Soil Colours.—The colours of a number of soils from Hawke's Bay and North Auckland were determined by means of the Maunsell spinning-disk method. This has been done to obtain a uniformity in names used by pedologists in New Zealand and to compare our soils with those in other countries to which standard names have been given. Colours are important in soil-work, since they give valuable information regarding certain characteristics.

TABLE IV.—SOIL COLOUR ANALYSES.

Soil Type.	Colour Group. (American System.)	Colour Analysis : Colour Percentage.			
		Red.	Black.	Yellow.	White.
Rendzina, Te Onepu Road, Hawke's Bay	Red-brown ..	18·0	52·0	19·0	11·0
Brown silt loam, Takapau Plains, Hawke's Bay ..	Brown-black ..	8·5	77·5	9·5	4·5
Pumiceous sands, Rissington Road, Hawke's Bay ..	Yellow	19·0	20·0	35·0	26·0
Kaihu sand, North Auckland	Grey	17·0	27·0	11·0	45·0

SOIL EROSION.

In October a Committee of specialists was set up by the Government under the ægis of the Department of Scientific and Industrial Research to inquire into and report on measures necessary for the preservation of vegetation in New Zealand, with special reference to the incidence, control, and prevention of land erosion. The setting-up of the Committee followed representations from the Royal Society of New Zealand, the Royal Agricultural Society, and the Council of Scientific and Industrial Research. The following was the personnel of the Committee: N. H. Taylor, Pedologist, Soil Survey Division, Department of Scientific and Industrial Research (Chairman); H. H. Allan, Director, Botany Division, Plant Research Bureau, Department of Scientific and Industrial Research; R. P. Connell, Land Utilization Officer, Department of Agriculture; C. A. Cotton, Professor of Geology, Victoria University College; E. R. Hudson, Director, Canterbury Agricultural College; E. B. Levy, Director, Grasslands Division, Plant Research Bureau, Department of Scientific and Industrial Research; C. M. Smith, Chief Inspector, State Forest Service; J. M. Smith, Fields Superintendent, Department of Agriculture.

The Committee held two meetings, and the individual members reported on the subject from their own specialized knowledge. The full report is in the process of publication as Bulletin 77 of the Department of Scientific and Industrial Research. The report states that in many areas soil erosion has reached a serious stage and, if uncontrolled, will accelerate rapidly. An alarmist attitude is deprecated, however, as in few cases is the damage beyond repair.

A recommendation is made that statutory and administrative measures should be taken at the earliest opportunity to inaugurate a programme to handle the serious soil-erosion, soil-conservation, and land-utilization problems that are now apparent. In such a programme the preservation and establishment of a stable vegetative cover of a due proportion of forest shrubland and grassland will be of great importance. This programme would require the active collaboration and co-operation of foresters, agrostologists, botanists, agriculturalists, engineers, and soil technologists.

MINERAL CONTENT OF PASTURES.

COBALT INVESTIGATIONS AT THE CAWTHRON INSTITUTE, PERIOD 1938–39.

Sir THEODORE RIGG, Officer in General Charge.

In previous reports mention has been made of the successful use of cobalt salts in overcoming stock ailment at Glenhope, Nelson, and at Morton Mains, Southland. During the past year investigations relating to the use of cobalt have been continued at both these centres and work has been established in the Sherry Valley, Nelson, and at Sergeant's Hill, Westport, where stock ailment of the "bush-sickness" type has been identified. Studies relating to the manufacture and use of cobaltized fertilizers have been continued, and further work has been done on seasonal variation of the cobalt content of typical pastures in the Nelson district and at Morton Mains, Southland.

With the aid of a special grant from the New Zealand Wool Publicity Committee and the New Zealand Meat-producers' Board a survey of the cobalt content of representative pastures in the South Island has been commenced and valuable information has already been obtained concerning the cobalt status of different pasture areas in the South Island.

I. COBALT SURVEY OF PASTURES IN THE SOUTH ISLAND.

During the past year pasture sampling has been carried out in the Ashburton County, Canterbury, in Southland and in the Sherry, Westhaven and Takaka districts of Nelson. On the West Coast pastures have been sampled at Karamea, Westport, Greymouth, and in the Grey–Reefton Valley. Surveys of a less detailed nature have been made in North Canterbury and in Marlborough. Although cobalt analyses have not yet been completed for all pasture samples, the results available have already shown a low-cobalt status in several pasture areas.