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THE  
CANADIAN AGRICULTURAL JOURNAL.

VOL. I.

MONTREAL, AUGUST 1, 1844.

No. 8.

Our article on hay-making should have appeared in our last, but was left out by mistake, and as the hay harvest may not be finished, we suppose it may as well appear in this number.

All grass intended for hay should be cut as near as possible to the time it is in full blossom. This may be difficult with those who have a large quantity, but when possible, it will be the farmer's interest to cut his grass for hay, when nearest to the time of bloom or flowering. In the neighbourhood of Montreal timothy grass is generally in bloom about the 15th to the 21st of July. Clover, about the 1st to the 10th of the same month. Clover if allowed to remain uncut many days after being in full blossom, will lose much of its best qualities before it is cured, and in the barn, as the small leaves, and blossoms are apt to fall off when this is the case. The clover should be allowed to remain in the swarths the day it is cut, and it should be turned in the swarths, without breaking, the following day. It should then be made up into small cocks, in such a manner as to preserve them from taking wet in case of rain. If the weather is favorable it should be allowed to remain in the cocks a day or two, to season, or if very green and luxuriant, perhaps more. It should then be dried and housed as soon as sufficiently seasoned to be secure against heating in the barn. The more green clover is, provided it is sufficiently dry, the better it will be for every purpose. When clover is intended for the farmer's own use, it would be a good plan to put a layer of good straw between the clover in the barn at every foot in height of the latter. The straw would imbibe the juice of the clover, prevent it from heating, and be good food for cattle mixed in this way. If clover is kept in stacks they should be immediately thatched well, as they are apt to take much wet. Timothy hay is easily cured in fine weather, and the less it is exposed to sun, dew, or rain after cutting, the better. It should not be allowed to remain on the swarth many hours after it is cut, until put up in cocks. If once dried, the dew should not be allowed to fall upon it before it is put up in cocks.—The smallest moisture upon it after it is dry, will change the colour and injure the hay. There is no grass so easy to make into hay as timothy and when well made, there is no better hay on earth. A gallon of salt to the load of fifty bundles, may be applied to both clover and timothy, or to any other hay; but we would not recommend more than this.

A very profitable trade in beef, pork, cheese, and butter, might be carried on between this country and Britain, if we were only to produce these articles in abundance, and perfection—and we certainly might

do this if we were to employ judiciously the advantages in our power. We have land that might be converted into good pastures, that would produce both beef, butter, and cheese in perfection, provided we stock them judiciously, and manage the dairy in a proper manner. We cannot have good beef without pasture neither can we have good cheese and butter, without good cows well kept, suitable dairies, utensils, and good management in every respect. When we are resolved to adopt English management in all these matters we may expect to produce articles that will sell in that country and bear a fair competition with English products. If our lands and management of their produce is entirely different from the system followed in Britain, it would be very unreasonable that we should expect with our defective and careless management to be able to compete with them, or raise produce which they will purchase from us, unless of good quality. It is wrong that we should be altogether depending upon one species of produce, when we might have many, that, if one were to fail, we would have another succeed. It has been a great defect in Canadian agriculture that when wheat failed there was no other produce to supply its place that could be profitably exported, and the consequence was that the country has been generally impoverished. If we were to produce all the beef, pork, butter, cheese, flax, and hemp, which we might do, we should not feel the loss of wheat so severely. Grass-fed beef, sold in the fall, would pay the farmer at five dollars the 100 lbs. and the markets of Britain would generally warrant that price; but less than this price, and 25s. to 30s. the 100 lbs. for pork, would not remunerate the farmer here. We wish we were able to persuade those who have any influence in Canada to exert that influence in forwarding the prosperity of the country, and in no way can it so certainly be promoted as by the increase of her annual productions and their value. We should produce what we shall be able to sell to those from whom we require to purchase commodities for our use, and until we do this we never can be in prosperous circumstances. If it were properly understood how much the prosperity of all classes in Canada must depend upon the productions of our soil being abundant, and valuable, there would be more interest felt, and taken, in advancing agricultural improvement. It is the productions of Canada alone which must maintain permanently a profitable trade and commerce between us and other countries.

Gold is worshipped in all climates, without a single temple; and by all classes without a single hypocrite.—*Colton.*

The following observations on the use of gypsum we copy from "Foote's Prize Essay" on Manures:—

1. It has been observed that plaster acts with increased efficiency when applied in connection with manures, or recently manured lands. The solution of the phenomenon, by our theory, is easy and satisfactory. The ammonia, which would otherwise escape from the decomposing manure into the atmosphere, is seized upon by the plaster, detained in the soil, and wholly converted to the use of the growing crop.

2. It has been observed that plaster acts with greater power on soils which have been recently stirred, than on those which have lain for a long time unmoved. Solution. By stirring the soil its porosity is increased; consequently it absorbs more freely the dews that fall upon it—from which the plaster separates, and hoards up in the soil, the rich deposits of the atmosphere. In proof of the extent to which the atmosphere is charged with fertilizing matters, which the rains and dews are constantly depositing upon the surface of the earth, we will here introduce the substance of a statement made to the American editor of Liebig, by Mr. E. Tufts, of Charlestown.

"Eight years since, about three quarters of an acre of land, situated on one side of a lane, and on a declivity, were broken up." About the same time, the proprietor of a field on the opposite side of the lane, and above the land of Mr. T., commenced gardening on a large scale, and formed an 'immense bed' of compost in the lane. This heap was made up of animal and vegetable matters, and from receiving constant additions, is continually undergoing fermentation, and the gases and vapours emanating from it are always perceptible. Four years ago Mr. T. observed, that, in some inexplicable way, his land had become so fertile as to induce him to dispense with the use of manure; he has not since used it, and is now 'fully persuaded that its fertility is owing to certain vapours arising from the heap, and then descending on his land. None of the soluble matters of the heap are carried to Mr. T.'s field, no manure has been applied, and its fertility continues unimpaired.'—*Appendix to Liebig, p. 366.*

3. Plaster has been observed to produce but slight effects upon old, dry, and hide-bound meadows. Says Liebig (p. 87), "Water is absolutely necessary to effect the decomposition of the gypsum, and also to assist in the absorption of the sulphate of ammonia by the plants; hence it happens that, the influence of gypsum is not observable on dry fields and meadows." To which it may be added, that, but a small quantity of putrescent matter existing in such cases, the exhalations are inconsiderable; and what is deposited from the atmosphere by the dews cannot be absorbed by the soil, in consequence of its compact, impenetrable surface. On old, and even dry pasture lands, the effect of plaster is much greater, there being ever present on their surface a portion of manure to serve as a basis for its action.

4. It has been universally observed, that the most striking effect of plaster is on the clover crop. "Red clover contains double the quantity of nitrogen that common hay does." *Gray, p. 158.*

**GUANO.**—Within a short time, experiments have been made in England with guano found in the Hebrides, and other Scottish islands, and also with the same substance found on the coast of Africa. We have seen no statement showing the comparative value of the Scottish; but in the late English papers we notice the results of various analyses, from which it appears that Peruvian guano contains from 86 to 88 parts in 100 of available matter, and the African 76—or, compared one with the other, as 7 to 8. Comparing cost and value, when delivered in England, however, the African is said to be 23 per cent cheaper than the Peruvian. In England, guano is estimated five times stronger than night-soil, four times stronger than dove-cote manure, "a deadly enemy to the wire-worm and fly, and a preventive of mildew and red rust." We doubt whether experiments in this country have sup-

ported this high estimate of its value. Attention is now being directed to the islands in the gulf of St. Lawrence, the coasts of Labrador and Newfoundland, &c., for the substance.—*Albany Cultivator.*

**AGRICULTURAL COLLEGE.**—Measurements are to be taken for the immediate establishment of the agricultural College in Wiltshire, for which purpose a public meeting of the friends and supporters of the proposed plan has been called for the 22d inst. Earl Bathurst has consented to preside.

**LIME AND SALT.**—I tried this mixture on two acres of old grass land, having mixed them in the proportions recommended by Mr. Cuthbert Johnson. A heap was made, and the lime and salt were laid in alternate beds, then mixed up together, and well covered over with soil and sods. After three months this was applied to the meadow in question; it was in a state resembling mortar, and was with difficulty spread; after it became dry, it was beat to pieces, and spread and brush harrowed. In many parts of the field, the grass appeared as if it was scorched. It did not grow luxuriantly, and the crop was the worst I ever had—in some parts not worth cutting.—*Correspondent Gard. Chron.*

**ANALYSIS OF SOILS.**—the following is a method of analysing soils for ordinary agricultural purposes:—Weigh a convenient quantity of the earth to be analysed say 1000 grains, dried in the open air; dry the same before a fire on paper, so as not to scorch the paper; re-weigh, and the difference will be the organic matter. Pour a convenient quantity of muriatic acid on the remainder; stir, and when settled, pour it off, and add oxalate of ammonia: the precipitate will be lime. Mix the remainder with water, and stir it well; when a little settled, pour off the turbid mixture, and the suspended contents are argillaceous, and the deposit siliceous.—*Correspondent Gard. Chron.*

**CUCUMBER AND MELON BUGS.**—The ravages of the yellow striped bug that attacks cucumber and melon vines, may be effectually prevented by sifting charcoal dust over the plants. There is something in this very offensive to the bug.—*American Farmer.*

**LOVE OF FLOWERS.**—A love of flowers is one of the earliest of our tastes, and certainly one of the most innocent. The cultivation of flowers, while it forms an elegant amusement, is a most healthy and invigorating pursuit. Unlike hunting, fishing, shooting, or similar rural amusements, it inflicts no suffering on any of the animal creation, and merely aids nature in her efforts to make the world beautiful to the eye, as the fruits are pleasant to the taste. The flower garden, while it agreeably occupies the time, does not impose a heavy tax upon the pocket, and there are very few flowers but what may be cultivated to as great perfection in the garden of the peasant as of the peer. It is a taste, too, which is well adapted to the female character, and affords much rational amusement to the recluse.—*Manual of Gardening.*

**CHARCOAL AND GUANO.**—Mr. Teschemacher, in "Hovey's Horticultural Magazine," says, "By mixing one-fortieth part of charcoal with a compost made of two parts loam and one of old manure, and carefully and intimately mixing the whole, and then applying it to greenhouse plants in the pot, and watering with water in which guano had been mixed, at the rate of one ounce to ten gallons, this treatment produced the most astonishing effects, not only in the growth but general health of the plants."

