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Nec aranearum sane textus ideo melior, quia ex se filigunt, nec noster vilior quia ex alienis libamus ut apes.

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From the N. Y. Albion.

GUANO.

As to its effects on grain, or as it is termed in English papers "corn" crops, as a top dressing, we have the testimony of Mr. Sim, of Scotsburn, Rosshire, in a Scotch paper, who says, "the farmers in the north are not, generally, very ready to experiment, but observing the effects of the new manure on their neighbours' fields, many began to think it must be a good one, and this, with the circumstance of bone dust having been scarce during the season for sowing turnips, led to a very greater demand for guano, encouraged also by the discovery of the African, and consequent reduction of the price." With hardly an exception all who have applied it are highly pleased with the appearance of their growing turnips, and are convinced that guano is cheaper, and more speedily effective, than bone dust. Still its value for corn crops (meaning what we call "small grain") and particularly for wheat, is comparatively little known to the great body of Scotch farmers, and it will be to them satisfactory to know that no doubt rests on that point.

"During the last winter and spring," says Mr. Sim, "I applied guano to eighty Scotch acres of wheat, and at present have the prospect of being paid four-fold and upwards. I applied it to grass land, without any manure, at the rates (according to the quality of the soil) of two and-a-half cwt. and two cwt., per Scotch acre. To land that had carried a crop of potatoes I gave one-and-a-half cwt., and the same after turnips wholly drawn for cattle. In every instance it has been highly beneficial. In very bad land, not worth 15s. per acre, with two-and-a-half cwt., I have the prospect of four to four-and-a-half drs. per acre; and on better, and with two cwt., still more. There has been considerable doubt with regard to the duration of guano beyond one season. Dr. Buckland, at the late meeting of the English Royal Society at Southampton, laid it down as a fact, that the effects were confined to one season. From my own experience I differ from him: I think its continuance depends wholly on the quantity applied. Taking Professor Johnson's view—which is, that this manure contains all the fertilizing ingredients necessary for soils, with the exception of potash, which, when required, can be otherwise supplied—I would say, with confidence, that the durability of the effects of guano will depend on whether the crop to which it is applied exhausts them. Knowing, as I do, the very great value of guano, I intend myself, and would advise my brother farmers, to apply it, not only to turnips, but to grain of every kind, where the richness of the soil or other full manuring may not render it dangerous, from the probability of their being too strong, which in our climate may be the case. Present prices warrant doing this; and should the importation during the next six months not be met by a corresponding demand [which, however, is very likely], prices may yet go lower. After the present year it is improbable that there will ever again be such a supply, as it is now well known that the whole of the Ichaboe guano will be taken off in a few months, after which we will be dependent on the Peruvian and Bolivian, and the value of these will be greatly enhanced."

BUTTER.

There are few departments of rural industry, in which there is so much room for improvement, as in the business of converting milk into butter.—This will be admitted, readily, by all who reflect on the very small proportion, which really pure, well-flavoured butter bears, to the whole quantity exposed for sale in the common market, or to that which is produced in the country. The defective quality of butter arises no less from want of care and skill in the management of the milk—probably much more from that cause, than from any effect upon the milk, resulting from

difference in the pasture and food of the cow; although the latter has, doubtless, a powerful influence. So sensible are they of this influence in Scotland, that we observe among other curious objects; never thought of in this country, a premium has been offered there for the best essay on the influence of food on milk and butter. We cannot but suppose, that the admitted superiority of the butter in the Philadelphia market, arises, in a great degree, from the nature of the pasture; consisting of long established "English grass" meadows. He who will take the trouble to make the calculation, will be struck with the increase of National wealth which would accrue from an improvement in the quality of our butter, from whatever cause, that should add a few cents to its selling price; without saying anything about the increase of the quantity which could be easily obtained, by more careful milking, and a better system of dairy management.

