

with each irrigation. Pasture irrigation ensures adequate grass growth during the dry summer and autumn weather, and when the schemes are fully operating will increase the meat, wool, and grass and clover seed production from the areas provided with irrigation facilities.

### Erosion and Land Deterioration

New Zealand has certain serious problems in soil erosion and land deterioration. On the hill country in the higher-rainfall districts sheet and slip erosion and reversion to second growth have been the cause of serious land deterioration over many thousands of acres of surface-grown pasture land, whilst on the tussock hill grassland in the lower-rainfall areas land deterioration has been caused by depletion of the native vegetation

through overgrazing and rabbits and burning and erosion.

Much of the surface-sown hill country consists of steep hills and mountains which were originally clothed in forest. The forest was felled and burnt, and pastures, established in the ashes of the forest fire, grew remarkably well for a number of years, when the carrying capacity declined as the plant food leached away and the surface soil eroded. Some areas in the very high-rainfall areas very quickly reverted to second growth of fern and manuka; on other areas the reversion was not as rapid, but the control of second growth by fire assisted sheet erosion and fertility has continued to fall as the surface soil has been washed away. When the stumps and roots of the original forest rotted away slip and gully erosion commenced, and this type of

erosion threatens the stability of both the hill country farms and the farms on the flood plains of rivers having their catchment areas in eroded hill country. Heavy rains bring down increasing amounts of silt which are deposited on the plains during periods of flood. The control of erosion will necessitate the utilisation of large areas of hill country for forestry instead of farming, the improvement of the pasture swards on the less seriously eroded country by topdressing and controlled grazing, and the stop-banking of rivers liable to flood low-lying country.

To implement the control of erosion a Soil Conservation and Rivers Control Act was passed in 1941—"An Act to make Provision for the Conservation of Soil Resources and for the Prevention of Damage by Erosion and to make Better Provision with Respect to the Protection of Property from Damage by Floods." The Act sets up a Soil Conservation and Rivers Control Council, which is given the general control of soil erosion problems, and which will work through boards having control of river catchment areas. The boards are given wide powers in the control of land, and although little has been done during the war, a progressive policy to combat soil erosion should be established after the war.

### Pig Industry Broadcasts

UNDER the auspices of District Pig Councils broadcasts will be delivered in December as follows:—

Auckland—1YA, on December 20, at 7.15 p.m., "Common Ailments," by C. Wallace, Supervisor, Waikato District Pig Council.

Palmerston North—2ZA, on December 19, at 8.30 p.m., "Bacon Production," by L. Marsdon, Supervisor, Wellington District Pig Council.

Dunedin—4YA, on December 11, at 7.15 p.m., "Common Ailments," by N. McDonald, Supervisor, Otago District Pig Council.

Napier—2YH, on December 14, at 7.30 p.m., "Pigs in Summer Time," by I. H. Owtram, Supervisor, Tairāwhiti District Pig Council.

### Capacity of Dips, Dipping Troughs, etc.

Because of their irregular shape the measurement of the capacity of dips and dipping troughs is often difficult. A simple method is to fill them from a container of known capacity and either record the gallonage at the various levels on a dip stick, or permanently on the side of the dip or trough.



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