

## EXPERIMENTS IN THE GUANO.

The substance called Guano having attracted much attention in England as a manure, as well as excited a considerable degree of interest amongst many intelligent cultivators of this island, I instituted a series of experiments at the Kirk Onchan nursery on its fertilizing properties.

Guano, it may be as well to premise, occurs as a deposit, of very considerable thickness, on various small rocky islets on the coast of Peru, ranging from the 12th to the 21st degree of south latitude. Its origin has been a subject of fanciful speculation, but it is now certainly known to be the excrement of peculiar kinds of sea-towl; which, feeding on fish, and visiting these islands in flocks dense enough to obscure the light of the sun, have accumulated their droppings to an extent that seems almost incredible—the accumulations attaining, it is said, the thickness, in some places, of 300 yards.—Vast quantities of this manure are used by the Peruvians for all kinds of crops.

It will not be necessary for me to detain you with a particular account of the constituents of Guano as ascertained by chemical analysis. According to the views of Liebig, and others almost equally celebrated in the agricultural department of chemistry, its fertilizing effect is to be attributed to the nitrogen it contains, in the form of ammoniac and uric acid, (the latter giving use by its slow decomposition to the former), and also, but secondarily, to the phosphate of lime, which furnishes many plants with matters essential to their healthy growth. After this short preliminary detail, which it was thought might possibly interest some of the members of the society, I proceeded to give an account of the experiments with Guano at the Kirk Onchan Nursery.

On a soil there of a light and poor nature, which would not decidedly deserve the name (to use the language of the farmer) of a hungry soil, were growing and still grow, two patterns of grass—one of Stickney's rye-grass, mixed with small quantities of *holecus lanatus* (woolly soft grass) and *poa trivialis*, the other of Italian rye-grass. A space was measured off from each of these patches, and on the 12th of May last both the spaces so measured off were top-dressed with Guano, with great care, at the exact rate of three cwt. per acre.

On the 20th of June following, one square yard of the dressed and undressed spaces, taken as fairly as possible, was cut and carefully weighed in the presence of Lawrence Adamson, Esqr., of Douglas, who had taken great interest in the experiments.—The following were the results:—

## FIRST EXPERIMENT.

*Stickney's rye-grass, and small quantities of Holecus lanatus, and Poa trivialis.*

Of one square yard, dressed with Guano at the above rate, the produce weighed..... 74lbs.  
Of ditto not so dressed..... 24

## SECOND EXPERIMENT.

*Italian rye-grass.*

Of one square yard, dressed with Guano as above, the produce weighed..... 101lbs.  
Of ditto not dressed..... 44

The Guano was also applied at the same time (12th of May), and at the same rate, to a row of young elms, and on the 20th of June this row could be distinguished, even at a considerable distance, from the others, by its deep and healthy green, and more free and vigorous growth.

The Guano was also applied to a row of birches with precisely similar effects, the neighbouring rows decidedly partaking of the benefit of the application.

On a row of strawberries, and the neighbouring rows, effects similar to the last were produced.

The Guano has also been applied, after the above rate, to different kinds of potatoes, to Swedish turnips, to Mangel Wurzel, and other vegetables, in competition with dung. The growth produced by the Guano has, in all these cases, been exceedingly healthy and vigorous, but it is yet too early to give the complete comparative results.

In the mean time, I have this day produced to the society, specimens of turnips and mangel wurzel, as grown on each manure.

The extraordinary consequences of the experiments on the grasses seem (it is most respectfully submitted to the society) to leave little doubt of the excellence of the Guano, as a top-dressing for the general run of land under grass for hay.

THOMAS LYLE.

Onchan Nursery, August, 1812.

