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# The Farmer's Journal,

—AND—

TRANSACTIONS OF THE LOWER CANADA BOARD OF AGRICULTURE.

VOLUME V. }

Price 50 cents per annum, in advance.

{ NUMBER 12.

POSTAGE FREE.

August 1858.

PUBLISHED UNDER THE DIRECTION OF MR. J. PERRAULT,  
Secretary-Treasurer of the Lower Canada Board of Agriculture, Pupil of the Imperial College of Grignon, (France) and of the Royal College of Agriculture of Cirencester.

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MONTREAL

PRINTED BY DEMONTIGNY & C<sup>o</sup> PROPRIETORS & PUBLISHERS

18 & 20, St. GABRIEL STREET.

## Board of Agriculture

LOWER-CANADA.

Montreal, July 29 1858.

PRESENT:—John Yule, Esq., *President*;  
E. L. De Blois, Esq., *Vice - President*;  
B. Pomroy, Esq., J. C. Taché, Esq., P.  
E. Dostaler, Esq., J. O. A. Turgeon, Esq.,  
James Logan, Esq., President of the Agricultural Association, Principal Dawson of McGill College; M. F. M. Ossaie, Professor of Agriculture at Normal School Jacques-Cartier; Revd. P. E. Leclerc, College Masson; Revd. J. Guilbeault, College l'Assomption; Revd. Desaulniers, College St. Hyacinthe; P. O. Chauveau, Esq. S. E.

The President took the Chair and exposed to the meeting his proceedings as President of the Board since the last meeting.

The meeting then proceeded to the appointment of Judges for the next Provincial Exhibition.

The Secretary informed the Board that the Farmer's Journal would be issued for the last time on the first of August. He declines to be Editor of the same, for the future.

Moved by M. Taché and resolved that a committee, composed of Messrs. the

President, Chauveau et Turgeon, be appointed to settle the matter of the publication of a Practical Agricultural Journal, and that this committee be authorised to contract for an annual collective sum not exceeding £500 for the publishing of the Journal in the both english and french languages.

Resolved that all the printing for the next Provincial Exhibition be made in both the english and french languages.

Two Petitions from the Secretary and Assistant Secretary were put before the Board.

Moved by M Ossaie, and *Resolved*: That M. Perrault do remain alone in charge of the Secretaryship of the Board of agriculture and as such responsible to the Board.

That the office of the Board be always occupied from 10 to 2 o'clock P. M. either by the Secretary or the Assistant Secretary. That however the Secretary will be present at the office on Tuesday and Friday of each week, and during all the time necessary at the time of the exhibition.

That the salary of the Secretary be of eight hundred dollars and that of the Assistant Secretary's six hundred dollars per annum.

J. PERRAULT, Secretary.

§ Letters invariably refused unless prepaid.

§ Advertisements, 6d per line, invariably published in the two languages. Business cards \$5 per annum, two lines only are allowed for that price.

§ Price of subscription 2s 6d payable invariably in advance, and to take date from the 1st of September.

§ Those who wish to discontinue their subscription must give notice thereof one month before the expiration of the term of their subscription for the year, otherwise they shall be considered as subscribers for another year.

§ Extract from Bill of Agriculture, 20 Vic. Cap. 32, Section 15,  
"If the said Boards or any of them shall publish a Monthly Journal, &c, it shall be the duty of all Agricultural Societies receiving any share of the Public Grant, to give notice of the time and place of holding their Exhibitions in the Journal so published or adopted by the said Boards respectively."

# The Farmer's Journal.

MONTREAL. JULY 1858.

## In-and-in Breeding.

There is no subject that demands greater knowledge or more skill on the part of the husbandman, than stock breeding and feeding. Notwithstanding much has been done in the way of improving the various kinds of domestic animals, much still remains to be done before perfectly satisfactory results shall be attained. Size, form, hardiness, quick maturity, tendency to fatten quickly, quality of flesh, hide, milking qualities, aptitude to labor, disposition,—the best breed or blood, as the breeder would say. These are topics relating to points of essential importance to every breeder, grazier and dairyman.

The farmer who breeds cattle for the shambles, desires that kind that will make the greatest amount, and the best quality of beef in the shortest time, from the feed consumed; if for the dairy, the kind that will produce the greatest quantity of milk, if to be sold by measure; the greatest amount of cream, if butter be the object, and of caseine, if cheese be wanted. Reference is also had by others to the capacity to work in the yoke. The kind of cattle best for the farmer to select, will depend upon what he wants to do with them. For, so to speak, they are machines kept by farmers to change vegetables of various kinds into beef, milk, butter, cheese, &c., and the breed that will produce the greatest amount of the best beef, from a given amount of feed and in the shortest time, will be deemed the best ma-

chine for changing grass into beef and fertilizers; the latter being an important item in good farming.

Successful efforts have been made within one hundred and fifty years, in improving cattle not less than other domestic animals. Much attention is now directed to the further improvements of the various breeds of live stock. The mode of carrying these to their highest degree of perfection, necessarily involves the much and oft-mooted question of "in-and-in breeding." It is proposed to furnish further testimony on this subject from the best and most reliable sources—testimony furnished by breeders of stock, derived from both experience and observation.

George Culley, in his "Observations on Live Stock," says that—

"The great obstacle to the *improvement* of domestic animals seems to have arisen from a common and prevalling idea among breeders, that no bull should be used in the same stock more than three years, and no tup more than two; because, (say they,) if used longer, the breed will be *too near akin*, and the produce will be *tender, diminutive*, and liable to *disorders*; some have imbibed the prejudice so far as to think it *irreligious*; and if by chance they were in possession of the best breed in the Island, would by no means put a male and female together that had the same sire, or were out of the same dam.

But fortunately for the public, there have been men in different lines of breeding, whose enlarged minds were not to be bound by vulgar prejudice or long established modes, and who have proved by many years experience, that such notions are without any foundation. Mr. Bakewell has not had a cross for upwards of twenty years. His best stock has been bred by the nearest affinities; yet they have not

decreased in size, neither are they less hardy, nor more liable to disorders; but, on the contrary, have kept in a progressive state of improvement.

This mode has also been frequently practiced in breeding the best dogs and game cocks. A certain gentleman who produced the best pointers in the north of England for many years, never bred from any other than his own; because, said he, I can find no better to cross them with. And I am informed from good authority, that a breeder of game cocks, who was very successful, would never allow his breed to be contaminated by crossing with others; and to this precaution he attributed all his superiority."

This confirms the experience of Col. Jaques, given in a former article on this subject, especially that narrated in the last.

Culley goes on to say;

"But one of the most conclusive arguments that crossing with different stock is not necessary to secure size, hardiness, &c., is the breed of wild cattle in Chillingham Park, in the county of Northumberland. It is well known these cattle have been confined in this park for several hundred years, without any intermixture; and are perhaps the *purest breed* of cattle in the kingdom. From their situation and uncontrolled state they must indisputably have bred from the nearest affinities in every possible degree; yet we find these cattle exceedingly hardy, healthy, and well formed, and their size as well as their color, and many other particulars and peculiarities, the same as they were 500 years ago.

"From these instances, it appears there can be *no danger* in breeding by the nearest affinities provided they are possessed in a *superior degree* of the qualities we wish to acquire; but if not possessed of these we ought to procure such of the

same kind as have, in the most eminent degree, the valuable properties we think our own deficient in. It is certainly from the *best males and females*, that *best breeds* can be obtained or preserved; to breed in this manner is undoubtedly right, so long as *better males* can be met with, not only among our neighbors, but also among the most *improved breeds* in any part of the Island, or from any part of the world, provided the expense does not exceed the proposed advantage. "And when you can no longer, at home or abroad, find *belier males* than your own, then by all means breed from them; whether horses, cattle, sheep or other animals, for the same rule holds good through every species of domestic animals. But upon no account, attempt to breed or cross from *worse* than your own, for that would be acting in contradiction to common sense, experience, and that well established rule. — That best can get best, or, which a particular case of a more general rule, viz., that Like begets like.

"On this simple axiom the whole mystery of improving stock depends, and, like many other valuable truths has been neglected, most probably for its simplicity, and other modes pursued: whim or fancy directed, without other reason or experiment to support or give the least color of plausibility to the practice."

Thus has the writer quoted at length the admirable and philosophic remarks of Geo. Culley, an English author of celebrity, both as a writer and stock breeder. Arthur Young describes him as "a man of the most extensive practice, and the deepest knowledge of his art."—*Country Gentleman*.

## The Wheat Midge.

A correspondent of the *Rural New-Yorker* of 22d of May, dating from Monroe Co., N. Y. says:

"As it is a matter of serious contemplation with the farmers of the Genessee Valley whether the wheat midge will remain permanently among us or not, it becomes important to know, as far as possible, how long they may be expected to bring ruin and desolation to our wheat crop"

And he asks:

"How long have they already been infecting districts and localities visited by them before us? Is there a reasonable prospect that they will show us the cold shoulder and take their final exit soon? Or shall we be compelled, (against our will and interest too,) to change our system of farming altogether, or may we hope for a better time coming."

Judging from our long acquaintance with the wheat midge and its ravages, we can offer the writer of the above, no hope "for a better time coming," and think it will be a long time before the midge will give the wheat growers of Monroe county the "cold shoulder, and take their final exit." It is now about twenty-five years since it first made its appearance in New-Hampshire, and its ravages were greater on our wheat crops last season, than on almost any previous year; they being much more abundant on the "hill farms" than ever before known, while in the valleys many fields produced little more than the seed sown. But from their first appearance among us till now, they have every year damaged the crops of spring wheat, some years to greater extent than in other seasons.

Says the late Dr. HARRIS, in his Report on Insects:

"The country over which it has spread, has continued to suffer more or less from its alarming depredations, the loss by which has been found to vary from about one tenth part to nearly the whole of the annual crop of wheat; nor has the insect entirely disappeared in any place till it has been starved out by a change of agriculture, or by the substitution of late spring wheat for the other varieties of grain."

Very early sown spring wheat sometimes escapes the ravages of the insect, it having become too far advanced before the annual appearance of the fly—so too, very late sown, that sown as late as the 25th of May, generally escapes the midge, the fly having disappeared before the grain is in blossom; but there is greater liability to rust, mildew, blight, &c., on the very late sown wheat, than on that sown early.

About six years ago some of our farmers began to sow winter wheat, and they were successful. The quantity sown each successive year has greatly increased. When sown from the 20th of August to 15th of September, on suitable ground, and properly manured and put in, we scarcely know of a failure to reap good crops; and of such in no instance have we known any injury to them from the midge. Why the midge should ruin your Genessee Valley winter wheat and leave ours unscathed, is a mystery not so easily solved. Our winter wheat gets the start of the midge! Why don't yous?

Last year we had three small fields of winter wheat on different varieties of soil, but all did well, getting a return of about twenty fold for seed sown; also had, within a short distance, a field of spring-sown wheat. At harvest time the grain would average four and a half feet high—heads at least five inches in

length—neither rust or mildew touched it, yet the yield was only seven pecks to the bushel of seed, in consequence of the depredation of the midge. *Country Gentleman.*

## Forests and Forest Trees.. I

### THEIR CARE AND PRESERVATION.

It is time for Americans to give special attention to the preservation of forests and to the growth of forest trees. In the settled parts of the continent a great portion of the woods have disappeared. In many places, where the natural growth was so luxuriant fifty years since as to be an incumbrance, timber for building and mechanical purposes has increased in value from five to ten fold, and is very scarce, while wood for fuel is almost unpurchasable. In a vast portion of these sections of the national domain which are sparsely settled or still unclaimed, there are no natural forests. Some of these regions, such as the prairies of Illinois and Iowa, are fertile and capable of rapidly producing a heavy growth of timber, when once planted and cared for, as numerous experiments have proved. On the other hand, some hilly and mountainous regions and the arid plains in the Indian country, in New-Mexico and North-Western Texas—the “great American desert”—are not readily susceptible of cultivation. But in nearly every square mile of these regions trees can be made to grow. When once planted, they will be the direct means of creating moisture, which will feed springs and streams, and of ameliorating the climate, and thus of rendering the soil productive.

As it is only by considering the properties of trees, and the part played by forests in the economy of nature, that we can see and appreciate their value, we may be pardoned for

attempting a somewhat extended and comprehensive view of the general subject.

Nature maintains a beautiful consistency in the distribution and arrangement of the animal and vegetable kingdoms. It is often said the lion, the tiger, the leopard and the camel delight in arid and sandy deserts. But this is only partially true. These beasts like a warm climate, and will live in barren tracts where the means of subsistence are so scanty as to drive away animals of other species. But should you entirely remove the vegetation, the equilibrium of nature would be destroyed, and all animals except those passing from one fertile region to another would disappear. Ruminating animals would leave in quest of vegetable food, and the carnivora that live upon them would follow. The animal world is dependent directly and solely on the vegetable world for subsistence. This is exemplified as clearly when man devours the ox that crops the verdant pasture, as when he lives entirely upon fruits, roots and plants. “For all these hungry guests Nature spreads the table when she brings forth vegetables, and if she would not let one of her world—the animal—become extinct, she must provide so surely for the multiplication of plants, that spite of all injurious and destructive influences, a general famine shall be impossible;”

But the vegetable world, while giving its fruits as food and sustenance to living creatures, has other properties, and carries out other purposes. We see at once the utility of a sturdy oak or a tapering pine when converted into the beam of a house or the mast of a vessel, but we do not always comprehend the direct and beneficial effects that trees and forests have upon the atmosphere, and through the atmosphere upon the

productiveness of the soil and the healthfulness of the climate. An eminent London physician expressed it as his opinion that if all the trees and shrubs were removed from the two or three thousand acres of parks, and from the gardens and private grounds of that great metropolis, in one year the bills of mortality would show an increase of deaths to the extent of more than fifty per cent. If we consider that there are ordinarily in London over 1,000 deaths a week, or nearly 60,000 a year, that the deaths by cholera in 1849, during the worst period of the visitation, were at no time over 500 a week, we see the bearing and influence of trees—according to the opinion quoted—on the health and longevity of the inhabitants of a crowded city. We might as reasonably expect that land animals could live without air, or fish without water, as that there could be a pure and healthy atmosphere where there are few or no trees or rapidly growing plants, or where, in an extended region, animal life vastly preponderates over vegetable life.

Nature is under all circumstances constantly attempting to keep up that just equilibrium which conduces to the good of the whole. Life is motion, death "cold obstruction." The sea haming its winds and tides, and natural streams runs. Wherever there is a stagnant pool by accident, or through the carelessness or bad management of man. Nature at once sets to work, to correct the evil. A green slime, which is vegetation, covers the surface of the pool, and consumes the poisonous gases generated by the stagaant water. Circumstances having produced an abundance of food for plants, plants appear, seemingly by a miraculous creation to consume it. This is in obedience to a law of nature, as beneficent as it is unerring. The history and geography of the world supply numerous instances in which the absence or

destruction of vegetation, and particularly of trees, has rendered a country uninhabitable because unhealthy. The Pontine marshes are a well-known example. In the time of the Cæsars all central Italy had a due proportion of forests, and the country was healthy and fertile, and supported a large population. Now that the forests are cut off, the dry land is arid and barren, and the marches send forth a malaria that kills almost every person that comes within reach of its exhalations. This poisonous malaria is contained in carbonic acid ammoniacal gas and watery vapor, which are the real food of plants, less than one-fourth part of which is composed of the organic matter contained in the soil. The rest is derived from the atmosphere. A single sunflower consumes daily 22 ounces of water; and one acre of sunflowers consumes three million pounds during the four principal growing month. A well stocked orchard will, in the same time, consume five million pounds. The family of the superrintendant of the National observatory at Washington, (Lieut. Maury) were subject to agues and fevers every Summer, the effect of the exhalation of marshes on the bank of the Potomac. The learned lieutenant planted, one spring, a large bed of sunflowers. The aërial scavengers consumed the miasmatic constituents of the atmosphere and for the first time since the place was inhabited the residents escaped the chills and fevers. The effect was no more mysterious than is the absence of cholera where buzzards, frequent showers, or the activity of man has destroyed or removed the filth of a crowded city. A field of hops, cabbages, or Indian Corn, or a nursery of trees, would doubtless have produced the same result. Experiments have shown that scarcely one-half the amount of water consumed by growing plants is supplied by rain, the

remainder being produced by absorption from the watery vapor of the atmosphere.

But there are other beneficial effects produced by growing vegetables and particularly by trees and forests besides that resulting from their consumption of their proper food in the shape of the gas of the atmosphere and the exhalations that arise from putrefying substances, and from the bodies and bred of living creature—all of which are destructive to animal life. Baron Humboldt, an accurate observer of nature, a philosophical writer of the highest standing, and a man of vast experience and varied culture, explains the reason of the effect of forests on the climate, through its action on the surrounding atmosphere, as follows;

“The forest region acts in a three-fold manner, by the coolness induced by its shade, by evaporation, and by the cooling proces of radiation. Forest...protect the ground from direct insolation, evaporate the fluids they have themselves produced, and cool the contiguous strata of air by the radiation of heat from their leafy appendicular organs.” “In the serene and long nights of the equinoctial zone, the forest air, which is contained in the interstices between the strata of leaves, becomes cooled by the process of radiation; for a tree, a horizontal section of whose summit would hardly measure 2,000 square feet, would in consequence of the greater number of its appendicular organs (the leaves,) produce as great a diminution in the temperature of the air as a space of bare land or turf many thousand times greater than, 2,000 square feet.”\*

We see from this that though perhaps a certain space covered with growing vegetables may consume as much moisture as an equal breadth of soil devoted to trees, the latter

have a far greater influence on the temperature.

It is easy to prove by direct facts and thermometrical observations that the climate along our seaboard and in the interior has undergone a material change during the last seventy years, and is constantly changing year by year, through no assignable cause except the destruction of our forests. The Winters are colder, and there is less snow, and the Summers are hotter and more dry. As less rain falls, the evaporation from the surface of the earth is so much greater that springs disappear, streams shrink into narrow dimensions, and lands formerly fertile and productive become parched and dried up with intense heat. Humboldt records the fact that “the Winters of Salem (Mass.), instead of having been rendered more mild, as conjectured, from the eradication of the forests, have become colder by 40 Fahr., during the last thirty-three years.”† The writer of this article can recall several examples of the deleterious effects of cutting down a forest in that part of the country where he was born and reared. While it stood, the cleared fields adjacent were covered during the Winter and Spring by a protecting garment of snow, produced unfailling and large crops of Winter wheat, which never flourished after the wood was cut off, and a large and durable spring, under the south side of the same forests, which had never been dry since the settlement of the locality, a period of forty odd years, failed totally during several weeks of every Summer. But these are only isolated examples. To see the subject in all its bearings, we must look at it from a more commanding point of view. Though the direct effect of one forest on the surrounding country will often be

\* “Views of Nature” page 93.

1842 “Views of Nature.”

very material, a person cannot create his own climate by operations confined to a single square mile of surface. If important effects are produced by the removal of a wood that covers one or two score of acres, what must be the influence on a whole country of a ruthless destruction of nine-tenths of its forests, and that, too, where the climate ranges between great extremes of heat and cold? If our knowledge equaled our desire for happiness, we should often shape our labors to different purposes. We boast of the discoveries, the improvements, and the intelligence of the age, of our numerous schools and the progress we have made in science and the arts.

"With derision might we meet the cry of our high culture; for all earnest moral reflection upon history would tell us, that we have yet scarcely straggled out of the mire of the lowest degradation and barbarism. From the hand of Nature man received the inheritance prepared for him, the vegetable and animal worlds, the dead matters, and their forces; and how has he managed this inheritance? If he shall have to render an account of it, it is to be feared that here, as everywhere, it will go hard with him.

"If we inquire for what purpose is the vegetable world, the parti-colored carpet of the earth intended, we find a threefold answer. The meanest purpose is undoubtedly to serve the common necessities of mankind, their nourishment and handicrafts, in a word their economy. I call it the meanest, because nature here merely satisfies for each individual what, however refined and glossed over by cultivation, are but animal requirements. The import of the vegetable world for the regulation of the numerous and comprehensive physical processes of the earth, appears indeed more lofty. The glow of the African desert, its

dry rainlessness, and the fullness of life in primeval forests, with their torrents of rain, obtain their peculiar characteristics through the vegetable world. Moisture and dryness of the atmosphere, warmth and cold of the soil, uniformity or variability of climate and the like, above all the life of animals, and finally of man in the mass, have their conditions in the luxuriance and the nature of vegetation. This import of vegetable life does not relate to the solitary, miserable individual, but to whole countries and regions, to many successive generations, the possibility and facilities for whose existence are intimately bound up with the formation of the vegetable world as a whole. Lastly, there is a third face, which the world of plants may turn toward us, without question the noblest and most exalted. It is like all nature, the symbol of the Eternal; behind this play of dead natural forces and their products, we adore a holy Author and sustainer. The vegetable creation is the rich altar-cloth of the temple of God, in which the recognition of beauty and sublimity of forms constitutes the worship.

