

The importance of manure to the farmer is such, that his success in the production of the crops he cultivates, will mainly depend on the quantity, and the application of it, to the crops he raises, as food for sheep and other stock; as those crops which are consumed on the farm are much more productive of an additional quantity of manure than the crops of grain, a great part of which is carried off the land.

Vegetable and animal matter in a state of decay or manure, is composed of carbon, oxygen, and hydrogen, as we have before stated, the elements of which are the elements of growing vegetables. "By the laws of chemical attraction, vegetable and animal manure are changed by the action of air and water, and made fluid or ariform." (Davy.) Vegetable and animal manure, when well mixed in the soil, gives to it the power of absorbing and transmitting moisture for the use of plants that grow in it; therefore, improvement in some soils, and increased energy in others, will be given by the application of manure. The effects produced will continue much longer in some soils than others; in some it will be of long duration; in others, it will be transitory. The dung of animals kept on the farm with litter is the principal manure on which the farmer should depend, as he has it in his power either to increase or diminish it. Other manure he can have recourse to when an additional quantity is wanted. As straw and green crops are the foundation of manure, the increase of these raw materials is therefore of great importance with a view to future crops. When straw is left in the field as stubble we are deprived of one-fourth at least of the means of producing manures, we therefore see the propriety of collecting all the straw which our crops produce, for the purpose of converting it into manure.

In the experiments we have made to ascertain the weight of a crop of straw, we find that the quantity of wheat straw will average double the weight of the wheat produced, so that if all the straw be converted into manure by part of it being consumed by some animal as food, and the remainder as litter, it would with proper care produce manure sufficient to keep up, and with good culture increase the productiveness of the soil.

The production of turnips, vetches and clover is a large proportion of the farm, and the consumption of these by sheep and oxen will, under almost every circumstance, produce a sufficient quantity of manure to keep the land in a highly productive state; and if sufficient attention is paid to this part of agricultural business, a much greater quantity of corn will result from it, even when a less breadth of land is sown to corn, and a greater proportion to turnips, vetches, and clover.

As manure is of such vital importance to a farmer, every attention should be paid to the collection of the materials necessary to form it; every vegetable substance, together with the waste earth of ditches, road sides, sides of the fields, yards, &c. will add to the compost heap, not only in quantity but also in quality, if proper care in the mixture be attended to.

Weeds of every kind will be available before they come to seed, or rather before they blossom, as the seeds of many of them are perfected before the blossom drops off; and it should be kept in mind that no fermentation in the dunghill will destroy the vegetative power of a single seed.

When vegetable matter is fermenting in a dunghill, it should be mixed and covered with earth which will imbibe the volatile or gaseous matter that is thrown off during its fermentation; and if there be a large portion of animal manure in the compost, it should have a bed of earth to imbibe all the carbonaceous matter that runs from it; and on every turning over which we think it right to give the mass, we should add an additional quantity of earth to cover it with.

Ashes from burnt peat are used extensively in Berkshire, as a top-dressing for young clover; and have so great an effect on the crop as to increase it perhaps fully one-fifth; 50 bushels is generally the quantity used, per acre, although more will have a greater effect. Ashes are had at Newbury in Berkshire, at 3d per bushel; this costs only 12s 6d per acre, and a day of a wagon, beside the spreading.

In the application of manure, the nature of the soil should be considered. If the soil be a strong clay, and very tenacious, the manure should be of a light, or loose porous nature, such as stable unfermented dung; and if a compost, it should be made of a light, sandy, or porous nature; but if the soil is light and porous, the dung should be of a cold nature, well rotten cow or cattle dung.

Compost made of cattle dung and clayey loam, or any heavy tenacious substance, is the best manure for light land; long straw or unfermented dung, as stable dung or any substances which are loose and friable, should never be used on sandy soils.

Peat mixed with green dung, and fermented, is formed into an excellent vegetable manure; the mode of doing this in the most perfect way is that recommended by Lord Meadowbank.

