



Cultivating, Oversowing, and Topdressing

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THE hills of the northern portion of Raglan County are typical of several million acres of the better class hill country throughout the North Island that have been grassed after bush. Varying in contour from rolling to steep and with soils derived from limestone, sedimentary rocks, and volcanic showers they have confronted the farmer with many diverse problems of control.

FARMERS on the limestone coastal belt—Te Akau, Waimai, Waikaretu, running north to the Waikato Heads—were able to maintain fair production in spite of price fluctuations and lack of fertilisers. Its natural fertility held on through good or adverse years limited only by a drying out tendency in summer and a lack of

permanent water in some areas. In contrast the clay areas derived from sedimentary rocks further inland by reason of steep broken hills and valleys and a strong tendency to revert to fern and second growth proved both difficult and expensive to handle. Indeed, if aerial topdressing had not eventuated, large areas of this country

would have reverted to fern with a consequent loss of production of wool and meat.

Ploughable Land

The improvement of hill country involves the introduction of better kinds of grasses and clovers and the raising of fertility by topdressing and liming so that these grasses and clovers will establish and grow. The pasture of the poor hills comprises much brown-top, danthonia, sweet vernal, and inferior clovers, and these need to be replaced by better grasses and clovers. Much of the land is ploughable and the most speedy and most certain method of improvement is to plough or giant disc such areas in early winter to allow weathering, and then to grow a crop of chou moellier, kale, or swedes preparatory to grassing.

On rush-infested limestone areas two successive crops are often taken to ensure a more effective smother of the natural regrowth. Such winter-fed crops are extremely useful. They enable the pasture to be spelled in May and June so that there is a long enough growth for the cattle to do well in late winter. A mixed crop can be grown, about $\frac{1}{2}$ lb. of chou moellier and $\frac{3}{4}$ lb. of swedes per acre with 3cwt. of serpentine superphosphate and up to 1 ton of lime being sown. Chou moellier will stand many diseases that may destroy the swede crop and is a



View of Waingaro Valley. The carrying capacity on the hill area at left was raised from one sheep to three in 8 years through annual applications of 2cwt. of phosphates and liming where possible. The sharp ridges typical of this once poor greywacke country contrast with the softer profile of the better-class limestone country in the heading photograph.

HEADING PHOTOGRAPH: Panorama of Te Akau, the most fertile hill district in Raglan County. The average carrying capacity per 8 acres is two ewes and replacements with one breeding cow (with calves). The limiting factor is lack of permanent water in summer droughts.