Project Name: Project Code: Agency Name:	EDGEROI Site ID:	Soil Studies in the Lower Namoi Valley EDGEROI Site ID: ed241 Observation ID: 1 CSIRO Division of Soils (QLD)							
Site Information Desc. By: Date Desc.: Map Ref.: Northing/Long.: Easting/Lat.:	W.T. Ward 06/08/87 Sheet No. : 8837_N 1:50000	Locality:stock route, oppoElevation:320 metresRainfall:No DataRunoff:No DataDrainage:No Data	osite Murrumbilla gate						
<u>Geology</u> ExposureType: Geol. Ref.:	Undisturbed soil core No Data	Conf. Sub. is Parent. Mat.: No Da Substrate Material: No Da							
Land Form Rel/Slope Class: Morph. Type: Elem. Type: Slope:	No Data Pediment 1 %	Pattern Type:No DataRelief:No DataSlope Category:Very gently slopeAspect:0 degrees	ed						
Erosion: Soil Classifica	ondition (dry): Surface crust								
Australian Soil C N/A ASC Confidence Confidence level <u>Site Disturban</u> <u>Vegetation:</u>	Classification: e: not specified <u>ce:</u> Cultivation. Rainfed	Mapping Unit: Principal Profile Form: Great Soil Group:	N/A Ug5.12 Brown clay						
Surface Coars Profile Morpho									
A11 0 - 0.1 n	n Dark reddish brown (5YR: Moderate grade of structu Granular; Smooth-ped fab 1mm) macropores, Moder	<ul> <li>Dark reddish brown (5YR3/2-Moist); Dark reddish brown (5YR3/3-Dry); ; Medium clay;</li> <li>Moderate grade of structure, 10-20 mm, Subangular blocky; Strong grade of structure, 2-5 mm,</li> <li>Granular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (&lt;1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 6.8 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -</li> </ul>							
A12 0.1 - 0.2	Prismatic; Strong grade o - 5) mm crack; Few (<1 pe	Dark reddish brown (5YR3/2-Moist); ; Medium clay; Moderate grade of structure, 100-200 mm, Prismatic; Strong grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Fine, (( - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; Field pH 6.8 (pH meter); Few, very fine (0-1mm) roots;							
A13 0.25 - 0.	grade of structure, 100-20 Smooth-ped fabric; Medi macropores, Moderately r	Dark reddish brown (5YR3/2-Moist); , 10YR44, 0-2% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 100-200 mm, Prismatic; Weak grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -							
A14 0.4 - 0.6	Lenticular; Moderate grad - 5) mm crack; Few (<1 pe Strong consistence; 0-2%	Dark reddish brown (5YR3/2-Moist); ; Medium clay; Strong grade of structure, 50-100 mm, Lenticular; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 8 (pH meter); Common, very fine (0-1mm) roots;							
A15 0.65 - 0.	Strong grade of structure, Moderately moist; Strong fragments; Very many (50	Dark reddish brown (5YR3/2-Moist); , 2.5YR46, 10-20% , 0-5mm, Distinct; Medium heavy clay; Strong grade of structure, 5-10 mm, Granular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Basalt, coarse fragments; Very many (50 - 100 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -							
B21r 0.75 - 1.	fabric; Fine, (0 - 5) mm cra	); ; Medium heavy clay; Massive grade of ack; Moderately moist; 90-100%, medium Few (2 - 10 %), Calcareous, Medium (2 - e (0-1mm) roots;	gravelly, 6-20mm, angular,						

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B22r 1.9 - 3 m	Dark red (2.5YR3/6-Moist); , 7.5YR76, 0-2% , 0-5mm, Faint; Light clay; Massive grade of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; 90-100%, medium gravelly, 6-20mm, angular, Basalt, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Veins; Field pH 8 (pH meter); Diffuse, Smooth change to -						
C 3 - 3.6 m	Reddish brown (2.5YR4/4-Moist); , 7.5YR76, 2-10% , 0-5mm, Distinct; Light clay; Massive grad of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; 90-100%, coarse gravelly, 20-60mm, angular, Basalt, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Few (2 - 10%), Calcareous, Medium (2 -6 mm), Veins;						
Morphological	Notes						
A11	The surface soil of this profile self-mulching. 75-367 is very stony, fragmented weathered rock in situ. Carbonate veins moderately firm, sugary in appearance. The soil in the rock is inwashed. A chemical sample (241.08) was not taken. 241.						
A12	06 is gravelly medium heavy clay.						
Observation N							

Observation Notes Parent Rock: residual, basalt, from sandstone and basalt, with lime Garrawilla Volcanics

Site Notes

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### Laboratory Test Results:

Depth	рН	1:5 EC	Exe	changeat Mg	ole Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m	Ca	Mg	ĸ		(+)/kg			%
0 - 0.1	6.81A	0.083A	25.65B	10.98	1.44	0.28				
0.1 - 0.2	7.03A	0.07A	27.35B	11.4	0.81000 01	0.38				
0.3 - 0.4	7.66A	0.057A	29.27B	11.83	0.61	0.47				
0.5 - 0.6	8.17A	0.095A	31.32B	14.26	0.61	0.68				
0.7 - 0.8	8.46A	0.176A	39.07B	16.69	0.66	0.97				
1.2 - 1.3	8.55A	0.138A	46.99B	21.65	0.97	2.15				
2.5 - 2.6 3.5 - 3.6	8.5A	0.163A	34.91B	18.05	0.35	2.03				

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Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Pa	article	Size	Analysis	5
m	%	С %	P mg/kg	P %	N %	K %	Density Mg/m3	GV	CS	FS %	Silt	Clay
0 - 0.1 0.1 - 0.2 0.3 - 0.4 0.5 - 0.6 0.7 - 0.8	<0.1B <0.1B <0.1B <0.1B 11.5B	1.62C 1.36C 1.22C	39.5J 15.9J 14.9J 9.5J 24J								12.7 12.8 11.9	52.3 55.1 57.2 54.8 52.1
1.2 - 1.3 2.5 - 2.6 3.5 - 3.6	2.8B 9.8B	0.21C 0.13C	4.8J 1.9J								4.4 7.6	36.5

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	3			mm/h	mm/h

## 0 - 0.1 0.1 - 0.2 0.3 - 0.4

0.3 - 0.4 0.5 - 0.6 0.7 - 0.8 1.2 - 1.3 2.5 - 2.6 3.5 - 3.6

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Observation ID: 1

### Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, pretreatment for
	soluble salts
15A2_K	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_MG	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_NA	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
19B1	Carbonates - manometric
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
5A2	Chloride - 1:5 soil/water extract, automated colour
6B3	Total organic carbon - high frequency induction furnace, infrared
7B1	Water soluble nitrate - automated colour
9B1	Bicarbonate-extractable phosphorus - manual colour
P10_CF_C	Clay (%) - Coventry and Fett pipette method

P10\_CF\_Z Clay (%) - Coventry and Fett pipette method P10\_CF\_Z Silt (%) - Coventry and Fett pipette method