The principal artificial manures are bone-dust, soot, rape, and oil cake; these produce wonderful results on the turnip crop.

Much earth should be used in all dunghills, as the earth that is thus impregnated is nearly if not altogether as valuable as the dung itself, in altering and improving the soil to which it is applied.

Road dirt, being the produce of stone reduced by friction, is of a gritty, sandy nature, whatever be the nature and properties of the materials of which it is composed; and from its gritty quality, it forms an excellent alternative for clayey soils, and when mixed with a large portion of horse dung, it forms an excellent compost for all clay or strong soils, as it tends to keep the soil open and porous.

In Flanders, great attention is paid to manure, particularly to the urine of animals, and water that runs from the dunghill. These are collected and oil cake dissolved in them, and they are drawn out in water carts and spread over the pasture land; or, mixed with earth, and formed into a compost, they become an excellent manure for turnips as well as pasture. An ox is said to make twelve cart loads of dung per annum, if fed on grass in the stall, and 1,400 gallons of urine. "The urine of 44 head of cattle, with the aid of 2,400 lb. of rape cake, is sufficient to manure in the best manner twenty-one acres."

Manure should be always applied to fallows so early as to be well mixed with the soil before the crop is sown; it then combines with it not only mechanically, but chemically, and thus increases the powers of the soil to combine with the water and air, and decompose the substances from which plants receive their nourishment. The whole of the manure, however, ought yearly to be applied to the production of those crops which furnish food for animals kept on the farm, such as turnips, cabbages, potatoes, vetches, carrots, and clover for sheep

and oxen. Meadow land should be manured soon after the crop of hay is carried off, and before the end of August. A compost with at least one-third of earth matter in it is the best manure for meadow or pasture land; and the land should be pastured the year after manuring.

**TO DESTROY CATERPILLARS.**—A gardener at Glasgow practises a mode of destroying caterpillars which he discovered by accident. A piece of woollen rag had been blown into a currant bush, and when taken out was found covered by the leaf-devouring insects. He immediately placed pieces of woollen cloth in every bush in his garden, and found next day that the caterpillars had universally taken to them for shelter. In this way he destroyed many thousands every morning.

**WIRE WORMS.**—The most effectual mode of destruction is that adopted by Mr. Pearce, of Pennare Goron, who, in 1838, having had three acres of wheat completely destroyed by the wire-worm, followed with turnips, and finding his turnips also beginning to fail, he employed several women and children to dig round the affected plants, and collect the worms. In this manner no less than 23,900 were collected, which he paid for at 1d. and 1½d. per hundred. By this means he saved considerably more than half his turnips, and had an excellent crop of barley afterwards. In an adjoining field a crop of wheat and another of barley were similarly destroyed. From this field he collected 30,000 wire-worms. He calculates that land may thus be freed from the wire-worms at from 5s. to 7s. per acre. This mode of wire-worms collecting has long been practised in the best cultivated Kentish hop-grounds.

**ON SOAKING SEED CORN.**—In former years we have noticed a variety of recommendations for the preparation of seed corn, but this year we scarce find any advice in our papers, on this subject. Our own advice has uniformly been to drop dry seed corn, and trust to providence to provide moisture for it. Our experienced farmers know that when the seed has been soaked and swollen, and then suffered to shrink before sprouting, its vegetative powers are gone, and we thus lose not only our trouble, but all our prospects for the season. Let the seed corn be dry when it is dropped, and if it is not buried too deeply in the soil, it will find its way out in due season.—*Boston Cultivator.*

