

Armed with this information, practical seed-sowing trials were undertaken at Tara Hills (200 acres), Awatere (50 acres), and Wither Hills (600 acres).

The distribution was reported as being very satisfactory and the strike good at Tara Hills and Wither Hills, and observations on establishment are being continued.

The inadequacy of fertilizer and seed-distributing equipment on the dominantly hilly and inaccessible pastoral land of New Zealand, and the fact that phosphate and clover are the key to conservation management of these lands, which are the backbone of New Zealand's live-stock industry, indicates the vital role the aeroplane could play in soil conservation and in the agricultural economy of the country.

4. OPERATIONS

(a) *Fire Control*.—The Council has taken active steps to control fire, mainly by the operation of Catchment Board by-laws. By this means, together with the enactment of the Forest and Rural Fires Act, it is felt that real progress has been made. However, the fact that the 1948-49 fire season has been a good one should not be regarded as evidence that the country's problems in this connection have been overcome.

(b) *Pests*.—As rabbits in many parts of New Zealand still constitute the worst cause of erosion, the Council has warmly welcomed the amendment to the Act and the constitution of the Rabbit Destruction Council.

The Council is appreciative of the extensive work done by the Department of Internal Affairs in controlling the depredations of deer, opossums, and goats. The damage to protective cover on unfarmed land by all three is serious from a watershed point of view, while the destructive effects of opossums is so critical in many farmed districts that tree-planting for conservation purposes is nullified.

(c) *Subsidy Work With Farmers*.—Increasing numbers of farmers have availed themselves of the Council's subsidies for conservation, tree-planting, and gully-control work :—

- (i) A subsidy of £1 for £1 for spaced tree-planting on eroded or erodible land, which includes the cost of fencing, has resulted in much useful work being done.
- (ii) A subsidy of £3 for £1 for gully-control and stabilization work involving structures has developed activity in this important class of work.
- (iii) Assistance to the extent of the cost of survey has been made available to encourage the construction of contour banks, pasture furrows, and broad-base terraces.

5. SURVEYS

Valuable experience was gained in two conservation surveys of the Te Weraroa and Ruamahanga Catchments—geology, soil, climate, farming, forestry and river data was collected to provide basic information of the soil conservation and river control needs of each area.

CONSERVATION FORESTRY

During the last century the area of native bush in the Dominion has been reduced from approximately 27,500,000 acres to the present figure of 12,500,000. In this relatively short period of time the axe and the fire-stick have been employed with little discrimination on all types of bush country, of which much has proved unsuitable for farming. As a result, while vast areas of bush have been successfully converted to permanent pasture and arable land, there are now very considerable tracts which, for topographic, climatic, and other reasons, should be retired again to forest. Headwater control is the only permanent solution to the problems of the plains; and the reafforestation of this deteriorating country, either by artificial planting or by the encouragement of natural regeneration, constitutes a major task in the conservation of those resources of soil and water upon which prosperity so largely depends.