will, if allowed to remain long enough, have to be broken down by a sledge-hammer before it can be distributed. Hence such a mixture must only be made in small quantities at a time and distributed at once. After each day's work the drill or distributor should be thoroughly cleaned out. The alternative to this procedure is to mix in some diluent which will keep the mixture from setting. An equal bulk of dry pumice or other sand will be very useful in this work, or bonedust or ground rock phosphate may be used if available.

Another point is that alkaline manures must not be mixed with nitrogenous organic manures or ammonium salts. The quicklime or any substance which contains it, such as basic slag, must on no account be mixed with meat manure, blood and bone, or ammonium sulphate. If such a mixture is made, the valuable and volatile ammonia gas is formed, driven off into the atmosphere, and so lost to the farmer. Of course, if basic slag is first mixed with superphosphate until an acid or neutral mixture is formed, and then mixed with blood and bone, no loss will result.

Carbonate of lime may be mixed with superphosphate and mixtures containing superphosphate. Such a mixture drilled in with the seed gives an excellent result with cruciferous crops such as turnips, swedes, and rape, which greatly benefit by an alkaline manure, even on pumice or sandy soils. This is the one exception to the use of lime on pumice lands. The slag-super mixture is, however, likely to give even better results with turnips.

Kainit is a favourite potassic dressing, but it must not be mixed directly with superphosphate and allowed to stand, otherwise it will become a sticky, unmanageable mass. By using a diluent and sowing it quickly in small quantities such a mixture may be safely made. It is perfectly safe to mix superphosphate with sulphate of ammonia, but if mixed with nitrate of soda such a compound must be sown at once.

Generally speaking, any mixture may be made if enough diluent is added and the mixture is not allowed to become alkaline in the presence of ammonium salts or nitrogenous organic matter.

(To be continued.)

Cream-grading.—In his last annual report the Director of the Dairy Division makes the following remarks on this subject: "The general consensus of opinion amongst the large majority of suppliers and those in control of dairy factories is that the grading should be made compulsory. Voluntary grading would be nearer the ideal, could it be effectively carried out generally. I am of opinion that it will not be so carried out, and that the earlier a compulsory system is approved by the Department the better will it be for all interested in the dairy industry and who have the real interests of the industry at heart. Legislation is, I believe, necessary for providing for a differential payment for second-grade cream, and without this compulsory grading would be useless. Compulsory grading with differential payment would add greatly to the effectiveness of the farm-dairy instruction work."

Bee-diseases.—During 1924–25 further material was collected by the Biological Laboratory in the study of *Nosema apis*, but the organism thus far could not be associated with any specific disease. Another disease of bees—paralysis—was dealt with from a bacteriological standpoint, but from many examinations the presence of bacteria which would account for the disease could not be demonstrated.