



New Soil Test Information

New features on the A&L Canada Laboratories soil test report to help interpret nutrient availability are, ppm Al, K/Mg ratio and %P.

A&L has worked with GPS in site specific sampling in conjunction with the use of yield monitors on a number of crops and have found that in some cases the K/Mg ratio correlates very close with yield and performances in specific management zones. This has become a key tool in understanding nutrient availability and crop response.

Purdue University and the Federal research station in Quebec City have conducted a number of trials on the availability of P in high Al soils. The ppm of Al in soils is used to predict %P available to plant uptake in soils high in Al. In most of most of Ontario this is not a problem, however on some sands and as we move closer to Quebec and in the Maritimes it becomes more of a problem and these two parameters may shed some light on what is happening to the P in the soil.

FACT SHEET

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K/MG RATIO	
VERY LOW	< 0.08
LOW	0.08 – 0.15
MEDIUM	0.15 – 0.25
VERY HIGH	0.25 – 0.50
EXCESSIVE	> 0.80

AL RATING - PPM	
VERY LOW	< 200
LOW	200 – 500
MEDIUM	500 – 800
HIGH	800 – 1100
VERY HIGH	1100 – 1600
EXCESSIVE	> 1600

The ideal AI rating is less than 400 ppm. In soils with greater than 400 ppm phosphorus will be tied up and unavailable to the crop.

From the research we first found the %P values to be as follows:

% PHOSPHORUS	
VERY LOW	< 4 %
LOW	4 – 6 %
MEDIUM	6 – 8 %
HIGH	8 – 10 %
VERY HIGH	> 10 %

Further research gave us a better understanding of this relationship by soil type.

% PHOSPHORUS

C.E.C.

	<9	10-13	14-17	>18
VERY LOW	0-4	0-3	0-2	0-1
LOW	5-9	4-6	3-4	2-3
MEDIUM	9-12	7-9	5-6	4-5
GOOD	12-15	10-12	7-9	6-7
HIGH	16+	13+	10+	8+