



Second Growth Control in South Otago

By J. G. RICHARDS, *Instructor in Agriculture, Balclutha.*

IN many regions of New Zealand the vegetative cover today differs greatly from that which existed when the pioneers arrived. In the broadest of classifications this vegetative cover was of two distinct types, and chief among the factors governing their distribution was rainfall. Where rainfall was high an association of native trees and shrubs thrived, forming the famed New Zealand bush; where the rainfall was low the plants forming the ground cover were tussocks and other xerophytes. With the growth of New Zealand's farming industry several million acres of each type have given way to pasture land, and the species dominant in the pastures are English and other introduced grasses and clovers. In many cases these introduced species have thrived so well under present farming methods that they have even ousted native species from their natural areas. On the other hand many of the native plants are con-

stantly trying to regain their former place, and as the introduced species have a much higher productive capacity the New Zealand farmer is ever on the alert to maintain his production and check the reversion of his pasture land.

INVADING native species cause the greatest concern under high rainfall conditions—more than 40in. a year—and particularly where pasture has been established on unploughable land. This problem of pasture land reverting to secondary growth constantly confronts settlers in the Catlins district of South Otago, and in 1939 the Government introduced a scrub-cutting scheme to assist those farmers in their efforts to retain their unploughable pasture lands.

The plant species which cause the most trouble are wineberry (*Aristotelia racemosa*), fuchsia (*Fuchsia exorticata*), boxwood (*Cassinia fulvida*), manuka, and bracken fern. In a survey carried out in 1938 it was estimated that about 20 per cent. of the area of each farm and 45 per cent. of the area of surface-sown bush land had reverted and was clothed with these species.

Review of Areas Cut

Under the scrub-cutting scheme areas were cut on 53 properties and the total area of secondary growth felled