

Years in which Broadbalk soil was sampled 1843-1944, and soil chemical properties analysed.

Year	Depth	%N	%SOC	Olsen P #	pH	Exchangeable cations				% CaCO ₃	Number of plots analysed
						Ca	K	Mg	Na		
1865	Topsoil	✓* ^a	✓* ^a	✓*	✓*	✓*	✓*	✓*	✓*	✓*	6
	Subsoil	✓*	✓*	✓*	N/A	✓*	✓*	✓*	✓*	✓*	6
1881	Topsoil	✓*	✓*	✓*	✓*	✓*	✓*	✓*	N/A	✓*	72
	Subsoil	✓*	✓*	✓*	N/A	✓*	N/A	N/A	N/A	✓*	16
1893	Topsoil	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	52
	Subsoil	✓*	✓*	✓*	N/A	✓*	✓*	✓*	✓*	✓*	36
1914	Topsoil	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	56
	Subsoil	✓*	✓*	✓*	N/A	✓*	✓*	✓*	N/A	✓*	40
1936	Topsoil	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	23
1944	Topsoil	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓* ^b	70
	Subsoil	✓*	✓*	✓*	N/A	✓*	✓*	✓*	N/A	✓* ^b	50

Archived soils from selected plots from each sampling were re-analysed in 2000-2006. Most data presented is from this re-analysis, with some exceptions, see notes below.

N/A = not available

✓* **Selected plots and sections.** This table lists the major soil samplings; other samples will have been taken from selected plots and sections in other years, to investigate specific questions.

Olsen P – soil Phosphorus in plant-available form, extracted with 0.5M NaHCO₃. Also known as bicarbonate soluble-P.

§ Exchangeable cations – Calcium (Ca), Potassium (K), Magnesium (Mg) and Sodium (Na). Extracted with 1M ammonium acetate (NH₄CH₃CO₂). Na is available in analysis sheets for 1881 topsoil.

^a Values for %N and %SOC from the re-analysis of the 1865 samples were very different to the original data and to the 1881 and 1893 re-analysed soils, so the original data was used.

^b Most of the CaCO₃ data for 1944 was from the original 1944 analysis, except for a few plots (9, 18 and 19) that were analysed in archived samples in 2001.

Position of sampling holes:

1865: Eight holes from selected treatment strips, positions unknown. Samples bulked to provide one sample per strip

1881: Six holes, positions known, from top to bottom of the field.

1893: Four holes, positions unknown, from top to bottom of the field.

1914: Four holes, two at the top end of the field, two at the bottom, positions unknown.

1936: Large number (10-20) of cores taken with narrow diameter auger from each of the existing five sections. Cores bulked within each plot.

1944: Four holes from each of the existing five sections. Holes 1 and 2 current section 0, holes 3 and 4 current section 1, etc.