DEEP SAND

General Description: *Deep siliceous sand with fine carbonate distributed throughout*

Landform: Gently undulating plain with sandhills.

Substrate: Windblown Molineaux Sand.

Vegetation:

Type Site: Site No.: CY027

1:50,000 sheet:	6430-1 (Broughton)	Hundred:	Tickera
Annual rainfall:	340 mm	Sampling date:	20/07/94
Landform:	Dune crest, 2% slope		
Surface:	Loose with no stones		

Soil Description:

Depth (cm)	*Description*
0-6	Brown loose highly calcareous loamy sand. Abrupt to:
6-20	Strong brown soft very highly calcareous sand. Gradual to:
20-70	Strong brown soft very highly calcareous sand. Diffuse to:
70-150	Reddish yellow soft very highly calcareous sand.

Classification: Ceteric, Regolithic, Calcic Calcarosol; thin, non-gravelly, sandy / sandy, very deep

Summary of Properties

Drainage Rapidly drained. Soil never remains wet for more than a few hours.

Fertility Inherent fertility is low as indicated by the exchangeable cation data. Surface fertility relies on organic matter and phosphorus, concentrations of which are both low. The soil's capacity to retain nutrients is low, due to its low clay content. Sulphur concentrations are low, and trace element deficiencies can be expected.

pH Alkaline throughout.

Rooting depth Approximately 70 cm in pit, but few roots below 6 cm

Barriers to root growth

Physical T here are no physical barriers.

Chemical There are no chemical barriers. Low nutrient status is the most likely reason for poor root densities.

Water holding capacity Approximately 60 mm in rootzone, but up to 40 mm is effectively unavailable due to low root densities in the subsoil.

Seedling emergence Very good except in seasons when water repellence is a problem.

Workability Loose surface is easily worked.

Erosion Potential

Water Low.

Wind Moderate. Surface cover needs to be maintained to prevent erosion.

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 (DTPA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
Paddock	8.6	7.8	2.9	0.1	0.4	0.5	16	143	3.0	0.9	-	-	-	-	3.1	4.49	0.66	0.05	0.42-	1.6
0-6	8.6	7.7	1.6	0.1	0.4	0.7	18	173	2.6	0.8	-	-	-	-	3.9	4.48	0.70	0.04	0.60	1.0
6-20	8.8	7.8	7.1	0.1	0.4	0.1	3	122	1.7	0.6	-	-	-	-	3.4	4.69	0.83	0.05	0.45	1.5
20-70	8.9	7.8	7.6	0.1	0.4	0.1	2	70	1.6	0.6	-	-	-	-	2.5	3.43	1.13	0.04	0.21	na
70-150	9.1	8.0	3.1	0.1	0.3	0.2	2	99	1.2	1.0	-	-	-	-	2.3	1.27	2.32	0.05	0.26	na

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