"And man in opposition to the vegetable world? Alternating many things he has laid his hands upon it, and the great phases of his history are also catalogued on the green leaf of vegetation. But how has he husbanded it? Where no temporary profit was to be derived from assiting nature, or even from leaving it alone, where the question concerned merely the misery of a thousand or two of his future fellow-beings, he has, with barbarous rudeness, demolished and destroyed for thousands of years, often wickedly squandered the seed which God had vouchsafed, not for himself alone, but also for his successors."

"Beauty, the expression of the divine in nature, vanished before

selfish profit from the vegetable world, and at most, caring, with narrow heart, for himself only, the individual inclosed a little space in which he used the beauty of nature, not for worship, but as a sensual pleasure. This is now the reality; when \* \* years have passed, let us hope to be able to report better things; for we do not despair of humanity."

This long extract (from Schleiden, one of the most eminent botanists and writers of the age,) is so pertinent to the subject that it will be pardoned. Testimony, in establishing a position or principle, rests not only upon facts and arguements, but upon authorities and opinions.

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## The Beet Sugar Manufacture

IN FRANCE.

From an interesting letter by "an English Farmer in France," in the last *London Farmer's Magazine*, we glean some facts as to the production and manufacture of this, perhaps, most important of French crops. A complete panic in the sugar trade was then in operation, which had reduced the price of roots from 14 and 18 shillings sterling during the last 4 years, and 21s in last Oct., to 2s. 6d. per ton in February and after March they would, owing to their age, be worth nothing at all to the sugar maker. But such a state of things is rare, if not altogether unprecedented. The demand with the present exception, is uniformly good, and the price remunerating. The crop is about 22 tons to the acre, often more—which would be at ordinary prices from \$75 to \$100, or a still larger sum per acre. "French chemists say that the most sugary roots are produced on clay with a deep top-soil, and containing flint. The land requires to be very clean, is

plowed *very deeply* in autumn, well manured and sown from the middle of April to the end of May, with about 8 pounds of seed per acre, either drilled or dibbled with the thumb one foot apart, and subsequently thinned out when the plants are up, to precisely this distance. Frequent hoeings during summer, and the pulling and cleaning when the tops droop and turn brown in Sept., complete the farmer's part of the operation. The white Silesian and a variety of the Silesian with red skin and white flesh, are the kinds most used. The beet crop is a rather more exhaustive one than potatoes, but on the other hand is most of it immediately returned to the soil—the tops and crowns not being carried off to the manufactory and the farinaceous part of the root which remains in cakes after the saccharine juice is extracted, being re-purchased by the farmer at about 16 cents per cwt, for feeding purposes, for which it is highly esteemed. At the manufactory the roots are well washed by steam power, macerated by machinery, and will yield in the hydraulic press 180 pints to 2 cwts. One ton of roots will yield 1¼ cwt of brown sugar, one quarter cwt, of molasses, and 2½ cwt. of refuse for sale to the farmer, the value of all of which is computed at £3. 13. 8d.

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## MANAGEMENT OF THE BARN.

Let the utmost neatness be observed in the management of the barn. No more hay or other fodder should be thrown on the floor at once than is requisite to supply one feed. By throwing large quantities from the mows or scaffoldings, there is an unavoidable loss from the drying of the fibre, which render, it less palatable to the animals, as well as less nutritious. Sweeping the floor daily

promotes cleanliness, and conduces to the healthy and consequently the comfort of animals. The "tie-ups" and "stanchels," as well as the mangers, cribs, &c., should be daily cleaned out and frequently washed. An occasional whitewashing should be given to the ceilings and partitions; its sanatory effects are well-known, and of a nature too indisputably obvious to admit of doubt. Vermin rarely infest barns or animals treated in this way. The floors of all "tie-ups" should always be of stones—large flags—which can be thoroughly cleansed by the diffusion of water, and which do not become impregnated with the ammoniacal matter contained in the urine, and the fœtid animal matters of the excrement.

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## MANURES

### VEGETABLE AND ANIMAL.

Every thing which has grown in the soil, even to the comparatively dry and unsucculent haulm or straw which most crops leave behind them is capable of being transformed, by the chemistry of nature, into manure, or the pabulum of vegetable life.

By the term *humus*, we understand that portion of the vegetable structure, or organization, which is resolved, by fermentation, into mould; such as the foliage, the stems, and succulent parts of the stalks of plants and even those portions of the more perfectly liquified or woody organism which are broken up by the play of chemical affinities, and made capable, when rendered soluble by water, of contributing to the development and sustenance of plants. It is rarely the case, however, that mere vegetable matters are applied to the soil artistically. They are, for the most part, used in conjunction with animalized particles, which render them

more energetic, efficient, and salutary in their effects.

Even the manure from the stable is by no means a purely vegetable substance, although formed of hay and grain. In every case, portions of matter rejected from the animal system, are mixed up with the vegetable mass—worn out, abraded particles, which are no longer of any service, and which are thrown into the common receptacle which receives the residuum of the food that has not been digested, and from which it passes in the form of excrement.

The poorer an animal is, the less of this animalized matter does it throw off; hence the well-known fact that the manure made by cows, oxen, horses, sheep and hogs, which have been well kept, is much more energetic and valuable than that furnished by those which have not been supplied liberally with food. The urine of every animal contains a certain portion of this animalized matter, and hence its superior value for agricultural purposes, and the high degree of vegetable fecundity resulting from its application to most crops and soil. The ammonia contained in this liquid manure also contributes, very essentially, to its fertilizing powers; but the animalized matter is that which chiefly produces its fermentation and putrefaction, without which it would be nearly or quite useless for manurial purposes, at least in its immediate effects. Other principles highly beneficial to vegetation are also contained in urine, many of which are derived immediately from the food upon which the animal is kept. This remark applies also to the solid voiding, and is illustrated by the following table, showing the constituents of feces and urine.

In one hundred parts of horse dung in a fresh state,—there were,  
 3.7 of biliary matter and coloring matter in state of alteration.  
 6.3 of mucus, (crude,) &c., &c.

20.2 of non-digested vegetable remains and ashes.  
69.8 of water.

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100.0

The quantity of ashes in this case was six per cent. Their constitution, according to accurate analysis, was as follows: In one hundred parts—

Phosphate of lime.....	05
Carbonate of lime.....	18.70
Phosphate of magnesia.....	36.25
Sillicia acid.....	45.00

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100.00

Urine from the horse contained, in one hundred parts—

Carbonate of lime.....	1.1
Carbonate of soda.....	0.9
Hippurate of soda.....	2.4
Hydrochlorate of potash.....	0.9
Urea.....	0.7
Water.....	94.0

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100.0

It will be seen that both these articles contain carbonate of lime, a substance valuable to vegetation in many ways, and they are also replete with other highly energetic and valuable principles. In applying manure to the soil—whether animal or vegetable—we should endeavor, in the first place, to ascertain the character and condition of the latter, and also the habits, character and requirements of the crops intended to be grown upon it. Whether we turn in green crops, or feed them to animals, and apply only their excrements, this information is alike essential to success. By applying to a vegetable, manure which does not contain principles congenial to its nature, or which does not secure those advantages which we might derive if the manure were more appropriate to the plant which it is desired to produce. It is worthy of some study,

therefore, to act understandingly upon this point, and to furnish such aliment as will be taken and assimilated by the system, for the support of which it is intended. By enabling ourselves to do this, we shall obviate no inconsiderable expence and trouble, and ensure a better success.

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## MILK.

### HOW MUCH FOR A POUND OF BUTTER.

—It has been stated very often that it takes an average of fourteen quarts of milk for a pound of butter, but this we have always thought pretty high, though willing to believe that the average was full twelve. A discussion upon this subject has lately arisen, and the evidence of Mr. Horsefall, in the Transactions of the New-York State Agricultural Society, is brought forward, and one writer says that he shows "beyond all dispute" that the average is fourteen quarts. The editor of the *Country Gentleman* comes to the same conclusion from the reports of various persons. The editor of the *Massachusetts Ploughman* believes that in that State ten quarts of milk is considered an average for a pound of butter; and he also states a fact that we fully believe, from the best evidence of our own senses, that the somewhat celebrated herd of cows, bred by Col. Jaques at Ten Hills farm, within a few minutes ride, and within sight of Boston State-House, known as "the cream-pots," averaged a pound of butter to four quarts of milk. We have often been assured by Col. J. that he has repeatedly made a pound of butter with his own hands from less than four—we think only three—quarts, drawn from the best butter cows of this remarkable herd, which were bred solely for the great butter-making quality of their milk. We have

also seen a lot of cows almost equal to those of Col. Jaques on the farm of Major John Jones, in Delaware; and it is claimed by many of the owners of Alderney cows that their milk is equally rich. Now, if these are facts—and who can dispute them?—what are we to think of the quality of judgment, sense, or economy of men who will keep cows on their farms for the sole purpose of making butter, at an average of one pound to fourteen quarts, when they could have cows that would give a pound from less than half that quantity? Let this fact be thought of, that it does take fourteen quarts of milk for a pound of butter, which might be made from four quarts. While this is a fact, it is not to be wondered at that Orange County farmers have quit making butter, notwithstanding the high reputation it had attained, and prefer to send their milk to New-York from every farm within reach of the river or railroad. If the milk averages two and a half cents a quart when sold, and it would take fourteen quarts to make a pound of butter, it would make the first cost of the butter 35 cents a pound, beside all the labor of its manufacture. At that rate a milk dairyman cannot even afford to make his own family supply—he can buy it from a farmer who cannot sell his milk at a rate more economical.

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## MANURE.

### THE QUANTITY PER COW.

—Where manure is as valuable as it is in all the farming region near New-York, the droppings of a milk cow form no inconsiderable portion of the profit, and perhaps afford one of the strongest arguments in favor of keeping her in a stable, fed upon green food in its season, only turning her out in a yard for air and

exercise. And as the value of the manure depends very much upon the food consumed, it will be found profitable, not only to increase the milk, but to improve the quality of the manure, to feed high. We have heard it estimated that a cow would give over eighty pounds a day, and that the annual value at the usual price would be thirty dollars. If it even averages half that per cow, we are satisfied that many farmers neglect a very important source of profit in not keeping more cattle in their stables, both for milk and meat. It is a question of very great importance—one that should be satisfactorily settled by the offer of a handsome prize by our State Agricultural Society—whether we cannot as well afford to feed corn to bullocks at 75 cents a bushel, as the feeders can at 25 cents at the West, where the manure is not counted of any value; particularly as we have the facilities of converting the grain into meal at a cheap rate, and the further advantage of improving the value of the land where the manure is applied, almost as much as the crops to which it is given are improved. This is proved by the fact that all farms that are profitable to the owner outsell those that are not, notwithstanding the land may be naturally just as good. In our opinion it is more profitable for a farmer to buy food for cattle than it is to buy manure. Very few farmers ever think how much can be made in a year from a single cow, and how much it is worth to him, and that he could not do without it, and we do not recollect that we ever heard a farmer while calculating the profit of keeping cows ever make any account of the manure—that is, the conversion of grass, cut or grazed, from self-sustaining fields, into a substance that enables him to produce grain from plowed fields that without manure would not pay for tilling; and

we very rarely hear of calculations upon the increased value of the manure made by an animal fed upon rich food, over one fed upon a meager diet. Yet it is one of the elements of profit, or return of part of the cost of high feeding, either for milk or beef; and we once more reiterate the assertion that a farmer cannot afford to buy city manure and haul it home, because it would be much more profitable for him to load his outgoing empty wagon with grain, purchased at current city prices, and convert that grain into meat or milk and manure, which in turn would be again converted into human food, and again brought to market and exchanged for cash and grain; the one to buy more stock to consume the grain, and in their turn go to market increased in value, leaving a certain profit in the manure made, if carefully saved.

