

Rastall, in "Agricultural Geology" (1916), suggests that such rocks yield soils of all kinds, their character being dependent largely on the climatic conditions. Where these are favourable the soils yielded by the rocks are often very fertile. He attributed the comparative barrenness of these formations in Britain, which occur among the Highlands of Scotland, to the climate and elevation of those parts. In many tropical regions where conditions favourable to the weathering of such rocks exist great fertility results.

In the accompanying Table 1 are given some analyses of mica-schist soils made in this Department's chemical laboratory from time to time. They comprise details of the composition of soils

TABLE I.—CHEMICAL ANALYSES OF MICACEOUS SOILS.

Results, except *, are percentages on soil dried at 100° C.

Laboratory No.	Locality.	Volatile Matter.		Total Nitrogen.	1-per-cent. Citric-acid Extract, Dyer's Method, Hall's Modification (Available Plant-food).				Hydrochloric-acid Extract (Total Plant-food).			
		*At 100° C.	On Ignition.		Lime, CaO.	Magnesia, MgO.	Potash, K ₂ O.	Phosphoric Acid, P ₂ O ₅ .	Lime, CaO.	Magnesia, MgO.	Potash K ₂ O.	Phosphoric Acid, P ₂ O ₅ .
L 295	Earnsclough, Clyde	2.48	4.60	0.140	..	..	0.014	0.052	0.35	0.38	0.20	0.10.
B 944	Cromwell ..	0.64	0.34	0.080	..	..	0.011	0.060	0.41	1.01	0.16	0.24
B 1037	Kurou ..	1.70	5.51	0.250	..	..	0.018	0.058	0.90	0.85	0.16	0.27
J 11	Alexandra ..	32.00	1.12	0.056	..	..	0.008	0.064	..	..	..	..
J 77	Maniototo ..	4.52	5.95	0.189	..	..	0.031	0.041	..	..	..	..
P 278	Composite, Central Otago	1.92	6.05	0.254	0.197	0.055	0.037	0.031	1.23	1.02	0.66	0.09
B 848	Stirling ..	0.74	2.82	0.100	..	..	0.015	0.072	0.74	0.80	0.10	0.19
E 1233	Maruia Plains, Murchison	1.58	4.62	0.152	..	..	0.014	0.050	1.02	1.26	0.58	0.20
H 570	Kokatahi ..	..	4.70	0.182	..	..	0.013	0.056	..	..	..	..
H 572	Hokitika ..	..	1.48	0.084	..	..	0.006	0.080	..	..	..	..
J 306	Koiterangi ..	2.00	4.02	0.150	..	..	0.016	0.056	..	..	..	..
J 307	" ..	0.54	1.45	0.056	..	..	0.012	0.087	..	..	..	..

NOTE.—In H 572 potash by hydrochloric acid is 0.24 per cent, and potash by hydrofluoric acid 3.09 per cent.

TABLE 2.—ANALYSES OF MICA-SCHIST ROCKS IN THE KOKATAHI WATERSHED, WESTLAND.

(1.) Schist from Jumbletop watershed of Toaroa River. (2.) Quartz-mica-schist from Toaroa Gorge. (3.) Mica-quartz-schist from Mikonui River. (8.) Schistose rock from Mikonui River. "C" and "D," American analyses quoted by Clarke in "Data of Geo-Chemistry" (1908).

Constituents.	(1.)	(2.)	(3.)	(8.)	C.	D.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Silica (SiO ₂) ..	68.09	70.18	71.93	70.18	70.76	64.71
Alumina (Al ₂ O ₃) ..	14.34	14.15	13.39	16.26	14.83	16.43
Ferric oxide (Fe ₂ O ₃) ..	0.16	0.28	0.12	0.46	1.46	1.83
Ferrous oxide (FeO) ..	4.39	3.53	3.31	2.84	3.09	3.84
Manganous oxide (MnO) ..	0.26	0.32	0.36	0.27	..	Trace.
Lime (CaO) ..	1.48	1.21	2.45	2.87	0.36	0.08
Magnesia (MgO) ..	1.57	1.01	0.91	2.58	1.99	2.97
Potash (K ₂ O) ..	3.23	2.48	2.20	0.78	3.50	5.63
Soda (Na ₂ O) ..	2.90	4.95	4.09	0.43	0.47	0.11
Titanium oxide (TiO ₂) ..	0.66	0.46	0.49	0.70	0.33	0.72
Carbonic anhydride (CO ₂) ..	..	0.60	..	0.08	..	..
Loss on ignition (excluding CO ₂) ..	2.09	1.09	0.80	1.84	2.79	3.10
Phosphoric anhydride (P ₂ O ₅) ..	0.28	0.17	0.18	0.32	0.26	0.02
Total ..	99.45	100.43	100.23	99.61	99.84	99.44

(Nos. 1, 2, 3, and 8 from Dominion Laboratory reports.)