

**Project Name:** CAN  
**Project Code:** CAN      **Site ID:** CP116      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (NSW)

**Site Information**

<b>Desc. By:</b>	C.L. Watson	<b>Locality:</b>	Research Station Springville
<b>Date Desc.:</b>	31/08/78	<b>Elevation:</b>	220 metres
<b>Map Ref.:</b>	Sheet No. : 8837    1:100000	<b>Rainfall:</b>	640
<b>Northing/Long.:</b>	149.616666666667	<b>Runoff:</b>	Very slow
<b>Easting/Lat.:</b>	-30.216666666667	<b>Drainage:</b>	Imperfectly drained

**Geology**

<b>ExposureType:</b>	No Data	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	Slightly porous, Unconsolidated material (unidentified)

**Land Form**

<b>Rel/Slope Class:</b>	Level plain <9m <1%	<b>Pattern Type:</b>	Alluvial plain
<b>Morph. Type:</b>	Flat	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Plain	<b>Slope Category:</b>	Level
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):**    Soft, Self-mulching

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Epicalcareous-Endohypersodic Self-Mulching Black Vertosol	<b>Principal Profile Form:</b>	Ug5.15

**ASC Confidence:**

Analytical data are incomplete but reasonable confidence.

**Great Soil Group:**

Black earth

**Site Disturbance:**    Cultivation. Rainfed

**Vegetation:**

**Surface Coarse Fragments:**

**Profile Morphology**

0 - 0.06 m	Dark brown (7.5YR3/2-Moist); ; Heavy clay; Strong grade of structure, <2 mm, Granular; 5-10 mm, Angular blocky; Very weak consistence; Moderately plastic; Slightly sticky; Field pH 8 (pH meter);
0.06 - 0.1 m	Dark brown (7.5YR3/2-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Very weak consistence; Moderately plastic; Slightly sticky; Very few (0 - 2 %), Calcareous, , Soft segregations; Field pH 8.3 (pH meter);
0.1 - 0.2 m	Dark brown (7.5YR3/2-Moist); ; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 8.5 (pH meter);
0.2 - 0.3 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32, 20-50% ; , 20-50% ; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 8.4 (pH meter);
0.3 - 0.4 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32, 20-50% ; , 20-50% ; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Concretions; Field pH 8.5 (pH meter);
0.4 - 0.5 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32, 20-50% ; , 20-50% ; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 8.5 (pH meter);
0.5 - 0.6 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32, 20-50% ; , 20-50% ; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Concretions; Field pH 8.5 (pH meter);
0.6 - 0.7 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32, 20-50% ; , 20-50% ; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 8.5 (pH meter);
0.7 - 0.8 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32, 20-50% ; , 20-50% ; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Concretions; Field pH 8.6 (pH meter);

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0.8 - 0.9 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32, 20-50% ; , 20-50% ; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Soft segregations;
0.9 - 1 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 8.5 (pH meter);
1 - 1.1 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Concretions; Field pH 8.6 (pH meter);
1.1 - 1.2 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 8.5 (pH meter);
1.2 - 1.3 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Concretions; Field pH 8.3 (pH meter);
1.3 - 1.4 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 7.9 (pH meter);
1.4 - 1.5 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Concretions; Field pH 7.9 (pH meter);
1.5 - 1.6 m	Dark brown (7.5YR3/2-Moist); , 7.5YR32; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 7.9 (pH meter);
1.6 - 1.7 m	Dark brown (10YR3/3-Moist); ; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Concretions; Field pH 8.1 (pH meter);
1.7 - 1.8 m	Dark brown (10YR3/3-Moist); ; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 8.2 (pH meter);
1.8 - 1.9 m	Dark brown (10YR3/3-Moist); ; Heavy clay; Very weak consistence; Moderately plastic; Slightly sticky; Few (2 - 10 %), Calcareous, , Concretions; Field pH 8.2 (pH meter);

#### **Morphological Notes**

#### **Observation Notes**

SLICKENSIDES INCREASING WITH DEPTH >30CM:AT >160CM LESS SLICKENSIDES:

#### **Site Notes**

WEE WAA

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable		CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity			%
						Cmol	(+)/kg			
0 - 0.06	8A	0.15A	25.5K	9.3	1.7	0.47	2.9B	39.8J		1.18
0.06 - 0.1	8.3A	0.14A								
0.1 - 0.2	8.5A	0.14A								
0.2 - 0.3	8.4A	0.14A								
0.3 - 0.4	8.5A	0.15A								
0.4 - 0.5	8.5A	0.16A								
0.5 - 0.6	8.5A	0.17A								
0.6 - 0.7	8.5A	0.17A								
0.7 - 0.8	8.6A	0.16A								
0.8 - 0.9	8.5A	0.18A								
0.9 - 1	8.6A	0.17A								
1 - 1.1	8.5A	0.18A								
1.1 - 1.2	8.3A	0.25A								
1.2 - 1.3	7.9A	0.68A								
1.3 - 1.4	7.9A	0.69A								
1.4 - 1.5	7.9A	0.55A								
1.5 - 1.6	8.1A	0.36A								
1.6 - 1.7	8.2A	0.35A								
1.7 - 1.8	8.2A	0.34A								
1.8 - 1.9	8.1A	0.34A								

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis		
m	%	C	P	P	N	K	Density	GV	CS	FS	Silt	Clay	
		%	mg/kg	%	%	%	Mg/m3			%			
0 - 0.06	0.35A	1.42D											
0.06 - 0.1										3D	16	21	54
0.1 - 0.2													
0.2 - 0.3													
0.3 - 0.4													
0.4 - 0.5													
0.5 - 0.6													
0.6 - 0.7													
0.7 - 0.8													
0.8 - 0.9													
0.9 - 1													
1 - 1.1													
1.1 - 1.2													
1.2 - 1.3													
1.3 - 1.4													
1.4 - 1.5													
1.5 - 1.6													
1.6 - 1.7													
1.7 - 1.8													
1.8 - 1.9													

Depth m	COLE	Gravimetric/Volumetric Water Contents							K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	mm/h	mm/h
		g/g - m3/m3								
0 - 0.06								0.21B		

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0.06 - 0.1  
0.1 - 0.2  
0.2 - 0.3  
0.3 - 0.4  
0.4 - 0.5  
0.5 - 0.6  
0.6 - 0.7  
0.7 - 0.8  
0.8 - 0.9  
0.9 - 1  
1 - 1.1  
1.1 - 1.2  
1.2 - 1.3  
1.3 - 1.4  
1.4 - 1.5  
1.5 - 1.6  
1.6 - 1.7  
1.7 - 1.8  
1.8 - 1.9

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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_CEC	CEC - 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
15G_C_AL1	Exchangeable aluminium - meq per 100g of soil - Aluminium By difference of C and A or B
19A1	Carbonates - rapid titration
2A1	Air-dry moisture content
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
5A2	Chloride - 1:5 soil/water extract, automated colour
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
P10_PB_C	Clay (%) - Plummet balance
P10_PB_CS	Coarse sand (%) - Plummet balance
P10_PB_FS	Fine sand (%) - Plummet balance
P10_PB_Z	Silt (%) - Plummet balance
P3B_GV_15	15 BAR Moisture g/g - Gravimetric using pressure plate