### NIGHT SOIL.

—Not long since the scavengers of a portion of the Williamsburgh part of Brooklyn were in considerable trouble about a place of deposit for the contents of privy vaults. It was a long drive to a dock where they were permitted to discharge the carts into vessels, and then vessels were not always in readiness. The whole operation was faulty. The long drive through the streets was looked upon by the inhabitants as a nuisance, and so it was, and the filling of the vessels was another nuisance; and the workmen felt it to be a serious nuisance not to be able to go on with their work without waiting for time and tide. Then what a piece of folly to boat away to New-Jersey such a rich source of fertility to the numerous gardens in the suburbs, some of which bought poudrette every year to apply to those very gardens. Pou-

drette! what is it? Deodorized night soil. The offensive contents of those privy vaults carted to the dock through long streets of dwellings, and boated over to the Hackensack, and there mixed with the swamp muck of the Newark meadows, and put up in barrels, marked by a new and less offensive name because it had lost its offensive odor, and also lost half its value, and then boated back again and sold close by where it started from at four or five times the price the raw material could have been had. We are wrong in saying four or five times, because the raw material had no value—it was a nuisance to be got rid of, and, in the instance noted, one that the scavengers were troubled to get rid of. So they applied to some owners of cultivated land and said, “Don’t you want this for manure?” They were answered with an expression of disgust at the “filthy stuff.” True, it is so naturally, but it does no follow that one should cry bah, and run away with his nose in his hand. The scavengers tried several persons for privilege to dig pits and bury this offensive substance. “No, we won’t have it on our land.” It happened that Andrew S. Fuller, a gardener, a man who had read books, and knew how to apply scientific information thus obtained in his business, that of a practical horticulturist, heard of the trouble of the scavengers and sent word to them to come to him, and he told them that he would not only give them the privilege of dumping their carts upon his grounds, but that his laborers should dig the pits and do all the work—they need only come whenever they were ready, and dump their loads in the night and go away again, and he would see to the rest, and that his neighbors should not complain of any nuisance. So he contracted with the charcoal merchants for all their dust at a low

rate, and as the carts are emptied this is sprinkled over the contents—and, presto, what a change! An offensive mass is changed to a savory compound—home-made poudrette—a most valuable fertilizer. Now, will farmers take a hint from Mr. Fuller, and not make a convenience of the house a nuisance, when it is only so by their own ignorance. Certainly no man could be so indolent as to neglect to deodorize and use such a valuable article, if he knew how. If charcoal dust cannot be obtained conveniently, the muck of the nearest swamp, decomposed into a pulverulent powder by the lime and salt mixture, will answer the purpose, only requiring a little more in bulk than of charcoal. In some places the cinders of locomotives can be easily obtained and will answer perfectly. In other places the soot of chimneys burning bituminous coal will be the cheapest deodorizer. In all places ground gypsum can be had without great expense, and that used daily in small quantities will enable any one to remove the content once a month and mix them with clayey loam, or decomposed sods, or any good soil, thus forming an inodorous compost of great value. Remember that night soil is not a nuisance, only when it is made so by ignorance, indolence, or neglect that is almost criminally wicked.

### OLD MORTAR.

—There is no valuable substance about a farm more often wasted, by throwing into the road, or into some mudhole, or out of the way corner, than the old mortar of chimneys and lath and plastered walls. It is because the fact is not known that this old mortar—the older the better—is a most valuable fertilizer. It is good upon any soil and upon every crop, used as a surface dressing. It is

particularly valuable in garden soil, which, notwithstanding its richness in nitrogenous manure, sometimes lacks just what it would receive from a dressing of this old mortar. In all places where it is highly esteemed, and only needs to be tried to induce every farmer to carefully save and apply it. It is worth more bushel for bushel, than the best stable manure, and some persons have ascribed virtues to it not much, if any, behind guano.

### Manurial Value of Burnt Earth.

—As a general thing American farmers know but little of the value of burnt earth for manurial purposes. In England, it is so well known that whole fields are treated in this way. The surface is pared off and winrowed up with brush, straw, stubble, peat, or dried sods, enough to start the fire and heat the clay to an almost brick-burning heat, and then the whole of the burnt mass is spread over the surface, and it adds greatly to the fertility. If any one doubts this, let him burn a log-heap and scrape up and carry away all the wood-ashes, and see if the burnt spot is not more productive for a year or two than any other portion of the field. We do not think it worth while to attempt to give the reason—we only state cause and effect. It is also notorious that the debris of a brick kiln, or earthen ware pottery or the pulverized bricks of an old wall or chimney, are fertilizers. Gardeners of experience never throw away the pieces of thin broken pots—they well know their value in promoting the growth of plants—and farmers should never waste broken bricks. If it will not pay to pulverize them; it will pay to bury them at the bottom of deep furrows in the field, or in trenches in the

garden. Remember the fact, that burnt clay will always prove beneficial to raw clay, and still more so to sandy land, or to soil charged with nitrogenous matter, such as what we term good garden soil.

### HOW TO OIL A HARNESS.

We all know that it is of great benefit to oil our harnesses, yet many of us neglect to do it, because we regard it as a dirty job; but it is easy enough, if done right. My process for doing it is as follows:—First, I take the harness apart, having each strap and piece by itself; then I wash it in warm soap-suds. I used to soak it in cold water for half a day, as others did, but I find that warm water does no harm and much facilitates the job. When cleaned, I black every part with a harmless black dye which I make thus:—One ounce of extract of logwood, twelve grains bichromate of potash, both pounded fine; upon that I pour two quarts boiling rain water, stirring until all is dissolved. When cool it may be used. I keep it on hand all the time, in bottles. It may be applied with a shoe brush, or anything else convenient. If any one objects to the use of this blacking, fearing that the bichromate of potash it contains would injure the leather, I would just say that this kind of potash will not injure leather, even when used in a much larger proportion. The blacking generally used contains copperas—a sulphate sometimes made of oil of vitrol and iron, and it is found that it will eat out the life of leather, unless used with great caution. When the dye has struck in, I go through with the oiling process. Some have a sheet-iron pan to oil in, which is better than anything; but I have a sheet of iron nailed to a board; it is about two by three feet square. This

I lay upon a table; I lay a piece or part of the harness upon this, and with neats-foot oil applied with a paint brush, kept for the purpose, I go over it, oiling every part; and thus I proceed until every part is oiled. The traces, breeching, and such parts as need the most, I oil again. For the last oiling I use one-third castor oil and two-thirds neats-foot oil, mixed. A few hours after, or perhaps the next day, I wipe the harness over with a woolen cloth, which gives it a glossy appearance. Why I use some castor oil for the last coat, is, because it will stand the effects of the atmosphere, the rain, &c., much longer than neats-foot oil, consequently the harness does not require oiling so often, by its use. One pint of oil is sufficient for one harness.

The common way of oiling a harness, is to apply as much neats-foot oil containing lamp-black as the leather will take up; then washing off with castile soap and water. This way is not so good as mine, because it makes the harness smutty, and also the soap that is used contains barilla—a strong alkali, which cuts up and feeds upon the oil in the leather, and the weather, especially if rainy, soon renders the harness stiff and unyielding as before; the wax in the threads is also destroyed, and the stitching gives way. I have experimented with different kind, of oil, and find that the kind and the process, I now use is the best.—*New England Farmer.*

### Antidote to the Rot in Potatoes.

—There are certain substances—some of which are also fertilizers—that are almost certain to prevent the rot in potatoes. Peat is an antiseptic—that is, counteracts putrefaction or

rot. Tan bark and charcoal also possess the same anti-rot qualities, in nearly as great a degree. But neither of these substances are fertilizers till decomposed, to do which requires a great length of time, or the mixture of some other substances with them; such as fish or other animal matter—with the peat, for example: Lime, as well as wood ashes, is a fertilizer, more especially the latter when unleached. In fact unleached ashes will have a greater effect upon the grass crop than any other substance which can be applied to it, excepting, perhaps, Peruvian guano or bone dust, where the soil has been greatly exhausted. The application of lime or ashes would not act as a partial preventive to rot in the potato, but they would be excellent fertilizers to apply to the crop, above all the ashes. To ensure a large crop of potatoes, and of a superior quality, there is no preparation equal to turning a rich pasture sod flat over a day or two only in advance of planting. As you furrow out for planting don't disturb the sod; it then decomposes about as rapidly as food is required for the growing crop. Another great advantage of a sod turned flat over is, few or no weeds spring up during the summer. Rich barn-yard or other putrescent manures, applied plentifully to the potato crop, is almost certain to bring the rot; and the quality of the potatoes is not so good, as when grown on a sod without manure.—L. S. WISCONSIN, February, 1858.—*American Agriculturist*.

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### Improvement of Pastures.

As the subject of the grasses and its importance has been frequently treated of in many of the agricultural journals, a recurrence to it at any time it is hoped will lead the agricul-

turist to study his best interest. Our pasture grounds need greater attention than is generally paid them, to make them productive in quantity and quality, of the grasses for the grazing herd. Next to the having good stock, is that of providing good pasturing. All lands are not adapted to this purpose. There is a vast difference in the quality of the grasses, and we consequently find that some pastures in which there is a luxuriant and well sustained crop of herbage the season through, the animals are famished and lean that are fed upon them. Other lands devoted to their use, while they appear short and dry, turn out their tenants in a condition obviously improved—they are fat, sleek, and show no sign of a lack of food, but the reverse. Low lands, which are generally saturated with water which becomes stagnant, seldom produce any but aquatic grasses, and can never be rendered good for pasture without draining. Although they produce an abundance of green, and apparently succulent herbage, the animals are invariably poor, afford but little milk and come to the barn in autumn lean and enfeebled. High grounds, although they are more liable to be seriously affected by drought, have the advantage of producing a more nutritious quality of food; the grasses are short, sweet, and highly nutritive and animals pastured upon them gain rapidly in flesh, and produce not only a larger quantity of milk, but that of a superior quality. Yet the best pasture lands, like the grass and cultivated soils, in general, will nevertheless, in time become sterile; the more valuable kinds of grass will "run out," and be supplanted by others of a less desirable kind or entirely worthless class. Nature, in this, seems to corroborate the importance of a rotary system of cultivation with respect to all the more valuable productions. After producing a cer-

tain class of plants, for a stated or definite period, the soil, appears to weary of it and to demand a change. We see in our forests, that the oak succeeds the pine and the pine the oak. So the minor productions. Corn cannot be cultivated with success on the same soil, more than three years in succession at most. Wheat never succeeds more than two, and clover and the other cultivated grasses deteriorate after yielding a few crops, and finally depreciate and disappear. By breaking up our pasture grounds, occasionally, applying manures and plaster, and stocking down with fresh seed, we should find the soil would be vastly benefitted and improved.