In the Transactions of the Highland and Agricultural Society of Scotland, we find some interesting experiments and observations, on the production of butter, by Professor Traill, in the relation of which facts are developed, and principles established, that deserve to be widely disseminated among all who are in any degree interested in the subject. It was found in the progress of investigation, that although the proportional yield of butter was greater from a large, than from a small quantity of milk; yet the results were most uniform and satisfactory, when the experiments were made on a few pints; not exceeding six for each churning. This probably arose, says the Professor—(who was assisted by Doctor Coran, of Liverpool, and Doctor Bostock of London,) from our being able to carry on the process, in glass vessels, which permitted us to see the process of the operation, and to collect the product more perfectly; and also from our being enabled to use, on this small scale, a more delicate balance, to ascertain the weight of the butter obtained. Various objects were proposed by those experiments, but the principal one, that which was deemed of most practical utility, was to determine the comparative advantages of a churning.

1. Sweet cream.
2. Sweet milk and cream together.
3. Sour cream, or that slightly acid.
4. Sour milk and cream together.
5. Scalded cream, or what is called clouted cream as practised in Devonshire.

One of the most striking results established by these careful experiments, is the vast difference in the richness of the milk last drawn, compared with a like quantity of that which is first obtained. No one thing probably contributes so much to lessen the products of the dairy, as inattention to this point. True, every one who knows anything of dairy management, is aware that the last portion of the milk is the richest; but few probably dream that the difference is so great, as it is proved to be by those actual and exact observations.

To ascertain the precise difference, a cow was selected which had calved five weeks before, and the experiments were commenced on Monday the 26th May.

- No. 1 was the first pint milked.
- No. 2 was the pint of the whole milking, except No. 1 and No. 3.
- No. 3 was the last pint of the milking, or afterings, as it is called in Scotland, where it is "sometimes sold as cream."

As in previous experiments, scalding the milk was found to favour the more perfect separation of the butter, after the three portions were allowed to remain twenty-four hours in the milk-house. They were at the same time placed in earthenware basins, in a pan of water heated to 180° Fahr. They were removed within an hour from the water, when the milk had acquired a temperature of 130°. They were replaced for ten hours in the milk-house, and then examined. No. 1 then showed scarcely any indication of cream. It formed a very thin pellicle only; and the quantity, being too small to be churned, was estimated, from oth-

er comparative trials, to be no more than equivalent to five grains of butter. No. 2 was evidently richer to the eye, but the cream was pale-coloured, and, when churned, yielded 181 grains of firm butter. No. 3. The cream, before churning, had a rich yellow tint; the butter produced was well flavoured, and weighed 551 grains. The difference between the richness of the first milk and the afterings, in a cow, yielded about fifteen pints of milk at each milking, is thus as 1:110.

When a cow has calved less recently, the difference between the first milk and afterings, however, appears not so great. On the 9th August, the milk of the same cow, which then yielded fourteen and a half pints at a milking, was subjected to experiment in a similar manner.

The three portions were placed in similar basins in the milk house for forty hours, and were then scalded till the temperature of the milk rose to 145°. The milk was drawn off next day from below the cream by means of a siphon, and the three portions were churned in glass vessels, at the same time, for thirty minutes. The butter was soft and very white, although it was allowed to remain for twenty-four hours after churning in cold water. This probably arose from the heat of the weather; the thermometer in the shade then standing as high as 73°. When the butter was washed, and worked to free it from water.

- No. 1 yielded 13 grains.
- No. 2 — 252 —
- No. 3 — 415 —

We have not room, and would perhaps be practising too much on the indulgence of the reader, to give the details of the whole series of experiments—suffice it to say that they seem to have been carried on with the greatest care and exactness and to command confidence for the general results which are thus summed up by the Professor.

1. That the addition of some cold water during churning facilitates the process, or the separation of the butter, especially when the cream is thick and the weather hot.
2. That cream alone is more easily churned than a mixture of cream and milk.
3. That butter produced from sweet cream has the finest flavour when fresh and appears to keep longest without acquiring rancidity; but that the butter-milk, so obtained, is poor, and small in quantity.
4. That scalding of the cream, according to the Devonshire method, yields the largest quantity of butter; which, if intended for immediate use, is agreeable to the palate and readily salable; but if intended to be salted is most liable to acquire, by keeping, a rancid flavour. The process of scalding is troublesome; and the milk, after the removal of the cream, is poor and often would be unsaleable from the taste it has acquired from the heating.
5. That churning the milk and cream together, after they have become slightly acid, seems to be the most economical process on the whole; because it yields a large quantity of excellent butter, and buttermilk is of a good quality—a point of some importance when buttermilk is largely used as an article of diet, as it is in Lancashire.
6. That keeping of butter in a sound state appear to depend on its being obtained as free from uncombined albumen, or caseine, and water, as it can be, by means of washing and working the butter when taken from the churn.