The report was listened to with much attention, and loudly cheered on its conclusion.—*English paper.*

## EDUCATE YOUR CHILDREN EARLY.

What is the object of education? To form the character. How is this to be done?—Not by lessons, but principally through the influence of example, and circumstances, and situation. How soon is the child exposed to these influences? From the moment it opens its eyes and feels the pressure of its mother's bosom—from that time it becomes capable of noticing what passes around it, and knowing the difference of one thing from another. So powerful are the gradual and unnoticed influences of these early months, that the infant, if indulged or humoured, may grow into a petty tyrant at ten months old, and tottle about in two years, a selfish, discontented, irritable thing, that every one but the mother turns from in disgust. During this period, every human being is making its first observations, and acquiring its first experience; passes his early judgments, forms opinions, acquires habits. They may be ingrained into their characters for life. Some right and some wrong notions may take with firm hold, and some impressions, good or bad, may sink so deep as to be with scarcely any force eradicated. There is no doubt that many of these incurable crookednesses which we attribute to nature, would be found, if they could be traced, to have originated in the early circumstances of life; just as a deformed or stunted tree, not from any natural perversity of seed, from which it sprung, but from the circumstances of the soil and situation where it grew.—*Journal of Education.*

## EARLY FORMATION OF GOOD HABITS.

If a child is neglected till six years of age, no subsequent education can recover it.—If to this age it is brought up in ignorance and dissipation, in all the baseness of brutal habits, in that vacancy of mind which such habits create, it is in vain to try to reclaim it by teaching reading and writing. You may teach it what you choose afterwards, but if you have not prevented the formation of bad habits, you will teach in vain. With children under the age of six years, learning—school learning—should not be the chief consideration, but the formation of moral principle.—*Brougham.*

READING.—Of all the amusements that can possibly be imagined for a hard-working man after his daily toil, or in its intervals, there is nothing like reading an interesting newspaper or book. It calls for no bodily exertion, of which he has already had enough, or perhaps too much. It relieves his home of its dullness and sameness. It transports him into a livelier and gayer, and more diversified and interesting scene; and while he enjoys himself there, he may forget the evils of the present moment fully as much as if he were ever so drunk, with the great advantage of finding himself the next day with the money in his pocket, or at least laid out in real necessities—and without the drunkard's misery of mind and body. Nay, it accompanies him to his next day's work; and if what he has been reading be any thing above the idlest and lightest, gives him something to think of besides the mere mechanical drudgery of his every day occupation—something he can enjoy while absent, and look forward with pleasure to. If I were to pray for a taste which should stand me instead under every variety of circumstances, and be a source of happiness and cheerfulness to me through life, and a shield against its ills, how ever things might go amiss, and the world frown upon me, it would be a taste for reading.—*Sir J. Herschel.*

## SMITHFIELD ON A MARKET MORNING.

There is much to see and something, it may be, to smell, in Smithfield on a market morning. Its penned thousands of Leicesters, South Downs, and Merinos—its countless thousands of fatted swine—its multitudes of bleating limbs, pretty dears, so soon to be swallowed with mustard-sauce, salad, and the usual electrics—its streets of living oxen, whose broad backs form a level leathery floor, over which you often see adventurous drovers, stick in hand, take their desperate way. Corpulent graziers, with leathern pocket-book crammed with Bank of England notes; enterprising knackers, wholesale dealers in that favourite article of food—horse-flesh, subsequently retailed to the legions in “a la mode” beef, mutton pies, sausages, and a variety of other racy costumes; lynx-eyed salesmen, who have but to glance at a beast to know how many stones he weighs, offal inclusive; journeymen butchers looking for a job; policemen on the scent for a roving pickpocket; chaw-bacons in smock frocks, munching bread and cheese, or gazing listlessly around from the secure eminence of a waggon load of hay; shepherds and drovers from all quarters of the agricultural world, and you have a morning at Smithfield.—*The World of London, in Blackwood.*

## EXTRAORDINARY ROOT OF BARLEY.

A single root of Barley was exhibited at the meeting of the North Suffolk and South Norfolk Agricultural Association on Wednesday last, which consisted of 122 distinct ears. This root was the produce of one grain of barley. Half a perch was planted in single grains on an acre of land in rows four feet and half apart, and twelve inches distant in the rows, and produced forty-four bushels.

A great natural curiosity was also exhibited, being a small branch of a tree, the leaves on one half of which are horn-beam, and on the other American oak. There are three of these trees now growing near each other in the county of Norfolk, all of the same description. They are apparently of twenty-five years growth, and it does not appear that this remarkable phenomenon has ever before been observed.—*Eng. Jan. 1843.*