Where the surface is such as not to favor this kind of amelioration, the use of plaster, ashes, lime, and other similar fertilizers, is of great benefit. I have seen poudrette, guano bone-dust, &c., used with good success, especially on sandy soils for pasture. But as to guano; I cannot recommend it for this purpose, at the present high price.

My plan for the last named soil, is to turn under a good crop of grass in August or September, and sow half a bushel of timothy, and red and white clover equally mixed, and apply three bushels of plaster to the acre as early as the first to the tenth of Sept., and keep off the cattle until the middle of the ensuing May; this is all that will be needed for several years, until the grass plants begin to fail, then they may be manured with good barn-yard manure as a top-dressing in the fall, and sow three or four bushels of plaster in the spring, and you will find the results all that is desirable.

Another thing, very desirable and important to having good pastures, is to know the quality of the soil and its chemical constituents, and then the kind of grasses that will produce the most nutrition to the animals to

be fed, whether for milk or flesh; for the great and fundamental doctrine from whence all our reasoning on the subject of animal nutrition, is the identity or almost identity, of the principle of vegetable and animal body. The conclusion founded upon this identity is, that with slight modifications, the vegetable principles are assimilated by the animal frame—the albuminous being converted into flesh and muscle, the oily ingredients into fat, and the mineral salts into bone and other solid parts. In the dairy, next to a *good* cow, is the importance of *good food* to the production of a *good article* of butter or cheese. Many dairymen are disappointed in not having a good article, and frequently lay the blame to the dairymaid, when the real truth is, the fault is in not providing good feed and pure water for the cows.—*Country Gentleman.*

**HARD CEMENT.**—The following cement has been used with great success in covering terraces, lining basins, soldering stones, etc., and every-where resists the filtration of water. It is so hard that it scratches iron. It is formed of ninety-three parts of well burned brick and seven parts of lithargé, made plastic with linseed oil. The brick and lithargé are reduced to a very fine powder; they are mixed together, and enough of linseed oil added. It is then applied in the manner of plaster, the body that is to be covered being always previously wet with a sponge. This precaution is indispensable, otherwise the oil would filter through the body, and prevent the mastic from acquiring the desired degree of hardness. When it is extended over a large surface, it sometimes happens to have flaws in it, which must be filled up with a fresh quantity of the cement. In three or four days it becomes firm.—*Scientific American.*

**Mowing Machine agt Scythe.**

In a late number of the *Country Gentleman*, the question is raised whether it is more profitable for a farmer to cut his grass with a scythe or to use a mowing machine. Mr. Johnston of Geneva, appears to me to have settled the matter, but I think the difference in cost is even greater than that indicated in his statement. I consider my mowing machine as capable of doing the work of ten ordinary men with ease, using one pair of horses. By changing the horses at noon, it will do the work of twelve men, or cut twelve acres a day, without difficulty. The price of mowing with the scythe is about the same here as with Mr. Johnston, say \$1 50 per day. Board for a man in mowing time, with five meals per day, cannot certainly be estimated at less than 50 cents, making the cost per hand amount to \$2 per day. Mowing by a machine (hired,) would cost 50 cents per acre, with board for a man and two horses, \$1 per day. Or thus :

10 men per day at \$2, would be.....	\$20 00
10 Acres by machine at 50 cents, would be...	\$5 00
Board for man and two horses.....	1 00
	— 6 00

Making a difference of cost in favor of machine, of \$14 per day.

There is also an advantage attending the use of the mowing machine, not referred to by Mr. Johnston, but which I have found well worthy of consideration. A farmer may now have his hands at work in the cornfield for several hours every morning, cultivating corn until the dew is off the grass; and he may have them all day in dull weather when the hay does not make. When the mowing is done with the scythe, this is of course out of the question. C. W. T., Bucks County, Pa. — *Country Gentleman*.

**Trees Around Barnyards.**

Much attention has been paid in your valuable paper lately to the management and cultivation of fruit trees. The subject is one of importance, and one worthy of your consideration, as well as of more attention among farmers than it generally receives. Now, Messrs. Editors, I am willing to do what I can to call more attention to this subject, and would therefore suggest a plan in which a few dollars might be profitably invested by every farmer who has a barnyard; it is this, to set out as many apple or other fruit trees around the barn and yard as the room will permit.

Trees so planted will soon throw out their roots under the barn and yard, where they will find an abundance of nourishment, which has soaked downward from the surface of the yard, and which did they not save, could not be made available in any other way. In consequence of their proximity to the yard and barn, they will not need any manuring or further attention, save to protect them from cattle, till they get out of their reach, which they will soon do and come into bearing.

The fruit from trees so planted is large and well developed, and they almost always hang full. One of my neighbors who has a row of apple trees on one side of his yard has two trees of the same kind, one near his yard and the other some distance off, the one near it produces apples of twice the size, and more than four times the quantity of the other. My neighbors' trees are about sixty years of age, and the largest I have ever seen, a number of them are about eight feet in circumference, at a distance of four feet from the ground, with a distance of sixty feet across them through the heads, and are still growing vigorously.

It is also a great advantage to a

yard to have trees around it, especially in winter, as they do much towards breaking the cold winds, and preventing much suffering among the cattle. I hope that those who feel disposed will try it next fall, as the outlay is so small and the result so sure, that I doubt not they will be satisfied, and an additional attraction be given to the old homestead.

AGRICOLA.

### Increasing the Quantity of Cream.

A gentleman in Brussels, Mr. BAKAERT, sometime since assured the public that he had at last been successful in his efforts to discover a process for increasing the quantity of cream from milk. The process by which this is accomplished is as follows:—

To every two quarts of milk, add a tablespoonful of liquid made by dissolving in a quart of water one ounce of carbonate of soda, one teaspoonful of curcuma, or tumeric, and three drops of marigold water is added. The action of the soda is, according to Mr. Bakaert, to cause a greater quantity of cream to be separated from the milk than would otherwise be; while the other ingredients render the quality and color of the butter superior to that of butter produced in the ordinary way.

We are not satisfied that this boasted discovery will be of any great utility, after all. It is somewhat difficult to conceive how the carbonate of soda can produce the action or result which, in this case, is attributed to it. As for "coloring" and "flavoring" butter, when the latter is properly made, it is to be regarded as of a piece with "gilding refined gold," or to add perfume to the violet. The milk of cows, judiciously kept, if well managed, will always produce butter of a good co-

lor and flavor, and the attempts of some to render their butter more saleable in the principal markets, by coloring it with pigments of various kinds, is, at best questionable as to its utility, and generally to be deprecated as a decided injury to the article when it is to be kept any time before being used.

In a paper now before us, we notice an article in which the yellow Altringham carrot is recommended as an excellent article for coloring butter! The yolks of eggs, and otto, are also used in some localities, for this purpose, and various other vegetables and *drugs*. Every thing added to good butter,—after a little salt,—hurts its keeping qualities, changes that sweet, delicious taste that good butter always has, causes it sooner to become rancid, and depreciates its true value.

**CANE CIDER.**—The Nashville Home-stead says that besides the excellent syrup and sugar made from the Chinese Sugar Cane, there is yet another article obtained from it which is of pleasant taste, and doubtless healthy in its consequences. It is obtained by putting the expressed juice of the cane into any clean wood or glass vessel, allowing it to stand ten or twelve days when it assumes the appearance of limpid water, and is fit for use. The flavor is similar to our best cider, and we suppose might be properly called cane cider.

**AS TO GOING TO PARTIES.**—"Extensive and promiscuous intercourse with mankind has few advantages for the man of thought. Access is not thus to be obtained to what is most valuable in others. Better for the studious, thinking man to be much alone, cultivating acquaintance with the inside of good books and himself, than with the outsides of other people."

MONTHLY METEOROLOGICAL REPORT

For May 1868.

BAROMETER.

Mean reading of the barometer F inches corrected and reduced to...	32° 29 751
Highest reading of the barometer the 8th day.....	30° 404
Lowest reading of the barometer the 24th day.....	29° 865
Monthly range.....	1° 039

THERMOMETER.

Mean reading of the standard thermometer.....	53° 02
Highest reading of the maximum do the 31st day....	80° 5
Lowest reading of the minimum do the 14th day....	30° 6
Monthly Range.....	49° 9
Mean of humidity.....	0° 764
Greatest intensity of the suns rays.....	99° 9
Lowest point of terrestrial radiation.....	30° 1

Amount of evaporation in inches..... 2 89

Rain fell on 14 days amounting to 5,387 inches it was raining 97 hours 25 minutes, accompanied by Thunder on 1 day.

Most prevalent wind N. by E.

Least prevalent wind W.

Most windy day the 22nd day, mean miles per hour..... 13 19

Least do do the 4th day do do 0 06

Ozone was present in large quantity.....

Aurora borealis visible on 3 nights.....

Montreal Market Prices.

CORRECTED BY THE CLERK

**Boursecours Market.**

Montreal, August 5th, 1858.

Flour, Country, per quintal.....	12 0 to 12 9
Oatmeal, do.....	11 6 to 12 0
Indian Meal, do.....	0 0 to 0 0

GRAINS.

Wheat, per minot.....	4 6 to 5 0
Barley, do.....	4 3 to 4 6
Rye, do.....	2 8 to 3 0
Oats, do.....	1 10 to 2 0
Buckwheat, do.....	2 0 to 2 3
Lower-Canada Indian Corn, do, yellow	4 0 to 4 6
Rye, do.....	0 0 to 0 0
Flax Seed, do.....	5 0 to 5 6
Timothy, do.....	9 0 to 10 0
Bran, do.....	0 0 to 0 3

FOWLS AND GAME.

