

Project Name: Nyabing Kukerin land resources survey
Project Code: NYA **Site ID:** 0729 **Observation ID:** 1
Agency Name: Agriculture Western Australia

Site Information

Desc. By:	Melanie Roberts	Locality:	
Date Desc.:	28/01/97	Elevation:	315 metres
Map Ref.:		Rainfall:	No Data
Northing/Long.:	6295587 AMG zone: 50	Runoff:	No Data
Easting/Lat.:	600001 Datum: AGD84	Drainage:	Very poorly drained

Geology

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

Landform

Rel/Slope Class: Gently undulating rises 9-30m 1-3% **Pattern Type:** Rises

Morph. Type:	Flat	Relief:	10 metres
Elem. Type:	Plain	Slope Category:	No Data
Slope:	1 %	Aspect:	0 degrees

Surface Soil Condition Hardsetting, Hardsetting

Erosion (wind); (scald) (sheet) (rill) (mass) (gully)
(stbank) (tunnel)

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Hypocalcic Mottled-Hypernatric Grey Sodosol		Principal Profile Form:	N/A
ASC Confidence:		Great Soil Group:	N/A
Analytical data are incomplete but reasonable confidence.			

Site Disturbance Cultivation. Rainfed

Vegetation

Surface Coarse Fragments 2-10%, medium gravelly, 6-20mm, subangular, Quartz; No surface coarse fragments

Profile Morphology

A1	0 - 0.06 m	Dark brown (10YR3/3-Moist); ; Loamy sand; Massive grade of structure; Dry; Field pH 5.5 (pH meter);
		Sharp, Wavy change to -
A2e	0.06 - 0.15 m	Pale brown (10YR6/3-Moist); ; Sandy clay loam; Massive grade of structure; Dry; Field pH 7 (pH meter);
		Abrupt, Wavy change to -
B21	0.15 - 0.8 m	Light grey (10YR7/1-Moist); Mottles, 10YR66, 10-20% , 15-30mm, Faint; Light clay; Strong grade of
		structure, 50-100 mm, Columnar; Dry; Field pH 7.2 (pH meter); Clear, Wavy change to -
B22c	0.8 - 1.3 m	Light grey (10YR7/1-Moist); Mottles, 10YR66, 20-50% , 30-mm, Distinct; Clayey sand; Single grain
		grade of structure; Dry; 20-50%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH
		8.3 (pH meter); Sharp, Wavy change to -
B23	1.3 - 1.85 m	Light grey (10YR7/1-Moist); Mottles, 7.5YR56, 10-20% , 15-30mm, Distinct; Light clay; Strong grade of
		structure, 20-50 mm, Polyhedral; Dry; Soil matrix is Slightly calcareous; Field pH 8.4 (pH meter);

Morphological Notes

B22c This layer is a sandy quartz seam

Observation Notes

Site Notes

Soil pit. Farmer has applied gypsum to the soil and received a positive response.

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.06	5B	9B	2.24H	0.94	0.08	0.48	0.09J		3.74D	
0 - 0.06	6.1H									
	5B	9B	2.24H	0.94	0.08	0.48	0.09J		3.74D	
0.06 - 0.15	6.1H									
	6.2B	12B	2.16A	2.94	0.05	1.44			6.59D	
0.06 - 0.15	7.6H									
	6.2B	12B	2.16A	2.94	0.05	1.44			6.59D	
	7.6H									
0.15 - 0.8	7.6B	54B	1.95E	6.22	0.14	4.18		14B	12.49D	29.86
	8.6H									
0.15 - 0.8	7.6B	54B	1.95E	6.22	0.14	4.18		14B	12.49D	29.86
	8.6H									
0.8 - 1.3	7.5B	57B	0.59E	2.74	0.1	1.49		6B	4.92D	24.83
	8.6H									
0.8 - 1.3	7.5B	57B	0.59E	2.74	0.1	1.49		6B	4.92D	24.83
	8.6H									
1.3 - 1.85	7.5B	110B	0.68E	5.64	0.19	2.99		10B	9.5D	29.90
	8.3H									
1.3 - 1.85	7.5B	110B	0.68E	5.64	0.19	2.99		10B	9.5D	29.90
	8.3H									