Besides the positive loss, sustained at the time, by falling to "strip" the udder of the drops it can be made yield; it is a well known fact, that the direct tendency of thus forbearing to express the very last drops, or "afterings" of the milk, is to hasten the period of going dry, as it is expressively termed. The constant care, then, should be to see that the udder is thoroughly exhausted of all that can be had, to ensure that it should always be drawn again or "stripped" after a little interval.

From the Albany Cultivator.
A few words on raising Poultry.—Mr. Editor.—Every farmer who is acquainted

with poultry-raising, know show extremely hard it is to raise young turkeys, and young poultry of any kind. In the early seasons of the year, fowls, ducks, and turkeys, are in the want of salt, more or less. Early in the spring of 1840, I got a few duck's eggs, of Judge Spencer (the large white kind) and raised five, (four ducks and one drake) which I kept through the winter in a warm hen house and fed them with corn and indian meal. They commenced laying very early; I had twelve turkeys at the same time; and as the hens commenced setting, I set them with duck eggs, allowing from 10 to 15 eggs for each hen, and as fast as they came forth, I shut the hens in coops, and put the coops on the edge of a pond in the yard, where I kept my fowls; I allowed the young ducks to stay with the hen until they were three weeks old, and then took the hen from them, and allowed the ducks to remain; and in a few days the hens commenced laying. In feeding I commenced with indian meal and white sea-sand, which contains salt sufficient for poultry; taking about one quart of meal to one gill of sand, and continued feeding that three times a week until they were completely feathered. I found that my ducks were larger and in better order than any of my neighbours. I did not lose a single one by sickness, and raised 90 from the 4 ducks; and having hens sufficient, there can be 150 raised from 4 ducks. I would advise all farmers and poultry raisers to pursue the same method, and not allow their old ducks to hatch at all; and feed in the same way turkeys and chickens, and they will find that they will do better than on any other food.

BURGESS WANDS.

Black Leg in Calves.—We noticed some time since in a Scottish paper, an article on rearing calves, in which it was stated that feeding them with oil-cake and turneps or potatoes, in winter, was deemed a sure preventive of the dreaded disease called *Black Leg*. At a late meeting of the farmers' club in England, several members spoke of this disease, one of them stating that a large and excellent breeder effectually prevents it by cutting down to the veins of the foot and dividing them just before they branch off to each hoof; he divides the vein in every foot of the calf. Another member stated that he had frequently lost calves by black leg, but believed that by proper precaution the disease may be prevented. He puts a rowel in each calf, and gives each an ounce of saltpetre once in three weeks. Since adopting this course he has not lost one. It seems that a healthy circulation of the blood is a great object aimed at, and this is much promoted by such kinds of food as keep the bowels properly open.

WASTE OF TOWN MANURES.

If every day and every hour did not furnish proofs of reckless improvidence, in regard to the saving and use of domestic manures, within our reach, one might be surprised at the eagerness with which we send around the Cape to the coast of Peru and to the coast of Africa, for the deposits of sea birds, while we permit the waste, in all our towns, of thousands of tons of the richest manures the world can afford.

The following observations applied in regard to London, would apply with equal truth to our own towns, making allowance for difference of size and population.

There is not in any town south of Philadelphia, a single manufactory of poudrette, that we are aware of, and none of bone-dust, south of Baltimore.

"By carefully conducted experiments, and very accurate gauging," observes Cuthbert Johnson, in his valuable work on the "Fertilizers," p. 293, "it has been ascertained that the principal London sewers convey daily into the Thames 115,608 tons of mixed drudge, consisting on an average composition of one part of solid or mechanically suspended matters, and twenty-five parts absolutely fluid. But if we only allow one part in thirty of this immense mass to be composed of solid substances, then we have