

SALT AS A MANURE.

TO THE EDITOR OF THE LIVERPOOL MAIL.

SIR,—I beg to call the attention of your agricultural readers, who are in the habit of using guano and artificial manures, to the fact that most of the carbonate of ammonia contained in them, or generated during their decomposition in the soil, is quickly evaporated before the plants derive any benefit from it. At least 20 or 30 per cent. of animal manures may be saved by the use of salt, which will prevent the ammonia escaping into the atmosphere, and two substances highly necessary to vegetation will be formed. The merits of salt as an agent in agricultural operations seem to have been nearly entirely overlooked by our experimental farmers; but I am satisfied, from extensive experience of my own, that when it is properly applied it will be found a most valuable addition to the various natural and artificial manures now offered to the public.

I am, &c.,

A FARMER.

EXTRACT FROM A FARMER'S DIARY.

"During the process of fermentation which takes place when large quantities of stable and farm-yard manure are thrown together, a considerable portion of the most valuable part is lost in the shape of carbonate of ammonia, which flies off. To prevent this great waste common salt may be used. It is a principle in chemistry that substances combine more freely at the moment of their generation or disengagement than at any other time. The chloride of sodium or common salt immediately unites with the carbonate of ammonia as it is formed, and a double decomposition takes place, producing muriate of ammonia and carbonate of soda.

"A recent discovery in chemistry has elicited this fact, and goes far to prove the utility of salt as applicable to manure. That the ancients were acquainted with the several properties of salt and its uses, in sufficiently shown by the following passage from Scripture:—Salt is good; but if the salt have lost its savour, wherewith shall it be seasoned? It is neither good for the land nor yet for the dunghill: men cast it out."

"To render this quotation perfectly intelligible, it is necessary to observe that in parts of Syria a species of rock-salt exists, which, if exposed for any length of time to the atmosphere, loses its saline properties, but retains its outward appearance. 'It has lost its savour,' 'men cast it out'; 'it is neither good for the land nor yet for the dunghill.' Here are two distinct uses, besides domestic purposes, to which salt was applied, and in both cases it was good. Upon the land it produces various effects according to the quantity used, and most agriculturists are acquainted with its nature; but the great source of its utility is upon the dunghill. There, in nature's laboratory, a chemical change takes place, and carbonate of soda and muriate of ammonia are formed.

"Sir H. Davy, in his 'Agricultural Chemistry,' remarks that farm-yard dung, in its decomposition, loses from half to two-thirds its weight; besides a saving of this immense loss, all noxious weeds and seeds are destroyed by the salt, as also the larvæ of insects, and the insects themselves, which consume great portions of the dung. To all farmers who are desirous of increasing the value of their farm-yard manure, I would strongly recommend the use of salt on the dunghill. It may be used in a liquid state, sprinkled amongst the manure at the time of throwing it into a heap, or spread afterwards in a dry state as a covering to the whole."

GLASS MILK-PANS.

Captain Stanley Carr, of Tuschenboeck, near Lubeck, transmitted to the Society, through Sir John W. Lubbock, Bart., and at the request of Mr. Handley, a specimen of the glass milk-pans employed so successfully in his German dairy, and referred to in his paper on the Rural Economy of Schleswig, Holstein, and Lauenburg, in the first volume of the Society's Journal (page 380). "The milk," says Captain Carr, "when brought to the dairy, is immediately strained through a horse-hair sieve into

the vessels, whether of wood, earthenware, copper tinned, zinc, cast-iron (lined with a china-like composition), or glass, placed in rows on the floor. All these different kinds of utensils have been tried with various success, in the hope of discovering how, in hot weather, more especially when a thunder storm is gathering, the milk can be guarded against a too early acidity; for, as it is a fixed and invariable rule that the cream must be removed from the milk before the latter gets at all sour, and an equally established fact, that all the oily particles cannot be obtained in a shorter period than 36 hours, vessels in which, during sultry, and especially damp weather, the milk could be kept the due time, are a great desideratum. As yet, however, there reigns much diversity of opinion on the subject, and shallow wooden vessels, as nearly as possible equally wide at top and bottom, containing, when full, about eight quarts, but in which, during summer, seldom more than six quarts are poured, are in most general use. They have, however, some disadvantages, of which the chief is the great difficulty and the consequent labour and close attention requisite to remove all acidity (which in some states of the atmosphere, is almost unavoidable), and which, penetrating the pores of the wood, sometimes resists all the patient scrubbing; first, with hot water and small birch scrabblers, and secondly, with boiling water and a hard round brush made of pigs' bristles (with which every hair's breadth is carefully polished over,) so that the despairing dairymaid is compelled to resort to washing in a ley of wood-ashes, or boiling, or even scorching over lighted chips, followed by countless rinsings in pure spring water. To diminish, in some measure, this labour, the plan of painting the milk pails and dishes with a preparation of cambrar, linseed-oil, and litharge has been adopted by the milk venders in some country dairies: not only, however, is the expense considerable, as the vessels must be finished off with peculiar care, and require to get three coats of the composition at first, and one yearly afterwards, but the milk, for some days after they are brought into use, has a perceptible taste of paint. The tinned copper milk pans are very costly, and must be carefully watched lest they should require re-tinning. The zinc arc, as yet, little known, and the assertion of their effect in better severing the cream from the milk not sufficiently proved. The cast-iron lined with enamel, though assuredly durable and very clean, seem too expensive; and the glass have many opponents on account of their brittleness, and the vague notions respecting glass and electricity inducing the idea that if the electric fluid get into the milk it cannot get out again! whereas, as it is ascertained that it always attaches itself to a conductor, and, in the absence of anything more attractive, runs along the surface, it is more likely that the milk should be protected in glass, which is a non-conductor, than in any other substance. In my dairy, which contains upwards of 180 cows, the glass vessels have been used for more than four years; and I give them a decided preference over all others. Their form is good, being sixteen inches broad at the top, and twelve at the bottom; the glass is dark bottle-green, transparent, and perfectly smooth, about one-eighth of an inch thick, and provided with a rounded rim at the upper edge, which makes it easy to retain a safe hold of them, even full. They contain eight quarts, but never receive more than six. They cost 8d. a piece, and their durability may be estimated by the fact, that to encourage carefulness, each dairymaid is allowed one dollar per annum extra, as *pan-money*, being bound at the same time to pay 10d. for each one she breaks: yet hitherto, no girl has broken to the extent of her dollar. It is self-evident that acidity cannot be communicated to glass, and the ease and rapidity with which they are cleaned, requiring merely to be first washed with lukewarm water, then rinsed in cold water and placed in a rack to dry, effect such a saving in fuel and labour (diminishing the number of our dairymaids by at least two), that the less quantity of butter obtained, supposing (which I by no means concede) that the milk, during a few weeks in summer, does sour sooner, and consequent throws up less cream in glass than in wood, is more than compensated by the lessened expense of the establishment, not to mention the great advantage of attaining the