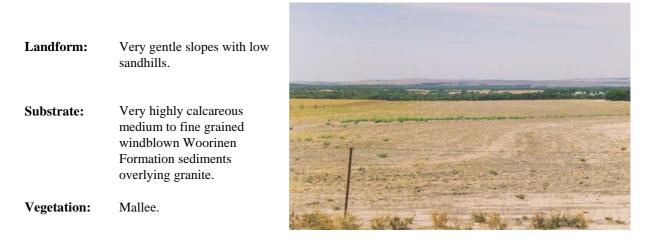
DEEP CALCAREOUS SANDY LOAM

(Bookabie soil)

General Description: Calcareous sandy clay loam becoming more clayey and calcareous with depth



Type Site:Site No.:EC0791:50,000 sheet:5932-3 (Minnipa)Annual rainfall:350 mmAnnual rainfall:350 mmLandform:Upper slope of gently undulating rise, 3% slopeSurface:Firm with no stones

Soil Description:

Depth (cm)	Description	
0-10	Very dark greyish brown friable highly calcareous sandy clay loam with moderate fine polyhedral structure. Clear to:	A La La La La
10-50	Strong brown friable very highly calcareous sandy clay loam with weak fine subangular blocky structure. Gradual to:	2199
50-73	Brown soft massive very highly calcareous sandy loam with minor carbonate concretions. Gradual to:	
73-130	Strong brown friable massive very highly calcareous light clay with minor ironstone concretions. Abrupt to:	
130-150	Strong brown friable very highly calcareous light clay with 20-50% carbonate concretions.	

Classification: Endohypersodic, Regolithic, Hypercalcic Calcarosol; medium, non-gravelly, clay loamy / clayey, deep

Summary of Properties

Drainage	Rapidly drained. The soil rarely remains wet for more than a few hours.							
Fertility	Inherent fertility is moderately low. Regular phosphorus applications are necessary, as the calcareous surface soil tends to tie up phosphate. Nitrogen levels depend on legume content of pastures and cropping history. Deficiencies of copper and zinc may occur from time to time, but levels at sampling site are satisfactory. Phosphorus levels are low, and organic carbon concentrations are marginal.							
рН	Alkaline at the surface, strongly alkaline with depth.							
Rooting depth	130 cm in pit, but few roots below 50 cm.							
Barriers to root growth								
Physical:	There are no physical barriers.							
Chemical:	High pH from 50 cm, and high sodicity and boron concentrations from 73 cm restrict deeper root growth.							
Water holding capacity	Approximately 100 mm in the root zone.							
Seedling emergence:	Satisfactory.							
Workability:	Firm surface is easily worked.							
Erosion Potential								
Water:	Moderately low.							
Wind:	Moderately low.							

Laboratory Data

Depth cm	pH H2O	pH CaC1 ₂		EC1:5 dS/m	ECe dS/m	Org.C %				Boron mg/kg	Trace Elements mg/kg (DTPA)			CEC cmol	Excl	ESP				
							mg/kg	mg/kg			Cu	Fe	Mn	Zn	(+)/kg	Ca	Mg	Na	K	
0-10	8.5	8.0	8	0.14	0.72	1.0	16	600	-	1.9	0.34	-	5.00	0.59	14.1	10.99	1.43	0.05	1.63	0.4
10-50	8.9	8.1	22	0.19	1.06	0.5	2	240	-	2.5	0.50	-	1.60	0.25	13.8	8.86	3.23	0.37	0.69	2.7
50-73	9.5	8.5	37	0.81	5.88	-	<2	210	-	11	0.28	-	0.56	0.24	10.8	3.09	5.54	2.66	0.56	24.6
73-130	9.8	8.7	35	1.09	8.51	-	<2	340	-	34	0.61	-	0.41	0.33	10.7	1.31	5.00	4.61	0.92	43.1
130-150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: CEC (cation exchange capacity) is a measure of the soil's capacity to store and release major nutrient elements.

ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC.