

and mixed with earth shortly after being carted out to the field in this month, and then again three weeks before it is applied: the first turning will cost 1d., and the second $\frac{1}{2}$ d. per cubic yard, measured before turning.

Liquid manure may be applied either by soaking manure heaps, or it may be hoarded up in tanks till spring, and carted out in water-carts on the land: in the latter case it may be well to fix the ammonia, which, when putrifying, it contains. And to guide to the economical performance of this, we may mention that 17 lbs. of ammonia require about half a cwt. of the sulphuric acid of commerce for its fixation, and that the same quantity of sulphuric acid is contained in about $1\frac{1}{4}$ cwt. of sulphate of iron. Now, fresh urine, averaging all that is produced from the various animals on the farm, may be considered to contain about 2 lbs. of ammonia in ten or twelve gallons; that is, in 100 to 120 lbs.: and the horse yields 3 to 5 lbs., the cow 30 to 40 lbs., and the sheep and pig probably 2 to 3 lbs. of urine daily.

It must not be forgotten that the value of manure depends not only upon its nitrogenous or ammoniacal compound, but also upon its mineral parts: and it differs greatly in these, according to the food and the age and condition of the animals which produce it. It is believed that the greater value which every farmer recognises in the dung of cake-fed beasts arises chiefly from the greater quantity of phosphates which it contains—those phosphates being contained in the food of the cattle. And the great difference in the value of their manure between a full-grown half-fat ox and a milch cow or a young beast, arises from the latter requiring all the phosphates in their food, one for the growth of its bones, and the other for the secretion of its milk, while the former, requiring them for neither of these purposes, passed them out in its manure. Manure also depends for some of its value on its bulk—its influence on the texture of the soil; but this, while sometimes beneficial, as on clay soils, where it ought to be applied fresh, is sometimes injurious, as on light soils, where, accordingly, it ought to be kept, if this can be done with safety to its volatile ingredients, till it is rotten, and of an unctuous texture. It would be beneficial if the terms on which farmers hold their lands were so modified as to allow of their changing the cattle food produced on their farms for any other kind of cattle food they might prefer—they would then be able to buy or to sell straw, according as a stiff or a light soil appeared to them to require a bulky fibrous manure, or one of a more condensed and less bulky character; and all this would be attended with benefit, not only to

themselves, but to their landlords also.—
(Monthly Journal of Agriculture.)

REMARKABLY PRODUCTIVE COWS.

A notice of some of the most remarkable cows of which accounts have been made public, may be read with interest, as it serves to show what is attainable in this respect.

The most extraordinary cow of which we have any record, is one which was owned by William Cramp, of Lewes, Sussex, England, concerning which the Board of Agriculture collected the following facts:—She was of the Sussex breed, and was calved in 1799. From May 1, 1805, to April 2, 1806, forty eight weeks and one day, her milk produced 540 lbs. of butter. The next year, or from April 19, the day she calved, to Feb. 27, 1807, forty-five weeks, she produced 450 lbs. of butter. It is stated she was sick this year, and under the care of a farrier three weeks after calving. The third year, from April 6, 1807, the time she calved, to April 4, 1808, fifty one weeks and four days, she produced 675 lbs. of butter. The fourth year, from April 22, 1808, the time she calved, to February 13, 1809, forty-two weeks and three days, she produced 466 lbs. of butter. The fifth year, from April 3, 1809, to May 8, 1810, fifty-seven weeks, she produced 594 lbs. of butter. The greatest quantity of butter mentioned as having been produced by this cow in any one week, was 18 lbs., and the greatest quantity of milk mentioned as having been given in any one day, was 20 quarts. She was well fed at all times. "In summer she was well fed on clover, lucerne, rye-grass and carrots, three or four times a day, and at noon about four gallons of grains and two of bran mixed together. In winter she was fed with hay, grains, and bran, mixed as before stated, feeding often."

The next most remarkable in the catalogue is the celebrated Oaks or "Danvers prize-cow." The first notice we find of her is in a communication of E. Hersy Derby, Esq., to the Massachusetts Agricultural Repository and Journal, dated Dec. 25, 1816. From this it appears that in 1813, Caleb Oaks, of Danvers, Mass., bought this cow of a brother-in-law, by whom she had been purchased of a drover. She was then five years old. Mr. Oaks made from her the first year 180 lbs. of butter. The next year, 1814, she produced 300 lbs.; in 1815, over 400 lbs.; in 1816, 484 lbs. In the latter year she took the first premium at the Massachusetts show at Brighton. The greatest quantity of butter made from her in one week was 19 $\frac{1}{4}$ lbs.; the greatest quantity of milk given per day was 16 to 18 quarts. She was fed, in addition to ordinary pasture feed, with one bushel of Indian meal per week, and al-