

SANDY LOAM OVER RED CLAY

General Description: *Hard sandy loam abruptly overlying a well structured red clay, calcareous with depth*

Landform: Undulating rises.

Substrate: Weakly indurated Tertiary sandstone, mantled by fine carbonate.

Vegetation:



Type Site: Site No.: CM902 1:50,000 mapsheet: 6630-4 (Spalding)
 Hundred: Milne Easting: 283100
 Section: 543 Northing: 6272050
 Sampling date: 10/04/1990 Annual rainfall: 495 mm average

Upper slope of undulating rise, 4% slope. Hard setting surface, no stones.

Soil Description:

Depth (cm)	Description
0-15	Reddish brown very hard massive sandy loam. Abrupt to:
15-60	Dark reddish brown firm medium clay with strong fine polyhedral structure. Clear to:
60-90	Yellowish red hard very highly calcareous medium clay with more than 50% fine carbonate segregations. Gradual to:
90-120	Yellowish red hard massive highly calcareous medium clay with 20-50% fine carbonate segregations and 20-50% weakly indurated yellow sandstone fragments. Gradual to:
120-150	Yellow hard massive sandy clay (weakly indurated sandstone), with minor fine carbonate segregations.



Classification: Sodic, Hypercalcic, Red Chromosol; medium, non gravelly, loamy / clayey, deep



Summary of Properties

Drainage: Well drained. The soil rarely remains wet for more than a day or so following heavy or prolonged rainfall.

Fertility: Inherent fertility is moderately low. Nutrient retention capacity is restricted by relatively low clay content and low pH.

pH: Acidic at the surface, strongly alkaline with depth.

Rooting depth: Satisfactory root growth in upper 60 cm, limited growth below 60 cm.

Barriers to root growth:

Physical: There are no significant physical restrictions.

Chemical: There are no apparent constraints in the upper 90 cm (below 90 cm, high pH is a limitation). Possible causes of low root densities below 60 cm are restricted water availability in highly calcareous clay, or low trace element availability.

Waterholding capacity: Approximately 80 mm in the rootzone.

Seedling emergence: Fair. Tendency for surface soil to seal and set hard affects plant establishment.

Workability: Fair. These soils tend to shatter if worked too dry, or puddle if worked too wet.

Erosion Potential:

Water: Moderately low.

Wind: Low.

Laboratory Data

Depth cm	pH H ₂ O	pH CaCl ₂	CO ₃ %	EC 1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Boron mg/kg
0-15	5.6	4.8	0	0.11	-	1.13	32	1.0
15-60	7.1	6.6	0	0.16	-	0.55	4	2.2
60-90	8.8	7.7	27	0.15	-	0.26	3	1.7
90-120	9.3	7.9	19	0.16	-	0.18	1	2.1
120-150	-	-	-	-	-	-	-	-

Further information: [DEWNR Soil and Land Program](#)