**NEW DRILL DRESSING FOR TURNIPS.**—To 1 qr. bone-dust, add 1 cwt. of salt and 10 gallons of water; mix them well; meanwhile mix 1½ cwt. of sulphuric acid with 10 gallons of water, gradually, and let it cool; when nearly cold, pour some of it, say a gallon, gently over the bone-dust salt, over the whole surface, to prevent much fuming of muriatic acids and mix it in; after an hour (or when it ceases to fume) add another gallon in the same way; and so on till all is in. The sulphuric acids decompose the salt and part of the bone; producing sulphate of soda and gypsum, and setting free muriatic and phosphoric acids. The muriatic acid penetrates the remaining bone, and renders it soluble without decomposition. The whole may digest together a few days or weeks, if convenient. The result will be a mixture of sulphate of soda and gypsum, with bones rendered soluble by muriatic acid. The bone must be genuine, and not mixed with oyster shells, &c., as they will neutralize the acid and destroy its effect. Whole bones would probably be made tender by a month's digestion, and by guano or rape in two or three months. This quantity upon an acre will produce more effect than 3 qrs. bone dust, at about half the cost; say 30s. For the drill, the acid may be neutralized by wood-ashes or mild lime; and dried by the addition of rape-dust, which will increase its activity, and probably make the most productive drill-dress that has yet been tried. It must not touch the seed. If used as liquid, it must not be neutralized, but dissolved in 1,500 gallons of water. In either case the land should be prepared with 6 or 8 loads of dung, to bear out the crop. These directions apply to turnips; but we think the same composition, neutralized with wood ashes, and dried with rape or bran, would increase the produce of grain (not of straw) in both wheat and oats, and perhaps barley also.

**THE ELEPHANT IN THE REGENT'S PARK.**—The daily rations of Jack, the male elephant, kept in the garden of the Zoological Society of London, and now about thirty years old, are a truss and a half of hay, forty-two pounds of Swedish turnips, a mash consisting of three pounds of loiled rice, a bushel of chaff, and half a bushel of bran, ten pounds of seabiscuit, a bundle of straw for his bed, weighing about thirty-six pounds, which he usually eats by the morning, and thirty-six pails of water. Besides this he collects no small portion of savoury alms from the public. Formerly his allowance was larger, and he had oats and mangel wurzel; but at that time Sunday was a day of fasting with him (as it is still to the *carnivori*), only broken by a slight morning meal. Some four or five years ago he determined to stand this hebdomadal privation no longer, and for two or three successive Sabbath nights he made such a disturbance that the keepers had small repose. Finding that this hint was not taken, he went a little further next time, and so bestirred himself that, like other agitators who have known how far to go, he carried his point; for he made an attack upon his den with such good will and effect, that they were fain to get up in the middle of the night to feed him. Since this demonstration of physical force he has enjoyed his full meals on Sunday.—*New Monthly Magazine*.

There, is, to our thinking, something awfully grand in the contemplation of a vast steam-engine. Stand amid its ponderous beams and bars, wheels and cylinders, and watch their unceasing play; how regular and how powerful!—the machinery of a lady's Geneva watch is not more nicely adjusted—the rush of the avalanche is not more awful in its strength. Old Gothic cathedrals are solemn places, preaching solemn lessons, touching solemn things; but to him who thinks, an engine-room may preach a more solemn still. It will tell him of mind—mind wielding matter at its will—mind triumphing over physical difficulties—man asserting his great supremacy—“intellect battling with the elements.” And how exquisitely complete is every detail!—how subordinate every part towards the one great end!—how every little bar and screw fit and work together! Vast as is the machine, let a bolt be but the tenth part of an inch too long or too short, and the whole fabric is disorganized. It is one complete piece of harmony—an iron essay upon unity of

design and execution. There is deep poetry in the steam-engine—more of the poetry of motion than in the bound of an antelope—more of the poetry of power than in the dash of a cataract. And ought it not to be a lesson to those who laugh at novelties, and put no faith in inventions, to consider that this complex fabric—this triumph of art and science—was once the laughing-stock of jeering thousands, and once only the waking phantasy of a boy's mind as he sat and in seeming idleness watched a little column of vapour rise from the spout of a tea-kettle?—*Illuminated Magazine*.

**POLITICAL JUSTICE.**—We are obliged to net, so far as our power reacheth towards the good of the whole community. And he who doth not perform the part assigned him towards advancing the benefit of the whole, in proportion to his opportunities and abilities is not only a useless, but a very mischievous member of the public; because he talks his share of the profit, and yet leaves his share of the burthen to be borne by others, which is the true principal cause of most miseries and misfortunes in life.—*Swift*.

**THE END AND USE OF KNOWLEDGE.**—Men have entered into a desire of learning and knowledge sometimes from a natural curiosity and inquisitive appetite, sometimes to entertain their minds with variety and delight: sometimes for ornament and reputation, and sometimes to enable them to gain a victory of wit and contradictions and sometimes for lucre and profession, but seldom sincerely to give a true account of their gift of reason for the benefit and use of man, as if there were sought in knowledge a couch whereupon to rest a searching and restless spirit, or a terrace for a wandering and variable mind to walk up and down with a fair prospect, or a tower of taste for a proud mind to raise itself upon, or a fort or commanding ground for strife and contention, or a shop for profit and sale, and not a rich storehouse for the glory of the Creator, and the relief of man's estate.—*Lord Bacon*.

**BEDSTEADS.**—Those who wish for neat bedsteads for the ensuing year, should wash them well with boiling water, and then put quicksilver, beaten with the white of an egg in every crack and corner. One white is enough for a bedstead, with as much quicksilver as it will receive. It is the only thing that keep bugs away when the bedstead cannot be often attended to. It is a certain poison to bugs.

The following beautiful little allegory is copied from the *N. O. Crescent City*:

A humming bird once met a butterfly, and being pleased with the beauty of its person, and glory of its wings, made an offer of perpetual friendship.

“I cannot think of it,” was the reply, “as you once spurned me and called me a drawing doll.”

“Impossible!” exclaimed the humming bird, “I always entertained the highest respect for such beautiful creatures as you.”

“Perhaps you do now,” said the other; “but when you insulted me I was a *caterpillar*. So let me give you this piece of advice: Never insult the humble, as they may one day become your superiors.”

**TO GET A GOOD WIFE.**—Choose a woman who has been inured to industry, and is not ashamed of it. Be sure she has a good constitution, good temper, is not fond of novels, and has not been accustomed to “*dashing*.” You need inquire no farther.—*Tennessee Agriculturist*.

When Dr. Johnson was asked what was the objection to gaming, he replied, “Sir, the objection to gaming is this: it circulates money without any intermediate labour or industry.”

A cargo of guano manure sold in the Glasgow market last week at from 5*l.* 13*s.* to 7*l.* 6*s.* per ton,

**PRUNING FRUIT TREES.**—Having practiced for the last fifteen years the plan of pruning fruit trees late in June, and having succeeded by this course much better than formerly, when, according to general usage in my section, I pruned in May, (sometimes in April,) I feel authorized to recommend pruning in the latter part of June as preferable to any other time. I do not know that this accords with the experience of others, but I feel well assured that if any who doubt its superiority over other methods, will give it a fair trial, they will not abandon it. The wounds heal sooner by pruning at that period, than when done at any other which I have tried.—*N. E. Farmer.*

**HORSES.**—C. W. Gooch, of Virginia, writing to the editor of the Southern Planter, says: "The ordinary means of purging a sick horse are so slow in operating, that, in many cases, they do no good. I send you a very simple recipe, with which some of your readers may not be acquainted, which I have never known to fail, and regard as the best and simplest. I saw it many years ago in the American Farmer, and have tested it:—Take a piece of chalk about the size of a walnut, pound it in a mortar, or wrap a rag around and reduced to powder with a hammer or anything else; put the powder into a bottle; pour common vinegar into the bottle until the effervescence prevents your pouring in more, and (having the horse ready) drench him with it. But little vinegar can be got into the bottle the first time, so that you will have to pour more into it and drench a second time. Ordinarily a pint will do. If it does not operate in five or six minutes, persevere in the dose, and in a very short time the animal will be well again."

**LIME FOR HORSES AND CATTLE.**—A writer in the American farmer recommends the giving of small quantities of lime to horses and cattle, as a preventive and cure for bots and murrain. Having a sick horse which he was unable to cure by other means, he gave him a table spoonful of lime slacked, three times a week, in his feed. After two weeks the horse passed off bots in large quantities, and recovered. Bots put into lime died in forty-eight hours. He feeds it to cattle by mixing it with their salt, and allowing them always to have access to it. Since he adopted this course, he has lost no animal by murrain, though he lost many before.

**STEAM POWER.**—A pint of water may be evaporated by two ounces of coals. In its evaporation it swells into 216 gallons of steam, with a mechanical force sufficient to raise a weight of thirty-seven tons a foot high. The steam thus produced has a pressure equal to that of common atmospheric air; and, by allowing it to expand, by virtue of its elasticity, a further mechanical force may be obtained, at least equal in amount to the former. A pint of water, therefore, and two ounces of coal, are thus capable of doing as much work as is equivalent to seventy-four tons raised a foot high. The circumstances under which the steam-engine is worked on a railway are not favourable to the economy of fuel. Nevertheless, a pound of coke, burned in a locomotive engine, will evaporate about five pints of water. In their evaporation they will exert a mechanical force sufficient to draw two tons weight on the railway, a distance of one mile in two minutes. Four horses working in a stage-coach on a common road are necessary to draw the same weight the same distance in six minutes.

The *Massachusetts Ploughman* says that Lamp Oil will kill warts on cow's teats.

**WOOL AND MUTTON.**—Two extraordinary shearings of twenty-four months old sheep were slaughtered by Mr. Smith, of Liverpool, last week. The best weighed 59½ lbs. per quarter; the other, 57½ lbs. per quarter; said to be the best of their age ever seen, taking their wool into consideration, for they were as thick in their hair as the best Downs. One sheared, three days before he was killed, 17 lbs. of wool, the other 15½ lbs; rough fat, 29 lbs. and 28 lbs. They were by a ram of the Lincoln breed, out of Great Western ewes. The two sheep, when dead, very much resembled the wonderful Cheviot sheep, bred by the Duke of Northumberland, and slaughtered last Christmas.—*M. L. Express.*

**IGNORANCE OF CITIZENS.**—In cities people are always brought up in total ignorance of, and blameable indifference for, country affairs. They can scarce distinguish flax from hemp, wheat from rye, and neither of them from barley. Eating, drinking, and dressing are their qualifications; pasture, copses, aftergrass, ining harvest, are Gothic words to them. If to some of them you talk of weights, scales, measures, interest, books of rates—to others of appeals, petitions, decrees, and injunctions—they will prick up their ears. They pretend to know the world, as though it were more safe and commendable to be ignorant of nature, her beginnings, growths, gifts, and bounties. This ignorance is often voluntary, and founded on the conceit they have of their own callings and professions. There is not a pettifogger, who, in his own sooty study, with his noddle full of wicked quibbles and destructive chicanery, does not prefer himself to the valuable husbandman, who praises God, cultivates the earth, sows in season, and gathers his rich harvest; and if at any time the rich hear talk of the first man, or the patriarchs or their rural lives, their order, and security, he wonders how there could be any living without attorneys, counsellors, judges, and solicitors; whilst those of another cast think they must be queer mortals without billiards, operas, cards, balls, coffee-houses, and ordinaries.

