

WET HIGHLY LEACHED SAND

General Description: *Thick bleached sand with an organically darkened surface over a dark coloured weakly coherent sandy subsoil*

Landform: Gently undulating rises.

Substrate: Clayey subsoil of a buried soil.

Vegetation:



Type Site: Site No.: SE014

1:50,000 sheet:	7022-2 (Gambier)	Hundred:	Gambier
Annual rainfall:	725 mm	Sampling date:	10/02/93
Landform:	Footslope of gentle rise, 1% slope		
Surface:	Soft with no stones		

Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-12	Very dark grey soft single grain fine sand. Sharp to:
12-30	Pink soft single grain fine sand. Clear to:
30-40	Strong brown and dark reddish brown soft fine sand with minor soft ferruginous segregations. Gradual to:
40-80	Light yellowish brown soft single grain clayey sand. Sharp to:
<hr style="border: 1px solid black;"/>	
Buried soil?	
80-130	Light yellowish brown soft single grain clayey sand. Sharp to:
130-140	Greyish brown, dark yellowish brown and strong brown mottled firm (wet) medium clay with strong coarse prismatic structure.
140-	Water table.



Classification: Fragic, Sesquic, Semiaquic Podsol; medium, non-gravelly, sandy / sandy, moderate **overlying:** Eutrophic, Grey Chromosol

Summary of Properties

Drainage	Moderately well drained. The water table impedes deep drainage, so the soil may remain wet for a week or so following heavy or prolonged rainfall.
Fertility	Inherent fertility is very low, as indicated by the exchangeable cation data. Most nutrient retention capacity is attributable to organic matter. Concentrations of most measured nutrient elements are marginal, and subsoil reserves and retention capacity are very low.
pH	Acidic at the surface, neutral with depth.
Rooting depth	140 cm in pit, but few roots below 40 cm.
Barriers to root growth	
Physical:	There are no physical barriers above the buried clay subsoil, although the iron rich subsoil can develop into a pan which severely restricts growth.
Chemical:	There are no chemical toxic barriers, but low nutrient retention capacity and status limit deep root growth.
Water holding capacity	Approximately 70 mm in the potential root zone.
Seedling emergence:	Fair due to water repellent surface.
Workability:	Soft surface is easily worked.
Erosion Potential	
Water:	Low.
Wind:	Moderate to moderately low.

Laboratory Data

Depth cm	pH H ₂ O	pH CaCl ₂	CO ₃ %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO ₄ mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
Paddock	5.7	5.2	0	0.08	0.55	1.5	23	86	-	0.5	0.4	50	4.7	2.9	8.2	5.28	0.84	0.08	0.14	na
0-12	5.9	5.4	0	0.06	0.40	1.1	12	55	-	0.3	0.2	54	1.1	0.4	5.6	3.55	0.27	0.10	0.07	na
12-30	6.3	6.0	0	0.03	0.21	0.09	5.5	31	-	0.2	0.1	16	0.1	0.1	1.8	0.72	0.04	0.10	0.03	na
30-40	6.3	6.0	0	0.04	0.28	0.08	4.8	31	-	0.1	0.1	26	0.1	0.1	1.1	0.72	0.04	0.09	0.02	na
40-80	6.8	6.5	0	0.03	0.18	0.03	4.5	39	-	0.1	<0.1	18	<0.1	0.1	0.7	0.67	0.05	0.07	0.08	na
80-130	6.7	6.5	0	0.04	0.29	0.02	4.3	47	-	0.1	<0.1	20	<0.1	0.1	1.5	0.82	0.06	0.07	0.07	na
130-140	7.0	6.5	0	0.09	0.31	0.28	3.4	210	-	0.6	0.1	9	<0.1	<0.1	10.1	6.20	1.64	0.28	0.63	2.8

Note: Paddock sample bulked from 20 cores (0-10 cm) taken around the pit.

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.