

grazed during the past year. The danthonia-dominant run-out pastures have responded remarkably to top-dressing and oversowing with subterranean and white clover, and have been converted into improved mixed pastures. Great protection of the soil and reduced erosion is evident, and at this stage a small proportion of sheep are being introduced. Comparative management trials of catchments have been made possible by fencing, and the merits of spaced tree-planting, rotational cattle-grazing, oversowing, pasture furrows, and stock dams are being evaluated. Over 40,000 additional trees of coniferous and eucalyptus species have been planted to stabilize land adjacent to the highway, and rabbits are being more successfully dealt with.

Esk, Hawke's Bay

On this 7,500-acre reserve, control of fire has resulted in rapid regeneration of protective scrub and fern, which has done much to stabilize the country and reduce run-off. The final programme of conservation, forestry, and farming is at present being given further consideration.

Wither Hills, Marlborough

The recuperative capacity of some of the worst eroded land in this low-rainfall part of Marlborough is most encouraging, and provides a very practical example of what can be achieved by modifying management. The response to this management has made possible the control of severe sheet and gully erosion and the flooding of lowlands at very low cost on this native pastoral land. The comprehensive application of control of grazing, fire, and rabbits, coupled with spelling, adequate fencing, contour cultivation, contour banks, establishment of good top-dressed pastures on the easy slopes, tree-planting of ruined land, supplementary feed, water-supply for stock, and prudent grazing by cattle and later sheep has been the key to restoring fertility and making possible the doubling of production from this farm in five years.

On the experimental side the effects of cattle-grazing only compared with cattle and sheep grazing are being determined in two comparable catchments, while records are being kept of the regeneration of pastures. Comparative studies are being made of the effects of various management factors on run-off and soil loss from plots. The effects of contour banks and strong vegetation have already been marked in increasing infiltration and reducing soil loss.

Whangamoa, Nelson

An area of 800 acres of poor burnt-over beech country has been set aside to study regeneration of native trees on abandoned country. Access tracks have been cut for fire and pest control. Experiments in natural regeneration are under way on portion of the area, and its progress is being examined on marked quadrats, while several methods of expediting this regeneration by sowing of manuka, sowing of native tree seeds, including beech, and opening up the canopy at later stages are being tried.

Adair, South Canterbury

Since this derelict and eroded farm was taken over two years ago, considerable improvement has been effected by weed-eradication and tree-planting, fencing, repairs to buildings, and thorough cultivation. The 80 acres is subdivided into appropriate paddocks, and comparable pairs of paddocks are treated similarly in the cropping programme, but one is normally cultivated and one is contour cultivated, broad-base terraced, and strip cropped, the object being to build up information on relative crop yields, as this is the critical information required to assess the merits of contour versus normal cultivation. Already positive results are being obtained in terms of run-off and soil loss. On two occasions after heavy rain the normally cultivated slopes have