Fertilizers.

Pumice land shows a marked response to phosphatic and nitrogenous fertilizers: potash and lime give little or no visible response. Superphosphate is the most satisfactory phosphatic fertilizer, and when sowing grass 3 cwt. per acre should be applied with the seed and a further 3 cwt. within four months of sowing; this second application encourages a rapid growth of white clover which is so essential to form a complete turf. As a farm practice the use of nitrogenous fertilizers for pasture establishment does not appear to be worth while. Sulphate of ammonia seems to have a retarding effect on white clover growth, although it encourages rye-grass for a short time. It appears that the best practice is to rely on clovers to provide the necessary nitrogen for grass growth.

Management.

Pasture management is important in securing good pastures. Pastures on the pumice land at high elevations are somewhat difficult to manage; the winter is long and comparatively severe, and when spring growth does start it is extremely rapid. Adequate stocking of pastures during the summer necessitates the provision of large supplies of winter feed. Stocking and management may be carried out with milking cows or grown sheep and dry cattle. With milking cows the essentials are fairly close subdivisions, allowing fields to be stocked with ten to fifteen milking cows per acre for short intervals; the use of the mower to control heavy growth of red clover; and the provision of large quantities of hay and silage or roots for winter feeding. The cutting and wilting of the red clover growth for milking cows is important. Growing red clover is not very palatable, and if cows are forced to eat too much of it butterfat production suffers; if, however, the clover is cut and wilted milking cows do remarkably well on it. With grown sheep and two-year-old dry cattle mowing is not required, as this class of stock can be forced to clean up the whole of the heavy summer growth of clover and grass.

(4) The Development of Unoccupied Crown Land.

The Land Laws Amendment Act, 1929, embodied a plan for the promotion of settlement on undeveloped Crown lands. The Minister of Lands is empowered to develop—to grass, fence, drain, and erect buildings on—unoccupied Crown lands prior to settlement. For the carrying-out of this work he was empowered to purchase machinery and other plant, to erect camps, and to farm the land for a period after its initial development. A considerable amount of development work under this Act has been undertaken on the pumice land in the Rotorua district, and experience gained in these large-scale grassing operations has enlarged our knowledge of the principles and practice of grassing pumice country.

The development of Ngakuru Block 1 was commenced in February, 1929, and of Ngakuru Block 2 in November, 1929. To date 4,500 acres have been grassed, 2,000 acres are being used for dairying on which are being milked one thousand cows, and the remaining land is running dry stock. These blocks are situated thirteen to twenty miles from Rotorua, and lie in the basin of the Whirinaki Stream, which flows into the Waikato River near Atiamuri. The land varies in