Turkeys (old) per couple.....	7 6 to 8 0
Do (young) do.....	0 0 to 0 0
Geese, do.....	4 6 to 5 0
Ducks, do.....	3 0 to 3 6
Do Wild, do.....	0 0 to 0 0
Fowls, do.....	2 6 to 3 0
Chickens, do.....	0 0 to 0 0
Pidgeons, Tame, do.....	1 0 to 1 3
Pardidges, do.....	0 0 to 0 0
Hares, do.....	1 0 to 1 3
Plover, do.....	0 0 to 0 0
Woodcock, do.....	0 0 to 0 0

MEATS.

Beef, per lb.....	0 4 to 0 9
Pork, do.....	0 5 to 0 7
Mutton, do.....	0 5 to 0 7
Do per qr.....	5 0 to 7 6
Beef, per 100 lbs.....	35 0 to 45 0
Pork, fresh, in carcass.....	35 6 to 35 9

DAIRY PRODUCE.

Butter, Fresh, per lb.....	0 9 to 0 10
Do Salt, do.....	0 6 to 0 8
Cheese (skim milk) per lb.....	0 6 to 0 8
Do (sweet) do.....	0 0 to 0 0

VEGETABLES

Beans, American, per minot.....	0 0 to 0 0
Do Canadian, do.....	7 6 to 8 0
Potatoes, per bag.....	4 0 to 4 6
Turnips, do.....	6 0 to 0 0
Onions, per minot.....	0 0 to 0 0

SUGAR AND HONEY.

Sugar, Maple, per lb.....	0 3 to 0 4
Honey, do.....	0 0 to 0 0
Bee's Wax, do.....	0 0 to 0 0

MISCELLANEOUS.

Lard, per lb.....	0 10 to 0 11
Eggs (fresh) per dozen.....	0 6 to 0 6
Halibut, per lb.....	0 7 to 0 0
Roadock, do.....	0 8 to 0 0
Apples, per barrel.....	10 0 to 20 0
Oranges, per box.....	37 0 to 0 0

PROVINCIAL  
AGRICULTURAL AND INDUSTRIAL  
**EXHIBITION !**

WILL TAKE PLACE AT

**MONTREAL.**

ON THE

29th, 30th of Sept., & 1st of Oct.

**5,600 Dollars**  
TO BE DISTRIBUTED IN PRIZES.

*Diplomas will also be awarded in  
the Industrial Department.*

AGRICULTURAL DEPARTMENT.

10 Classes, 194 Sections.

10 Cattle ; 20 Sheep ; 30 Swine ; 40 Horses ; 50 Dairy Produce ; 60 Sugar ; 70 Field Productions ; 80 Agricultural Implements ; 90 Foreign Stock ; 100 Poultry and Birds.

HORTICULTURAL DEPARTMENT.

3 Classes, 63 Sections.

10 Bouquets, Wreaths and Flowers ; 20 Fruits, 30 Vegetables.

INDUSTRIAL DEPARTMENT.

13 Classes, 550 Sections.

10 Painting in Oil, Pencil and Crayon, and Daguerrectypes ; 20 Ladies' Exhibition of Fancy Work, &c. ; 30, Printers', Bookbinders' and Lithographers' Work ; 40 Cabinet Work and Musical Instruments ; 5, Woods, Carpenters', Joiners', and Turners' Work ; 60 Marble, Stone, Brick, and Tiles ; 70 Ores and Metals, Machinery and machines and manufactures of Iron, Brass, Lead, and Tin ; 80 Woolen, Cotton, Linen and Hemp Manufactures ; 90 Leather, Manufactures of Leather and India Rubber ; 100 Industrial Products, chemically or otherwise compounded ; 110 Hatters', Furriers', and Clothiers' Work ; 120 Indian Productions and Curiosities ; 130 Carriages and Sleighs.

For Prize Lists, forms of Entry, and information, address (post-paid, if by Mail) to the Secretary Treasurer in Montreal. For particulars of the Industrial Department, address the Exhibition Committee of the Mechanics' Institute, and for particulars of the Horticultural Department, address the President of the Horticultural Society.

All exhibitors must furnish the undersigned, on or before the 8th September, at his office, No. 33, Notre-Dame Street, with a list and description of the articles they intend to enter for exhibition, as after that day no entries can be received.

JOSEPH PERRAULT,

Secretary-Treasurer.

Montreal, August, 1858.

*Local Committee of Superintendance.*

C. S. Rodier, Esq., Mayor of Montreal, T. S. Brown, Esq., James Ferrier, Jr. Esq., G. W. Weaver, W. Rodden, The President of the Union St. Joseph, Dr. Valois, Pointe-Claire, John Yule, Esq., Chambly, Presidt. B. A., E. J. DE Blois, Esq., V. P. B. A., David Brown, Esq., P. B. A. and M. Hon. P. J. O. Chauveau, V. P. B. A. and M.

*Industrial Department.*

W. P. Bartley, R. Irwin, Charles Garth, J. C. McDonald, Alexr. A. Stevenson, Sec.

*President of the Horticultural Society.*

James Ferrier, Jr. Esq.,

The Public will be admitted on the 30th September and 1st of October only.

THE  
COUNTY OF LOTHBINIERE

**Agricultural**  
SOCIETY, No. 1.

Purposes holding their Fall Exhibition on Wednesday the 13th and Thursday the 18th of October on the Farm of Mr. And. McKee St. Sylvester, Craigs Road.

JOHN PARKE,

Secretary Treasurer.

A. S. C. L. No. 1.

1st August 1858.

COUNTY OF RIMOUSKI

**Agricultural**

SOCIETY

The Exhibition of this Society will take place at Ste. Luce in the County of Rimouski, on Thursday the 19th day of August when the following prizes will be awarded :

STALLIONS.

1st Prize	\$16.00
2nd "	8.00
3rd "	4.00

MARES.

1st Prize	8.00
2nd "	4.00
3rd "	2.00

DRAUGHT HORSES.

1st Prize	8.00
2nd "	5.00
3rd "	4.00
4th "	2.00

COLTS OR FILLIES UNDER TWO YEARS.

1st Prize	8.00
2nd "	4.00
3rd "	2.00

BULLS.

1st Prize	12.00
2nd "	8.00
3rd "	4.00

BROOD COWS.

1st Prize	6.00
2nd "	4.00
3rd "	3.00

MILK COWS.

1st Prize	8.00
2nd "	4.00
3rd "	2.00

HEIFERS UNDER 2 YEARS.

1st Prize	6.00
2nd "	4.00

RAMS.

1st Prize	4.00
2nd "	2.00

EWES.

1st Prize	4.00
2nd "	2.00

BOARS.

1st Prize	12.00
2nd "	8.00
3rd "	4.00

SOWS.

1st Prize	8.00
2nd "	6.00
3rd "	4.00

FLEECES.

1st Prizes	4.00
2nd "	2.00

COCKS.

1st Prize	1.00
2nd "	0.50

HENS.

1st Prize	1.00
2nd "	0.50

LOT OF HENS.

1st Prize	2.00
2nd "	1.00

GEESE.

1st Prize	2.00
2nd "	1.00

TURKEYS.

1st Prize	2.00
2nd "	1.00

DUCKS.

1st Prize	2.00
2nd "	1.00

TWILLED CLOTH

1st Prize	4.00
2nd "	3.00
3rd "	2.00

LIGHT CLOTH.

1st Prize	2.00
2nd "	1.00

FLANNEL.

1st Prize	4.00
2nd "	3.00
3rd "	2.00

PLAIN LINEN

1st Prize	4.00
2nd "	2.00

TOWELL LINEN

1st Prize	4.00
2nd "	2.00

For all other works made by the loam or for needle work, according to their merit \$20.

By Order,

JAMES SMITH,

Secretary Treasurer

A. S. C. R

**Agricultural**

SOCIETY, No. 1.

OF THE

COUNTY OF OTTAWA.

The Exhibition of Cattle, Farming Implements Produce and Domestic Manufactures of this Society, will be held at Aylmer on Wednesday the 6th day of October next.

CHARLES SYMMES,

Secretary Treasurer.

A. S. No. 1, C. O.

1st August 1858.

**Agricultural**

SOCIETY

OF THE

COUNTY OF MONTCALM.

The Annual Exhibition of this Society will be held at the Village of St. Esprit, in the County of Montcalm, on the property of Captain Rivais, on Thursday, the 30th of September next, at ten o'clock A. M.

By Order,

A. H. DE CAUSSIN,

Secretary Treasurer

A. S. C. M.

**Agricultural**

SOCIETY

OF THE

COUNTY OF LAVAL.

The General Exhibition of Cattle, Agricultural Products, &c., &c., for this County will take place in the Village of St. Vincent de Paul, on Thursday the 9th of September next at 10 o'clock A. M.

FELIX McMAHON,

President.

CHARLES SMALLWOOD, M. D.

Secretary Treasurer.

1st August 1858.

**Agricultural**

SOCIETY

OF THE

COUNTY OF TERREBONNE.

The General Exhibition of Animals, Agricultural Productions, &c., &c., of the said County will take place in the Village of Terrebonne on Tuesday the 16th of September next at 10 o'clock A. M.

ALPHEUS KIMPTON,

Président.

CHARLES SMALLWOOD,

Secretary Treasurer.

1st August 1858.

**Agricultural**

SOCIETY No. 1,

OF THE

COUNTY OF NICOLET.

The Exhibition of this Society will be held at Becancour on the twelfth day of October at ten o'clock in the forenoon.

H. W. A. LAMBERT,

Président.

J. JUTRAS,

Secretary Trea.

1st August 1858.

**Agricultural**

SOCIETY

OF THE

COUNTY OF DORCHESTER.

The Annual Exhibition of the Agricultural Society of the County of Dorchester, will take place at St. Anselme in the County of Dorchester, on the Public Square, on Wednesday the sixth day of October next at nine o'clock, A. M.

By Order,

SIMÉON LAROCHELLE,

Secretary Treasurer.

A. S. C. D.

1st August 1858.

**Agricultural**

SOCIETY No. 2,

OF THE

COUNTY OF OTTAWA.

The Annual Exhibition of the above Society will be held at the Village of Thurso in the Township of Lochaber on Wednesday the 15th day of September 1858, at eleven o'clock, A. M.

A. WATERS,  
Secretary Treasurer,  
A. S. No. 2, C. O.

1st August 1858.

**Agricultural**

SOCIETY

OF THE

COUNTY OF LAPRAIRIE.

The Annual Exhibition of this Society will take place at the Village of Laprairie, on the 22nd day of September next, at nine o'clock A. M.

By Order,  
H. LANCTOT,  
Secretary Treasurer.  
A. S. C. L.

**Agricultural**

SOCIETY No. 2,

OF THE

COUNTY OF NICOLET.

**NOTICE.**

The Annual Exhibition of this Society will take place in the Village of Nicolet in the County of Nicolet on the 30th day of SEPTEMBER next, at TEN O'CLOCK, A. M.

