

the red clover sown in the latter year still persists. This piece is typical of much land in the district—just ploughable, but too steep for either the drill or the mower. In July and August, 1923, the land was worked up with disks and harrows. On 31st August 3 cwt. basic super was sown, applied by hand, and on 1st September various grass-mixtures were sown, the ground being then tine-harrowed. Three plots have been set out as follows:—

(1.) Italian rye-grass, 9 lb.; Hawke's Bay rye-grass, 9 lb.; paspalum, 6 lb.; red-top, 3 lb.; Chewing's fescue, 3 lb.; *Poa pratensis*, 1½ lb.; cow-grass, 3 lb.; *Lotus major*, ½ lb.; wild white clover (imported Kentish), ¼ lb.; subterranean clover, ½ lb.: total, 35¾ lb. per acre.

(2.) Cow-grass, 3 lb.; *Lotus major*, 1½ lb.; subterranean clover, 1½ lb.: total, 6 lb. per acre.

(3.) Italian rye-grass, 6 lb.; Hawke's Bay rye-grass, 6 lb.; cocksfoot, 6 lb.; crested dogstail, 3 lb.; brown-top, 3 lb.; cow-grass, 3 lb.; *Lotus major*, ½ lb.; wild white clover (imported Cotswold), ¼ lb.; *Danthonia pilosa*, 6 lb.; *Danthonia semi-annularis*, 3 lb.: total, 39¾ lb. per acre.

Plot 2 was partially planted with kikuyu-grass (from the Albany Experimental Area) on 23rd October. A good take of practically all the species has been obtained, and these plots should furnish a rough guide as to the comparative value of the various grasses and clovers under such conditions.

TOP-DRESSING OF PASTURE.

Four series of plots have been laid out with a view to demonstrating the value of phosphatic manures and lime on permanent pasture. Two of these series are on undulating fern country, in one case on very poor light land, and in both cases on decidedly deteriorated pasture; the third is on a river-flat carrying a comparatively good turf; and the fourth is on Field E, a steepish slope where the bracken-fern is fast overshadowing the weakening grasses and clovers of the original sowing. The manure was applied at the end of July. In every case the value of the phosphates has been fully demonstrated in the improved colour and vigour of the turf, the increased clover content, and the decided preference shown by live-stock for the manured plots. At the time of writing (January) there is little to choose between super and super plus lime: basic slag has given gratifying results, but has not yet proved so potent an agent as super. Further observations will be made later.

GENERAL.

There is ample scope for experimental work in the King-country, and farmers are keenly alive to the necessity for improved methods. A new local committee has been formed, and the more energetic settlers have readily come forward to assist with the erection of fences and other work. A considerable amount of pasture top-dressing is now carried out in the district, and on this point, as well as others, the advice of the Fields Division officers and the evidence of the plots are frequently sought. It is always difficult to conduct careful experiments on a co-operative basis, however helpful (as in this case) the co-operating farmers may be, but in the meantime the Aria experimental area is serving both as an object-lesson and an encouragement to a district that needs and appreciates both.