

the roller the better. This rolling consolidates the bottom of the seed-bed, and brings the soil moved by the plough in close contact with the unmoved subsoil, making a continuous firm layer of soil through which soil moisture may move from the deeper layers to the surface.

There are two main types of pasture established on the consolidated sand areas, viz. :—

(1) A paspalum - subterranean-clover pasture :

— (2) A rye-grass - cocksfoot - paspalum - white-clover pasture.

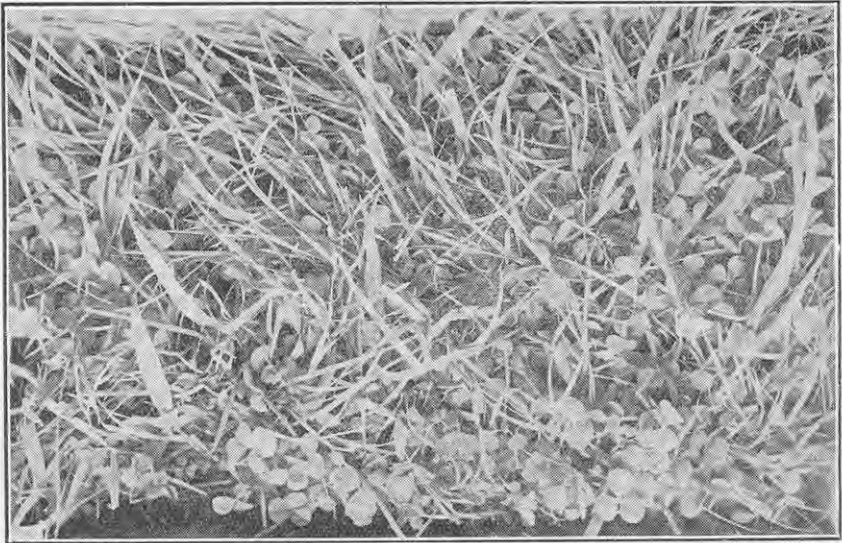


FIG. 12. RYE-GRASS - COCKSFOOT - WHITE-CLOVER - PASPALUM PASTURE.

The ideal type of pasture-sward which is growing vigorously on the Red Hill sand areas. Pasture sown March, 1933, had adequate phosphatic top-dressing during the first year, and has been top-dressed annually with 3 cwt. superphosphate each autumn. Photo taken 16/10/35.

The paspalum - subterranean-clover pasture (Fig. 11) is found where farming is carried out on extensive rather than intensive lines and where only light top-dressing is practised. It is an excellent association where rye-grass is difficult to establish and maintain. Paspalum has good summer growth, whilst subterranean clover is an annual. It buries its own seeds, and the young plants live up to February-March. They grow well in the autumn, winter, and spring, grow vigorously in October, November, and December, and then wither and die. This association appears to be more suited to the Te Kopuru sands; it is fairly easy to establish, but the growth from subterranean clover is not very great on this poorly drained soil type. White clover is difficult to establish and maintain, and subterranean clover with *Lotus hispidus* and suckling clover forms a good companion for paspalum.

The rye-grass - cocksfoot - white-clover - paspalum pasture (Fig. 12) is found growing vigorously in the Red Hill sand soil type. A