**THE FRENCH COLONY OF NEW ZEALAND.**—The firmness of the chief of the French colony, and, it must also be added, the conciliatory spirit of the British magistrate, have contributed to maintain the independence demanded for it by Captain Lavaud, without the slightest interruption of harmony between the French and the British colonists. In the colonies of Australia and New Zealand, it is the opinion of all parties, no matter to which nation they belong, that France ought to retain the privilege of this independence at least for the large extent of land which forms Banks' Peninsula, now in her possession, and which contains ports at all times accessible to ships of war and whalers. Advices from Akaroa, the southern island, dated the 1st and 26th of March last, bring us the following details. The rapid progress of the British colony at Nicholson (the northern island) surpasses all idea. Although founded only on the 22d January, 1840, it had already 3000 inhabitants, and 600 to 700 houses. There were in the port in February last, 23 vessels, of which five were of three masts.—Capitalists, commercial agents of the principal houses of Sydney and London, and persons who in England would occupy a distinguished rank—the son of Sir John Sinclair, a son of Lord Petre, &c. were actively engaged in commercial pursuits. One of the French colonists, who arrived in the Counte de Paris, fixed himself at a league from Akaroa, and, with his wife, cultivates a hectare (two acres and a half) of ground. In five months he had gained 1500f. by the sale of vegetables. The reports which were current as to the probability of the rupture of peace in Europe had not in the slightest degree affected the friendly relations between the French colony at Akaroa and the British colony at Nicholson. The question of the sovereignty of these islands has not yet been decided. The *statu quo* has been established by agreement between Captain Lavaud and the English Commandant, until the two governments shall have come to an understanding on the subject. Negotiations are at present proceeding in London, which have been retarded by the embarrassments of the British cabinet.

**THE PLAINS OF HUNGARY.**—We had heard much of the dull and monotonous character of the great plain of Hungary. We had now a veritable specimen of it before us—for many long and weary miles we drove, ere so much as a cottage made its appearance, and all the while the corn waved on either hand, rank and luxuriant. Yet, singular as to us this state of things appeared, it is but a copy, an imperfect one, of what prevails elsewhere. There are parts of the country, especially in the great plain of the Theiss, where you may travel an entire day without encountering either the houses or the faces of men; and all the while your route will be through fields loaded with abundant crops of wheat and rye. Moreover, the customs of the people who occupy that plain are to the full as striking as the external appearance of the country—and it may be as well if I describe them. The long and fierce wars which Hungary sustained with Turkey, and the exposure of these open districts to perpetual invasion, first induced the inhabitants to congregate in heaps, and the habits then contracted have never since been laid aside. Accordingly, there are no such things as villages or hamlets, far less detached dwellings, to be seen anywhere; but at remote intervals one from another, you come upon towns, towns of the veriest huts, where dwell six, eight, ten, and sometimes as many as thirty thousand peasants together. How they preserve order among themselves I do not know, for their magistrates seem to possess little influence over them; yet they do live peaceably enough, and, though all are poor and squalid, and filthy to a degree, there seems to be a perfect indifference to the evils which poverty and squalor bring with them. They are to a man agriculturists. It is by the labour of their hands that the boundless plains through which you have travelled are cultivated; and the process by which the mighty operation is performed is this: When the season for ploughing and sowing comes round, the males march in a body from their homes. They erect wigwags, or huts, here and there, in the fields; and then setting to work, they toil from Monday till Saturday, living on the provisions, which they may have brought with them, and sleeping at night in their bivouac. On Saturday they all return to the town, and do not leave it again till Monday. In this manner the first processes are carried through; and, when all the seed has been scattered, the people march back to their permanent habitations, there to abide in idleness and filth till some fresh operation becomes necessary. Finally, when harvest is ready, the bivouac is resumed, the women coming forth this time to assist

in getting it in. And as the completion of the sowing season sent them back to town, so, when reaping ends, the huts are abandoned.—*Gleig's Hungary.*

