

(i) *Tablelands, Eastern Wairarapa*.—The Council has been negotiating with the Lands Department to take over the management of one of the worst eroded sections in this fertile hill country during a restorative period of from five to ten years. Conservation practices proved to be effective on this property will have a wide application in the east coast districts of the North Island.

### 3. CO-OPERATIVE EXPERIMENTAL WORK WITH CATCHMENT BOARDS AND DEPARTMENTS

The team-work achieved through the Central Standing Committee (the Council's Advisory Committee on research and experimental work) has resulted in progress being made in tackling conservation problems, and individual Departments are actively pursuing research on particular aspects of soil conservation.

In addition, necessary work in some catchment districts has considerable experimental value if adequate records are maintained.

(a) *Te Awa*.—In co-operation with local farmers, the Manawatu Catchment Board and the Grasslands Division of the Department of Scientific and Industrial Research are doing research into the grassland problems of hill country. In addition to investigating the effects of management upon the pastures, valuable trial work on gully, stream, and slip control is being carried out.

(b) *Mangaweka*.—The Rangitikei Catchment Board, the Grasslands Division, and the Council are co-operating with a local farmer in hillside stabilization trials using various spacings of trees, improved management of pastures, and debris dams in various combinations on unstable slopes.

(c) *Waiouru*.—The Rangitikei Catchment Board, Grasslands Division, and State Forest Service have co-operated in revegetation trials on wind-eroded pumice grassland by extending their plantings of trees, shrubs and grasses affording them various types of protection.

(d) *Poverty Bay*.—Moderately successful results have attended the work of the Grasslands Division of the Department of Scientific and Industrial Research, the Department of Agriculture, and Poverty Bay Catchment Board in regrassing trials on slips and flow-eroded areas in the district.

(e) *Wairarapa*.—It is too early to expect results from the grassing trials carried out on slips by the Grassland Division, Department of Agriculture, and the Wairarapa Catchment Board.

(f) *Aerial Top-dressing and Seeding Trials*.—The preliminary trials in aerial distribution of superphosphate and pasture seeds organized by the Council and carried out by the R.N.Z.A.F. and Aerodromes Services of this Department gave considerable promise.

The R.N.Z.A.F. succeeded in making a suitable 1-ton hopper, which was attached to an Avenger aircraft. The trials at Ohakea proved that an adequate distribution of from 2 cwt. to 2½ cwt. per acre was obtained by flying at 400 ft. elevation in parallel flights 90 ft. apart at 125 miles per hour. Placement of the fertilizer and flying control on hilly terrain at Raglan were further investigated during very satisfactory trials on hilly pasture land.

At this stage a fully representative departmental, farmers', and fertilizer-manufacturers' advisory and co-ordinating Committee was set up by the Council, and larger-scale field trials were organized to extend over several farms on various types of soil, slope, pasture conditions, and terrain in the Wairarapa. A great deal of initiative and energy by the R.N.Z.A.F. in adapting old equipment and preparing a flight of three planes has made these larger trials possible.

The ballistics of various grass and clover seeds useful in oversowing native and sown pasture land were investigated in experimental distribution flights at Rongotai and information regarding height and pattern of spread were obtained.