

THE COLONIAL FARMER,

DEVOTED TO THE AGRICULTURAL INTERESTS OF NOVA-SCOTIA, NEW-BRUNSWICK,
AND PRINCE EDWARD'S ISLAND.

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ON MANURES.

When a country advances, in the progress of improvement, from stagnation to tillage, the various sources of manure are investigated and sought after with an avidity commensurate to the fervent spirit of enterprise. The attention, which is paid to this branch of management, indicates with certainty the state of the art; and wherever we discover little or no exertions made in it, in order to accumulate by artificial means the aggregate heap beyond the ordinary supply, no further proof is requisite of the state of debasement in which agriculture lies. On the other hand, when a vigilant and persevering industry is ever on the alert; when numerous expedients are tried to enlarge the quantity as well as to improve the quality of manures; when composts—diversified both in the ingredients and proportions—become objects of curiosity and experiment;—these are the first symptoms of returning life and vigour, and may be hailed as the precursors of more flattering and auspicious prospects. The ardour of agricultural pursuit in England was ushered in by these beginnings: and at the present day, there is no subject of more paramount interest than the augmentation of the dunghill. Every kingdom of nature has been remarked, to find out substances endowed with the principle of fertility; science has come in to the assistance of art; philosophy has stooped from her dignity, and joined in the general research; and the public interest, instead of having flattered with the very ample success which hitherto has attended the inquiry, has only been roused to more spirited and adventurous efforts. The curious mixtures of Lord Meadowbank, the mixture of soil with decomposable matter, the universal application of lime, and the late introduction of burnt clay, are steps in that great race, in which all men, as if stimulated by one common impulse, seem to have engaged. Indeed, unless other means are resorted to, in order to replenish the waste of vegetation, than the simple contents of the barnyard, Great Britain could not sustain the half of her population, nor draw from her own territorial domains that exhaustless abundance which provides the basis for her commerce, and ministers to the necessities, comforts, and luxuries of life. This exuberance of supply may be traced to the improved and skillful methods, not of cultivation, so much as of multiplying the efficacy of putrescible manures. There was a period in her history when, like this Province, she was more “a grazing than a corn country;” and when a butcher’s stall bore no sort of relation in price to wheat and other grain. When we review this part of her history, we are struck with the plausible blunders she once committed, and trace, between them and our own, a striking and remarkable analogy. The manures then in use were the simple excrementitious matter of the cattle on the farm, unaided by those compound ingredients which have been since introduced, and which may be considered in the light of the materials from which the modern stores are manufactured. In truth, without great attention to the artificial increase of this necessary article, our agriculture can never rise to any importance; and it would be vain to urge the extended culture of white crops, unless we possess the means of repairing the exhaustion of the soil.—It has been long acted on in Flanders, and is now universally acknowledged in England, that an arable farm may be kept in good heart, and subjected to a continued course of cropping, without any extraneous dung, other than what is made on the premises on the consumption of green crops, straw, and fodder. The cattle which are fed on turnips, the horses employed in labour, the pigs and poultry are perfectly sufficient to supply such a quantity, under the direction of a scientific manager, as will annually restore to the land that richness of which it is deprived; and at the same time admit the grain to be carried to market, to meet the wants of the community. Every spot, in both countries, can be made to repair its own waste; and the luxuries of one is never employed to correct the poverty of another. Here our rich marshes and inland tracts are taxed, and as it were, laid under contribution, for the benefit and support of our uplands.

In the further prosecution of this subject, I shall point out some capital errors in the management of manure, which prevail, with

few exceptions, throughout the whole province, and which have a most pernicious influence on our agricultural progression: and I shall prescribe the remedies which the case suggests, and which are practicable under existing circumstances.

I observe in the first place, that we have almost no pit dug upon a regular plan for the collection and preservation of the dung, which from time to time it wheeled out of the barn. Sometimes it is spread out on the green sward; sometimes cast carelessly in a court, or adjoining yard; but seldom in an excavation made purposely for retaining the juices which run from it. These are suffered either to stream along the surface, or sink into the earth; and in both cases, their utility is sacrificed to inattention and ignorance. This is no more, however, than the half of the evil. The exhalations, which arise from the ardent influence of a summer’s sun, and from the natural activity of fermentation, are permitted to escape freely, and to carry along with them all the strength and substance of the putrescible matter. No means are taken to fix the gases which are generated, and which constitute the elements of vegetable food. I do not know, if there be one solitary instance throughout the whole range of the province, of the application of soil on the surface of a dunghill, to prevent this unpardonable waste and dissipation; and I am too confident, there is none, of lining the bottom with a regular coat or layer, to imbibe the nutritive moisture. The dung, too, is suffered to rot without any attention whatever to the degree of heat; and I should startle my readers, were I to tell them that the fermentation should never be urged beyond 100° of Fahrenheit’s Thermometer. At a much lower heat, carbonic acid, carburetted hydrogen, and the other gases of that family ascend as elastic fluids, and are diffused and lost in the atmosphere. The dunghill becomes what is called *fire-fangen*, and the principles of fertility are expended by the action of those chemical laws, which regulate and pervade the minute and subtle particles of matter.

If the dung be injudiciously treated, the urine discharged by the cattle is squandered, and indeed altogether lost. This is owing to the construction of the barns which generally prevail throughout the province, and which cannot be altered without some little outlay of capital. Being formed of wood, they are mostly raised and propped on a foundation; and a floor of plank is invariably laid.—The whole urine of the cattle except what is absorbed by the dung, finds its way through the seams; and either oozes into the earth, or forms beneath the barn a fetid and noisome pool of standing water. The essential elements of vegetable matter with which it is surcharged, assume quickly the gaseous forms; and either mount up through the floor, or escape by the sides of the building. At all events, their fertilizing qualities are turned to no account, and the loss, from this single circumstance, is ruinous beyond calculation. It may be necessary, in some measure, to ascertain the amount of this mischief, that we may set about correcting an evil of such formidable magnitude, with a vigorous and resolute energy. I should be afraid to hazard my character with the public, by stating in round and unqualified language, the value of this rich juice which is literally wasted, and thrown away; and, therefore, I shall proceed with caution, and give a detail of facts—conclusive in their bearings—and substantiated by the best authority. They are contained in a letter from Charles Alexander, near Peebles, in Scotland; and are addressed to Sir John Sinclair in 1812 for publication. This intelligent farmer had long been impressed with the great importance of the urine of cattle as a manure; and he set about to discover, by a long and well conducted series of experiments, the best method of collecting and applying it. He began, by digging a pit contiguous to the feeding stall, but distinct altogether from that which was appropriated for the reception of the dung. The dimensions of this pit, according to his own account, were 36 feet square, and 4 feet deep, surrounded on all sides by a wall; and the solid contents were 192 yards. Having selected the nearest spot where he could find loamy earth, and this he always took from the surface of some field under cultivation, he proceeded to fill it; and found that, with three men and two horses, he could easily accomplish 28 cubic yards per day;