**INDIAN VENGEANCE.**—The Otoe Indians having procured some kegs of whiskey, resolved to have a grand carousal, and aware of the fury to which their passions would be stimulated by intoxication, removed all weapons beyond their reach. When the whiskey began to work, a fearful brawl commenced, and in the frenzy of strife the brother bit off a part of the chieftain's nose.—The Itoan was sobered in a moment; he paused, looked intently into the fire, without uttering a word; then drawing his blanket over his head, walked out of the building and hid himself in his own lodge. On the following morning he sought his brother, and told him that he had disfigured him for life: 'To night,' said he, 'I will go to my lodge and sleep; if I can forgive you when the sun rises you are safe, if not you die.' He kept his word; he slept upon his purpose, but sleep brought no mercy. He sent word to his brother that he had resolved upon his death, that there was no further hope for him; at the same time he besought him to make no resistance, but to meet his fate as a warrior should. His brother received the message, and fled from the village. An Indian is untiring in his pursuit of revenge; and though many years may elapse, yet he will obtain it in the end. From the time it became the fixed purpose of the Itoan to slay his brother, his assiduity never slept; he hunted him for months. He pursued his trail over the prairies; he followed his track from one thicket to another; he traced him through the friendly villages but without success; for although he was untiring, his brother was watchful and kept out of his way. The old warrior then changed his plan of action. He lay in wait for him in the forest, crouching like a tiger in the paths which he thought he might frequent in hunting, but he was a long time unsuccessful.

At length, one day when seated on a dead tree, he heard the crackling noise of a twig breaking beneath a cautious footstep. He instantly crouched behind the log, and watched the opposite thicket. Presently an Indian emerged from it, and gazed earnestly around. The Itoan recognized his brother instantly. His care worn face and emaciated form evinced the anxiety and privations he had suffered. But this was nothing to the Itoan; as yet his revenge was unsated, and the miserable appearance of his brother touched no cord of his heart. He waited until he was within a few feet of him, then sprang from his lurking place and met him face to face. His brother was unarmed; but met his fiery look with calmness, and without flinching. 'Ha, ha! brother,' cried the Itoan, cocking his rifle; 'I have followed you long in vain—now I have you—you must die.' The other made no reply, but throwing off his blanket, stepped before him, and presented his breast. The Itoan raised his rifle and shot him through the heart!—*Taylor's Natural History of Society.*

**EFFECTS OF TOBACCO ON MAN.**—In small doses, tobacco causes a sensation of heat in the throat, and sometimes a feeling of warmth in the stomach; these effects, however, are less obvious when the remedy is taken in a liquid form, and diluted. By repetition it usually operates as a diuretic, and less frequently as a laxative. In larger doses it provokes nausea, vomiting and purging. Though it seldom gives rise to abdominal pain, it introduces a most distressing sensation of sinking at the pit of the stomach. It occasionally acts as an anodyne, or more rarely promotes sleep. But its most remarkable effects are languor, feebleness, relaxation of the muscles, trembling of the limbs, great anxiety, and tendency to faint. Vision is frequently enfeebled—the ideas confused—the pulse small and weak—the respiration somewhat laborious—the surface cold and clammy, or bathed in a cold sweat—and in extreme cases convulsive movements are observed. In excessive doses the effects are of the same kind, but more violent in degree.

Snuff. Lanzoni states that an individual fell into a state of somnolence and died lethargic on the twelfth day, in consequence of taking too much snuff. The habitual use of this substance blunts the use of smell, and alters the tone of the voice; but I am unacquainted with any other well ascertained effects, though Cullen ascribes loss of appetite and dyspepsia to it. I have known several inveterate snuff-takers, who, after many years use of this substance, have discontinued the use of it with impunity; but Dr. Cullen thinks that when the discharge of mucus is considerable, the ceasing or suppression of it by abstaining from snuff, is ready to occasion the very disorders of the head-ache and ophthalmia, which it had formerly relieved. The smoking of tobacco, by those unaccustomed to it, gives rise to all the before described effects of large and excessive doses. A very interesting case which had almost terminated fatally, is related by Dr. Marshall Hall. It was that of a young man who, for his first essay, smoked two pipes. Gmelin mentions two cases of death from smoking, in one of seventeen, in the other eighteen pipes at a sitting. In habitual smokers, the practice, when employed moderately, provokes thirst, increases the secretion of saliva and buccal mucus, and produces a remarkably soothing and tranquillising effect on the mind, which has made it so much admired and adopted by all classes of society, and by all nations, civilized and barbarian. The practice of chewing tobacco is principally confined to sailors, and is less frequently submitted to our observation, so that we are not so competent to speak of its effects, which probably are similar to those caused by smoking. The application of tobacco to abraded surfaces is a very dangerous practice, and has, in some instances, been attended with violent or even fatal results. Mr. Weston has related a case, in which the expressed juice of tobacco was applied to the head of a boy, aged eight years, for the cure of *tinea capitis*. Death took place three hours and a half after the application.—*Percival's Materia Medica.*

