Project Name:SOIL STRUCTURE & MANAGEMENTProject Code:SSMSite ID:Agency Name:CSIRO Division of Soils (ACT)

Observation ID: 1

| Desc. I | • | B. Mu | | Locality: | | 050 | | | | |
|--|----------------------------|----------------|--|--|---|--|--|--|--|--|
| Date D Map Re | | 13/03 Sheet | //91 t No. : 8229 1:100000 | Elevation: Rainfall: | | 250 metr No Data | es | | | |
| • | ng/Long.: | | 300 AMG zone: 55 | Runoff: | | Moderate | ely rapid | | | |
| Easting | - | 49710 | 00 Datum: AGD66 | Drainage: | | Moderate | ely well di | rained | | |
| <u>Geolo</u> Exposi Geol. F | ureType: | Undis Ou | sturbed soil core | Conf. Sub. is Parent. Mat.: Substrate Material: | | | No Data No Data | | | |
| Land I Rel/Slo Morph. Elem. 3 Slope: | pe Class: . Type: | | er-slope | Relief: | Slope Category: No Data | | | | | |
| <u>Surfac</u> | e Soil Co | onditio | on (dry): Soft | | | | | | | |
| Erosic | on: No so | calding | (scald) Partial, Severe (shee | et) | | | | | | |
| | Partia | al, Mod | lerate (rill) Partial, Moderate (| (gully) | | | | | | |
| <u>Soil C</u> | lassificati | ion | | | | | | | | |
| | lian Soil Cl | | cation: | | | ng Unit: | | N/A | | |
| | Red Chrom | | | | | bal Profile | | Dr2.13 | | |
| | confidence ence level r | | cified | | Great | Soil Grou | p: | Red-brown earth | | |
| | | | Iltivation. Rainfed | | | | | | | |
| Vegeta | | | | | | | | | | |
| Surfac | ce Coarse | Frag | ments: | | | | | | | |
| <u>Profile</u> | e Morphol | logy | | | | | | | | |
| 0 | 0 - 0.02 n | n | Organic Layer; ; | | | | | | | |
| A11 | 0.02 - 0.0 | 07 m | Reddish brown (5YR4/4-Moist); ; Fine sandy loam; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm cr Medium, (5 - 10) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropore Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Common (1-5 per 100mm2) Coarse (>5mm) macropores, Dry; Very weak consistence; Non-plastic; Normal plasticity; Non-sticky; Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Abrupt change to - | | | | | | | |
| A12 | 0.07 - 0.1 | 14 m | Dark reddish brown (5YR3/4-Moist); ; Medium clay; Weak grade of structure, 2-5 mm, Platy; Earthy fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Medium (2-5mm) macropores, Few (<1 per 100mm2) Fine (1- 2mm) macropores, Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Strong consistence; Very plastic; Normal plasticity; Moderately sticky; Common, very fine (0-1mm) | | | | | | | |
| B21 | 0.14 - 0.2 | 24 m | Dark reddish brown (2.5YR3/4-Moist); ; Medium clay; Strong grade of structure, 50-100 mm, Prismatic; 20-50 mm, Angular blocky; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Medium (2-5mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Strong consistence; Many cutans, >50% of ped faces or walls coated, distinct; Few, very fine (0-1mm) roots; Gradual change to - | | | | | | | |
| B21 | 0.24 - 0.5 | 52 m | Reddish brown (2.5YR4/4-Moist); ; Medium clay; Strong grade of structure, 50-100 mm, Prismatic; 20-50 mm, Angular blocky; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Dry; Strong consistence; Many cutans, >50% of ped faces or walls coated, distinct; Soil matrix is Slightly calcareous; Few, very fine (0-1mm) roots; Gradual change to - | | | | | | | |
| B22k | 0.52 - 0.7 | 72 m | Reddish brown (2.5YR4/4-M Prismatic; 20-50 mm, Angul Coarse, (10 - 20) mm crack >50% of ped faces or walls mm), Veins, weak, segrega segregations, weak, segreg | lar blocky; Sm ;; Medium, (5 - coated, disting tions;Very few | ooth-pe 10) mr ct; Very (0 - 2 ° | ed fabric; \ m crack; D / few (0 - 2 %), Calcar | /ery coar ry; Strone : %), Man eous, Me | se, (20 - 50) mm crack; g consistence; Many cutans, ganiferous, Fine (0 - 2 edium (2 -6 mm), Soft | | |

