

Project Name: Kaniva, Vic. (Gilgai Soils)
Project Code: REG **Site ID:** A1063 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (VIC)

Site Information

Desc. By: G. Blackburn	Locality:
Date Desc.: 14/09/70	Elevation: 120 metres
Map Ref.: Sheet No. : 7125 1:100000	Rainfall: 480
Northing/Long.: 141.1	Runoff: No Data
Easting/Lat.: -36.283333333333	Drainage: Imperfectly drained

Geology

ExposureType: Soil pit	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: No Data	Substrate Material: No Data

Land Form

Rel/Slope Class: No Data	Pattern Type: Alluvial plain
Morph. Type: No Data	Relief: 5 metres
Elem. Type: Plain	Slope Category: No Data
Slope: 0 %	Aspect: No Data

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification: N/A	Mapping Unit: N/A
ASC Confidence: Confidence level not specified	Principal Profile Form: N/A
	Great Soil Group: Solodized solonetz

Site Disturbance: No effective disturbance. Natural

Vegetation:

Tall Strata - Tree, 6.01-12m, Sparse. *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.05 m	Dark yellowish brown (10YR3/4-Moist); ; Fine sandy loam; Massive grade of structure; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Weak consistence; Field pH 6 (pH meter); Many, very fine (0-1mm) roots; Diffuse change to -
A2	0.05 - 0.1 m	Reddish brown (5YR4/3-Moist); ; Fine sandy loam; Weak grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Weak consistence; Many, very fine (0-1mm) roots; Diffuse change to -
A2	0.1 - 0.17 m	Reddish brown (5YR5/4-Moist); ; 5YR43, 2-10% , 0-5mm, Distinct; , 2-10% , 0-5mm, Distinct; Sandy loam; Weak grade of structure, 20-50 mm, Subangular blocky; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Firm consistence; Field pH 6.5 (pH meter); Common, very fine (0-1mm) roots; Clear change to -
A2B	0.17 - 0.2 m	Reddish brown (5YR5/4-Moist); ; 5YR43, 2-10% , 0-5mm, Distinct; , 2-10% , 0-5mm, Distinct; Fine sandy loam; Weak grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Very firm consistence; Common, fine (1-2mm) roots; Clear change to -
B	0.2 - 0.3 m	Reddish brown (5YR4/4-Moist); ; 2.5YR46, 2-10% , 0-5mm, Distinct; , 2-10% , 0-5mm, Distinct; Medium clay; Strong grade of structure, 5-10 mm, Angular blocky; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Weak consistence; Field pH 8.5 (pH meter); Many, very fine (0-1mm) roots; Diffuse change to -
B	0.3 - 0.4 m	Yellowish red (5YR4/5-Moist); ; 5YR32, 2-10% , 5-15mm, Distinct; , 2.5Y74, 2-10% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 5-10 mm, Prismatic; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Strong consistence; Soil matrix is Slightly calcareous; Common, very fine (0-1mm) roots; Diffuse change to -
B	0.4 - 0.5 m	Yellowish red (5YR5/6-Moist); ; 10YR32, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Medium heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Strong consistence; Soil matrix is Slightly calcareous; Field pH 9 (pH meter); Common, very fine (0-1mm) roots; Diffuse change to -

