Project Name: **Soil Changes under Agriculture**
Project Code: **Paired** **Site ID:** **M7** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (SA)**

Site Information

Desc. By: N.J. McKenzie
Date Desc.: 24/08/89
Map Ref.: Sheet No. : 6629 1:100000
Northing/Long.: 6175300 AMG zone: 54
Easting/Lat.: 328400 Datum: AGD66
Locality: Keyneton
Elevation: No Data
Rainfall: No Data
Runoff: No Data
Drainage: No Data

Geology

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

Land Form

Rel/Slope Class: No Data
Morph. Type: No Data
Elem. Type: No Data
Slope: %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: No Data

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:
N/A
ASC Confidence:
Confidence level not specified
Mapping Unit: N/A
Principal Profile Form: Dr3.43
Great Soil Group: Soloth

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.03 m	Dark brown (7.5YR3/2-Moist); ; Loam; Weak grade of structure, 10-20 mm, Subangular blocky; Fine, (0 - 5) mm crack; Moderately moist; Weak consistence; Moderately plastic; Normal plasticity; Non-sticky; 0-2%, medium gravelly, 6-20mm, angular, dispersed, Quartz, coarse fragments; Many, very fine (0-1mm) roots; Abrupt, Smooth change to -
A21	0.03 - 0.08 m	Reddish brown (5YR4/4-Moist); Light reddish brown (5YR6/4-Dry); ; Loam (Heavy); Weak grade of structure, 20-50 mm, Angular blocky; Fine, (0 - 5) mm crack; Moderately moist; Weak consistence; Moderately plastic; Normal plasticity; Slightly sticky; 2-10%, medium gravelly, 6-20mm, angular, dispersed, Quartz, coarse fragments; Many, very fine (0-1mm) roots; Clear, Smooth change to -
A22	0.08 - 0.1 m	Reddish brown (5YR5/4-Moist); Reddish yellow (5YR6/5-Dry); ; Sandy clay loam (Heavy); Moderate grade of structure; Fine, (0 - 5) mm crack; Moderately moist; Firm consistence; Moderately plastic; Normal plasticity; Moderately sticky; 2-10%, medium gravelly, 6-20mm, angular, dispersed, Quartz, coarse fragments; Common, very fine (0-1mm) roots;
A22	0.1 - 0.18 m	Reddish brown (5YR5/4-Moist); Reddish yellow (5YR6/5-Dry); ; Sandy clay loam (Heavy); Moderate grade of structure; Fine, (0 - 5) mm crack; Moderately moist; Firm consistence; Moderately plastic; Normal plasticity; Moderately sticky; 2-10%, medium gravelly, 6-20mm, angular, dispersed, Quartz, coarse fragments; Common, very fine (0-1mm) roots; Clear, Smooth change to -
B1	0.18 - 0.2 m	Red (2.5YR5/8-Moist); Mottles, 5YR56; Light clay; Moderate grade of structure, 20-50 mm, Polyhedral; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; Very plastic; Superplastic; Very sticky; 0-2%, medium gravelly, 6-20mm, angular, dispersed, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Common, very fine (0-1mm) roots;
B1	0.2 - 0.25 m	Red (2.5YR5/8-Moist); Mottles, 5YR56; Medium heavy clay; Moderate grade of structure, 20-50 mm, Polyhedral; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; Very plastic; Superplastic; Very sticky; Many cutans, >50% of ped faces or walls coated, prominent; Common, very fine (0-1mm) roots; Gradual, Smooth change to -
B21	0.25 - 0.3 m	Red (2.5YR4/6-Moist); Mottles, 5YR56; Medium heavy clay; Moderate grade of structure, 50-100 mm, Prismatic; Strong grade of structure, 20-50 mm, Angular blocky; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; Very plastic; Normal plasticity; Very sticky; Many cutans, >50% of ped faces or walls coated, prominent; Common, very fine (0-1mm) roots;

Project Name: **Soil Changes under Agriculture**
Project Code: **Paired** **Site ID:** **M7** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (SA)**

B21	0.3 - 0.4 m	Red (2.5YR4/6-Moist); Mottles, 5YR56; Medium heavy clay; Moderate grade of structure, 50-100 mm, Prismatic; Strong grade of structure, 20-50 mm, Angular blocky; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; Very plastic; Normal plasticity; Very sticky; Many cutans, >50% of ped faces or walls coated, prominent; Common, very fine (0-1mm) roots;
B21	0.4 - 0.5 m	Red (2.5YR4/6-Moist); Mottles, 5YR56; Medium heavy clay; Moderate grade of structure, 50-100 mm, Prismatic; Strong grade of structure, 20-50 mm, Angular blocky; Fine, (0 - 5) mm crack; Very firm consistence; Very plastic; Normal plasticity; Very sticky; Many cutans, >50% of ped faces or walls coated, prominent; Common, very fine (0-1mm) roots; Diffuse, Smooth change to
B22	0.5 - 0.6 m	Red (2.5YR5/6-Moist); Mottles, 7.5YR68, 20-50% , 15-30mm, Distinct; Mottles, 2.5YR44, 20-50% , 15-30mm, Distinct; Silty clay loam; Moderate grade of structure, 20-50 mm, Polyhedral; Fine, (0 - 5) mm crack; Firm consistence; Very plastic; Normal plasticity; Very sticky; Many cutans, >50% of ped faces or walls coated, prominent; Common, very fine (0-1mm) roots;
B22	0.6 - 0.8 m	Red (2.5YR5/6-Moist); Mottles, 7.5YR68, 20-50% , 15-30mm, Distinct; Mottles, 2.5YR44, 20-50% , 15-30mm, Distinct; Silty clay loam; Moderate grade of structure, 20-50 mm, Polyhedral; Fine, (0 - 5) mm crack; Firm consistence; Many cutans, >50% of ped faces or walls coated, distinct; Few, very fine (0-1mm) roots; Gradual, Irregular change to -
BC	0.8 - 1.1 m	Red (2.5YR5/6-Moist); Mottles, 10R43, 20-50% , 30-mm, Distinct; Mottles, 2.5YR58, 20-50% , 30-mm, Distinct; Massive grade of structure; Fine, (0 - 5) mm crack; Firm consistence; Common cutans, 10-50% of ped faces or walls coated, distinct;
C1	1.1 - 1.25 m	;
C1	1.25 - 1.45 m	;
C2	1.45 - 1.6 m	;
C2	1.6 - 1.75 m	;