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B22k 0.72 - 0.92 m Reddish brown (5YR4/4-Moist); Substrate influence, 2-10%, Faint; Strong grade of structure, 50-100 mm, Prismatic; 20-50 mm, Angular blocky; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Strong consistence; Many cutans, >50% of ped faces or walls coated, distinct; Few (2 - 10%), Calcareous, Medium (2 - 6 mm), Soft segregations, weak, segregations;Few (2 - 10%), Calcareous, Coarse (6 - 20 mm), Soft segregations, weak, segregations;Few (2 - 10%), Calcareous, Medium (2 - 6 mm), Nodules, weak, segregations;Few (2 - 10%), Calcareous, Coarse (6 - 20 mm), Nodules, weak, segregations;Few (2 - 10%), Calcareous, Coarse (6 - 20 mm), Nodules, weak, segregations;Few (2 - 10%), Calcareous, Coarse (6 - 20 mm), Nodules, weak, segregations;Few (2 - 10%), Calcareous, Coarse (6 - 20 mm), Nodules, weak, segregations;Few (2 - 10%), Calcareous, Coarse (6 - 20 mm), Nodules, weak, segregations;Few (2 - 10%), Calcareous, Coarse (6 - 20 mm), Nodules, weak, segregations;Few (2 - 10%), Calcareous, Coarse (6 - 20 mm), Nodules, weak, segregations;Few (2 - 10%), Calcareous, Coarse (6 - 20 mm), Nodules, weak, segregations;Very few (0 - 2%), Manganiferous, Fine (0 - 2 mm), Veins, weak, segregations;Few, very fine (0-1mm) roots;

Morphological Notes B22k

Also mangan ped coatings

Observation Notes

Pan a distinct layer

atlas area is My9 but soils look like Qc3

Site Notes

FOSTER PASTURE WEST WYALONG

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Laboratory Test Results:

| Depth | рН | 1:5 EC | Ex | changeabl | e Cations | | Exchangeable | CEC | ECEC | ESP |
|-----------------------------|-------|--------|-------|-----------|-----------|------------|-------------------|--------|------|------|
| m | | dS/m | Ca | Mg | к | Na Cmol | Acidity (+)/kg | | | % |
| 0.02 - 0.04 0.03 - 0.105 | 5.03B | 0.245A | 2.55J | 1.3 | 1.39 | 0.15 | | 5.46l | | 2.75 |
| 0.04 - 0.07 | 4.44B | 0.163A | 2.29J | 1.01 | 0.82 | 0.1 | | 4.61I | | 2.17 |
| 0.07 - 0.12 | 4.33B | 0.116A | 2.63J | 1.04 | 0.75 | 0.05 | | 4.721 | | 1.06 |
| 0.12 - 0.24 | 5.56B | 0.05A | 7.66J | 4.88 | 0.85 | 0.07 | | 13.15I | | 0.53 |
| 0.15 - 0.225 0.72 - 0.82 | 7.4B | 0.142A | 9.96J | 11.14 | 0.95 | 0.42 | | 19.671 | | 2.14 |

| Depth | CaCO3 | Organic | Avail. | Total | Total | Total | Bulk | Pa | article | Size | Analysis | S |
|-----------------------------|-------|---------|------------|--------|--------|--------|------------------|----|---------|---------|----------|------|
| m | % | C % | P mg/kg | P % | N % | K % | Density Mg/m3 | GV | CS | FS % | Silt | Clay |
| 0.02 - 0.04 0.03 - 0.105 | | 1.56C | | | | | 1.62 | | | | 9 | 12 |
| 0.04 - 0.07 | | 1.24C | | | | | | | | | 9 | 12 |
| 0.07 - 0.12 | | 1.23C | | | | | | | | | 9 | 13 |
| 0.12 - 0.24 | | 0.73C | | | | | | | | | 7 | 42 |
| 0.15 - 0.225 | | | | | | | 1.59 | | | | | |
| 0.72 - 0.82 | | 0.2C | | | | | | | | | 22 | 49 |

