

SMART! Fertilizer Management

<http://www.smart-fertilizer.com/articles/soil-test-interpretation>

SOIL TEST INTERPRETATION GUIDE

Element	Nitrogen (N-NO3)	Phosphorus (P)		Potassium (K)		
Extraction Method	2N KCl	Bray	Olsen	Ammonium Acetate		Ammonium Bicarbonate - DTPA
Rating/Units	ppm	ppm	ppm	meq/100g	ppm	ppm
Low	<20	<20	<10	<0.45	<175	<60
Adequate	20-41	20-40	10-15	0.45-0.7	175-280	61-120
High	41-75	40-100	15-40	0.7-2.0	280-800	121-180
Excessive	>75	>100	>40	>2.0	>800	>180

Element	Calcium (Ca)		Magnesium (Mg)		Sulfur (S-SO4)
Extraction Method	Ammonium Acetate		Ammonium Acetate		KCL 40
Rating/Units	meq/100g	ppm	meq/100g	ppm	ppm
Low	<5	<1000	<0.5	<60	<5
Adequate	5-10	1000-2000	0.5-1.5	60-180	5-10
High	>10	>2000	>1.5	>180	10-20

Excessive					>20
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Element	Iron (Fe)	Manganese (Mn)	Zinc (Zn)	Copper (Cu)	Boron (B)
Extraction Method	DTPA	DTPA	DTPA	DTPA	Hot Water
Rating/Units	ppm	ppm	ppm	ppm	ppm
Low	<2.5	<0.6	<1.0	<0.6	<0.5
Adequate	2.5-5.0	>2.0	>1.5	>2.0	0.5-2.0
High	>5.0				>2.0

Interpretation of Soil Electrical Conductivity		
Rating	1:1 Extract EC (mmhos/cm)	Saturated Paste ECe (mmhos/cm)
Low (Non-saline)	0.01-0.45	0.0-2.0
Low (Slightly saline)	0.45-1.5	2.1-4.0
Medium (Moderately saline)	1.51-2.9	4.01-8.0
High (Strongly saline)	2.91-8.5	8.01-16.0
Very high (Very strongly saline)	>8.5	>16.0

Desirable range of exchangeable cations	
Cation	Range
Calcium	65%-80%

Magnesium	10%-20%
Potassium	3%-8%
Sodium	<6%
Aluminium	<1%

The values and ranges presented are in no way absolute. The aim is for you to use this document to get better understanding of the numbers and the terms used in **soil test reports**.