

GRASSING OF BEECH-BUSH HILL COUNTRY.

EXPERIMENTS IN THE MURCHISON DISTRICT.

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THE grassing of beech-bush hill country in the Murchison district (Nelson back-country) has been a great source of trouble to the settlers, as the grasses sown last for three or four years only, and then bracken-fern completely takes possession. After the first two or three years the grass-growth is generally too scanty to allow the heavy stocking of the ground when the fern is coming away in the early summer, so that unless a sward can be secured which in itself will serve as an efficient competitor for the occupation of the ground fern is certain to become dominant in a few years.

Where the settler has a considerable area of flat country capable of growing good permanent and temporary pastures he is in the position of dealing with a considerable amount of hill country through his ability, whenever occasion demands, to heavily stock burns that are running into fern, and to recuperate his sheep after they have been kept under less than maintenance conditions on the hill country. In general, however, the owner of good flat ground leaves severely alone his hill-bush country, while the holder of only hill country, by means of burning and sowing down fresh areas, keeps his pasture-supply going until he has dealt with all his area, by which time many of his earlier burns have run into fern, and the ruin of his whole holding is often only a matter of a few years.

From the foregoing it can be seen that the grassing of certain hill country in the Murchison district should not be attempted on a large scale until such time as there is reliable information regarding what kinds of grasses are best to sow and what method of management is best to adopt. The good growth for the first two years that is secured by reason of the temporary fertility of the soil due to the ashes formed through burning off the forest has in the past misled settlers as to the capabilities of the ground in supporting even a fair type of permanent pasture.

The soil of the Murchison hill country in general, as its original plant covering would indicate, is very deficient in lime, and also shows a marked deficiency in phosphates. Whether liming and the application of phosphates is in any way practicable is extremely problematical, but experiments in this direction are much to be desired.

The experience of the settlers has shown that Chewings fescue is by far the most promising of the permanent grasses to sow, but it has rather a bad name owing to its not being relished by stock when the herbage is old. The value of Chewings fescue, however, is undoubted, and especially so on such country as the Murchison hills, where the rainfall is sufficient to keep it growing during a good part of the year. As in other similar country in New Zealand, *Danthonia pilosa* makes a great effort in certain places to compete with fern in the final