Project Name: DD
Project Code: DD **Site ID:** B242 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: G.D. Hubble
Date Desc.: 05/10/54
Map Ref.: Sheet No. : 9142 1:100000
Northing/Long.: 151.244444444445
Easting/Lat.: -27.6213888888889
Locality:
Elevation: No Data
Rainfall: 610
Runoff: Moderately rapid
Drainage: Moderately well drained

Geology

ExposureType: Soil pit
Geol. Ref.: Qpc
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Auger boring, 2 m deep,Unconsolidated material (unidentified)

Land Form

Rel/Slope Class: Gently undulating plains <9m 1-3%
Morph. Type: Crest
Elem. Type: Levee
Slope: 0 %
Pattern Type: Alluvial plain
Relief: No Data
Slope Category: No Data
Aspect: No Data

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:
Eutrophic Mesonatric Black Sodosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Dd1.43
Great Soil Group: Solodized solonetz

Site Disturbance: No effective disturbance other than grazing by hoofed animals

Vegetation: Low Strata - Tussock grass, , . *Species includes - Dichanthium sericeum, Heteropogon species

Tall Strata - Tree, 6.01-12m, Sparse. *Species includes - Eucalyptus tessellaris

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.15 m	Dark greyish brown (10YR4/2-Moist); ; Coarse sandy loam; Massive grade of structure; Many (>5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 6.1 (pH meter); Gradual change to -
A2	0.15 - 0.23 m	Grey (10YR6/1-Moist); ; Loamy coarse sand; Massive grade of structure; Many (>5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 6.4 (pH meter); Abrupt change to -
B2	0.23 - 0.51 m	Very dark greyish brown (10YR3/2-Moist); ; Heavy clay; Strong grade of structure, 100-200 mm, Columnar; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, Quartz, coarse fragments; Field pH 8.2 (pH meter); Gradual change to -
B2	0.53 - 0.84 m	Very dark greyish brown (10YR3/2-Moist); , 2.5Y54; Heavy clay; Strong grade of structure, Prismatic; Strong grade of structure, 20-50 mm, Angular blocky; Moist; Very firm consistence; 2-10%, fine gravelly, 2-6mm, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 9.3 (pH meter); Diffuse change to -
B2	0.91 - 1.32 m	Light olive brown (2.5Y5/4-Moist); , 10YR31; Heavy clay; Moderate grade of structure, Angular blocky; Moist; Very firm consistence; 2-10%, fine gravelly, 2-6mm, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9.2 (pH meter); Diffuse change to -
B3	1.32 - 1.83 m	Light olive brown (2.5Y5/4-Moist); , 2.5Y52; , 5YR48; Sandy medium clay; Weak grade of structure, Angular blocky; Moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9.1 (pH

Morphological Notes

Observation Notes

Site Notes

DARLING DOWNS

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.15	6.1H	0.014B	3.4K	3.1	0.39	0.1	4.6D			
0.15 - 0.23	6.4H	0.013B								
0.23 - 0.51	8.2H	0.098B	9.1K	13.7	0.19	5.5	2.9D			
0.53 - 0.84	9.3H	0.213B	8.7K	12.3	0.23	5.8				
0.91 - 1.32	9.2H	0.237B								
1.32 - 1.83	9.1H	0.122B								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis				
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.15		1.16A	33C	0.042F	0.09B		1.60	2	64C	15	7	13
0.15 - 0.23		0.47A			0.03B			3	69C	16	6	8
0.23 - 0.51	0.05C	1.22A	11C	0.05F	0.09B			1	39C	9	5	42
0.53 - 0.84	1.3C	0.48A						2	44C	10	6	38
0.91 - 1.32	0.43C	0.11A						4	39C	9	5	43
1.32 - 1.83	0.14C	0.05A		0.037F				4	48C	11	6	34

Depth	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	15 Bar		
m		g/g - m3/m3						mm/h	mm/h
0 - 0.15				0.21C			0.14C		
0.15 - 0.23									
0.23 - 0.51									
0.53 - 0.84									
0.91 - 1.32									
1.32 - 1.83									

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Laboratory Analyses Completed for this profile

15_NR_CA	Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded
15_NR_H	Hydrogen Cation - meq per 100g of soil - Not recorded
15_NR_K	Exch. basic cations (K++) - meq per 100g of soil - Not recorded
15_NR_MG	Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded
15_NR_NA	Exch. basic cations (Na++) - meq per 100g of soil - Not recorded
19B_NR	Calcium Carbonate (CaCO3) - Not recorded
2A1	Air-dry moisture content
3_NR	Electrical conductivity or soluble salts - Not recorded
4_NR	pH of soil - Not recorded
5_NR	Water soluble Chloride - Cl(%) - Not recordede
6A1	Organic carbon - Walkley and Black
7_NR	Total nitrogen (%) - Not recorded
9_NR	Available P (mg/kg) - Not recorded
9A_NR	Total element - P(%) - Not recorded
P10_GRAV	Gravel (%)
P10_NR_C	Clay (%) - Not recorded
P10_NR_CS	Coarse sand (%) - Not recorded
P10_NR_FS	Fine sand (%) - Not recorded
P10_NR_Z	Silt (%) - Not recorded
P3A_NR	Bulk density - Not recorded
P3B_VL_01	0.1 BAR Moisture m3/m3 - Volumetric using suction plate
P3B_VL_15	15 BAR Moisture m3/m3 - Volumetric using pressure plate