Geo. DAVID,  
Secretary Treasurer  
A. S. C. N. No. 2.

1st August 1858.

**Agricultural**

SOCIETY

OF THE

COUNTY OF MISSISQUOI.

The Annual Fair and Cattle show of this Society will be held in Bedford on the 9th day of September, 1858. The winter show at the same place on the 23rd day of December 1858.

By Order,  
H. O. Meigs,  
Secretary Treasurer  
A. S. C. M.

1st August 1858,

**Agricultural**

SOCIETY

OF THE

COUNTY OF RICHMOND

The Annual Exhibition of the County of Richmond will take place on the 29th September next, in the Upper Village of Melbourne.

By Order,  
JOHN MAIN,  
S. T. R. C. A. S.

1st August 1858.

COUNTY OF BROME.

**Agricultural**

SOCIETY.

The Fall Show of Said Society will be held at the Village of Knowlton in said County on Wednesday the 13th September next at ten o'clock A. M. And the Winter Show will be held at the same place on Tuesday the 4th of January next at Ten o'clock A. M.

By Order  
N. PETTES,  
Secretary Treasurer,  
C. B. A. S.

## THE ANNUAL EXHIBITION

OF THE

SHEFFORD COUNTY

*Agricultural*

SOCIETY

will be held in the Village of Waterloo on  
Wednesday 8th day of September next.

Geo. H. ALLEN

Secretary Treasurer.

A. S. C. S.

1st August 1858.

## AGRICULTURAL

SOCIETY

OF THE

COUNTY OF COMPTON.

The annual Exhibition of the above County will be held at Cookshire, Eaton on Thursday the 23rd day of September 1858, where Premiums to the amount of \$650 will be awarded.

By Order,

S. J. POMROY

Secretary Treasurer

A. S. C. C.

1st August 1858.

*Agricultural*

SOCIETY

OF THE

COUNTY OF WOLFE.

## NOTICE.

The Wolfe County Agricultural Society will hold their Annual Exhibition at Martletown, Dudswell on Thursday the 30th day of September 1858.

By Order,

ALLEN LOTHROP,

Secretary Treasurer

W. C. A. S.

1st August 1858.

*Agricultural*

SOCIETY

OF THE

COUNTY OF BAGOT.

## NOTICE.

Is hereby given that the second Exhibition of the Agricultural Society of the County of Bagot, will take place at the Village of the parish of Ste. Rosalie, on Thursday, the twenty third day of September next, at 10 o'clock, A. M.

P. S. GENDRON,

Secretary Treasurer.

A. S. C. B.

1st August 1858.

*Agricultural*

SOCIETY

OF THE

COUNTY OF ST. JOHNS.

The Annual Exhibition of this Society will be held in the City of St. Johns, on Monday the 27th Day of September next at 10 o'clock, A. M.

L. L. ROY,

Secretary Treasurer.

S. J. C. A. S.

1st August 1858.

COUNTY OF PONTIAC

*Agricultural*

SOCIETY'S SHOW.

The Annual Exhibition of this Society will take place at Clarendon Centre, County of Pontiac, on Tuesday the 13th day of October next.

S. M. JUDGSON,

Secretary Treasurer

C. P. A. S.

COUNTY OF ARGENTEUIL  
**AGRICULTURAL**  
 SOCIETY.

The annual Exhibition of the Agricultural Society for the County of Argenteuil will be held at the Village of St. Andrews, on Wednesday the 22nd day of September next. For list of premiums see advertisements circulated throughout the County.

By Order,  
**H. HOWARD**  
 Secretary Treasurer  
 A. S. C. A.

1st August 1855.

**AGRICULTURAL**  
 SOCIETY

OF THE

COUNTY OF TEMISCOUATA.

The annual Exhibition of this Society will take place on the 7th October next, at 10 o'clock A. M. in the parish of St. George de Kakouna, on Mr. Abraham LeBel's property, and the examination of the several crops now standing will commence on the first of August next.

By Order  
**J. B. BEAUBIEN,**  
 Secretary Treasurer  
 A. S. C. T.

1st August 1858.

**Agricultural Society No 2**  
 OF THE COUNTY  
**OF VAUDREUIL**

The annual Exhibition of the County of Vaudreuil will take place on the 29th of September next on the property belonging to Donald McDonald, Esq., at Cote Ste Madeleine de Rigaud, and the inspection of grains and crops in the fields, will take place on the 15th of July next.

By order,  
**E. N. FOURNIER,**  
 S. T. A. S. C. V.

July, 1st, 1858.

**AGRICULTURAL**  
 SOCIETY.

OF THE

COUNTY OF RICHELIEU.

President P. M. DeBlois, Esq.  
 Vice-President, Jacob W. Dorge, Esq.  
 Secretary Treasurer, J. G. Crebassa, Esq.

DIRECTORS.

J. B. Lamere, Esq., Sorel; Regis Latraverse Esq., Ste. Victoire; Joseph Collette Chapdeleine, Esq., St. Ours; François Dubois, Esq. St. Aimé; Charles Magnant, Esq. St. Ours; J. B. Lafetie, Esq., St. Aime; L. N. Ferland Esq., St. Robert.

The public Exhibition for the distribution of prizes for the best Cattle, Agricultural Produce, Domestic Manufactures, &c., will be held at the Village of St. Aimé, on the Public Square, on Wednesday the 29th day of September next at 9 o'clock A. M. precisely.

By order,  
**J. G. CREBASSA,**  
 Secretary Treasurer  
 A. S. C. R.

1st August 1848.

**THOMAS COUILLARD.**

IMPORTER.

No. 155, ST. PAUL STREET, MONTREAL.

Farmers will always find at the above address, a large assortment of Agricultural and Horticultural Implements, such as: Spades, Rakes, Scythes, Shovels, Plough Shares, Pitchforks, Hoes, Stay-Reels, &c.

—ALSO—

Sugar and Potash Kettles, Stoves of all sorts, Furnaces with Boilers, cast Iron of every description and a large assortment of

**SELF GOODS.**

Nov. 1857.

# VETERINARY ALMANACK.

Under this Title, **Mr. Felix Vogeli**, Veterinary Surgeon of Montreal will publish in September an Almanack of 64 pages octavo at least containing independantly of the necessary information for a work of this kind the following matter:

1o. A chapter entitled **INTRODUCTION** or a *chat with the reader* which will treat of the importance and of the objects of Veterinary science, and of the different branches of knowledge necessary to the man who practises it; of the services which he is called upon to render to agriculture, to Commerce, to Luxury, to War— what he is entitled to demand in return and of statistical information on the riches of Canada in Cattle of every description.

2o. A chapter under the head of **MEDICINE AND SURGERY** treating of Lamperis, Strangles Vives, Cholics and Indigestions of farm Cattle,—of Founderd Horses;—Blemishes in the bones;—of Worms and of the minor surgical operations.

3o. A chapter on the *Health and Education* of Cattle and containing a definition of Hygiene and its division; information on the Coupling, the Pairing and the crossing of Races, the care to be given to mothers during gestation, deliverance, suckling and weaning; the keeping of Stables and Barns the preservation of food &c., &c.

4o. A chapter on Farriery in which will be found general information on horse shoeing and posing, on the diseases of the hoof, on the necessity of keeping it constantly soft, &c.

5o. A chapter on agriculture containing a short review of all animals useful or prejudicial to Agriculture.

Lastly, **ADVERTISEMENTS** for the sale of Horses, the Prize Stallions; Agricultural Products;— Farms to Let or for Sale;—Agricultural implements and machines, &c.—Advertisements be will charged at the te of one Dolliar for each square lines equal to 13 lines in newspapers.

This work which will be published in the two languages, at 12½ cents. Subscriptions are solicited from this date. They can be addressed, free of postage, in Post Stamps, to M. F. Vogeli, Veterinary Surgeon, No. 12, Bonsecours street, Montreal, to the Editor of the *Courrier of St. Hyacinthe*, at St Hyacinthe, or to the office of the *Farmers Journal*, Montreal.

A liberal discount to Booksellers and Newspaper proprietors.

As this Almanack will be published every year it will furnish those who will keep the series a useful, curious and interesting collection if engaged in agricultural and farming pursuits.

## VETERINARY INFIRMARY.

### DR. FELIX VOGELI

Graduated in the French Government schools and formerly Veterinary in Chief in the French Artillery and Cavalry. Short and full treatment of all horse and cattle curable diseases, 11, Bonsecours Street, Hôtel du Peuple, Montreal. Horses bought or sold to order.

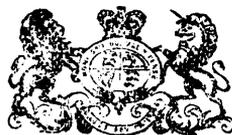
October 1857.

### J. LEDUC,

LATE AGENT OF L. RENAUD & FREERE,  
MONTREAL,  
**COMMISSION & BROKER,**  
CHICAGO, ILL.,

Office:—No. 6, Dearborn St.

March 1858.



## CROWN LANDS DEPARTMENT.

Toronto, 2nd June. 1858.

### NOTICE

IS hereby given, that about ONE HUNDRED AND THIRTY EIGHT VILLAGE and PARK LOTS in the Village PLOT of LAFONTAINE, TOWNSHIP of CHERTSEY, COUNTY OF MONT-CALM, Lower-Canada, will be open for sale on and after the 6th JULY NEXT

For particulars apply to the agent A. DALY, Esquire, at Rawdon in said County.

ANDREW RUSSELL,

Asst. Com.

**NOTICE**

TO

**FARMERS.**

THE MUTUAL FIRE INSURANCE COMPANY of the County of Montreal continues to insure farmers and other rural properties of the same description at 5j per £100 for three years, with a premium note of five pounds per hundred pounds insured to be assessed according to the losses and the expenses of the Company.

The amount insured now is over TWO MILLIONS OF DOLLARS.

**2,000,000 Dollars.**

Apply at the office No 1, St. Sacrement street Montréal or to the undersigned Directors.

- MM. Edw. Quin, President. Long-Point.
- Joseph Laporte, Pointe-aux-Trembles.
- Eustache Prudhomme, Côteau-St.-Pierre.
- Walter Benny, Montreal.
- Benj. Comte, do
- P. Malot, Belœil.
- M. F. Valois, Pointe-Claire.
- Leopold Desrosiers, Berthier.
- Wm. Boz, St.-Laurent,

P. S. LE TOURNEUX.

Secretary and Treasurer.

Montreal, 12th Janv. 1858.



**TO FARMERS!**

**PIERRE DUFRESNE,**

MANUFACTURER OF

**BOOTS AND SHOES,**

AT LOW PRICES,

Wholesale and Retail,

NO. 123,

CORNER OF ST. GABRIEL AND

NOTRE-DAME STREETS,

Sign of the Little Red Boot.

September 1857.