Morphological Notes

Observation Notes

Disturbed Soloth - paired with M8

Site Notes

Project Name: Soil Changes under Agriculture
Project Code: Paired **Site ID:** M7 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (SA)

Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0 - 0.03	5.5C 5.7A	0.36A	14.8D	4.3	1.5	0.16		21.8L	20.8D	0.73
0.03 - 0.08	5.1C 5.4A	0.13A	9.3D	2.5	0.66	0.19		13.3L	12.7D	1.43
0.08 - 0.18	5.4C 5.7A	0.09A	5.1D	1.7	0.56	0.2		7.4L	7.6D	2.70
0.18 - 0.25	6.2C 6.5A	0.11A	5.1D	2.9	0.74	0.26		8.6L	9.1D	3.02
0.25 - 0.35	6.4C 6.7A	0.18A	5D	5.4	0.73	0.51		12.2L	11.7D	4.18
0.35 - 0.5	6.6C 6.8A	0.29A	4D	5.9	0.52	0.83		9.5L	11.3D	8.74
0.5 - 0.6	6.8C 7.1A	0.37A	3.3D	5.5	0.37	1.1		8.7L	10.2D	12.64
0.6 - 0.7	7.2C 7.6A	0.46A	2.2E	4.3	0.36	1.3		8.8B	8.1D	14.77
0.8 - 0.9	7.5C 7.9A	0.58A	1.6E	3.4	0.31	1.5		6.8B	6.8D	22.06
1 - 1.2	7.5C 7.9A	0.57A	0.89E	2.1	0.15	1.1		4B	4.2D	27.50
1.3 - 1.4	7.8C 8A	0.62A	0.68E	1.7	0.1	0.96		3.5B	3.4D	27.43
1.5 - 1.6	7.7C 8A	0.61A	0.73E	1.7	0.13	1.1		3.4B	3.6D	32.35
1.6 - 1.75	7.6C 8A	0.66A	0.89E	2.3	0.12	1.3		3.3B	4.6D	39.39

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 - 0.03	<0.1B	10.2A							7A	46	15	21
0.03 - 0.08	<0.1B	4.5A					1.04		6A	55	13	19
0.08 - 0.18	<0.1B	1.6A					1.04		9A	59	15	14
0.18 - 0.25	<0.1B	0.7A					1.66		10A	39	13	38
0.25 - 0.35	<0.1B	0.6A					1.58		1A	27	14	58
0.35 - 0.5	<0.1B	0.5A					1.57		1A	29	16	56
0.5 - 0.6	<0.1B	0.4A					1.59		2A	37	18	44
0.6 - 0.7	<0.1B	0.2A							4A	41	18	38
0.8 - 0.9	<0.1B	0.1A							9A	46	19	26
1 - 1.2	<0.1B	0.1A							4A	67	16	15
1.3 - 1.4	<0.1B	0.1A							6A	63	19	12
1.5 - 1.6	<0.1B	0.1A							11A	58	20	12
1.6 - 1.75	<0.1B	0.1A							8A	56	20	17

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	
m		g/g - m3/m3						mm/h	mm/h
0 - 0.03									
0.03 - 0.08	0.02A		0.23G				0.09F		

Project Name: **Soil Changes under Agriculture**
Project Code: **Paired** **Site ID:** **M7** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (SA)**

0.08 - 0.18	0.01A	0.19G	0.07F
0.18 - 0.25	0.02A	0.3G	0.19F
0.25 - 0.35	0.05A	0.36G	0.25F
0.35 - 0.5	0.05A	0.37G	0.24F
0.5 - 0.6	0.04A	0.35G	0.22F
0.6 - 0.7			
0.8 - 0.9			
1 - 1.2			
1.3 - 1.4			
1.5 - 1.6			
1.6 - 1.75			

Project Name: **Soil Changes under Agriculture**
Project Code: **Paired** **Site ID:** **M7** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (SA)**

Laboratory Analyses Completed for this profile

15B2_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15B2_CEC	CEC - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15B2_K	Exchangeable bases and CEC - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15B2_MG	Exchangeable bases and CEC - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15B2_NA	Exchangeable bases and CEC - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15C1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_CEC	CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_K	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_MG	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_NA	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15J_BASES	Sum of Bases
15N1	Exchangeable sodium percentage (ESP)
19B1	Carbonates - manometric
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
4B2	pH of 1:5 soil/0.01M calcium chloride extract - following Method 4A1
5A2	Chloride - 1:5 soil/water extract, automated colour
6A1	Organic carbon - Walkley and Black
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_CS	Coarse sand (%) - Coventry and Fett pipette method
P10_CF_FS	Fine sand (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method
P3A1	Bulk density - g/cm3
P3B2VL_15	15 BAR Moisture m3/m3 - Volumetric using disturbed sample on pressure plate
P3B4VL_005	0.05 BAR Moisture m3/m3 - Volumetric of soil clods (Soil Survey Staff,1967)
P5_COLE	Coefficient of Linear Extensibility (Grossman et al. 1968)