**CHARCOAL MOST EFFECTIVE IN THE GROWTH OF PLANTS.**—Mr. Barnes, of Brecon, says, "Charcoal is the most astonishing article to make use of for all purposes of cultivation, and especially for plants under artificial treatment. I judge from many years' experience of its use. My pine soil consists of nothing but charcoal and loam, without a particle of manure of any sort. Every plant under my care has some charcoal used about it. I never saw the plant that did not delight in it, and to heaths it is most especially acceptable." Mr. Stewart, gardener at Stradsell Hall, has exhibited to the Horticultural Society, some cucumbers grown in equal parts of loam and charcoal, without any manure. No stimulant could have given better fruit, so far as health was concerned.—*Engineer and Architect's Journal.*

The Earl Fitzwilliam has intimated to his tenantry, that he will pay half the expense for providing tanks for containing liquid manure, on the several farms held under his lordship. It is hoped there will not be a single tenant who will not avail himself of this liberal offer; and it would be well if some other landlords follow the noble lord's example.—*Doncaster Gazette.*

Cheerfulness keeps up a kind of daylight in the mind, and fills the soul with a steady and perpetual serenity.

There are more calamities in the world arising from love than from hatred.

FARMING FOR LADIES; OR A GUIDE TO THE  
POULTRY-YARD, THE DAIRY, AND PIGGERY.

BY THE AUTHOR OF "BRITISH HUSBANDRY."

London: John Murray, 1844.

On a careful perusal of this most interesting volume we should at once pronounce its author as peculiarly fitted for the office of popular instructor in rural economy. Evident research, and consequently great information is here before us. Nothing contained in it is unsuited to the highest intellects, neither is it above the comprehension of the most humble; it is, to use his own words, "neither intended for the mere cottager nor for persons of large fortune, but for those ladies in the middle ranks of life who study healthful domestic economy, either for their pleasure or the profit which it affords; though, in saying this, we may justly add, that a cottage housewife might gather useful hints from its contents, and that a duchess would lose nothing by its perusal." As one intimately acquainted with the doctrine of household avocations, he deals with every subject in a practical way, and gives his readers a collection of facts, not only highly interesting, but useful. The style in which it is written is graceful, and abounds in anecdotes explanatory of the subject under consideration. The author has rendered his countrywomen an invaluable service by the publication of this little volume and we venture to predict that it will, before many months, run through very many editions. "In London the common prices of poultry are generally so high, that people of narrow income, if living in town, can seldom put any on their table. Fortunately, however, the taste is now growing general amongst persons who are occupied in trade and professions of getting a box or villa for their families in the outlets; and if to their garden be added a paddock for the feeding of a cow, with sheds for the accommodations of a pig and poultry, in the manner of a little farmery, or even for cooks and hens, it is inconceivable how much it would add to the luxuries of the table, without at all increasing the expense: the most illustrious lady in the land, THE QUEEN, sets the example. Those residents at Windsor who are in the habit of taking an early morning walk, to enjoy "the cool, the fragrant, and the silent morn," in the splendid demesne, proudly crowned by its ancient castle, must have often seen two persons in plain attire, tripping lightly across that pleasant meadow called "Datchet's Mead," in order to visit a farm at the extremity of the Home Park. These persons are her Majesty and Prince Albert, pursuing their way to the dairy and poultry-yard; and in their progress sporting with their infants, who are either mounted on their piebald ponies, or driving their well-trained goats in a phaeton. It is impossible to witness the unaffected enjoyment of the royal couple in this domestic excursion, unalloyed as it is by any restraint of official etiquette, without feelings of extreme pleasure, as a bright pattern to people of the highest rank, and if copied, would reflect credit upon those of a humbler station.

Upon perusal we promise our fair readers that "Farming for Ladies" will be found to suggest methods for a serious saving in domestic economy. People are constrained, now-a-days, to open their eyes to their true interest; and if upon reflection, the "fairest of creation" can find that, not by labour, but *mind*, they can assist in bearing the burthen and heat of the day, here is a wide field now presented, where the acquisition of practical and scientific knowledge can be attained, and recreation enjoyed by the old, while "to the young (by the tenderness necessarily bestowed on the animals committed to their care), it engenders a kindly feeling towards the whole creation, as it springs up insensibly in their youthful bosoms, grows with their growth to the manifest improvement of their dispositions, and thus increases all the heartfelt joys of a beloved family."

**DROP CAKES.**—One quart of milk, a large tea-spoonful of saleratus, dissolved in a cup of cream; to which stir in flour very smoothly until a thick batter is formed. Then dip your spoon in milk and with it place pour batter at short distances in a buttered pan. Very delicate, made entirely of cream, either with or without eggs.

MINERAL MANURES.

Of all the manures termed mineral, those that come under the denomination of *sulphates*, or those in which the mineral base is combined with sulphuric acid, are perhaps the most important. Of these, the sulphate of magnesia, (Epsom salts,) sulphates of potash and soda, and sulphates of lime or gypsum, are the most common and useful.

The action of the sulphates is most conspicuous on the cultivated grasses, leguminous plants and the roots; on grains they do not produce results as decisive, though occasionally instances of great benefit from their use may be adduced. The chemical analysis of plants, carried on so successfully by the German experimenters, by determining the constituents of the several cultivated plants, has shown which of the mineral manures are the most necessary for each; and the results thus arrived at, are the more satisfactory, as they are found in the main to perfectly agree with those obtained in practice. To show this, we here append a table, for which we are indebted to Johnston's Chemistry. It shows the constitution of the ash of several grasses and clovers, so far as relates to the sulphates. One hundred parts of the ash of each was examined.

Sulphates.	Red		White	
	Rye Grass.	Clover.	Clover.	Lucerne. Sainfoin.
Potash,.....	8-81	19-95	31-05	13-40 20-37
Soda,.....	3-94	5-29	5-79	6-15 4-37
Lime.....	7-31	27-80	23-53	48-31 21-95
Magnesia,.....	0-90	3-33	3-05	3-48 2-88
Sulphuric acid,...	3-53	4-47	3-53	4-04 3-41

Great as is the effect of the sulphate of lime on white clover, farmers we think will generally agree that it is exceeded by the action on red clover, a result to be expected from the table; and still greater is the effect on lucerne, as some limited experiments made by us have demonstrated. This, too, the analysis would indicate. The sulphates of potash we have never used, but the European journals declare the result of experiments on plants to conform to the analysis, and that as a dressing for white clover, it is superior to the sulphate of lime. Another useful hint may be taken from this table, which is that a quantity of the sulphates which would be sufficient for one kind of plant, would be insufficient for another. Thus compare rye grass and clover, and it will be seen that a top dressing which would cause the first to thrive, would scarcely be felt by the latter. So far as regards the common grasses, rye grass, herds grass, timothy, &c., the nitrates are more efficient in promoting their growth than the sulphates, while for the clovers and their kindred plants, the sulphates are to be preferred.

If, as Prof. Johnson supposes, the value of the sulphates is to be mainly attributed to the sulphuric acid they contain, it would be important, in forming an estimate of their respective values as a manure, to ascertain the several proportions of sulphuric acid. This may be seen in the following table, in the first column of which the proportion of acid is shown, and in the second, the quantity of each that a gallon of water at the ordinary temperature will dissolve. Thus 100 lbs. of burned gypsum contain as much sulphuric acid as

125 lbs. common gypsum,	Gypsum burned 1-6th lb. to the gallon
125 " sulph. of potash,	" " uburn, 1-4th "
104 " " soda dry,	Sul. of potash, 1-2 "
255 " " " crys.	" of sc. dry, 1-2 "
181 " " " magnesia,	" " crys. 3-1-2 "
	" of magnesia, 4 "

These tables prove that the sulphate of lime is much the cheapest and best application of the sulphates, admitting that the value depends on the acid alone; and if we adopt the opinion of Liebig that its principal value is found in its being an absorbent of ammonia, the result will not be essentially different. Its effect too, will be the most durable; as the small quantity soluble in a given quantity of water, will prevent its speedy solution and disappearance in the soil. Where, however, plants are obliged to rely mainly on dews instead of rain for their moisture, a dressing of sulphate of soda or magnesia would be preferable, as more readily soluble. The better way then of applying the sulphate of soda or potash, would be in solution, every week, and sprinkled over the growing crop from a water cart. Prof. Johnston thinks 100 lbs per acre would be sufficient.

Considerable difference of opinion has existed among farmers as to the best time for the application of sulphate of lime to the soil or crops. We have found the most benefit when applied directly to the plants, but whether applied to the soil or the crop, we have rarely if ever found it fail. We prefer using it after the plants are well advanced, and this opinion would seem to receive countenance from the experiments instituted by Prof. Korte to test this point. The plant was clover, and it was found that the produce of different parts of the same field was in the following proportions:

Undressed,.....	100 lbs.
Top dressed, 30th of March,.....	132 "
" 13th of April,.....	140 "
" 27th of April,.....	156 "

This result would seem to confirm the opinion that gypsum on the leaves of plants, operates as a carbonate, by the absorption of ammonia.

**BURNT RHUBARB IN DIARRHŒA.**—It may be useful to know the value of burnt rhubarb in diarrhœa. It has been used with the same pleasing effects, for more than twenty years. After one or two doses, the pains quickly subside, and the bowels return to their natural state. The dose is from five to ten grains. The manner of preparing it is to burn the rhubarb powder in an iron pot, stirring it until it is blackened; then smother it in a covered jar. It loses two-thirds of its weight by the incineration. It is nearly tasteless. In no one case has it failed where given. It may be given in port wine, milk, and water.

## The Canadian Agricultural Journal.

MONTREAL, AUGUST 1, 1844.

We hope the farmers have by this time, cleared all their crops, and pastures of those most troublesome, and injurious pests, the weeds, in whatever form or size they grow. There is nothing in Canadian farming so injurious and discreditable to the farmer as the abundance of weeds that are seen in the crops in all directions, a traveller may pass. It must be manifest that large weeds that generally tower over the crop, must thrive at the expense of the crop, and draw to themselves a large portion of the nutriment in the soil which the cultivated crop should have. Indeed there is scarcely any excuse for allowing weeds to grow, come to maturity, and scatter their seeds over the neighbour's lands, who might be disposed to keep his land clear, and free from weeds. In fact, no man is justified in allowing weeds to grow, and mature on the lands he chooses to occupy. We have many years endeavoured to persuade farmers how necessary it was to destroy weeds wherever they appear in the lands they occupy. No farm can be under good management where any weeds are suffered to grow, even in waste places. It is not sufficient that the crops be free from them, but the waste spots, if any there be, and the pastures, road, drain and fence sides, must be free also from them. It is certainly true that a large portion of the nutriment of the soil of Canada is taken up by weeds, and lost to all useful purposes. It is time that some change for the better should take place, that would put an end to this evil.

We wish it was in our power to persuade the leading men of all political parties in this province, to unite their influence and talents in the work of agricultural improvement, on the necessity and importance of which there can be no mistake or difference of opinion. We are firmly persuaded that, to effect this, and to ensure the prosperity of agriculture, both of which it is perfectly possible to accomplish, would produce more of permanent comfort and happiness, in the families and at the fire-sides of the Canadian population of all classes and origins, than will ever be attained by party strife and agitation. We disclaim any interference in party politics, but we would urge upon party men the example of party men in England, who all unite, heart and soul, to forward the improvement of agriculture. There would be patriotism indeed in men of all parties uniting in the good work of instructing, and improving the condition of their fellow countrymen who require it. We are satisfied that the class to which we are proud to belong have nothing to gain by party strife and agitation, and therefore we would urge all men who are true friends of the agricultural class in Canada to be united in their endeavours to forward the improvement and prospects of our agriculture. There is not the shadow of excuse for men of any party to neglect this paramount duty which they owe to their country. The education of the people, and their instruction in the art of agriculture, and other useful arts, should not be influenced or retarded by parties or politics. What men prize as the comforts and conveniences of existence, are dependent upon, and can only be attained by the people being perfectly instructed in the arts by which they obtain their living, and that man or men who shall be instrumental in producing this perfection in the arts, by which people obtain the means of existence, will deserve the lasting gratitude of his country, what few politicians ever can have pretensions to.