**Dr. Picault's Medical Hall,**  
**42, NOTRE-DAME STREET,**  
**MONTREAL.**

THE most approved Medecines for the diseases of Horses and Cattle will always be found at the above address.

— ALSO:—

Consultations and treatment of all diseases by Drs. Picault, father and son, Drugs of all sorts, French Patent Medecines, &c.

September 1857.

**Worthy of Recommendation.**

Mr. J. B. ROLLAND'S Librairy has always been remarkable for the choicest and most complete assortment of

**Books on Agriculture,**

**Papers,**

**Pictures, &c.,**

to be found in this City, his prices will be found as low as those of any other book store.

September 1857.



**Bureau of Agriculture**  
**and Statistics,**

Toronto, July 28th, 1856.

HIS EXCELLENCY THE GOVERNOR GENERAL, has been pleased to approve of the method of distribution of the LAND IMPROVEMENT FUND, prescribed by the Order in Council herewith, published in the hope that a judicious and economical management thereof may be thereby insured.

A Circular from the Department will be received by the Head of each Municipality, stating the amount at the disposal of such Municipality.

As the best season of the year for making improvements to which the Fund is applicable is close at hand, it is recommended that the preparations for the appropriation of the Money be made as soon as possible.

The Order in Council is as Follows:—

It is ordered that the Funds derived from the sales of Lands in each particular Township, or other Municipality, and applicable to the purposes of the Fund formed under the 14th Section of the Act 16 Vic., Ch. 159, and not already apportioned, be applied to the making, maintaining, altering, or improving of the Roads or Bridges in each of those Townships, or other Municipalities, respectively, and be for this purpose, distributed and disposed of by and through the Municipal Council of each such Township or other Municipality. Each such Council to report to the Bureau of Agriculture the manner of Expenditure of all such Monies on the FIRST DAY of JANUARY and JULY, in each year, and at any intermediate time within ten days after having been called upon so to do, by that Department.

Certified,

W. H. LEE, C. E. C.  
P. M. VANKOUGHNET.



## Bureau of Agricultural Statistics,

Toronto, 25th July, 1856.

**To Emigrants and others seeking lands for Settlement.**

The PROVINCIAL GOVERNMENT have recently opened out THREE GREAT LINES OF ROAD, now in course of completion, and have surveyed and laid out for Settlement the Lands, through, and in the vicinity of which those Roads pass.

The Roads, as advertised by the Agents of the Government, appointed to the respective localities to afford information to the Settler are known as "THE OTTAWA AND OPEONGO ROAD," "THE ADDINGTON ROAD" and "THE HASTINGS ROAD."

## The Ottawa and Opeongo Road

Commences at a point on the Ottawa River, known as "Ferrall's," a little above the mouth of the Bonchere River, and runs in a Westerly direction, passing through the northerly part of the County of Renfrew.

It is intended to connect this road with a projected line of road known as "Bell's Line" (leading to the Lake Muskako, and Lake Huron, by a branch which will diverge from the Opeongo Road in the Township of Brudnell, at a distance of about 53 miles from the River Ottawa, forming with "Bell's Line," a great leading road, or base line from the Ottawa to Lake Muskako, 171 miles in length, passing through the heart of the Ottawa and Huron Territory, and opening up for settlement a vast extent of rich and valuable land.

This road, and the country through which it passes, now open for settlement, is easily accessible, and the Agent for the granting of Lands in this district is Mr. T. P. French, who resides at Mount St. Patrick, near Renfrew, on the Opeongo Road, a few miles from the Lands which are to be granted. To reach the section of Country under Mr. French's charge the Settler must go from MONTREAL up to the Ottawa River to a place called Bonchere Point, and thence by land come twenty-five or thirty miles westward to the Township of Grattan, in which Mount St. Patrick is situated.

## The Addington Road

Commencing in the Townships of Anglesea in the northern part of the county of Addington near the Village of Flints Mills, in Kaladar, runs almost due north to the River Madawaska, a distance of 35 miles—and is to be continued thence for the distance of 25 miles till it intersects the Ottawa and Opeongo Road.

The Agent for the granting of the Land in this district is Mr. E. Perry, who, for that purpose, is now resident at the Village of FLINTS MILLS. The outlines of five townships of very superior land are already surveyed and ready for Settlement within the limits of the Agency, lying north of Lake Massanoka, and between it and the River Madawaska. The Townships are

called respectively Abinger, Denbigh, Ashley, Effingham, Angelsea, and Barrie.

The direct route to this Section is by way of KINGSTON, Canada West, thence, to NAPANEE, either by land or Steamboat, and thence North to the Township of Kaladar, and the Village of FLINTS MILLS where Mr. Perry resides.

## The Hastings Road

Almost paralld to the Addington Road and at a distance West from it of about 32 miles is the HASTINGS ROAD. This Road beginning at the northern part of the County of Hastings, and running a distance of 74 miles, almost due north, also intersects the OTTAWA AND OPEONGO ROAD and its extensions.

The Government Agent is Mr. M. P. Hayes, who resides at the Village of Hastings, lately called Madoc, about 28 miles north of the town of Belleville. The Road between these places is in good order—The land to be granted by the Crown under this Agency extends from 15 to 70 miles north of the Village of Hastings. The Road through this large extent of land is passable for 40 miles, and money is now being expended to extend it 30 miles further, so that Settlers can get in and out without difficulty, and find a good market for surplus produce, as well as convenient facilities for bringing in what ever supplies they may require—abundance of which can be had at the Village of Hastings, where the Government Agent resides.

The direct way to reach this Section which is easily accessible, is by KINGSTON, Canada West, thence by Steamboat up the Bay of Quinte to BELLEVILLE, 56 miles, and thence by a good Road to HASTINGS, 28 miles.

In order to facilitate the Settlement of the Country and provide for keeping in repair the Roads thus opened: the Government has authorized Free Grants of Land along these Roads, not to exceed in each case ONE HUNDRED ACRES, upon application to the Local Agents, and upon the following.

## Conditions.

That the Settler be eighteen years of age.

That he take possession of the land allotted to him within one month, and put in a state of cultivation at least twelve acres of the land in the course of four years.— build a house (at least 20 by 18 feet) and reside on the lot until the conditions of settlement are duly performed; after which accomplishment only, shall the settler have the right of obtaining a title to the property. Families comprising several settlers entitled to lands, preferring to reside on a single lot will be exempted from the obligation of building and of residence, (except upon the lot on which they live) provided that the required clearing of the land he made on each lot. The non-accomplishment of these conditions will cause the immediate loss of the assigned lot of land, which will be sold or given to another.

The road having been opened by the Government, the settlers are required to keep it in repair.

The Local Agents, whose names and places of abode have already been given, will furnish every information to the intending settler.

The LOG-HOUSE required by the Government to be built, is of such a description as can be put up in four days by five men. The neighbours generally help to build the Log-cabin for newly arrived Settlers, without charge, and when this is done the cost of the erection is small; the roof can be covered with bark, and the spaces between the logs plastered with clay, and white-washed. It then becomes a neat dwelling, and as warm as a stone-house.

The Lands thus opened up and offered for settlement, are, in sections of Canada West, capable both as to Soil and Climate; of producing abundant crops of winter wheat of excellent quality and weight, and also crops of every other description of farm produce, grown in the best and longest cultivated districts of that portion of the Province, and fully as good.

There are, of course, in such a large extent of country as that referred to, great varieties in the character and quality of land—some lots being much superior to others; but there is an abundance of the very best land for farming purposes. The Lands in the neighborhood of these three roads will be found to be very similar in quality and character, and covered with every variety

of Timber—some with hard wood, and some with heavy pine.

Water for domestic use is every where abundant; and there are, throughout, numerous streams and falls of water, capable of being used for Manufacturing purposes.

The heavy timbered land is almost always the best, and of it, the ashes of three acres—well taken care of and covered from wet,—will produce a Barrel of Potash, worth from £6 to £7 currency. The capital required to manufacture Potash is very small, and the process is very simple and easily understood.

The expense of clearing and enclosing heavily Timbered Lands, valuing the labor of the settler at the highest rate, is about FOUR POUNDS Currency per Acre, which the first wheat crop, if an average one, will nearly repay. The best timber for fencing is to be had in abundance.

A Settler on these lands, possessing a capital of from £25 to £50, according to the number of his family, will soon make himself comfortable, and obtain a rapid return for his investment. The single man, able and willing to work, needs little capital, besides his own arm and axe—he can devote a portion of the year to clearing his land, and in the numerous lumbering establishments, he can, at other seasons, obtain a liberal remuneration for his labor.

The climate throughout these Districts is essentially good. The snow does not fall so deep as to obstruct communication; and it affords material for good roads during the winter, enabling the farmer to haul in his firewood for the ensuing year from the woods, to take his produce to market, and to lay in his supplies for the future—and this covering to the earth, not only facilitates communication with the more settled parts of the District, but is highly beneficial and fertilizing to the soil.

In all the localities above named, wherever Settlers have surplus produce, there is a good market for it near to them—farm produce of all kinds being in great demand by the Lumber or Timber Merchants, who are carrying on extensive operations through these parts of the country.

According to the ratio of progress which Canada West has made during the last ten years, the value of property on an average

doubles within that period; irrespective of any improvements which may have been made by the Settlers.

In many Counties the value of Land, once opened for settlement has increased FIVEFOLD in the period named, but the average value of such land, according to the statistics of Canada West, DOUBLES EVERY TEN YEARS in the mere lapse of time, exclusive of any expenditure thereon—and it is not too much to expect that this ratio will not diminish for generations to come.

The Sections of Country opened by these roads lie in and to the Southern part of the Great Ottawa Region, stretching from and beyond them to the shores of Lake Huron, to Lake Nipissing, and to the Ottawa River—an immense extent of country whose resources are now seeking and will rapidly obtain development.

THE OTTAWA COUNTRY, lying south of Lake Nipissing and of the great River Ottawa, and embracing a large portion of the land offered for settlement, is capable of sustaining a population of EIGHT MILLIONS OF PEOPLE, and it is now attracting general attention, as the more western portions of Canada are being rapidly filled up.

The Parliament of Canada in its last Session, incorporated a company for the construction of a Railway to pass through this Ottawa country from the Shores of Lake Huron to the City of the Ottawa, and thence Eastward.

A survey of the River Ottawa and the neighbouring Country has been undertaken, and will be completed in the present year, its principal object being to ascertain by what means the River Ottawa can be rendered navigable and connected with Lake Huron so as to enable vessels to pass by that route from the most Western Waters into the River St. Lawrence and the Ocean. These projected works are alluded to, in order to show that the attention of the Government, Parliament and people of Canada has been fixed upon this important portion of the Province.

P. M. VANKOUGHNET,

Minister of Agriculture, &c.