

and even more, were required to do this effectively and quickly before the pasture became soiled. The number of fields had to be determined in order that a complete grazing rotational scheme might be inaugurated, so as to provide that each field would be grazed down when at the right stage. Dry cattle and sheep were utilized to clean up the fields after the dairy cattle had taken the "bloom" off the pasture. Such rank growth as then remained was mown off, and the field harrowed and closed until its next grass flush was ready.

There is no doubt that such control methods in grassland management are also capable of effecting a great increase in production per acre where only phosphatic fertilizers are used. It is not too much to state with regard to our dairying districts generally that the mismanagement of the grassland is our present stumbling-block. From November onwards the great majority of dairy lands are seen in varying stages of grass that has run to flower and seed-head. The loss in butterfat-production up till the end of December must be very great from this cause alone. Rectification must come by greater subdivision of these large fields into areas small enough to be properly controlled. To use soluble nitrogenous manures on large fields would not be practical, as proper control could not then be exercised—in fact, less control than before could be exercised. Subdivision and a proper water-supply are therefore more imperative with the new grassland manuring. Farmers must realize this point and use nitrogenous manures only on those fields that can be properly controlled. In this way knowledge of local conditions and the response from different fields under different climatic and seasonal conditions will be gauged, and such practical knowledge utilized to the best advantage in the future. The foundation on which a dairy-farmer must build is seen by every thoughtful man to be the adoption of the controlled paddock system. The farmers' aim will then be to manage his grazing in such a way that he can consume his grass at the 4- or 5-in. stage.

Compared with phosphatic fertilizers of proved worth, nitrogenous artificials purchased in New Zealand are very costly. The question of economy is therefore exercising the minds of thoughtful dairy-farmers. When it is considered that the use of phosphatic manures combined with effective tripod harrowing has produced such striking results this is only natural. At the present time 3 tons of super-phosphate can be purchased as cheaply as 1 ton of sulphate of ammonia, the most widely known and used nitrogenous manure. The usual phosphatic dressing for grassland is 3 cwt. per acre per annum, but many farmers who have used double the quantity are convinced that the results are highly satisfactory. On most of the pumiceous Waikato and Thames Valley lands it would appear that the saturation-point for phosphates has not been reached with a 3 cwt. per annum dressing. On the other hand, the use of sulphate of ammonia and nitrate of soda has always been advised for the hay and ensilage crop. Such being the case, the returns from application of these manures should be greater when the grass is consumed at the 4- or 5-in. stage rather than as a mature crop of ensilage or hay.