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0.5 - 0.6 m	Light brown (7.5YR6/4-Moist); , 2.5Y64, 20-50% , 5-15mm, Distinct; , 5YR56, 20-50% , 5-15mm, Distinct; Sandy medium clay; Strong grade of structure, 10-20 mm, Prismatic; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Strong consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Many, very fine (0-1mm) roots; Diffuse change to -
0.6 - 0.7 m	Light brown (7.5YR6/4-Moist); , 5YR56, 20-50% , 5-15mm, Distinct; , 2.5Y62, 20-50% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Very strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Common, very fine (0-1mm) roots; Diffuse change to -
0.7 - 0.8 m	Greyish brown (2.5Y5/2-Moist); , 5YR56, 20-50% , 5-15mm, Distinct; , 7.5YR76, 20-50% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Very strong consistence; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse change to -
0.8 - 0.9 m	Light brownish grey (2.5Y6/2-Moist); , 5YR56, 20-50% , 5-15mm, Distinct; , 2.5Y52, 20-50% , 5-15mm, Distinct; Fine sandy medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Slightly calcareous; Field pH 9 (pH meter);
0.9 - 1 m	Greyish brown (2.5Y5/2-Moist); , 5YR56, 20-50% , 5-15mm, Prominent; , 20-50% , 5-15mm, Prominent; Fine sandy medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Very firm consistence; Many (20 - 50 %), Calcareous, Fine (0 - 2 mm), Nodules; Soil matrix is Slightly calcareous; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
1 - 1.1 m	Light brownish grey (2.5Y6/2-Moist); , 5YR56, 20-50% , 5-15mm, Prominent; , 20-50% , 5-15mm, Prominent; Sandy medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Very firm consistence; Many (20 - 50 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Slightly calcareous; Few, very fine (0-1mm) roots;
1.1 - 1.2 m	Pale brown (10YR6/3-Moist); , 5YR56, 10-20% , 5-15mm, Prominent; , 10-20% , 5-15mm, Prominent; Sandy medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Very firm consistence; Very few (0 - 2 %), Calcareous, Coarse (6 - 20 mm), Nodules; Soil matrix is Moderately calcareous; Few, very fine (0-1mm) roots;
1.2 - 1.3 m	Light yellowish brown (2.5Y6/4-Moist); , 5YR66, 10-20% , 5-15mm, Prominent; , 5YR42, 10-20% , 5-15mm, Prominent; Sandy medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Very firm consistence; Few cutans, <10% of ped faces or walls coated; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Soil matrix is Moderately calcareous; Few, very fine (0-1mm) roots;
1.3 - 1.4 m	Light yellowish brown (2.5Y6/4-Moist); , 5YR56, 10-20% , 5-15mm, Prominent; , 10-20% , 5-15mm, Prominent; Sandy medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Very firm consistence; Common cutans, 10-50% of ped faces or walls coated; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Few, very fine (0-1mm) roots;
1.4 - 1.5 m	Light yellowish brown (2.5Y6/4-Moist); , 5YR56, 10-20% , 5-15mm, Prominent; , 10-20% , 5-15mm, Prominent; Sandy medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Very firm consistence; Common cutans, 10-50% of ped faces or walls coated; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
1.5 - 1.6 m	Pale yellow (2.5Y7/4-Moist); , 5YR56, 2-10% , 5-15mm, Prominent; , 2-10% , 5-15mm, Prominent; Medium clay; Strong grade of structure, 20-50 mm, Prismatic; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Very firm consistence; Common cutans, 10-50% of ped faces or walls coated; Soil matrix is Slightly calcareous; Few, very fine (0-1mm) roots;
1.6 - 1.7 m	Pale yellow (2.5Y7/4-Moist); , 5YR54, 2-10% , 5-15mm, Prominent; , 2-10% , 5-15mm, Prominent; Medium clay; Strong grade of structure, 20-50 mm, Prismatic; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Strong consistence; Common cutans, 10-50% of ped faces or walls coated; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Few, very fine (0-1mm) roots;

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|-------------|---|
| 1.7 - 1.8 m | Pale yellow (5Y7/3-Moist); , 5YR54, 0-2% , 5-15mm, Prominent; , 0-2% , 5-15mm, Prominent; Fine sandy medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Strong consistence; Common cutans, 10-50% of ped faces or walls coated; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Slightly calcareous; |
| 1.8 - 1.9 m | Pale yellow (5Y7/3-Moist); , 5YR54, 2-10% , 5-15mm, Prominent; , 2-10% , 5-15mm, Prominent; Sandy medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Strong consistence; Common cutans, 10-50% of ped faces or walls coated; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Slightly calcareous; Few, very fine (0-1mm) roots; |
| 1.9 - 2 m | Pale yellow (5Y7/3-Moist); , 5YR54, 0-2% , 5-15mm, Prominent; , 0-2% , 5-15mm, Prominent; Sandy medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Strong consistence; Common cutans, 10-50% of ped faces or walls coated; Soil matrix is Slightly calcareous; |

