

desirable grasses and clovers or to weeds  
and third rate grasses and clovers or to weeds  
inactive to

The master factor in the swing of the development, one way or the other, lies in the difference between adequately fed stock and inadequately fed stock, and the explanation of the change for the better in the one case and for the worse in the other case lies in the demands of the plant itself. Stock in large numbers adequately fed on grassland return to the land residues, particularly of a nitrogenous nature, adequate for the fertility requirement of the higher producing pasture plants and under a system of high soil fertility maintenance and high leaf production, severity of grazing is seldom pronounced. In the case of inadequately fed stock, high production at any one time is never possible: the stock residues are in lesser amounts and are of less value as plant foods, and leaf production is never adequate for the healthy root development of the sward. The close and persistent grazing concomitant of overstocking overprunes the grasses and intensifies the paucity of leafage produced. The non-shade producing nature of the closely grazed sward is favourable to flat and mat weed development and the growth of these inhibit tillering in the grasses and what leafage is produced is forced erect where it is nibbled off by the ever-grazing, inadequately fed stock. The constant dribble wears away the hardest rock; the constant nibble wears down the best of swards.

#### Changes in Vegetation as a result of Grazing by Stock Inadequately Fed.

Under this heading we may consider two aspects of grassland development. (1) The wearing down of scrub and fern growth by a system of forcing (inadequate feeding) stock to a point where conditions are made so difficult for plant growth that they go out, being replaced by hardy, aggressive, low producing grassland of the *Danthonia pilosa* type. Such change must be regarded as a beneficial one to the farmer for the reason that the vegetation produced is feed for a payable class of stock such as sheep, but none the less the development from a vegetation point of view is a retrogressive succession, and hence serves to indicate the axiom that stock in large numbers inadequately fed ruin the country from the vegetation point of view in so far as the forward development to forest is stopped and retrogressive development instituted.

(2) The wearing down of high production swards through a series of insidious changes where the oncoming vegetation is of a lower order than that which is being displaced. I refer here to potentially or