It may be considered by some that the actual manure that is mixed up in compost heap, might as well be applied to the soil without this trouble; that a less quantity would answer, and all the labour of carting, &c. be saved. We are of a different opinion, however, and believe that any given quantity of good manure would not top-dress meadows to the same extent, or produce any thing near the same improvement, that the same quantity of good manure would do after mixing in a compost heap. Of course, expense will be incurred in carting to the heap, and in again carting the compost to the field where it is to be applied as top-dressing. Any clay mixed in compost will become good top-dressing on grass land. It refreshes the soil, and is very beneficial to the roots of the grass. The small quantity of manure applied in compost to an acre of land, would, if applied alone, produce very little improvement, but in compost it will do much good and greatly increase the crop. On grass land compost can be most beneficially applied.

## AGRICULTURAL REPORT FOR JULY.

A considerable quantity of rain fell in the beginning of the month, and indeed throughout the month we had rain frequently, but on the whole the weather was very favourable for the growing crops, with, perhaps, the exception of potatoes, in low or flat situations, which may have suffered from too much moisture. We do not recollect having seen the crops look better than at present, for many years past. The barley, peas, and oats, where sown early, are very promising. Some fields of barley are being cut down as early as the 22d of July. The wheat is good in many situations, and not much injured by the larvae of the wheat-fly, but we are sorry to hear that this is not general. The fly has done extensive injury in some fields, though we cannot report at the present moment what proportion of the crop has suffered. We believe, however, that a large quantity of wheat will be raised in Canada East this year, and we trust that, by judicious management with regard to cultivation and seed next year, the quantity of wheat that may be raised will greatly exceed, what it has been for many years past. We have observed that if the weather is windy about the time wheat comes into ear, it has a great influence in saving the crop from the fly—and this year the wheat that came first into ear, about the end of June, has been less injured by the fly, in consequence of windy evenings about that time. We understand that the wheat that has suffered most injury is that which was sown between the 1st and 21st of May. We believe what was sown subsequently to that period is safe—and if it continues free from rust it will be a good crop. There is much of what is known as three months wheat that will not be subject to rust, and it is this variety that should be sown, if possible, until the destructive insect the wheat fly, shall have left us altogether. On adopting proper precaution, we may manage with our wheat so as to insure a crop, but it is necessary to be cautious as to the seed sown, and period of sowing, so that as little risk as possible may be incurred, as the loss of a crop to a farmer, on land sown with wheat, is very considerable. We would strongly recommend any farmers who have seed wheat this year, that is proved to escape the fly, and be proof against rust, to preserve it all for seed. We shall do so, and hope to be able to supply seed for a considerable extent of land next year.

We would recommend those who have summer-fallow, to cultivate it at this time, and burn off all weeds, grass, and a part of the clay which may readily be done, and it will be a valuable means of manure for the ensuing crop, if judiciously managed. For any one disposed to sow fall wheat, summer-fallowed land is the very best preparation of the soil, and the wheat should be sown as soon as possible, lightly ploughed in. The seed should of course be steeped in a strong brine or in urine, stirring it frequently, and skimming off all light grains. This, if properly done, will prevent smut in the crop. A small quantity of blue vitrol

dissolved in the steep is said to have a good effect. The farmer who is not disposed to sow fall wheat, may reserve his summer fallow for wheat in the spring, for this it will be well adapted, or for barley. Barley and peas are likely to produce abundantly, and for the latter there should be encouragement to export, if freight was reasonable. The fact is, however, that the shipping charges, &c. amount to more than the merchants are disposed to pay the farmer for either peas or barley, and this prevents the exportation of these grains—very much to the prejudice of the Canadian farmer. The crop of oats is likely to be good, the season being favourable for it. Indian-corn, where the soil was suitable, has greatly improved in the last month, but much of the seed sown has failed in consequence of wet and cold in the spring. It is only in high and dry soil, that this grain should be cultivated, and if this precaution were adopted, good crops of corn might be generally raised in Canada. Potatoes look well, where the crop has not suffered from excessive wet, or dry rot in the seed, and we cannot exactly say to what extent this damage exists, but believe it is not very considerable. Turnips are not a crop cultivated in Canada, to an extent to deserve any particular notice. We may make the same remark with regard to carrots, parsnips, and mangel wurzel. The hay crop is considered to be a fair average generally, and on good soil, abundant. We hope there may be a fair demand and remunerating price for it. We have repeatedly referred to the great waste of time, and injury to men and horses, that is the consequence of allowing the Hay Market to continue until night. We cannot see why this Market should not close at three o'clock, at the latest. If it was known to close at that hour, buyers and sellers would be aware of the fact, and make bargains before that hour. The buyers wish to exhaust the patience of the sellers by keeping them standing on the market place, with loads upon the horses from six to nine hours, and often more than this, in order to reduce the price of hay, and buy it often for less than the cost of cutting, carting to market, tolls, weighing, &c. If the prices are to be low, they might as well be determined at once, and the time wasted, and injury to men and horses, prevented. If our City authorities do not consider it very much against their own interests, we would very respectfully submit the expediency of adopting some regulation that would close the Hay Market at three o'clock, providing a good yard and sheds, for the hay unsold at that hour, and making a reasonable charge for the accommodation. Indeed, we think the charge for re-weighing the hay that remains unsold, would be ample remuneration for the accommodation of a yard and cover for the unsold hay. The London hay-market is closed at three o'clock, and the horses are generally removed from the loads of hay when standing in the markets, the hay is also covered with a tarpaulin to save it from rain while in the market. There can be no doubt that judicious regulations with regard



to the time of closing the market, and storing the unsold hay, would prove satisfactory to both buyer and seller. We regret to see the neglect of farmers to weeding. In every part of the country weeds are allowed to grow, and flourish to maturity. It is certainly a great loss, and very discredit to our agriculture. It would not be very expensive to keep down weeds, if farmers would only resolve that they should not be allowed to prevail, and occupy the place of useful plants. If cut down when green they might be converted into manure. We would strongly recommend the increase of our pasture lands, and their improvement. We might raise as good beef here as in the United States, and it would be more profitable to grow our own beef and export it, than to allow our markets to be filled up with foreign beef for exportation. We have seen as good pastures here, where the land was good and well managed, as in any country, and it will now be the fault of the farmers, if we do not export beef, butter, and cheese in abundance. Our present laws, if they are maintained, will give some degree of encouragement, and protection to agriculture, but if there is no certainty that they shall be maintained, farmers will not have confidence to introduce a system, and we shall go on in the old way, and allow foreigners to derive all the advantages that should be our own as a British Province.

The Orchards have suffered much by vermin this year. Apples must be scarce.

At the present moment the weather is beautiful, and the crops generally promise an abundant harvest, so that the prospect of the farmers, and of the country is very encouraging, and there is every cause of thankfulness.

Côte St. Paul, July 31st.

The fly, and lice in sheep, may be prevented by a strong decoction made from tobacco, and applying it frequently during the summer months, when these insects are most troublesome to sheep, when the wool is short. Soon after shearing, the tobacco water may be applied with a sponge all over the body, but when the wool becomes long in the fall, the wool should be divided with the fingers, and the tobacco water applied from a bottle, with a part of a goose quill inserted in the cork through which the water may be squirted along the lines opened in the wool with the fingers. The necessary strength of the decoction may be ascertained by applying it to the insects; if it is sufficiently strong it will immediately destroy their vitality.

It should be well understood by farmers, that the best protection against drought which they have in their power, is stirring the earth frequently to keep it light, loose, and mellow, and we believe that sowing grain crops in drills, and hoeing them, is a great cause that the crops are better than when sowed broad-cast. It is very probable that any cultivated crop would pay

amply for hoeing, and stirring up the soil frequently between the plants—but of course the crop, of whatever species, must be sown in drills to admit of this. According to the reported results of experiments made, when land that had not been ploughed or stirred in any way was dry ten inches down, land by the side of it, ploughed and frequently hoed, was moist within a few inches of the surface in a very severe drought. We cannot give more useful information on this subject than by copying an article from the British Gardener's Almanack, which may be applicable to either the garden or field culture. The nearer we approach, in field culture, to that which is found best for the garden, the more certain we will be to cultivate well:

We have been favoured with the following Report by Robt. A. White, Esqr. who kindly exerted himself to obtain subscribers to this Journal, when lately visiting Perth and other sections of the Province. We have been informed by other parties, as well as by Mr. White, of the great exertions made at Perth, by the Agricultural Society there, to improve the stock and agriculture in that vicinity, and we believe that in the neighbourhood of Perth, agriculture and stock are in as high a state of improvement as in any part of Canada. We give the Report as sketched by Mr. White, but we hope soon to have an opportunity of seeing that part of the country:—

The Perth Agricultural Society, established 8th May 1841, by a few enterprising gentlemen of Perth, and by whose perseverance the same has flourished, and has been of vast benefit to that part of the country. Henry Glass, Esqr. is President.—The Society has spent about £300, in the purchase of bulls, sheep and swine, imported animals—Bulls, short horned Durham and Ayrshire breeds; sheep, Leicester, and the pigs Berkshire. Visited Mr. Malloch's farm (who is a Lawyer and Judge of the District,) where we saw the Society's Bull, Monarch; he is an imported, short horned Durham, which cost the Society, £75. His equal is not to be found in British North America; he stands full 16 hands high, measure, 9 feet from the root of horns to rump, and weighs upwards of 24 cwt. aged 6 years.—He is of herd book origin, but his pedigree the Society has never been able to procure. All his stock is of the finest description.

Mr. M. has also, some good Leicester sheep and Berkshire pigs, but his young Ayrshire bull, Messenger, raised from another imported bull which cost the Society £50, promises to be a first rate animal. He is out of his Ayrshire cow Favorite, a handsome creature.

Mr. M's farm is adjoining the District farm and contains 46 acres; stands the proprietor now about £1500. Fences cost about £300 and drains £100.

Barn 55 x 35, cellar whole size barn, floor for roots' stables in one end; sufficient gutters to convey the liquid manure to a cistern.

We have much more interesting matter furnished to us by exchange papers, and from other sources, than we are unable to give place to in our journal at its present size. We must, however, keep it at this size until our subscription list will justify us in enlarging our sheet.

