

THE FARMERS' NOTE-BOOK.

Within the last quarter of a century, what has not Agriculture done among us? and how little has it merited—nay, how triumphantly has it falsified, the taunts of its selfish defamers! To speak of nothing else, what skill and what energy have been displayed in procuring for our poor soils the elements of fertility! They who ever talk of farmers ever sticking like limpets to the rock—ever clinging obstinately to old ways, old prejudices, while the world around them is hastening on faster and faster—talk so from very ignorance. They forget the many great changes in farming that this century has witnessed. They forget the revolution in agriculture that was necessary ere the very first step in manuring was generally accomplished—the planting of green crops, the buying of live stock, the building of sheds and courts and byres, and the subsequent thousand and one experiments in feeding. But as agriculture advanced, the difficulty increased. Each year brought new demands on behalf of the hard-tasked soil, and the manures of the farm-yard were soon found inadequate to meet them. Let us see what followed—it will show whether farmers be indeed the stand-still dunce which some men have not scrupled to call them.

First of all, bone-dust was found to be an excellent fertiliser; and forthwith bone-mills were erected, and the osseous gatherings of town and country were poured into them, in order to eke out the refuse of the byre. Nay, wide Europe was ransacked for this new and potent agent of fertility; the fields of the Continent were robbed of their long-buried stores to grow the grain of England. The scenes of unforbidden strife, where the grass still grew rank and long, were opened for the sake of their hidden treasures, and “a valley of dry bones” would then have been prized like a golden mine. Leipsic, Waterloo, and far Borondino; Eylau, Lutzen, and Friedland, and many another bloody field of fight, were thus ransacked; and not seldom did our wondering millers lift from amid the bone-heaps fragments of shivered swords and rusty breastplates.*

* England consumes more bones, for agricultural purposes, than all the rest of the world. As bones gathered for this purpose in Great Britain are free from police or excise inspection, we have no means of ascertaining the amount of the home supply; but the official value of those imported amounted, some twelve years ago, to £300,000 per annum, and the selling price to our farmers would probably be little under £400,000. Since then, the foreign supply has

But even the hundred battle-fields of Napoleon failed at length to yield an adequate supply. Bone-mills began to stand idle, and yet the ground clamored loudly for more. Farmers were puzzled what to do, but cast their eyes anxiously around to discover some other agent of fertility. And lo! it was found almost at the Antipodes—upon the lone islets of the Southern seas, amid the rainless region of Peru, and off the burning shores of Africa,—where countless flocks of sea-birds had for ages made their resting-place. The discovery was a godsend, and the news spread like wildfire. Ship after ship sailed for those far-off islets, and returned laden with guano, to add still further to the produce of our fields.†

Guano in turn grew scarce, yet the progressive movement went on. Town and country were ransacked at home, as eagerly as land and sea abroad; and soon a rich, though limited, mine of manure was discovered in the beds of coprolites, which pass like verdant zones across many parts of England. The farmer's eye first rested reflectively on the superior luxuriance of these bands, and, with the eagerness of the gold-seeker, he dug into their depths to lay bare the cause. In those depths he found strangely-formed nodules, the fossil-dung of enormous lizards or crocodiles which in primeval ages had roamed over the south-eastern parts of our island; and the value of the discovery became at once apparent when analysis proved these coprolites to contain a much larger quantity of phosphoric acid than the best bones.

Meanwhile Science was working away in her laboratory to assist the sturdy farmer in the field; and not a little was he benefited by her investigations. Nitrate of soda, sulphate of ammonia, and a dozen other chemical fertilisers, were thus added in his store. The fertilising property and rapid action of bones were greatly enhanced by dissolving, or rather digesting, them in diluted sulphuric acid.*

been decreasing; the bones imported in 1848 being worth, in bone-dust at 2s. 6d. per bushel, about £220,000.

† The imports of guano rose from 2000 tons in 1841, to 220,000 tons in 1845; but, since then, the paucity of the supply has caused the average annual importation to fall to about 90,000 tons. It will give some idea of the energy and enterprise of our farmers to state that, as the price of guano has ranged from £6 to £10 per ton, the money expended on the purchase of this manure alone amounted in 1845 to the enormous sum of a million and a half, sterling.

* It is worth nothing here, that although, from the pasty state in which sulphuric acid leaves