Morphological Notes

Observation Notes

Site Notes

LOWAN

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+)/kg			%
0 - 0.05	6.8H	0.058B	6.6K	2.7	1	0.9			
0.05 - 0.1	6.9H	0.045B	4.9K	2.5	0.41	1.2			
0.1 - 0.17	8.4H	0.097B	3.2K	1.7	0.34	0.67			
0.17 - 0.2	8.4H	0.094B	5.5K	3.9	0.45	2.2			
0.2 - 0.3	8.7H	0.15B	8.4K	6.8	0.81	4			
0.3 - 0.4	8.8H	0.33B							
0.4 - 0.5	8.8H	0.41B	10K	15	2.1	11			
0.5 - 0.6	8.9H	0.49B							
0.6 - 0.7	8.9H	0.54B	8.2K	14	1.8	10			
0.7 - 0.8	8.9H	0.59B							
0.8 - 0.9	8.9H	0.61B	8.8K	15	2	12			
0.9 - 1	8.9H	0.61B							
1 - 1.1	9H	0.57B	9.5K	15	2.1	13			
1.1 - 1.2	9H	0.62B							
1.2 - 1.3	9.1H	0.59B	10K	15	2	13			
1.3 - 1.4	9.1H	0.57B							
1.4 - 1.5	9H	0.57B	9K	15	1.8	13			
1.5 - 1.6	9H	0.58B							
1.6 - 1.7	9H	0.58B	8.2K	14	2	13			
1.7 - 1.8	9H	0.54B							
1.8 - 1.9	9H	0.57B							
1.9 - 2	9H	0.53B							

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle	Size	Analysis		
m	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	FS	Silt	Clay
0 - 0.05	0C	1.8E			0.15B				16C	50	13	19
0.05 - 0.1	0C	0.63E			0.064B				15C	55	14	16
0.1 - 0.17	0.1C	0.26E			0.025B				17C	58	13	12
0.17 - 0.2	0.3C	0.26E			0.023B				15C	51	15	20
0.2 - 0.3	0.3C	0.31E			0.039B				12C	41	9	36
0.3 - 0.4	0.3C	0.29E			0.039B							
0.4 - 0.5	0.3C	0.21E			0.029B			7C	28	6	55	
0.5 - 0.6	5.6C	0.17E			0.025B							
0.6 - 0.7	7.2C	0.1E			0.017B			9C	29	9	41	
0.7 - 0.8	5.5C	0.11E			0.015B							
0.8 - 0.9	2.7C	0.11E			0.015B			8C	28	9	49	
0.9 - 1	2.6C	0.11E			0.016B							
1 - 1.1	4.6C	0.11E			0.015B			10C	24	6	52	
1.1 - 1.2	9.8C	0.11E			0.015B							
1.2 - 1.3	7.3C	0.08E			0.014B			8C	22	6	54	
1.3 - 1.4	8.9C	0.06E			0.012B							
1.4 - 1.5	6.1C	0.04E			0.012B			7C	22	6	53	
1.5 - 1.6	4.7C	0.06E			0.011B							
1.6 - 1.7	4.1C	0.04E			0.011B			8C	23	4	57	
1.7 - 1.8	3C	0.05E			0.012B							
1.8 - 1.9					0.011B			8C	24	7	54	
1.9 - 2					0.011B							

Depth	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	

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m	g/g - m3/m3	mm/h	mm/h
0 - 0.05			
0.05 - 0.1			
0.1 - 0.17			
0.17 - 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			
1.9 - 2			

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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_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 (CaCO ₃) - Not recorded
2_LOI	Loss on Ignition (%)
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 recorded
6Z	Organic carbon (%) - Not recorded
7_NR	Total nitrogen (%) - Not recorded
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