**VENICE.**—The Republic of Venice presents to the eye of the curious inquirer one of the most striking phenomena in political history. Rising almost imperceptibly from the waves of the ocean, she gradually extended her territory and increased her power till she obtained a considerable, and occasionally a predominant, influence, not only in the affairs of Italy, but of the civilized world at large. Her form of Government was marked by singularity; and her institutions, though complex and artificial, were so skilfully consolidated that for a long period, odious as they were to every generous and thinking mind, they seemed to bid defiance to the innovating operations of time. In her "palmy state of existence" she was venerated rather than loved. In her decay, she was regarded with a kind of mysterious awe, which prevented the observer from seeing the extent of her weakness; when at length she rashly provoked the vengeance of Napoleon Bonaparte, she fell without a struggle, and not a sigh of regret was breathed by the friends of human rights on the occasion of her fall.—*Smallwood's Magazine.*

**PREVENTION OF DRY ROT.**—Government have recently ordered the opening of the fungus pits in Woolwich dockyard which had been closed in August, 1836, for the purpose of testing the virtues of Sir William Burnett's process for rendering wood, cordage, and all descriptions of woollen free from dry rot. The result, it would appear from the report of the officer deputed by the admiralty to superintend the experiments, is in every way successful, the prepared wood being as clear and sound when it came out, as when first deposited. Some samples of prepared canvass and calico were submitted to the same test, with their counterpart unprepared, and the former were as sound as when taken from the loom, whilst the unprepared were entirely destroyed. In consequence of these favorable results, the admiralty have been induced to take the patent under their especial patronage, and a large iron tank is being erected, with air and force pumps, for the speedy saturation of timber in the Dry dock-yard at Portsmouth. Other tanks are in the course of operation in Chatham Dock-yard. It would likewise appear that metals are prevented from oxidation by this process, and consequently the fastenings of ships' timbers are preserved from rust or decay. It is further a singular fact, that articles prepared with this material will become less inflammable in proportion to the strength of the solution used.

**GALLANT ACTION AND CAPTURE OF A SLAYER.**—H. M. brig Persian, 16. By letters from this vessel, dated off the Congo, July 2d, it appears that two of her boats (the pinnace and gig) had been dispatched up the river in quest of slavers, under the command of her first Lieutenant, P. H. Somerville, and that they were unexpectedly attacked by a piratical slaver called the Astrea; she was fitted out and sailed from the Havana, with a crew of desperadoes shipped expressly to fight their way through every obstacle, and equipped with all things necessary for a slaver, but she never displayed any flag. The boats had been absent from the Persian two days, when they fell in with the Astrea, and, on their attempting to go alongside of her, a most desperate battle ensued; after a smart contest, which lasted half-an-hour the boats proved successful, with the loss of two men killed and two wounded, whilst the Astrea had eight men killed out of fifty men who were on board when the action commenced. The gallantry displayed by the Spaniards was worthy a better cause, and the boat's crews (as stated by one of the seamen, in a letter to his mother) fought like true Englishmen, the dying and the dead rendering, to the last, all the aid which bravery could accomplish. Indeed, upon the whole, it is stated to have been one of the most daring affairs that has taken place on the coast for many years.—*Devonport Independent.*

**THE PRINTER.**—Many who have acquired great fame and celebrity in the world began their career as Printers. Sir William Blackstone, the learned English Commentator of laws, was a printer by trade. King George the III. was a printer, and not unfrequently worked at the trade after he ascended the throne of England. We need not say that Franklin was a printer, for this is well known to all who are familiar with his name. Alexander Campbell, the theologian, is a printer.