| Depth | COLE | Gravimetric/Volumetric Water Contents | | | | | | | | K unsat |
|---|------|---------------------------------------|----------|---------------|----------------------|------------|-------|--------|------|---------|
| m | | Sat. | 0.05 Bar | 0.1 Bar g/ | 0.5 Bar g - m3/m3 | 1 Bar 3 | 5 Bar | 15 Bar | mm/h | mm/h |
| 0.02 - 0.04 0.03 - 0.105 0.04 - 0.07 0.07 - 0.12 | | 0.31F | 0.26F | 0.221 | | 0.15F | 0.12D | 0.1G | | |
| 0.12 - 0.24 0.15 - 0.225 0.72 - 0.82 | | 0.33F | 0.28F | 0.261 | | | | | | |

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Laboratory Analyses Completed for this profile

| 13A1_AL | Oxalate-extractable aluminium |
|-------------------------|--|
| 13A1_FE | Oxalate-extractable iron |
| 13A1_MN 13A1_SI | Oxalate-extractable manganese Oxalate-extractable silicon |
| 13C1 AL | Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon |
| 13C1_FE | Citrate/dithionite-extractable iron, aluminium, Marganese and Silicon |
| 13C1_MN | Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon |
| 13C1_SI | Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon |
| 14H1_CA | Soluble bases/SE (Ca,Mg,K,Na) |
| 14H1_K | Soluble bases/SE (Ca,Mg,K,Na) |
| 14H1_MG | Soluble bases/SE (Ca,Mg,K,Na) |
| 14H1_NA 15F1_CA | Soluble bases/SE (Ca,Mg,K,Na) Exchangeable bases by 0.01M silver-thiourea (AgTU)+, no pretreatment for soluble salts |
| 15F1_K | Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts |
| 15F1 MG | Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts |
| 15F1_NA | Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts |
| 15F3 | CEC by 0.01M silver-thiourea (AgTU)+ |
| 15N1 | Exchangeable sodium percentage (ESP) |
| 3A1 | EC of 1:5 soil/water extract |
| 4B1 | pH of 1:5 soil/0.01M calcium chloride extract - direct |
| 6B3 P10 CF C | Total organic carbon - high frequency induction furnace, infrared Clay (%) - Coventry and Fett pipette method |
| P10 CF Z | Silt (%) - Coventry and Fett pipette method |
| P3A1 | Bulk density - g/cm3 |
| P3B3VLc001 | 0.01 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate |
| P3B3VLc003 | 0.03 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate |
| P3B3VLc005 | 0.05 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate |
| P3B3VLc01 | 0.1 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate |
| P3B3VLc03 P3B3VLcSAT | 0.3 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate Saturated Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate |
| P3B3VLd06 | 0.6 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on |
| 1 OBOVEGOO | pressure plate |
| P3B3VLd1 | 1 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on |
| | pressure plate |
| P3B3VLd15 | 15 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on |
| | pressure plate |
| P3B3VLd3 | 3 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on |
| | pressure plate |
| P3B3VLd5 | 5 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on |
| | pressure plate |
| P6_LP PWS1-2mm | Dispersion Index (Loveday and Pyle, 1973) 1000-2000 micron fraction (%) - Wet Sieving after chemical dispersion |
| PWS20-63 | 20-63 micron fraction (%) - Wet Sieving after chemical dispersion |
| PWS212-425 | 212-425 micron fraction (%) - Wet Sieving after chemical dispersion |
| PWS425-1mm | 425-1000 micron fraction (%) - Wet Sieving after chemical dispersion |
| PWS63-212 | 63-212 micron fraction (%) - Wet Sieving after chemical dispersion |
| | |