We would propose to issue the Journal once a fortnight at this size, or once a month at a double size or 32 pages, provided subscribers could be had. We would also give drawings of animals, farm-buildings, and implements, but all must depend upon our obtaining subscribers. We have as ample means at our disposal to publish a useful journal for farmers as are in the possession of any individual on this continent—Let us only have support and we engage to publish a journal which shall be equal to any other in practical usefulness. It is not creditable to such a city as Montreal and the surrounding country, that there would not be sufficient encouragement for one Agricultural Journal. Our journal may not be deserving of the support we claim for it, but the fault rests with those who withhold their support. Farmers, though they may be persuaded that they require no more instruction on the subject of agriculture, might wish to impart some of their practical knowledge to their brother farmers, who certainly do require instruction, and the columns of our paper have been constantly offered for communications of this nature that might be sent to us. We make the best selection in our power, but have not space to publish them to the extent we desire. We carefully abstain from publishing any of the exaggerated statements, we occasionally meet in exchange papers. We endeavour that no statement shall appear in our paper that cannot be reconciled with practical experience, and that no plan of cultivation or management shall be recommended that may not be adopted easily and advantageously by farmers. From the means of selection in our power, we believe it is possible for us, even in one number, to give insertion to matter that might be new, and of more value to the best informed practical agriculturist, than the amount of subscription for a year. The more we have been able to read, and to see of the world, the more clearly we can perceive how very ignorant we are, and how much we have to learn. There are few publications in which something may not be found both to interest and instruct the best educated men—and now that so much new information is in circulation on the science and practice of agriculture, there are not many farmers, however great their skill in the art may be, that might not derive benefit from what is published in a Journal of Agriculture in a year.

Very few people ever consider in detail the expenditure of labour required from the garden labourer when digging. It is a labour above all others calling into exercise the muscles of the human frame; and how great is the amount of this exercise may be estimated from the following facts. In digging a square perch of ground in spits of the usual dimensions (7 inches by 8 inches) the spade has to be thrust in 700 times, and as each spade full of earth, if the spade penetrates 9 inches, as it ought to do, will weigh on an average full 17 lbs. 11,900 lbs. of earth will have to be lifted; and the customary pay for doing this in England

is 2½d. As there are 160 perches or rods in an acre, in digging the latter measure of ground, the garden labourer has to cut out 112,000, spadeful of earth, weighing in the aggregate 17,000 cwt. or 850 tons, and during the work, he moves over a distance of 14 miles. As the spade weighs between 8 and 9 lbs. he has to lift, in fact, during the week, half as much more weight than that above specified, or 1,278 tons. An able-bodied labourer can dig 10 square perches in a day, at the depth above stated. For the ordinary purposes of tillage, a much less depth would answer, though the greater the depth, and the more perfect the work of digging is executed, the better it will be for any crop that is to be sown in land so prepared. In Ireland, the land intended for flax is generally dug with a spade, and the poorer classes of farmers prepare land after potatoes, for oats and barley, by digging it with a spade, and raise good crops by this mode of cultivation. Labour is however too expensive in Canada, to justify this mode of cultivation, except in very rare instances, or for flax and hemp, and this mode of cultivation would be the best and most suitable for them, as the soil requires to be broken and pulverised for these plants. We do not know any crops that would be more likely to pay for their cultivation, provided they were cultivated as they should be, to be produced in perfection, than flax and hemp. Both seed and fibre would find a certain market and fair price, and would be articles of exportation. We have long endeavoured to excite interest respecting the cultivation of these plants, but hitherto without any success. We repeat now, what we have so often stated, that the permanent improvement and prosperity of our cities and towns, cannot be secured by any other possible means than by the productions of the country being abundant and valuable, and such as will give a surplus that can be exchanged for the foreign productions we may require, for our comfort and convenience. This is a plain proposition—that we must produce here, what will give us, or purchase for us—all we may require, and if we do not do this, it will be useless to import merchandize, that we cannot purchase or pay for. It is a valuable production of our country, that alone can secure the prosperity of all classes in Canada.

The following notice of a work about to be published by Mr Colman, an agriculturist from the United States now in England on an agricultural Tour is likely to possess much interesting information, and will be a valuable work for his countrymen.—We copy from the *Mark Lane Express*.

Of the energy with which agricultural improvement is pursued at this time in England, and of the importance of agriculture, he thus writes;—

“England presents at this time a more brilliant example than any age or country had before witnessed of the application, I will not say of science, for that would not comprehend the idea which I wish to express, but the application of mind to agriculture. The practice of agriculture, and the philosophy of agriculture, are matters of uni-

versal interest. Men of all grades and conditions are laboring in this great cause and are asking for the how, and the why, and the wherefore. The brightest intellects are directing their talents to agricultural inquiries; and the humblest, in their humble, but not inefficient way, are seconding their efforts. So many minds concentrating their rays upon the same point, they must be sure to illuminate it with an extraordinary brilliancy;

"Agriculture is now getting to be recognised as the commanding interest of the state; so it must ever be, as lying at the foundation of all others. Few persons are apprised of their obligations to agriculture; and it is difficult to estimate the extent of these obligations. Every man's daily bread, his meat, his clothing, his shelter, his luxuries, all come from the earth. The foundation, or, as the French would say, the *materiel* of all commerce and manufactures, is agriculture; and its moral influences are innumerable and most powerful."

Speaking of the state of "English Agriculture," he says—

"The condition of practical agriculture in Great Britain, as far as I had opportunity of observing it, must be pronounced highly improved. Many parts of the country present an order, exactness, and neatness of cultivation greatly to be admired; but a sky is seldom without clouds, and there are parts of England where the appearance is anything but laudable, and where there are few and very equivocal evidences of skill, industry, or thrift. We are often told in America, that England is only a large garden, in which art and skill and labor have smoothed all the rough places, filled up the hollow places, and brought every thing into a beautiful and systematic harmony, and into the highest degree of productiveness. This is not wholly true; indeed, although there are many farms to be altogether admired for the degree of perfection to which their cultivation has been carried, yet there are not a few places where the indications of neglect and indolence and unskillfulness are but too apparent; and where, in an obvious contest for victory between the cultivated plant and the weeds, the latter triumph from their superiority both in force and number."

Mr. Colman is alive to the advantages resulting from certainty of tenure; speaking of the frequency with which property changes hands in the United States, he says—

"Like short leases, it has an obvious tendency to hinder or discourage improvements of a substantial and permanent character, involving a large expenditure."

He expresses in glowing terms his admiration of our parks, both public and private; and he sympathizes with the national "veneration for old trees," in most enthusiastic language.

His opinion of the land-owners of England, as landlords, seems to have been formed from those with whom he came immediately in contact, and who, from their being of the class who take pleasure in practical agriculture, would most likely be amongst the very best and most considerate to their tenantry.

In a late debate in the House of Commons on the protection of agriculture, Sir Robt. Peel made the following observations, and we copy them, considering ourselves as a province of the British Empire, and entitled to the same protection for our agriculture, that the farmers of the British Isles enjoy for theirs. We would strongly recommend these observations to the attention of our Canadian Legislature.

"Sir, I defend protection to agriculture. I defend it on the same principles and to the same extent that I defended it before. I am not now going to express any new opinions on the subject. Speaking generally, and not in the abstract, I think that the agriculture of this kingdom is entitled to protection—entitled to it on considerations of justice and sound policy. I consider that there are special and peculiar burdens on land. I do believe that the policy of that Act which, in imposing

burdens for the relief of the poor, subjected the profits of trade to that relief—a policy as regards trade that has not been acted on—I do believe, I say, that on that account agriculture is entitled to protection. I do believe also that it is entitled to protection as a compensation for the restrictions which are placed on the employment of capital in it. These circumstances give it in justice a clear title to protection, as a special and peculiar case. But I maintain that it is likewise entitled to protection on considerations of sound policy. I do not uphold it on this ground for the good of the landlord, or for the good of the tenant, or for the good of the labourer merely; but I uphold it on the ground that it is for the good of the community at large."

And with reference to the doctrines of the political economists he made the following excellent observations:—

"According to the strict principles of political economy, which I cannot contest with you in abstract matters, it may be mathematically true that the population, say of agriculturists, from which protection is withdrawn, should apply themselves to other avocations on the cessation of that to which they have been brought up; but I ask you, is that practicable? We are not here as philosophers, dealing with the abstract quantities. but we are here as legislators, dealing with the interests and feelings, and prejudices and passions, of our fellow men. Are we afraid to shirk the question? I speak of tenants as well as labourers. It is no doubt true in theory that the labourer from Kerry or Galway may seek work in the mills of Manchester or Stockport, but will he find it? and if he does, will he be able to perform it? Literally, the proposition is true; but it is false in fact. The small farmer, whose father and grandfather have been, as he is, engaged in the cultivation of the land from whence he is driven, for the want of protection, how can he accommodate himself to the new employment for his labour, which will be then found only in towns. Remove protection, and you will destroy at once the application of capital to the land. You may rejoice, as philosophers, at applying the principles of political economy, in all their strictness and rigour, to the social condition of the country; but if by doing so you endanger the happiness of the nation and the peace of the people, we will obtain but a sorry result."

We have selected the following from the report recently made to the meeting of the Royal English Agricultural Society, by the farmer of one of its members. The turnip-fly is a most destructive insect, even in Canada, and as the means proposed to destroy them or prevent their ravages are very simple we recommend them to turnip growers. Steeping the seed in a strong decoction of tobacco previous to sowing we have found a good plan. It is well to force the plant forward to the rough leaf as soon as possible by ample manure application.

I took an old sack, had it ripped open into the form it was when cut from the roll of canvas, had it nailed to a pole, the thickness of a pitching-fork handle, leaving the pole about eight inches at each end, longer than the sacking. I then had one side smeared over with tar, made two men, one at each end of the pole, draw the sacking (the tarred side downwards) regularly over the field, letting it sweep the ground, carrying it at an angle of about forty-five degrees, fresh tarring with a brush every "bout," or oftener if required; on examination I found great numbers of flies sticking to the

tared sacking; I repeated the operation once a day, for four days, and saved the plant of turnips. Since that time, when I have discovered flies on the plants, I have pursued the same plan, and have not, from that time till this, had occasion to plough up a single acre from the effects of the fly. I have several years past used gas-tar, in consequence of its leaving a stronger scent in passing over the plants than common tar, and which prevents the flies that are not caught from devouring the same. I do not mean to assert that once going over a field will prevent the destruction of a crop; it must be persevered in according to the strength of the fly and the state the land is in. To force the plant into rough leaf, with good farming, and this preventive, I do believe if a farmer lose his plant of turnips by fly, it is in a great measure his own fault."—Mr. Jas. Sherring, farm-bailiff to Mr. Henning, Frome-house, Dorchester, Dorset, also favored the Council with the following communication on the same subject:—"A great deal has been published, and many experiments tried, to prevent that most ravenous of all insects, the fly, from devouring that valuable root, the turnip. After twenty years' experience with the greatest success, I beg to submit to your notice the following recipe:—A month at least before I begin sowing my turnips, I purchase the different sorts of seeds I may require; I provide vessels for the reception of each, adding to every 20 lbs. of seed half-a-pint of linseed oil, taking care to have it well mixed; I add 1 lb. of the flower of sulphur; every morning, I have the whole rubbed between the hands to get the seed in a proper state for drilling: the drillman must be apprised of what seed he has to use, or he will not drill a sufficient quantity, as the sulphur will choke the cups; this of course must be looked to. As I before stated, I have practised this experiment for the last twenty years, without a single failure, and I believe I can safely say without losing a plant. The early part of last season the fly made great ravages in some parts of this country, but not one did I perceive in a field of my employers. For the benefit of those of my agricultural friends that may be inclined to try the experiment, I lay the same before your most honourable Society, trusting it may be tried with the greatest success."