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis
m	%	Clay %	mg/kg	%	%	%	Mg/m3	GV CS FS Silt
0 - 0.06		1.15D		180B	0.072E			
8.2								6.4
0 - 0.06		1.15D		180B	0.072E			6.4
8.2								
0.06 - 0.15		0.43D		55B	0.021E			7.2
22.8								
0.06 - 0.15		0.43D		55B	0.021E			7.2
22.8								
0.15 - 0.8		0.09D		31B	0.006E			7.3
37.3								
0.15 - 0.8		0.09D		31B	0.006E			7.3
37.3								
0.8 - 1.3		0.05D		21B				1.8
14.6								
0.8 - 1.3		0.05D		21B				1.8
14.6								
1.3 - 1.85		0.04D		20B				2.4
23.8								
1.3 - 1.85		0.04D		20B				2.4
23.8								

Laboratory Analyses Completed for this profile

15_NR_BSa	Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CM	Exchangeable bases (Ca/Mg ratio) - Not recorded
15A1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_CEC	Exchangeable bases (CEC) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts
15A1_K	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_MG	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_NA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no 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

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15C1_K soluble salts	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for
15C1_MG soluble salts	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for
15C1_NA soluble salts	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for
15E1_AL	Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts
15E1_CA salts	Exchangeable bases (Ca ²⁺ , Mg ²⁺ , Na ⁺ , K ⁺) by compulsive exchange, no pretreatment for soluble
15E1_K	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_MG	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_MN	Exchangeable bases (Mn ²⁺) by compulsive exchange, no pretreatment for soluble salts
15E1_NA	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15J_BASES	Sum of Bases
15L1_a Sum of Cations	Exchangeable bases Base saturation percentage (BSP) - Auto calculated from available using
	and measured clay
15N1_a	Exchangeable sodium percentage (ESP) - Auto calculated from available using CEC
15N1_b	Exchangeable sodium percentage (ESP) - Auto calculated from available using Sum of Cations
18A1_NR	Bicarbonate-extractable potassium (not recorded)
3_NR	Electrical conductivity or soluble salts - Not recorded
4_NR	pH of soil - Not recorded
4B_AL_NR	Aluminium in 1:5 soil/0.01M calcium chloride extract - method not recorded
4B1	pH of 1:5 soil/0.01M calcium chloride extract - direct
4G_NR	pH buffering capacity, (method not recorded)
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A1	Total nitrogen - semimicro Kjeldahl, steam distillation
7C1a	Ammonium-N, in presence or absence of nitrite
7C1e	Nitrate-N, in presence of nitrite
9A3	Total Phosphorus (ppm) - semimicro kjeldahl, automated colour
9B_NR	Bicarbonate-extractable phosphorus (not recorded)
9H1	Anion storage capacity
P10_1m2m	1000 to 2000u particle size analysis, (method not recorded)
P10_20_75	20 to 75u particle size analysis, (method not recorded)
P10_75_106	75 to 106u particle size analysis, (method not recorded)
P10_gt2m	> 2mm particle size analysis, (method not recorded)
P10_NR_C	Clay (%) - Not recorded
P10_NR_Saa	Sand (%) - Not recorded arithmetic difference, auto generated
P10_NR_Z	Silt (%) - Not recorded
P10106_150	106 to 150u particle size analysis, (method not recorded)
P10150_180	150 to 180u particle size analysis, (method not recorded)
P10180_300	180 to 300u particle size analysis, (method not recorded)
P10300_600	300 to 600u particle size analysis, (method not recorded)
P106001000	600 to 1000u particle size analysis, (method not recorded)