Project Name: DD

Project Code: DD Site ID: B195 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: C.H. Thompson Locality:

 Date Desc.:
 01/10/53
 Elevation:
 434 metres

 Map Ref.:
 Sheet No.: 9242
 1:100000
 Rainfall:
 660

 Northing/Long.:
 151.580555555556
 Runoff:
 Slow

Easting/Lat.: -27.7458333333334 Drainage: Imperfectly drained

<u>Geology</u>

ExposureType: Soil pit Conf. Sub. is Parent. Mat.: No Data

Geol. Ref.: Jw Substrate Material: Soil pit, 0.94 m deep, Porous, Mudstone

Land Form

Rel/Slope Class: Gently undulating rises 9-30m Pattern Type: Rises

1-3%

Morph. Type:Upper-slopeRelief:No DataElem. Type:HillslopeSlope Category:No DataSlope:1.75 %Aspect:No Data

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:Mapping Unit:N/ACalcic Mottled-Mesonatric Black SodosolPrincipal Profile Form:Dd2.43ASC Confidence:Great Soil Group:Solodic soil

All necessary analytical data are available.

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

Vegetation: Low Strata - Tussock grass, , . *Species includes - Bothriochloa decipiens

Tall Strata - Tree, 6.01-12m, Sparse. *Species includes - Eucalyptus populnea, Casuarina cristata

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

Dark grey (10YR4/1-Dry); ; Clay loam; , Platy; Moderately moist; Firm consistence; 0-2%, 0 - 0.06 m medium gravelly, 6-20mm, Detrital sedimentary rock (unidentified), coarse fragments; Field pH 6.8 (pH meter); Abundant, fine (1-2mm) roots; Clear change to -Grey (10YR6/1-Dry); ; Clay loam; Weak grade of structure, Angular blocky; Moderately moist; A2 0.06 - 0.14 m Firm consistence; 2-10%, coarse gravelly, 20-60mm, Detrital sedimentary rock (unidentified), coarse fragments; Field pH 7.6 (pH meter); Many, fine (1-2mm) roots; Abrupt change to -B21 0.14 - 0.28 m Very dark grey (10YR3/1-Moist); , 7.5YR54; Heavy clay; Moderate grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Very firm consistence; 0-2%, medium gravelly, 6-20mm, Detrital sedimentary rock (unidentified), coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.5 (pH meter); Common, fine (1-2mm) roots; Gradual change to -**B22** 0.3 - 0.53 m Brown (7.5YR5/4-Moist); , 7.5YR42; Heavy clay; Moderate grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Very firm consistence; 0-2%, medium gravelly, 6-20mm, Detrital sedimentary rock (unidentified), coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.8 (pH meter); Few, fine (1-2mm) roots; Gradual change to -B23 Brown (7.5YR4/2-Moist); ; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; 0.53 - 0.71 m Moderately moist; Very firm consistence; 0-2%, medium gravelly, 6-20mm, Detrital sedimentary rock (unidentified), coarse fragments; Few (2 - 10 %), Calcareous, , Nodules; Few (2 - 10 %), Gypseous. . Crystals: Field pH 8.1 (pH meter): Few. fine (1-2mm) roots: Gradual change to -**B24** Brown (7.5YR4/2-Moist); , 10YR64; Heavy clay; Weak grade of structure, 20-50 mm, Angular 0.71 - 0.89 m blocky; Moist; Firm consistence; Very few (0 - 2 %), Calcareous, , Nodules; Common (10 - 20

%), Gypseous, , Crystals; Field pH 7.8 (pH meter); Gradual change to -

Light grey (10YR7/1-Moist); , 10YR66; Heavy clay; Weak grade of structure, 20-50 mm, Angular

blocky; Moist; Firm consistence; Few (2 - 10 %), Gypseous, , Crystals; Field pH 7.3 (pH meter);

Morphological Notes

0.94 - 1.27 m

Observation Notes

Site Notes

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Project Name: DD
Project Code: DD Site ID: B19
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DARLING DOWNS

Project Name: DD
Project Code: DD Site ID: B195
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Laboratory Test Results:

Depth	рН	1:5 EC	Exc	changeable	Cations K	I Na	Exchangeable	CEC	E	CEC	E	SP	
m		dS/m	Ca	Mg	N.	Na Acidity Cmol (+)/kg					9,	6	
0 - 0.06 0.06 - 0.14	6.8H 7.6H	0.05B 0.03B		6.6	1	0.4	7.4D			35E			
0.14 - 0.28	8.5H	0.03B		6.4	0.51	6.6			4	40.5E			
0.3 - 0.53	8.8H	0.55B											
0.53 - 0.71	8.1H	7.85B											
0.71 - 0.89	7.8H	14.1B											
0.94 - 1.27	7.3H	4.62B	•										
Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Pa GV	rticle S	Size A FS	nalysis Silt (Clav	
m	%	%	mg/kg		%	%	Mg/m3			%		,	
0 - 0.06		3.86E	42C	0.048F	0.30	6B	1.30		8C	30	20	32	
0.06 - 0.14	0.000	1.6A			0.4	. D	4.00	3	11C	36	24	25	
0.14 - 0.28 0.3 - 0.53	0.03C	1.54E			0.13	3B	1.20 1.30		6C	20	12	59	
0.53 - 0.53	8.81C	0.19A					1.50		7C	11	14	55	
0.71 - 0.89	0.0.0	0								• •		00	
0.94 - 1.27		0.1A	7C	0.017F	•				<1C	2	22	71	
Depth	COLE		Gra	avimetric/Volumetric W		Vater Contents			K sat	t I	K unsat		
		Sat.	0.05 Bar	0.1 Bar 0.5 Bar		1 Bar	5 Bar 1	5 Bar				4	
m				g/g	g - m3/m3	3			mm/h	1	mm/h		
0 - 0.06 0.06 - 0.14							(0.3C					
0.14 - 0.28								.36C					
0.3 - 0.53 0.53 - 0.71							C	.38C					
0.71 - 0.89 0.94 - 1.27													

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Laboratory Analyses Completed for this profile

15 NR Sum of Ex. cations + Ex. acidity - Not recorded

15_NR_CA Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded

15_NR_H Hydrogen Cation - meg per 100g of soil - Not recorded

15 NR K Exch. basic cations (K++) - meq per 100g of soil - Not recorded Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded 15_NR_MG Exch. basic cations (Na++) - med per 100g of soil - Not recorded Calcium Carbonate (CaCO3) - Not recorded 15_NR_NA

19B_NR

2 LOI Loss on Ignition (%) Air-dry moisture content 2A1

3_NR Electrical conductivity or soluble salts - Not recorded

4_NR pH of soil - Not recorded

5_NR Water soluble Chloride - Cl(%) - Not recordede

Organic carbon - Walkley and Black 6A1 6Z Organic carbon (%) - Not recorded 7 NR Total nitrogen (%) - Not recorded 9_NR Available P (mg/kg) - Not recorded Total element - P(%) - Not recorded 9A_NR

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 Bulk density - Not recorded P3A_NR

P3B_VL_15 15 BAR Moisture m3/m3 - Volumetric using pressure plate