An Imperial bushel of potatoes weighs, when washed or cleaned, 56 lbs. but 4 lbs. additional is allowed if they are not washed. They do not give heaped measure in England. We wish the same rule were adopted here, namely—the Imperial bushel, and the same regulation of measuring or weighing they have in England. It would be beneficial to both buyer and seller to have these regulations in force in Canada. It would be much better to be obliged to give a certain weight for the bushel, whatever was measured by it.

According to the English Gardener's Almanack, the best size for flower-pots is 8½ inches in diameter and 8 inches in depth, or the size pots known at the London Potteries as 2½'s. It is also recommended that instead of a flat bottom, it should be pushed inwards like that of a wine-bottle and six small holes be made round the lower edge of the bottom to let water escape. Nothing is more injurious to flower roots than stagnant water, and in order to avoid this, the earth for potting should not be sifted; but, so far from the small pebbles being taken out, a layer of small fragments of

brick should be placed in the bottom of each pot, to act as an under-drain. It is recommended that garden pots should be thickly painted on the outside—if they are of common brownware. Stone and china pots are said to be infinitely the best, as they keep the roots more uniformly moist and warm, not being as porous as the common pots. There is another plan recommended to improve the drainage of pots, by having one pot within another, having its bottom indented and pierced, but not touching its outer pot by half an inch all round. The bottoms of pots should be raised a little so as to let the water escape through the holes in the bottom. Drainage is most essential; the water may pass through the earth in the pots but should not be allowed to stagnate in the bottom of the pot. It is the same in field cultivation.

In this and the following months, the hoe, which should never be idle, ought to be even more than usually active. There is more than one reason for this, besides the just agricultural axiom that,

One year's seeding  
Makes seven years' weeding.

And among them is the fact, that it facilitates the access of the atmospheric air and moisture to the roots of the plants cultivated. No plant flourishes unless the air penetrate thoroughly to its roots, and this is one of the causes of subsoil ploughing and trenching ground being so extremely beneficial to the crops grown upon it. This is now being carried out extensively in practice, but it was long since suggested by the experiments of Du Hamel. He remarked, "that the lateral roots of plants are always vigorous in proportion to their vicinity to the soil's surface." The same acute phytologist observed, "that sap roots never thrive so well, other circumstances being the same, in a stiff and wet soil as in one that is dry and friable," (*Phydes Arbres*, i. c. 5,) and this led to experiments demonstrating that the roots of plants are benefitted by the application to them of oxygen gas, one of the principal constituents of the atmosphere. Loosening the soil necessarily facilitates its admission, but it also promotes the access of moisture. This abounds in the atmosphere most during the hottest months, and it is absorbed and retained most abundantly by a soil which is in the most friable state. Professor Schuber found, that 1000 grains of stiff clay absorbed in 24 hours only 36 grains of moisture from the air; whilst garden mould absorbed in the same time 45 grains; and fine magnesia 76 grains. Then, again, pulverizing the soil enables it to retain the moisture absorbed better. This I demonstrated some years since, and the reason is obviously because a hard soil becomes heated by the sun's rays much more rapidly than one with a loosened texture. The latter is better permeated by the air, which is one of the worst conductors of heat. I am glad to find my opinions confirmed by so practical and so intelligent a man as Mr. Barnes, Gardener to Lady Rolle, at Bicton Gardens, Devonshire. He says, (*Gard. Mag. Sept. 1843*), "I do not agree with those who tell us, one good weeding is worth two hoeings: I say, never weed any crop in which a hoe can be got between the plants; not so much for the sake of destroying weeds and vermin, which must necessarily be the case, if hoeing be done well, as for increasing the porosity of the soil, to allow the water and air to penetrate freely through it. I am well convinced, by long and close practice, that

oftentimes there is more benefit derived by crops from keeping them well hoed, than there is from the manure applied. Weeds, or no weeds, still I keep stirring the soil; well knowing, from practice, the very beneficial effect which it has."

"Raking the surface fine, I have almost wholly dispensed with in every department. By hoeing with judgment and foresight, the surface can be left even, wholesome, and porous; and three hoeings can be accomplished to one hoeing and raking. Much injury is done by raking the surface so very much. It is not only the means of binding and caking the surface, but it clears the stones off as well. The earth, in its natural state, has stones, &c., to keep it open and porous, &c. If the earth be sufficiently drained, either naturally or otherwise, and the surface kept open, there is no fear of suffering either from drought or moisture." After all that I have written on the subject, I need scarcely add that I entirely agree with Mr. Barnes in thinking the hoe one of the gardener's best friends; and, as it always must be a more frequently used implement than any other, what is the best form of its construction deserves some consideration. The *handles* should never be made of heavy wood, for this wearies the hand, and is altogether a uselessly heavy weight thrown upon the workman. It is merely the lever, and every ounce needlessly given to this, diminishes, without any necessity, this available moving power. The best woods for handles are birch or deal.

For earthing up plants, broad blades to hoes are very admissible, and they may, without objection, have a breadth of nine inches; but this permission of breadth does not extend to hoes required for loosening the soil and destroyed weeds. These should never extend to beyond a breadth of six inches, and the work will be done best with one two inches narrower. The iron plate of which they are formed should be well steeled, and not more than one-sixteenth of an inch thick. The weight necessary should be thrown by the workman's arm and body upon the handle, and the thicker the blade, the greater is the pressure required to make it penetrate the soil. It should be set on the handle at an angle of 68°. as this brings its edge, when used, at a good cutting angle with the surface of the soil, and the workman soon learns at what point most effectively to throw his weight, and holds the handle further from, or nearer to the blade, accordingly as he is a tall or short man. Mr. Barnes, of Bicton Gardens, whose opinions relative to hoeing I have already quoted, has paid considerable attention to the formation of this implement, and has favoured me with letter upon the subject, from which I will now give some extracts.

He employs nine sized hoes, the smallest having a blade not more than one-fourth of an inch, and the largest ten inches. The smallest are used for potted plants and seed-beds, and those from two inches and a half to four inches wide are used for thinning and hoeing among crops generally. These have all handles varying in length from eight inches and a half to eighteen inches, all the neck or upper part formed of iron, for the smaller sizes not thicker than a large pencil, and that part which has to be grasped by the workman is only six inches long, and "formed either of willow or some other soft light wood which is best to the feel of the hand; for hard heavy wood is cumbersome, harsh, and tiring." Each labourer works "with one in each hand, right and left." "The blade is made thin, and with a little foresight and activity it is astonishing how much ground can be got over in a short time." The handle has what is called a "crane neck."

"The crane neck allows the blade to pass freely and kindly under the foliage of any crop where the earth requires loosening; and the blade works itself clean, allowing the earth to pass through, as there is no place for it to lodge and clog up as in the old fashioned hoe, to clean which, when used of a dewy morning, causes the loss of much time in scraping and cleaning."

An industrious and virtuous education of children is a better inheritance for them than a great estate. To what purpose is it, asks a heathen philosopher, to heap up riches and have no concern as to what manner of heirs you leave them to? The question is worthy of more than a passing thought: let it be well considered by every American father—*Selected*.

**FARMER'S FOLLY.**—The *Sussex Express* says:—"On Thursday last a great number of rooks were shot on the estate of William Oliver, Esq., when one old bird was killed, having in its crop 19 large grub-worms, and 17 wireworms. However annoying these birds may be at times, this must be convincing proof that they are decided friends to the farmers."

**GOOSEBERRY CATERpillars.**—Dredge hellbore with a common dredger-box over the bushes, and it is an unfailling remedy for destroying these vermin.

**A HINT TO COFFEE DRINKERS.**—M. Pleischel states, from experience, that the infusion of roasted coffee acquires a far superior taste, and is more concentrated—consequently, that a larger amount of beverage can be prepared from the same quantity of coffee—by adding to the boiling water, just before pouring it over the coffee, one grain of crystallized carbonate of soda for every cup, or two-and-a-half grains for every half-ounce of coffee.

**TO PRESERVE APPLES, PEARS, &c.**—Take apples or pears, and peel them, then cut them into eighths, observing to extract the core; dry in a kiln or oven until quite hard. In this way fruit is kept in the United States for two years. For use, wash, the fruit in water, then pour boiling water on it, let it stand for a few minutes and use it as fresh fruit. The water forms an excellent substitute for fresh juice.

**TO HASTEN THE BLOWING OF BULBOUS-ROOTED FLOWERS.**—Nitrate of potash, 12 ounces; common salt, 4 ounces; pearlsh, 3 ounces; sugar, 5 ounces; rain water, 1 quart. Dissolve, and put a spoonful of this liquid into the flower-glass, then fill it with soft water. Change the water every nine days.—U. S. *Practical Receipt Book*.

**BUTTER.**—Is improved by working the second time, after the lapse of twentyfour hours, when the salt is dissolved, and the watery particles can be entirely removed.

**GAPS IN CHICKENS.**—May be easily cured by giving them small crumbs of dough impregnated with a little soft-soap; once or twice is sufficient.

**CURE FOR BOTS.**—Give the horse one ounce of slaked lime three times a week, mixed with his food, for two or three weeks.

**TO MAKE CORKS FOR BOTTLES.**—Take wax, hog's lard, and turpentine, equal quantities, or thereabouts. Melt all together, and stop your bottles with it.

If you can afford it, postpone everything to do a service for the deserving and unfortunate.

The most miserable of all beings is the most envious.

Extracted from Dr. Playfair's Lecture, delivered to the members of the Royal Agricultural Society, in December last.

The food for cattle is of two kinds, azotized and unazotized, with or without nitrogen. The following table gives the analysis of various kinds of food for cattle in their fresh state :

	Water.	Organic matters.	Ashes.
100 lbs. Peas,	16	80½	3½
“ Beans,	14	82½	3½
“ Lentiles,	16	81	3
“ Oats,	18	79	3
“ Oat-meal,	9	89	2
“ Barley-meal,	15½	82½	2
“ Hay,	16	76½	7½
“ Wheat-Straw,	18	70	3
“ Turnips,	89	10	1
“ Swedes,	85	14	1
“ Mangel-wurtzel,	89	10	1
“ White carrot,	87	12	1
“ Potatoes,	72	27	1
“ Red Beet,	89	10	1
“ Linseed-cake,	17	75½	7½
“ Bran,	14½	80½	5

A glance at this table would enable a person to estimate the value of the articles as diet. Thus every 100 tons turnips contained 90 tons of water. But the value of inorganic and organic matters which these foods contain, differed. Thus Mr. Elham states, that 100 lbs. of hay were equal to 339 lbs. of mangel-wurtzel. It would be seen that that quantity of hay contained 76 lbs. of organic matter, whilst the mangel-wurtzel contained only 34 lbs.

One result of feeding animals on foods containing much water is, that the water abstracts from the animal a large quantity of heat, for the purpose of bringing it up to the temperature of the body, and in this way a loss of material took place.

The mode proposed by Sir Humphrey Davy, of ascertaining the nutritive properties of plants, by mechanically separating the gluten, is unsusceptible of accuracy. The more accurate way is to ascertain the quantity of nitrogen, which being multiplied by 62, will give the quantity of albumen contained in any given specimen of food.

