The improvement of pastures by resowing after an arable period not only can be carried out quickly, but also makes it possible to take advantage of recent advances in regard to strain differences within pasture species. Hence the improvement often may be made a double-feature one—the sowing of more valuable species such as rye-grass, cocksfoot, and clovers in place of brown-top, rib-grass, catsear, &c., can be linked with the use of the better strains that were not readily procurable when the pasture, if an old one, was previously sown down. The official system of seed certification has resulted in a dependable supply of such strains. When improvement of a pasture by renewal is being considered, it should be kept in mind that while lack of fertility is not always the cause of inferior pastures it frequently is so. If a pasture is inferior because of the lack of fertility under which it exists, then it is of prime practical importance to bear in mind that the mere sowing of seed fitted to give a good pasture will not necessarily give such a pasture; if improved fertility by means of such practices as top-dressing and drainage is needed, then, until the fertility is suitably improved, the sowing of good seed will prove futile to a considerable extent. In practice this seems sometimes to be completely overlooked. For instance, a pasture which is of low production and poor composition is broken up and arable crops which impoverish the land are grown before the area is again sown in grass. Really in such circumstances it is unreasonable to expect an improved permanent pasture until the fertility is made greater than it was prior to the impoverishment by the exhausting crops. It follows that in the circumstances cited any cropping prior to the sowing of the permanent pasture should be fitted to increase instead of to exhaust the fertility of the soil. This common-sense course is reversed in those numerous cases in which such crops as oats, maize, and millet precede permanent pasture in land the fertility of which prior to these crops tends to be inadequate for the type of pasture it is desired to obtain; the crops named and similar ones in general reduce fertility, especially when they are not consumed where they are grown. If land is worn out to some extent by cropping prior to the sowing of permanent pasture, then a liberal fertilizing of the young pasture in its early stages becomes particularly advisable.

July Top-dressing.

Extensive field experience has taught that top-dressing, if not already done, may be carried out with good results in July. In many of the main dairying districts, even in the case of wet relatively cold soils, superphosphate applied in July may be expected to bring about useful increases in the amount of feed available directly from the pastures in August. When speedy benefit from top-dressing is desired, as it usually is, then superphosphate ordinarily should be used, and in districts in which liming is profitable lime should be applied shortly before or at the same time as the superphosphate if benefit from a previous liming is not still being obtained.

On many occasions in these notes the application to grassland of superphosphate and of other phosphates much earlier in the year has been recommended. That recommendation continues, but many who have not top-dressed or not top-dressed enough prior to winter would be wiser to do it in July or thereabouts than to do no further top-dressing during this year.

If the weather conditions do not lead to an unusually late commencement of increased growth-rate of grass in the new season, then the application of sulphate of ammonia or similar nitrogenous fertilizer about mid-July to suitable pastures may be expected to result in a substantial increase in the feed available from treated fields in August and September, but for a few weeks prior to mid-July it is usually inadvisable to apply such nitrogenous fertilizer. As a general rule superphosphate should be used in conjunction with sulphate of ammonia. Whether sulphate of ammonia or similar