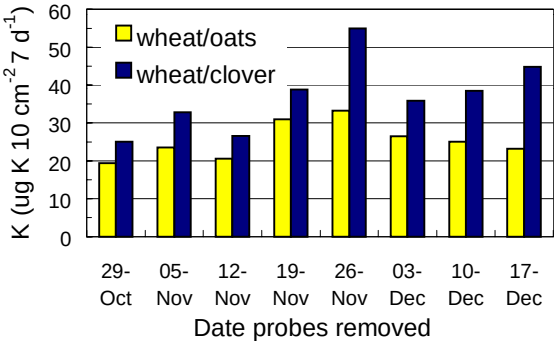
Something further to consider is having Western Ag Innovations analyze the PRS probes for you instead of simply leasing the probes. This is an economical option for researchers who don't have the facilities or resources to effectively analyze the probes themselves. We are equipped with a pressure wash system that does a thorough job of washing the probes, which is very important for assuring good results. We are also able to measure a wide range of nutrients through use of an auto-analyzer and ICP.

Following are examples of how the probes have recently been used:



Probes were placed in the soil for 1-week intervals successively over the growing season in an experiment at Oregon State University. The PRS effectively detected differences in the nutrient supply power of the differently managed soils. The probes were also effective in mapping variations in supply rate during the season as environmental conditions changed and plant uptake of nutrients occurred.

By using the PRS probes the researchers were able to measure several nutrients at once, which added to the comprehensiveness of the study and assisted in data interpretation.



Data courtesy:
S.E. Salisbury* and Dr. N.W. Christensen**
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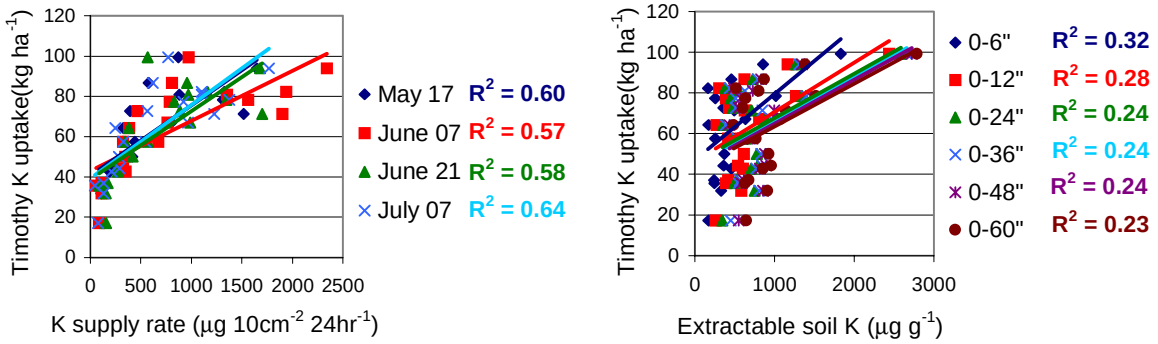
Another study demonstrating application of the probes was performed by Alberta Agriculture to determine how soil nutrient supply powers vary with different rates of cattle manure applied to a perennial timothy stand. In this case, probes were buried for 24 hours due to concerns of root

competition for soil nutrients. PRS supply rates were often better correlated with nutrient uptake by timothy than were soil nutrient contents determined by extraction.



Data courtesy: B. Flaten, Alberta Agriculture,Food and Rural Development, Stettler, Alberta, brent.flaten@agric.gov.ab.ca

Western Ag Innovations offers analysis of NO_3-N, NH_4-N, Ca, Mg, K, P, Fe, Mn, Cu, Zn, B, S, Pb, and Cd for $20 per sample – which works out to $1.43 per nutrient. The cost of using the probes is built into this price, so there is no separate probe cost. Up to four pairs of probes may be used and bulked together to produce one sample for analysis – similar to a bulk soil sample. So, for $20 you receive up to four pairs of probes plus analysis of one eluate for all of the 14 elements listed above. We can courier the probes to you whenever you desire to make a probe burial. You then bury the PRS probes for the allotted time, remove them from the soil, wash the soil off as well as possible with deionized water and courier them back to us for analysis. We then rewash the probes if necessary, elute them, analyze the eluate and send the data back.

We also offer analysis for N only (including use of the probes) at a cost of $10 per sample and can analyze other ions not listed above at an additional charge.

To place an order or for more information please contact:

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