

Site code¹	MM5028
Location	Lara (Patullos Road), Lara district, south-west Victoria
Landform	Undulating rises
Geology	Quaternary Newer Volcanics: <i>extrusive tholeiitic to alkaline basalts, minor scoria and ash</i>
Element	Flat

Profile morphology

Horizon	Depth (cm)	Description
A1	0–5	Dark brown (7.5YR3/2); clay loam; strong coarse blocky structure; firm consistence (dry); sharp boundary to:
B21	5–40	Dark brown (7.5YR3/2); heavy clay; strong coarse blocky structure; strong consistence (dry); boundary to:
B22	40–60	Brown (10YR5/3); heavy clay; moderate fine blocky structure; very firm consistence (moderately moist); boundary to:
B23	60+	Greyish brown (2.5Y5/2); medium clay; moderate fine blocky structure; firm consistence (moderately moist); common calcareous soft segregations.

ASC: Vertic (& Calcic), Hypernatric, Black Sodosol

Analytical data²

Site	Sample	pH	EC	NaCl	Ex Ca	Ex Mg	Ex K	Ex Na	Ex Al	Ex	
MM5028	depth									acidity	
Horizon	cm	H ₂ O	CaCl ₂	dS/m	%	cmol _c /kg	cmol _c /kg	cmol _c /kg	cmol _c /kg	mg/kg	cmol _c /kg
A1	0–5	6.9	N/R	0.28	0.05	7	7	1.3	3.9	0	11
B21	5–40	8.2	N/R	1.01	0.23	10.2	10.2	1.3	14.8	0	0
B22	40–60	8.8	N/R	1.37	0.29	7.8	7.8	1.4	16.2	N/R	0
B23	60+	9.2	N/R	1.51	0.32	7.1	7.1	1.4	16.2	N/R	0

Site	Sample	FC	PWP	KS	FS	Z	C	Org C	Bulk
MM5028	depth	(-10kPa)	(-1500kPa)						density
Horizon	cm	%	%	%	%	%	%	%	t m ⁻³
A1	0–5	41.1	27.2	9	24	12	44	3	1.53
B21	5–40	63.9	46.2	4	11	13	68	N/R	1.06
B22	40–60	N/R	N/R	5	15	15	64	N/R	N/R
B23	60+	N/R	N/R	5	14	16	57	N/R	N/R

Management considerations

This soil exhibits shallow topsoils leading to strong, blocky, cracking clay subsoils. The subsoils are alkaline and highly sodic with calcareous segregations present at depth. These subsoils usually have poor structure and results in dispersion (and subsequent clogging of pores), restricting water and gas movement through the subsoil.

Improvement of soil structure through increased organic matter would be useful, and addition of gypsum where sodic would be beneficial. Bringing this material to the surface is likely to contribute to surface sealing and increase erosion susceptibility.

¹ Source: Maher JM, Martin JJ 1987 Soils and landforms of south-western Victoria. Department of Agriculture and Rural Affairs. Research Report No. 40.

² Source: Government of Victoria, State Chemistry Laboratory.