

## Soil test guidelines for 0-10 cm samples in relation to pasture performance goals

### Dairy system aiming for 95 - 98% potential pasture yield at "Adequate" soil test result

Pasture performance compared to potential yield (after fertiliser application)	<90%	90% - 95%	95% - 98%	98% - 99%	100%
	<b>Deficient</b> large capital fertiliser required	<b>Marginal</b> moderate capital fertiliser required	<b>Adequate</b> maintenance fertiliser required	<b>High</b> low maintenance fertiliser required	<b>High</b> Trial data shows no fertiliser response
	<b>Olsen P (mg/kg)</b>				
All soils	<9	9 - 14	14 - 20	20 - 27	>27
	<b>Colwell P (mg/kg)</b>				
PBI 0-15 (Very sandy)	<15	15 - 23	23 - 30	30 - 41	>41
PBI 15-35 (Sand, Sandy loams)	<17	17 - 26	26 - 34	34 - 47	>47
PBI 35-70 (Sandy/Silty loams)	<19	19 - 30	30 - 39	39 - 53	>53
PBI 70-140 (Sandy/Silty clay loams)	<22	22 - 35	35 - 45	45 - 61	>61
PBI 140-280 (Clay loams )	<26	26 - 42	42 - 54	54 - 74	>74
PBI 280-840 (Clay loams & Clay)	<37	37 - 58	58 - 75	75 - 102	>102
PBI >840 (Volcanic clays & Peat)	<50	50 - 90	90 - 120	120 - 150	>150
	<b>Colwell K (mg/kg)</b>				
Sand	<70	70 - 120	120 - 170	170 - 230	>230
Sandy/Silty loam	<80	80 - 130	130 - 190	190 - 250	>250
Sandy/Silty clay loam	<90	90 - 130	130 - 190	190 - 260	>260
Clay loam and Clay	<100	100 - 150	150 - 220	220 - 280	>280
Peat	<200	200 - 270	270 - 350	350 - 400	>400
	<b>Exch K (cmol (+)/kg)</b>				
Sand	<0.18	0.18 - 0.31	0.31 - 0.44	0.44 - 0.6	>0.6
Sandy/Silty loam	<0.2	0.2 - 0.33	0.33 - 0.49	0.49 - 0.64	>0.64
Sandy/Silty clay loam	<0.23	0.23 - 0.33	0.33 - 0.53	0.53 - 0.66	>0.66
Clay loam and Clay	<0.26	0.26 - 0.39	0.39 - 0.56	0.56 - 0.72	>0.72
Peat	<0.51	0.51 - 0.69	0.69 - 0.90	0.90 - 1.02	>1.02
	<b>Sulfur (KCl-40) (mg/kg)</b>				
All soils	<4.5	4.5 - 7.5	7.5 - 10.5	10.5 - 14	>14
	<b>Sulfur (CPC S) (mg/kg)</b>				
All soils	<1.5	1.5 - 3	3 - 4	4 - 6	>6

# Soil test guidelines for optimum dairy pasture production

## In Tasmania : 0 – 7.5 cm depth soil samples

	Very low	Low	Optimum	High	Very high
	<b>pH water</b>				
All soils	4.5 – 5.0	5.1 – 5.5	5.6 – 7.0	7.1 – 7.3	
	<b>Olsen P (mg/kg)*</b>				
All soils	< 10	10 - 20	20 - 30	30 - 60	> 60 Excessive
	<b>Sulfur (KCl-40) (mg/kg)</b>				
All soils		< 8	8 - 16	16 - 32	> 32
	<b>Colwell K (mg/kg)*</b>				
Sand	< 70	70 – 120	121 - 170	170 – 230	> 230
Sandy loam	< 90	90 – 150	151 - 220	221 - 290	> 290
Sandy clay loam	< 100	100 – 150	151 - 220	221 – 300	> 300
Clay loam & clay	< 115	116 - 170	171 - 250	251 – 320	> 320

\*Derived from Gourley CJP, Melland A, Waller R, Awty ID, Smith A, Peverill K, Hannah M (2007) Making better fertiliser decisions for grazed pastures in Australia. Victorian Government, Department of Primary Industries, Melbourne (multiplied by 1.15 for depth adjustment)