The following table shows the equivalent value of several kinds of food, with reference to the formation of muscle and fat, the albumen indicating the muscle forming principle:

	Albumen.	Unazotized matter.
100 lbs. Flesh,	25	0
“ Blood,	20	0
“ Peas,	22	51½
“ Beans,	31	52
“ Lentiles,	33	48
“ Potatoes,	2	24½
“ Oats,	10½	68
“ Barley-meal,	14	68
“ Hay,	8	68½
“ Turnips,	1	9
“ Carrots,	2	10
“ Red beet,	1½	8½

The analysis in this table, are partly the result of Dr. Playfair's, and Boussingault's analysis. The albumen series indicates the flesh-forming principles, and the unazotized series indicates the fat-forming principles. By comparing this table with the former, it will be at once seen which foods contain not only the greatest quantity of organic matter, but what proportion of the organic matter is nutritive, and which is fattening, or that which furnishes combustible material. In cold weather, those foods should be given which contain the larger proportion of unazotized matters, in order to sustain the heat of the body. Thus it will be seen, that potatoes are good for fattening, but bad for fleshening. Linseed cake contain a great deal of fattening matter, and but little nutritive matter; hence barley-meal, which contains a good deal of albumen, may be advantageously mixt with it.

Dumas, a French chemist, states that the principles of fat exist in vegetables, as in hay and maize, and, like albumen, it is deposited in the tissues unchanged. But Liebig regards fat as transformed sugar, starch, gum, &c., which has undergone a change in the process of digestion. This is why linseed cake is fattening; all the oil is squeezed out of the seed, but the seed-coat—which contains a great deal of gum and the starch of the seed—is left, and these are fattening principles.

The oxygen, introduced by respiration into the lungs, is destined for the destruction of carbonaceous matter; but there is a provision made for taking it into the stomach with the food, and this is done by the saliva. The saliva is always full of bubbles, which are air bubbles, and carry the oxygen of the atmosphere into the stomach with the food. The object of rumination in animals, is the more perfect mixing of the food with the oxygen of the air. This is why chaff should not be cut so fine for ruminating animals, as the shorter the chaff is, the less it is ruminated, and less oxygen it gets.—*Mark Lane Express.*

**HOME-MADE WINES.**—To every six gallons of water put eighteen pounds of lump sugar; boil it half an hour; when new milk warm, put to it two quarts of elderflowers, picked from the stalk, the juice and peel of six lemons, six pounds of raisins stoned, with four or five spoonful of yeast, put all together into your barrel, stirring it often for three or four days; when it has quite done working put in a quart of the best British Brandy, and then stop it up. It will be ready for bottling in seven months. The lemons must be pared as thin as possible.—*Wakefield Journal.*

**POSTAGE CURIOSITIES.**—At the late meeting of the Royal Institution, Lord Prudhoe, President, in the chair, the Rev. John Barlow gave a communication on what he termed the chemical and mechanical processes, &c., of the postage system. Some curious calculations were included in the essay, in the course of which it appeared that more than 220,000,000 of chargeable letters were posted in 1843. Now, taking a common-sized letter as an unit, this quantity would pave a road twenty-five yards wide (the average width of Oxford-street, pavement included), from the General Post-Office, St. Martin's-le-Grand, to the entrance of the City of Oxford. Or, supposing all the letter boxes in the United Kingdom to be open twelve hours in a day, and to communicate with one large spout, the letters would keep flowing through at a rate of fourteen every second in the year.

**BOTS IN HORSES.**—Passing, not long since, through one of the principal manufacturing villages in the interior of Cumberland county, my attention was arrested by a large concourse of persons who had gathered around a building to see a poor horse die of the bots! A very amusing circumstance, surely, but one of such common occurrence, that to me, at least, it has ceased to be a matter of curiosity or surprise. I forward you the following recipe, in the hope that it may prove a benefit to many:—To make the bots let go their hold, give the patient a quart of molasses, or dissolved sugar, with a quart of sweet milk. In 30 minutes you will find him at ease. Then pulverize an eighth of a pound of alum; dissolve in a quart of warm water, and give as a drench. In two hours or less, administer 1 lb. salts, and you will effect a cure. I have never known this remedy fail.—*Maine Cultivator.*

A good book and a good woman are excellent things to those who know how to justly appreciate their value; but there are many who judge of both only by their covering.

**WORMS ON CABBAGE.**—These pests of the garden may be destroyed by taking off one of the large lower leaves of the cabbage, about sundown, and laying in on the top of the plant, backside down. Take it off early in the morning, and the whole or a large part of the worms of that cabbage will be on it, and may be destroyed at pleasure. So says W. Chandler, in the *Tenn. Agriculturist.*

**CULTIVATION OF FLOWERS.**—There are a class of men who would pare down every thing to the mere grade of utility,—who think it the height of wisdom to ask, when one manifests an enthusiasm in the culture of flowers, “*Of what use are they?*” With such we have no sympathy. We will not say, with Mr. Colman, in case of such an interrogatory being put to us, that “our first impulse is to look under his hat and see the length of his ears,” but we are always inclined, in such cases, to thank God that our tastes do not correspond with theirs. Better—(say these ultra utilitarians)—better devote our time to the culture of things useful and needed to sustain life, than to employ it on things which, like flowers, are intended only to look at and please the eye. But why, (we would ask with Mr. Colman,) “why should not the eye be pleased?” What pleasure more pure, more warming to the heart, more improving to the mind, more chastening to the affections, than those which come through the eye? Where shall we read more luminously displayed the perfections of the Creator, than in the star-spangled heavens above and flower-spangled earth beneath?—

“Each cup a pulpit, and each leaf a book.”

Nonsense—sheer nonsense—to tell us it is useless to cultivate flowers. They add to the charms of our homes. Rendering them more attractive and beautiful, we multiply and strengthen the domestic ties which bind us to them. We would not advocate the cultivation of flowers to neglect more necessary objects: attention to the one does not involve neglect of the other. Every man engaged in the culture of the earth, can find time to embellish his premises, who has the will to do it, and we pity those who have not. Rob earth of its flowers—the wondrous mechanism of the Almighty—and we should lose the choicest mementoes left to remind us that it was once a paradise.

**TO MAKE BLUE WASH FOR WALLS.**—Get a pound of blue vitriol from a drug store and have it powdered like mortar. Provide also, two quarts of lime. Take six cents worth of glue, boil it in a quart of soft water till thoroughly dissolved. Put the powdered vitriol in a wooden bucket, and when the glue-water is cold, pour it on the vitriol, mix and stir it well. When the vitriol is dissolved in the lime-water, stir in by degrees the two quarts of lime. Try the color by dipping in a piece of white paper, and when dried you can judge if the color is as blue as you want. If too pale, stir in a little more powdered vitriol. It is well to provide an extra quantity of each of the articles, in case a little more of one or the other should be required.

**VALUE OF THE FLAX CROP.**—The following letter, showing the importance of the flax crop to the farmer, when proper attention is paid to its preparation and cultivation, appears in the Newry Telegraph:—Mr. W. Blakely, a tenant of the Dean of Dromore, on the townland of Corceleny, near Warrington, grew last season, three stated acres of flax, which he managed strictly according to directions of the society for the promotion and improvement of the growth of flax in Ireland. The produce of the field had been recently purchased for 15s. per stone, by Messrs. M'Murry and Hening, of Warrington, the eminent cambric manufacturers, who say it is equal, if not superior, to any flax they ever saw before, and that they have given 36s. per stone for foreign flax of an inferior quality. A large portion of this flax has been delivered to Messrs. M'Murry & Co., but some still remains to be dressed by the machinery of Mr. Henry, of Ready. Should this part be as productive as that already furnished, the entire produce of the three acres will be 120 stones, which, at 15s, will give to the farmers £90, but he has a certainty of one hundred stones, which will realise £75. The flax is now in process of conversion into cambric pocket handkerchiefs capable of being spun to 30 hanks to the pound, and is to be spun by the hand. Mark, now, the employment this will give. It gives constant employment, for twelve months, to 132 women to spin it, 19 weavers will be occupied a like period in weaving, and it will employ 40 women a year to hem-stitch, (or vein,) the handkerchiefs—thus giving constant employment, for twelve months, to 190 persons. It is curious to see the result of the process which

this flax is now undergoing. It will produce 210 webs of cambric, each web containing five dozen handkerchiefs, each dozen will be worth 40s. and the entire, when finished, will be worth £2,000.

**PREMIUM CHEESE.**—For a cheese of 20 pounds, a piece of rennet about two inches square, is soaked about twelve hours in one pint of water. As rennet differs very much in quality, enough should be used to coagulate the milk sufficiently in about forty minutes. No salt is put into the cheese, nor any outside during the first six or eight hours it is being prepared; but a thin coat of fine Liverpool salt is kept on the outside during the remainder of the time it remains in press. The cheese are pressed forty-eight hours, under a weight of seven or eight cwt. Nothing more is required but to turn the cheese once a day on the shelves.

**RASPBERRY JAM.**—Take 1 pound loaf-sugar to every pound of fruit; bruise them together in your preserving-pan with a silver spoon, and let them simmer gently for an hour. When cold, put them into glass jars, and lay over them a bit of paper saturated with brandy, then tie them up so as carefully to exclude the air.

**TOMATO CATSUP.**—To a gallon skinned tomatoes add 4 table-spoonfuls of salt, 4 do. black pepper, half a spoonful allspice, 8 red peppers, and 2 spoonfuls mustard. All these ingredients must be ground fine, and simmered slowly in sharp vinegar for three or four hours. As much vinegar is to be used as to leave half a gallon of liquor when the process is over. Strain through a wire-sieve, and bottle, and seal from the air. This may be used in two weeks, but improves by age, and will keep several years.

**TO EXTRACT THE ESSENTIAL OIL FROM ANY FLOWER.**—Take any flowers you like, which stratify with common sea-salt in a clean earthen glazed pot. When thus filled to the top, cover it well and carry it to the cellar. Forty days afterwards, put a crape over a pan, and empty the whole to strain the essence from the flowers by pressure. Bottle that essence, and expose it four or five weeks to the sun, and evening dews, to purify. One single drop of that essence is enough to scent a whole quart of water.

At a meeting lately held of the Society of Arts, a lamp, for using up kitchen-stuff, &c. was placed on the table. The wick is circular, and runs down into the tallow receptacle, which is surrounded by a cistern, into which boiling water is poured when the lamp is required to be used. It gives a light equal to about ten mould candles, at a cost of about a halfpenny per hour.

**AROMATIC BEER.**—Take 20 drops of the oil of spruce, 20 do. saffras. Pour 2 quarts of boiling water upon the oils, then add 8 quarts of cold water, 1 1-2 pint of molasses, and 1-2 a pint of yeast. Let it stand two hours and then bottle it.

**SAUSAGES QUITE RICH ENOUGH FOR AN EPICURE.**—Take 30 pounds of chopped meat, 8 ounces of fine salt, 2 1-2 ounces of pepper, 2 teacups of sage, and 1 1-2 cup of sweet marjoram, passed through a fine sieve. For the latter, thyme and summer savory can be substituted if preferred.

