

Value of Poultry Manure.

The following report to Mr. L. Wright by Dr. A. VOELCKER, F. R. S., appears in the London Live Stock Journal.

Inclosed you will find analysis of the two samples of chicken manure which Mr. O. E. Cresswell of Hereford sent me on March 19th, 1880:

	<i>Fresh Manure</i>	<i>Partially dried Manure.</i>
Moisture,.....	61 63	41.06
*Organic matter and salts of ammonia,	20.19	38 19
Tribasic phosphate of lime bone phosphate,.....	0.97	5.13
Magnesia, alkaline salts, &c.,....	2 63	3 13
Insoluble siliceous matter sand, 2 58	2 58	12 49
	<hr/> 0 00	<hr/> 100 00
*Containing nitrogen,.....	71	3.78
Equal to ammonia,.....	2.09	4.5)

You will notice that in a fresh condition the sample of chicken manure analyzed by me contained 91½ per cent. of water in round numbers and 12½ per cent. of sand, while the sample of partially-dried manure contained 41 per cent. of water, and about the same proportion of sand as the fresh dung. Judging from the appearance of the manure, the greater proportion of the sand, it appears to me, arises from earthy matter which the fowls picked up with their food, and is not due to sand merely adhering to the excrements externally.

I need hardly say that the large proportion of moisture, and the considerable amount of useless siliceous matter in fresh chickens' dung, detract much from its value as a manure. However chicken dung, although greatly inferior to Peruvian guano, is a much more concentrated fertilizer than the best description of ordinary farmyard manure, which seldom yields more than three fourths per cent. of ammonia, whereas the sample of fresh chicken manure analysed by me contained an amount of nitrogenous organic matter and salts of ammonia, capable of yielding, on final decomposition, 2 per cent. of ammonia. The agricultural and commercial value of the dung of horses, cows, sheep, pigs, pigeons, fowls, and of concentrated artificial manures, such as Peruvian and other varieties of ammoniacal guanos—depends mainly upon the percentage of phosphate of lime and of nitrogen, or its equivalent of ammonia, which these various fertilizers contain.

In former years, when Peruvian guano was exclusively imported into England from the Chincha Islands, in the north of the Peruvian coast, the guano deposited on these islands in a rainless country and rapidly dried by a boiling sun heat, generally yielded from 16 to 18 per cent. of ammonia. The southern Peruvian guano deposits, from which our supplies have been drawn for the last

few years, vary much in composition. The best cargoes of Peruvian guano at present seldom contain more than 10 or 11 per cent. of ammonia; those of a medium quality from 6 to 8 per cent., and cargoes selling at about £8 per ton, from 3 to 4 per cent. The latter, however, are much richer in phosphate of lime than high ammonical Peruvian guanos, and not unfrequently contain over 40 per cent. of phosphate of lime.

Compared with Peruvian guano, and adopting the same rates by which the official price of different cargoes of Peruvian guano is regulated, I find fresh chicken manure of the quality of the sample analyzed by me is worth, in round numbers, about £2 a ton, and the sample of partially dried manure about £4 4s. per ton.

Pigeon dung, I find, is rather more valuable than fowls' dung.

With regard to the application of chicken manure, I would observe that the least expensive, and probably the best, way of using it is to make it with dry earth, burnt clay, wood-ashes, and such-like matters, into a compost. Mixed with about twice its weight of dry earthy matters of this kind, it will soon be reduced into a fairly dry and powdery state, in which it may be readily spread broadcast on the land, or be sown by the manure drill, and be found a useful general manure for every kind of garden produce.

For root crops—turnips carrots, kohlrabi, mangels—chicken manure, reduced and in a dry powdery state, should be mixed with an equal weight of superphosphate of lime, and the mixture be drilled in with the seed at the rate of 5 cwt. per acre. In making the earth compost, quicklime, in my judgement, should not be mixed with chicken dung, for the effect of quicklime upon fowls' excrement is to liberate ammonia, which would escape and be lost in a great measure. On the other hand, there is no harm, but every advantage, in mixing good soot with chicken dung, for unadulterated soot generally contains from 3½ to 4 per cent. of ammonia, or nearly twice as much as I found in the sample of fresh chicken dung which Mr. Cresswell sent me.

If chicken manure is intended for sale, and not for use on the farm or place where it is produced, it is not advisable to dry or delute it with much earth matter of no intrinsic fertilizing value, but to use such matters in as dry a condition and as sparingly as possible. Soot, when it can be procured is a good drier for chicken manure, and at the same time adds ammonia to it. In the absence of soot, I would recommend to mix the fresh chicken manure with some burnt gypsum, to which a small quantity of superphosphate of lime may be added, the free acid of which will effectually prevent the escape of ammonia from the chicken dung.