**AN IRON HOUSE.**—A gentleman of Brussels has constructed an Iron house, which is said to answer the objects intended in a satisfactory manner. The walls are hollow, and the hot air circulates from a central point in the kitchen, through the intervals in the walls, and by means of valves the quantity to be admitted may be regulated. A house consisting of 17 rooms will cost £1,165, while a house of the same size in brick would cost £1,157. The rooms are arranged on three floors. The whole weight is 797 and a-half tons, avoirdupois, (510,000 kilogrammes.) The advantage of this structure of house is represented to be its permanent nature, and the facility with which it may be moved. The expense of carrying it from Brussels to Liege, Ghent, or to Antwerp, would be about £25.

**PIGEON FLIGHTS.**—The Brussels papers mention the following pigeon flights as having just taken place. On Sunday morning, Aug. 21, at ten o'clock, 90 young pigeons from Brussels were let off at Paris; the first of which reached home at two minutes past two the same afternoon, and eight others within seven minutes after many more reached home during the day. The same morning, 147 young pigeons from Antwerp were let off at London between eight and nine. The first arrived at Antwerp at five minutes past two the same afternoon, five others before half-past two, 16 more before four, and 12 more before the evening.

**DR. COOKE, OF BELFAST.**

A public meeting was held in Belfast in July last at which the Rev. Dr. Cooke was presented with a bust of himself.

Mr. J. E. Tennent, M. P., presented the bust to the Rev. Doctor, and delivered an eloquent speech on the occasion, from which we extract the following passages:—It is but seldom, in a man's life, that he has it in his power to combine, in one and the same act, an expression of his public and personal feelings more thoroughly than I am enabled to do upon this occasion. Mr. Macdowall, an artist of distinguished eminence in London, and in whose success I have for some years taken a deep interest, not merely on the score of his talents, which are of the very highest order, but on account of his being a native of Belfast, was employed, at my suggestion, in producing a bust of our valued friend, Dr. Cooke. (Hear, hear.) His success in the undertaking was quite remarkable; and it occurred to me that a work of art at once so creditable to our town from the talents of the sculptor, and so gratifying to our own feelings from the record which it preserves of Dr. Cooke, should not be allowed to perish in the frail material of clay and plaster, but should be transferred to the more lasting and permanent marble, and placed in some suitable situation, to perpetuate the memory of our friend. I was anxious to have accomplished this at my individual expense, but a few admirers of Dr. Cooke in London, Manchester, and Dublin, as well as some members of his congregation, had entreated that they might be permitted to have their names associated with the object, and to contribute to its completion. By their aid and co-operation the work was completed, and a request conveyed that I should this day place it in your hands, and leave it for your discretion to find a suitable position for its perpetual preservation in this meeting-house. This pleasing duty, gentlemen, it is my good fortune to be permitted this day to discharge. I now commit it to your friendly hands. But, gentlemen, I am anxious to have this memorial of my friend, Dr. Cooke, accepted by you, not merely as my tribute of personal esteem and admiration of the man, but as a slight but sincere testimonial of my feelings towards the body to which he belongs, and a pledge of my attachment to the Church of Scotland, of which he is so distinguished a luminary. It would ill become me, connected as I am with that church through numerous relatives and friends, who are its members, and some of them its ministers—it would ill become me to feel or speak with indifference of its constitution, its communion, its prosperity, or its interests; and still less would it become me to express such a feeling, as a member of the sister Church of England—a church which, in all its recent persecutions, sufferings, and its fiery trials, has found sympathy and strength in the voluntary alliance, the uncompromising defence, and the powerful and generous support of the Pres-