ACIDIC GRADATIONAL LOAM OVER ROCK

General Description: *Dark brown loamy surface with a paler coloured subsurface horizon overlying a brown, yellow and red mottled clay loamy to clayey subsoil forming in weathering fine grained metamorphic rock*

Landform: Slopes of undulating low hills

Substrate: Proterozoic phyllite or schist

Vegetation: Blue gum (Euc. leucoxylon) woodland

Type Site: Site No.: CH098

1:50,000 sheet:	6628-2 (Onkaparinga)	Hundred:	Onkaparinga
Annual rainfall:	775 mm	Sampling date:	06/09/96
Landform:	Midslope of undulating low hill with a gradient of 8%		
Surface:	Firm with no stones		

Soil Description:

Depth (cm)	*Description*
0-13	Very dark greyish brown silty loam with weak coarse blocky structure and 2-10% phyllite gravel. Clear to:
13-28	Greyish brown silty clay loam with weak coarse blocky structure and 2-10% phyllite gravel. Clear to:
28-40	Brown, red and yellowish brown silty medium clay with strong polyhedral structure and 2-10% phyllite gravel. Clear to:
40-75	Soft weathering phyllite with pockets of dark yellowish brown and brown silty clay loam with weak polyhedral structure.

Classification: Sodic, Eutrophic, Brown Dermosol; medium, slightly gravelly, silty / clayey, moderate

Summary of Properties

Drainage Moderately well drained. Saturation within the profile is unlikely for more than a week.

Fertility Natural fertility is moderately high as indicated by the exchangeable cation data. Levels of all measured elements are adequate. Organic carbon is satisfactory.

pH Neutral at the surface, slightly acidic with depth.

Rooting depth 75 cm in pit (in rock cleavages at the base).

Barriers to root growth

Physical: Moderately shallow depth to rock.

Chemical: There are no chemical barriers.

Water holding capacity Approx. 80 mm total available, 40 mm readily available.

Surface condition Firm, easy to work.

Erosion Potential

Water: Moderate due to the slope.

Wind: Low.

Laboratory Data

Depth cm	pH H_2O	pH $CaC1_2$	CO_3 %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO_4-S mg/kg	Boron mg/kg	Trace Elements mg/kg (EDTA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP	Exch Al mg/kg
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K		
Row	7.1	6.1	0	0.07	0.31	1.82	49	308	7.5	1.0	17.5	183	52.7	5.17	14.2	11.7	2.00	0.26	0.46	1.8	3.1
0-13	7.2	6.3	0	0.06	0.32	2.10	35	279	5.0	0.9	-	-	-	-	12.0	10.8	1.45	0.21	0.51	1.8	2.9
13-28	6.8	5.7	0	0.05	0.20	1.46	13	137	3.5	0.6	-	-	-	-	10.9	8.12	1.63	0.40	0.18	3.7	3.4
28-40	6.2	5.0	0	0.07	0.34	0.89	8	126	20.7	0.7	-	-	-	-	19.5	11.6	5.24	1.56	0.39	8.0	19.1
40-75	6.2	5.0	0	0.10	0.49	0.47	8	97	30.2	0.3	-	-	-	-	12.3	7.71	3.70	1.52	0.16	12.4	32.6

Note: Row sample bulked from 20 cores (0-15 cm) taken along the planting lines.
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.