

Project Name: Soil Changes under Agriculture
Project Code: Paired **Site ID:** M1
Agency Name: CSIRO Division of Soils (SA)

Observation ID: 1

Site Information

Desc. By:	N.J. McKenzie	Locality:	S.E. Rhynie
Date Desc.:	03/04/89	Elevation:	No Data
Map Ref.:	Sheet No. : 6629 1:100000	Rainfall:	No Data
Northing/Long.:	6216300 AMG zone: 54	Runoff:	No Data
Easting/Lat.:	289100 Datum: AGD66	Drainage:	No Data

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:	No Data
Morph. Type:	No Data	Relief:	No Data
Elem. Type:	No Data	Slope Category:	No Data
Slope:	%	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:	Dr2.13
		Great Soil Group:	Red-brown earth

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dark brown (7.5YR3/4-Moist); Brown (7.5YR5/4-Dry); ; Silty loam; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Dry; Very firm consistence; Field pH 7 (Raupach); Clear, Smooth change to -
B1	0.1 - 0.15 m	Dark reddish brown (5YR3/3-Moist); ; Light clay; Strong grade of structure, 5-10 mm, Angular blocky; Rough-ped fabric; Moderately moist; Very firm consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 6.5 (Raupach); Clear, Smooth change to -
B21	0.15 - 0.2 m	Reddish brown (2.5YR4/4-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Dry; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Field pH 7.5 (Raupach);
B21	0.2 - 0.3 m	Reddish brown (2.5YR4/4-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Dry; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Field pH 7.5 (Raupach);
B21	0.3 - 0.4 m	Reddish brown (2.5YR4/4-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Dry; Very strong consistence; 2-10%, medium gravelly, 6-20mm, angular platy, undisturbed, Shale, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, prominent; Field pH 7.5 (Raupach);
B21	0.4 - 0.42 m	Reddish brown (2.5YR4/4-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Dry; Very strong consistence; 10-20%, medium gravelly, 6-20mm, angular platy, undisturbed, Shale, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, prominent; Field pH 7.5 (Raupach); Clear, Smooth change to -
B22k	0.42 - 0.5 m	Reddish brown (2.5YR4/4-Moist); Mottles, 2.5YR5/6, 20-50% , 30-mm, Distinct; Medium heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Strong consistence; 10-20%, coarse gravelly, 20-60mm, angular platy, undisturbed, Shale, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Many (20 - 50 %), Calcareous, Very coarse (20 - 60 mm), Soft segregations; Field pH 8.5 (Raupach);

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B22k	0.5 - 0.7 m	Reddish brown (2.5YR4/4-Moist); Mottles, 2.5YR5/6, 20-50% , 30-mm, Distinct; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Strong consistence; 20-50%, coarse gravelly, 20-60mm, angular platy, undisturbed, Shale, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Many (20 - 50 %), Calcareous, Very coarse (20 - 60 mm), Soft segregations; Field pH 8.5 (Raupach); Gradual, Smooth change to -
BC	0.7 - 0.84 m	Red (2.5YR5/6-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; 50-90%, coarse gravelly, 20-60mm, angular platy, undisturbed, Shale, coarse fragments; Many (20 - 50 %), Calcareous, Very coarse (20 - 60 mm), Soft segregations; Field pH 9 (Raupach); Clear, Smooth change to -
R	0.84 - m	Rock

Morphological Notes

Observation Notes

Disturbed Red-Brown Earth - paired with M2

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[illegible]

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Laboratory Analyses Completed for this profile

15B2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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 (Ca ²⁺ ,Mg ²⁺ ,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/cm ³
P3B2VL_15	15 BAR Moisture m ³ /m ³ - Volumetric using disturbed sample on pressure plate
P3B4VL_005	0.05 BAR Moisture m ³ /m ³ - Volumetric of soil clods (Soil Survey Staff,1967)
P5_COLE	Coefficient of Linear Extensibility (Grossman et al. 1968)