SHALLOW CALCAREOUS LOAM

(Calcareous loam)

General Description: Calcareous loam grading to a highly calcareous clay loam with variable rubble, forming in weathering basement rock

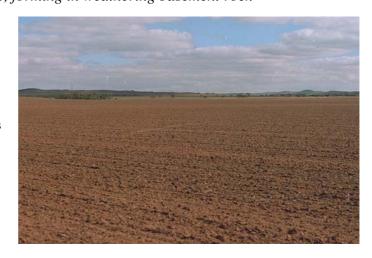
Landform: Undulating rises and low

hills.

Substrate: Weathering basement gneiss

and schist.

Vegetation:



Type Site: Site No.: EE047

1:50,000 sheet: 6230-4 (Mangalo) Hundred: Annual rainfall: 350 mm Sampling

Landform: Lower slope of 2% Surface: Firm with no stones

Hundred: Mangalo Sampling date: 13/04/89

Soil Description:

Depth (cm) Description

0-10 Dark yellowish brown highly calcareous loam

with weak fine granular structure. Clear to:

10-25 Yellowish brown highly calcareous massive sandy

clay loam. Clear to:

25-55 Yellowish brown massive very highly calcareous

clay loam with 20-50% carbonate nodules. Clear

to:

55-100 Weathering rock with 20-50% fine carbonate

segregations. Gradual to:

100-150 Weathering rock with minor fine carbonate

segregations.



Classification: Epihypersodic, Paralithic, Supracalcic Calcarosol; medium, non-gravelly, loamy / clay loamy,

moderate

Summary of Properties

Drainage Well drained. The soil rarely remains wet for more then a few days.

Fertility Inherent fertility is moderate as indicated by the exchangeable cation data. Regular

phosphorus applications are essential - the fee lime in the soil reduces availability. Nitrogen levels depend on cropping history and legume content of pastures. Copper and zinc deficiencies occur occasionally, although levels are adequate at the sampling

site.

pH Alkaline at the surface, strongly alkaline with depth.

Rooting depth 55 cm in pit.

Barriers to root growth

Physical: There are no physical barriers in the soil profile. The underlying rock becomes harder

and more impenetrable with depth.

Chemical: High pH and sodicity from 25 cm limit root growth.

Water holding capacity Approximately 60 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 H ₂ O	pH CaC1 ₂	CO ₃	EC1:5 dS/m	ECe dS/m	Org.C	Avail. P	Avail. K		Boron mg/kg	Trace Elements mg/kg (DTPA)				CEC cmol	Exchangeable Cations cmol(+)/kg				ESP
							mg/kg	mg/kg			Cu	Fe	Mn	Zn	(+)/kg	Ca*	Mg	Na	K	
0-11	8.0	7.6	1	0.24	1.91	-	-	-	ı	4. 7	1.31	12	28.0	0.71	19.0	?	3.40	0.21	1.80	1.0
11-25	8.9	8.3	18	0.22	1.07	-	1	-	1	4.3	2.10	9.8	4.60	0.15	14.0	?	4.40	0.33	0.89	2.0
25-55	10.3	9.1	30	0.70	4.12	-	-	-	-	11.1	2.10	5.6	1.14	0.17	10.0	?	14.00	3.70	0.96	37.0
55-100	10.6	9.3	32	0.74	4.40	-	-	-	-	11.5	2.21	4.7	0.97	0.33	7.80	?	9.30	4.10	0.71	53.0
100-150	10.6	9.1	1	0.48	5.15	-	-	-	-	3.1	-	-	-	-	2.80	?	3.10	0.90	0.18	32.0

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

* Exchangeable calcium (Ca) values not presented because the laboratory procedure used was inappropriate for very highly calcareous samples.