**RASPBERRY SYRUP.**—To every quart of fruit add a pound of sugar, and let it stand over night. In the morning, boil and skim it for half an hour; then strain it through a flannel bag, and pour it into bottles, which must be carefully corked and sealed. To each bottle, add, if you please, a little brandy, if the weather is so warm as to endanger its keeping.

**TO PREVENT MURRAIN IN CATTLE.**—Take equal parts of salt and slacked lime; mix and give two table-spoonful twice a week during the prevalence of the disease.

**TO EXTRACT IRON MOULDS.**—Rub the spot with a little powdered oxalic acid, or salts of lemon and water, let it remain a few minutes, and rinse in clear water.



**HINTS ON THE USE OF VARIOUS MANURES.**—GUANO, when good, ought to be of a light-brown or fawn-colour, dry and powdery, not sticky or clammy to the touch, and the lumps when broken showing numerous small, clear, shining crystals, and giving out a strong smell of ammonia when mixed with a little quicklime, and moistened with water. Guano should be kept quite dry till used, as damp renders it liable to decomposition and the loss of ammonia; and it should never be brought in contact with quicklime, which, as has been remarked, drives off the ammonia; but guano may be used on land that has been limed a short time before, and the lime well mixed with the soil, particularly after heavy rain. Bone-dust and gypsum are too well known to require any remark. The burned gypsum is the best—costs about 30s. per ton. Sulphates of soda and magnesia can be got, the former at about 3l. 10s. per ton, the latter from 6l. to 7l. per ton. In using guano for Potatoes it ought to be applied at the rate of three cwt. per acre, either sown by the hand in the drills, or broadcast just before the drills are formed, and 18 cubic yards of dung spread below the Potato cut, and the whole covered in the usual manner; the Potatoes set, as they are cut, being first dusted with gypsum in powder. Or the guano may be mixed as follows:—3 cwt. guano, 1 cwt. gypsum, 1 cwt. sulphate of soda,  $\frac{1}{2}$  cwt. of sulphate of magnesia, and 1 cwt. of common salt, sown broadcast as above mentioned, and 18 cubic yards of dung in the drills. This last mixture appears, after repeated trials, the best for Potatoes, and to give a larger crop than 40 or 50 cubic yards of the best farm manure; and the after-crops, as far as can be judged of from trials for the last three years, do not seem to be inferior, and in some cases are better than when farm-yard manure alone had been used. The same mixture as for Potatoes answers well for Turnips with a little dung; but a cheaper one without dung seems to answer as well, viz., guano, 2 $\frac{1}{2}$  cwt., bone-dust, 6 cwt. or 15 bushels, and of gypsum, common salt, and sulphate of soda, 1 cwt. each, to be sown broadcast on the land, which is immediately to be formed into drills in the usual manner, or with the double-mould plough, and the Turnip-seed sown with the barrow. *Mixture for Top-dressing Hay, Pasture-Grass, and Outs.*—Hay to be cut (if top-dressed with the following mixture), viz:—1 cwt. guano, 4 cwt. or 10 bushels fine bone-dust, 1 cwt. gypsum, and 1 cwt. of common salt, give a third more produce in Hay, and the after foggage, both of that and the succeeding years, is much improved. The same dressing may be applied to old or young pastures with great benefit, and makes the land to carry at least one-third more stock, besides benefitting the after crops. This dressing may also be applied with benefit to Corn, Barley, Wheat, particularly in poor lands, and where the straw is likely to be short. All top-dressings of ammoniacal and other salts should be applied in rainy or moist weather, early in the season, i. e., in April, just as the Grass or Corn is beginning to spring.

**IGNORANCE.**—It is impossible to make people understand their ignorance; for it requires knowledge to perceive it; and therefore he that can perceive it hath it not.—*Bishop Taylor.*

**STEAM POWER.**—A pint of water may be evaporated by two ounces of coal. In its evaporation it swells into 216 gallons of steam, with a mechanical force sufficient to raise a weight of 37 tons to a foot high.

Human life is a donkey race, in which the winner is he who comes in last.

**CHLORIDE OF CALCIUM.**—A correspondent, in reference to the communication of Mr. Bernays, of Manchester, to the Royal Agricultural Society, on the advantages of chloride of calcium in dry seasons, wishes to know the proper portion of spirit of salt to be applied to common chalk to produce chloride of calcium, or, to use the more common name by which the substance is known, muriate of lime. This will, we apprehend, depend, in great measure, upon circumstances, and we should recommend our correspondent to apply to any practical chemist in his neighbourhood. In the meantime, as the subject is one of considerable importance, the following extract from the invaluable Lectures on Agriculture Chemistry and Geology, by Professor Johnstone, will be acceptable to our readers:—"This substance is said to have been beneficially applied to various crops, but to potatoes especially, with surprising effects. Under its influence maize and Jerusalem artichokes have grown to the height of from 14 to 18 feet, and potatoes have attained the weight of two to three pounds. When prepared in a dry state, this substance rapidly deliquesces and runs into a liquid. The most convenient way of applying it, therefore, would be in a state of solution, so largely diluted as to have only a slight taste. In this condition 500 gallons per acre may safely be applied, by means of a watering cart, so contrived as to allow it to flow on the tops of the ridges and young plants, by which means unnecessary waste will be avoided."

Boys that have been properly reared, are men in point of usefulness at sixteen; while those that have been brought up in idle habits, are nuisances at twenty-one.

That day in which a man neither does some good action nor acquires some useful knowledge, should not be (if possible) numbered in the days of his life.

If vice is permitted to sap superior abilities, they only become as gay colours upon a reptile.

Evil thoughts are for a time companions; evil deeds are companions for eternity.

The consequences of one hour become conditions for the next.

The first great gift we can bestow on others is a good example.

An humble man is like a good tree; the more full of fruit the branches are, the lower they bend themselves.

Public favour, like sunshine, is apt to weaken while it warms, therefore it is best never to remain too long under its influence.

The officers taken prisoners at Afghanistan are to be indemnified for the loss of their property on that occasion.

The advice of a wise man is to be considered as a prediction.

Nobility is nothing, unless supported by good actions.

Desire not more of the world than is necessary to accommodate you in passing through it.

Reason ought to oblige every man to pursue the general happiness as the best means to procure and establish his own.

Envy and evil are the natural fruits of laziness and ignorance.



SONG OF THE HAYMAKERS

The noontide is hot and our foreheads are brown,  
 Our palms are all shining and hard;  
 Right close is our work with wain and the fork,  
 And but poor is our daily reward.  
 But there's joy in the sunshine, and mirth in the lark.  
 That skims whistling away over head;  
 Our spirits are light, though our skins may be dark,  
 And there's peace with our meal of brown bread.  
 We dwell in the meadows, we toil in the sod,  
 Far away from the city's dull gloom;  
 And more jolly are we, through in rags we may be,  
 Than the pale faces over the loom.  
 Then a song and a cheer for the bonnie green stack,  
 Climbing up to the sun wide and high;  
 For the pichers, and rakers, and merry haymakers,  
 And the beautiful Midsummer sky.

Come forth, gentle ladies—come forth, dainty sirs,  
 And lend us your presence awhile;  
 Your garments will gather no stain from the burs,  
 And a freckle won't tarnish your smile.  
 Our carpet's more soft for your delicate feet  
 Than the pile of your velveteed floor;  
 And the air of our balm swarth is surely as sweet  
 As the perfume of Araby's shore.  
 Come forth, noble masters, come forth to the field,  
 Where refreshment and health may be found;  
 Where the wind-rows are spread for the butterfly's bed  
 And the clover-bloom falleth around.  
 Then a song and a cheer for the bonnie green stack,  
 Climbing up to the sun wide and high;  
 For the pitchers and rakers, and merry haymakers,  
 And the beautiful Midsummer sky.

"Hold fast!" cries the waggoner, loudly and quick,  
 And then comes the hearty "Gee-wo!"  
 While the cunning old team-horses manage to pick  
 A sweet mouthful to munch as they go.  
 The tawny-faced children come round us to play,  
 And bravely they scatter the heap;  
 Till the tiniest one, all outspent with the fan,  
 Is curled up with the sheep-dog, asleep.  
 Old age sitteth down on the haycock's fair crown'  
 At the close of our labouring day.  
 And wishes his life, like the grass at his feet,  
 May be pure at its "passing away."  
 Then a song and a cheer for the bonnie green stack,  
 Climbing up to the sun wide and high;  
 For the pitchers, and rakers, and merry haymakers,  
 And the beautiful Midsummer sky.

ELIZA COOK,

Virtue does not give talents, but it improves them:  
 talents neither give nor supply the place of virtue.

Whoever finds pleasure in vice and pain in virtue,  
 is a novice in both.

Virtue is beautiful in the plainest, but vice is ugly  
 in the most beautiful.

There is nothing so delightful as hearing or speak-  
 ing the truth.

No vices are so incurable as those which men are  
 apt to glory in.

MONTREAL MARKET PRICES.

CORRECTED BY THE CLERK OF THE MARKET.

New Market, August 1.

Wheat,.....per minot,.....	5/6 @ 6/3
Oats,..... do .....	1/3 @ 1/4
Barley,..... do .....	2/0 @ 2/4
Peas,..... do .....	2/6 @ 3/9
Buckwheat, do .....	1/8 @ 2/1
Rye,..... do .....	2/6 @ 3/0
Flaxseed,... do .....	5/0 @ 5/6
Potatoes, New, do .....	2/0 @ 2/6
Beans, American, per bushel,.....	4/0 @ 4/6
Do. Canada,.... do .....	6/0 @ 6/8
Honey, per lb,.....	0/4 @ 0/4½
Beef,... do .....	0/2½ @ 0/6
Mutton, per qr. ....	1/6 @ 4/6
Lamb,... do .....	1/3 @ 2/6
Veal,.... do .....	2/0 @ 10/
Pork,.....per lb,.....	0/3 @ 0/5
Butter, Fresh, do .....	0/6 @ 0/9
Do. Salt, do .....	0/5 @ 0/6
Cheese,..... do .....	0/3 @ 0/4½
Lard,..... do .....	0/5 @ 0/6
Maple Sugar, do .....	0/5 @ 0/5½
Eggs, per dozen, fresh,.....	0/5 @ 0/6
Turkeys, (old), per couple,.....	5/0 @ 6/0
Do. (young) do .....	0/2 @ 2/9
Geese,..... do .....	2/6 @ 4/0
Ducks,..... do .....	1/8 @ 2/0
Fowls,..... do .....	1/3 @ 2/0
Chickens,..... do .....	1/0 @ 1/3
Partridges,.... do .....	2/6 @ 3/0
Hares,..... do .....	0/10 @ 1/0
Apples, American, per barrel,.....	15/0 @ 20/
Do. Canada,... do .....	0/0 @ 0/0
Flour, per quintal, .....	12/6 @ 13/4
Beef, per 100 lbs.,.....	20/0 @ 30/0
Pork, Fresh, do .....	22/6 @ 27/6
Hay, per 100 bundles,.....	20/0 @ 27/6
Straw, per 1200 lbs.,.....	12/6 @ 17/6
Woodcock, per brace,.....	1/6 @ 1/8

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