

Site code<sup>1</sup> SW5

Location Moreys Road, Ayrford, Timboon District, south-west Victoria



Grazing Paddock

Landform Plain  
Geology Neogene Hanson Plain Sand  
Element Flat  
Slope 0  
Aspect -



Mottled-Sodic, Eutrophic, Brown Dermosol/ ferric kaolinitic clay

Horizon	Depth (cm)	Description
A11	0–15	Brown (10YR4/3); very fine sandy clay loam; weak to moderate medium blocky structure; weak consistence (moist); few (2–5%) ferromanganiferous nodules (2–4 mm); pH 5.9; abrupt boundary to:
B21	15–25	Yellowish red (5YR5/6); light clay (subplastic); moderate medium blocky structure; weak consistence (moist); few (2–5%) ferromanganiferous nodules (2–10 mm); pH 6.0; clear boundary to:
B22	25–50	Yellowish brown (10YR5/6) with strong brown (7.5YR5/6) mottles; light clay (subplastic); moderate medium blocky structure; weak consistence (moderately moist); few (5%) ferromanganiferous concretions (2–10 mm); pH 6.0; clear boundary to:
B23	50–75	Yellowish brown (10YR5/6) with strong brown (7.5YR5/6) mottles; light medium clay (subplastic); strong coarse polyhedral parting to fine polyhedral structure; pH 6.8; boundary to:
B24	75–95	Yellowish brown (10YR5/6); light clay (subplastic); strong medium–coarse polyhedral parting to strong fine polyhedral structure; very firm consistence (moderately moist); common (20%) ferruginous concretions (2–8 cm); pH 5.9; boundary to:
B3	95+	Light grey (2.5Y7/0) with brownish yellow (10YR6/6) mottles; light clay (subplastic); strong consistence (dry); many (50%) ferruginous concretions (2–10 cm); pH 5.6.

<sup>1</sup> Source: Imhof M, Brown A, Ward G (unpublished) Soils associated with dairy irrigation and winter wet soils in Southwest Victoria

## Analytical data<sup>2</sup>

Site SW5	Sample depth	pH		EC	NaCl	Ex Ca	Ex Mg	Ex K	Ex Na	Ex Al	Ex acidity	FC	WP	CS	FS	Z	C
Horizon	cm	H <sub>2</sub> O	CaCl <sub>2</sub>	dS/m	%	cmole/kg	cmole/kg	cmole/kg	cmole/kg	mg/kg	cmole/kg	(-10kPa)	(-1500kPa)	%	%	%	%
A11	0–15	5.9	5.4	0.19	N/R	9.4	1.7	0.64	0.70	N/R	N/R	N/R	19.0	9.1	37.0	11.5	29.0
B21	15–25	6.0	5.7	0.22	N/R	5.4	1.3	0.33	0.47	N/R	N/R	N/R	17.0	7.6	36.0	13.0	41.0
B22	25–30	6	5.8	0.17	N/R	4.1	3.4	0.21	0.65	N/R	N/R	N/R	19.4	8.0	30.7	9.0	52.0
B23	50–75	6.8	6.3	0.16	N/R	3.1	6.0	0.20	0.87	N/R	N/R	N/R	27.5	4.8	16.5	6.0	74.0
B24	75–95	5.9	5.4	0.61	<0.05	3.5	5.2	0.15	0.84	N/R	N/R	N/R	26.0	9.2	17.4	5.0	71.5
B3	95+	5.6	4.9	0.32	<0.05	4.3	4.1	0.14	0.94	N/R	N/R	N/R	23.0	16.6	19.1	4.0	62.0

## Management considerations

A lack of strong texture contrast between surface (A) horizon and subsoil (B21) horizon is a key feature of gradational soil types such as these. The clay increases gradually down the profile to the extent that the deep subsoil formed from deeply weathered Neogene sediments exhibits a very high clay content. The surface soil is moderately acid, as is the upper subsoil whereas the deeper subsoil (from 50 cm depth) becomes slightly to moderately acid. The salinity rating is very low throughout most of the profile and becomes low in the deeper subsoil. Subsoil drainage is likely to be reasonably good. Overall, limitations to plant growth are not significant at this site.

The subplastic properties of the subsoil may lead to problems with sealing of earth dams. Sealing can be improved by compaction at the optimum water content and treatment with sodium tri-polyphosphate or addition of bentonite (Rolfe 1989).

<sup>2</sup> Source: Government of Victoria State Chemistry Laboratory.