

results may be here quoted. Rothamsted reports that covered manure increased the yield of potatoes by 7 cwt., and that of wheat by 5 bushels of grain and 4 cwt. of straw per acre. At Woking covered manure increased a wheat crop by 2 bushels of grain and 2 cwt. of straw per acre. The College of Science for Ireland, experimenting with potatoes, dressed two plots with farmyard manure at the rate of 18 tons per acre, one from a covered and the other from an open heap. The yield from the former plot was 9 tons 14 $\frac{1}{4}$ cwt. per acre, while that from the latter was 7 tons 14 $\frac{3}{4}$ cwt.

Every attempt should be made to save the liquid manure from the shed-drains. This manure should be drained into a tank or shallow concrete well placed below ground-level, and in a convenient position so that it may be pumped to a tank on a dray and directly applied to the field—preferably grassland. If conditions permit it may even be gravitated direct from the drains and used to irrigate the pastures. Failing both these methods it should be pumped on to the manure-heap. On no account should liquid manure be allowed to run to waste, as it contains a very appreciable amount of quickly available plant-food—approximately two-thirds of the total nitrogenous matter and four-fifths of the total potash (the phosphoric acid being mostly contained in the solids). It has been found that 1,500 gallons of liquid manure are equivalent to 150 lb. sulphate of ammonia and 4 $\frac{1}{2}$ cwt. of kainit.

As an addition to light soils farmyard manure should be well rotted (not firefanged) or what is generally termed "short." On the other hand, it should be "long" or strawy if for use on heavy or clayey soils. The straw which has been used as litter or bedding being more intact in the latter kind tends to keep the soil open, while in the former the well-rotted material brings about consolidation of the soil-mass and assists in retaining moisture, &c. Farmyard manure should rather be distributed over as large an area as is consistent with practical convenience, and so long as the distribution is even and in combination with artificial fertilizers applied separately, it will be found without exception that much better results will be obtained than if larger amounts of either are used separately. Farmyard manure varies much in composition, and although it is often called a complete manure it is not really well balanced, being usually deficient in phosphoric acid. For this reason it should be used in conjunction with one of the artificial phosphatic fertilizers.

As regards the time of year when farmyard manure should be applied, much depends on the circumstances. Where it is desirable to apply it to pastures it should be carted and spread during winter or early spring, and the field thoroughly tripod-harrowed as soon as practicable afterwards. For the growing of green fodders or roots it must be spread and ploughed in early, or some considerable time before sowing. Such crops as chou moellier, maize, thousand-headed kale, &c., being gross feeders, readily respond to an application of farmyard manure. In the case of the potato crop it can be spread between the ridges, together with artificial fertilizer, and the tubers planted, after which the whole will be covered by splitting the drills in the ordinary way.