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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 7.

POSTAGE FREE.

March 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.

CORRESPONDENTS.

C. SMALLWOOD, M. D. L. L. D.

M. FÉLIX VOGELI,

Veterinary Surgeon from France, formerly chief Veterinary Surgeon of Cavalry and Artillery and Professor of Hippiatrics, Author of different Works on the Veterinary Art and Member of several Scientific Societies in France.

TRANSLATOR, T. CHAGNON, Esq.,

Assistant-Secretary of the Board of Agriculture,

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MONTREAL

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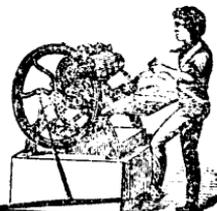
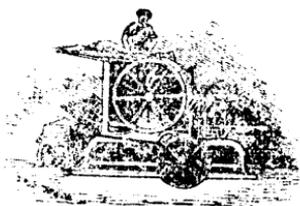
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Montreal, September 1857.

**De Montigny & Co.**

# The Farmer's Journal.

MONTREAL, MARCH 1858.

## Board of Agriculture Lower Canada.

Montreal February 18th 1858.

The Board met this day at 11 o'clock A. M. pursuant to notice given to members.

**PRESENT**:—John Yule, Esq., president; E. J. DeBlois, Esq., vice-president; Major Campbell, M. P. P., Esq.; R. N. Watts, Esq.; J. O. A. Turgeon, Esq.; P. E. Dostaler, Esq.; James Logan Esq.; president of the Agricultural Association for Lower-Canada; Professor Dawson, McGill College; Revd. P. E. Leclerc, Professor of Agriculture, College Masson, and D. Brown, Esq., president of the Board of Arts and Manufactures.

The president took the chair and read a letter from Mr. Hutton, secretary of the Bureau of Agriculture, Toronto, acquainting the Board that MM. R. N. Watts, J. C. Taché, B. Pomroy, and J. O. A. Turgeon, members of this Board retiring this year, had been reelected for the years 1858 and 1859 members of this Board by the Agricultural societies of L. C.

Mr. Yule was then proposed and unanimously reelected president of this Board.

Mr. DeBlois was proposed and unanimously reelected vice-president.

Mr. J. Perrault was proposed and unanimously reelected secretary-treasurer.

Mr. Logan and Mr. Turgeon were appointed a committee to examine the accounts of the local committee of the last provincial exhibition.

A letter from the Honble. A. N. Morin, offering to sell his agricultural library to this Board, with a catalogue of the same—

**Resolved**.—That a committee composed of Major Campbell, Professor Dawson and Revd. P. E. Leclerc, will take this catalogue of books into their consideration, and report to the Board.

The resolution of the agricultural association at their meeting on the 19th september last, that a petition be presented to the three branches of legislature to authorise this association to fix a permanent place to hold the provincial annual exhibition was then brought before the Board by Mr. president: Moved by Mr. DeBlois seconded by Mr. Dostaler:

That the Board is of opinion that the demand contained in the above resolution of the agricultural association would entail serious difficulties.—lost.

**Resolved**.—That a petition be prepared in accordance with the resolution of the agricultural association.

**Resolved**.—That Mr. Chagnon, assistant secretary of this Board shall be allowed the secretary's salary during that gentleman's absence and that the president be authorised to make arrangements respecting the editing of the journal.

**Resolved**.—That the Mayor of Montreal, the presidents of Hochelega and Jacques Cartier agricultural societies, the president of the Montreal horticultural society, for the time being, and T. S. Brown Esq., of Montreal, do compose the Local committee for the next provincial exhibition to be held in september next, at Montreal.

The meeting then adjourned till the next day at 9 o'clock A. M.

The Board met the next day, the 19th February, according to adjournment of the previous day.

**PRESENT**:—John Yule, Esq., president; E. J. DeBlois, Esq., vice-

president, Major Campbell, M. P. P. J. O. A. Turgeon, Esq., P. E. Dostaler, Esq., James Logan, Esq.

A list of agricultural societies re-organized under the act 20 Vic. chap. 49. Was then put before the Board and decided upon.

*Resolved.*—That no agricultural society will be recognized by the Board unless they will send to this Board a list of subscriptions according to the schedule A of the above Act, and as required by said Act. On the application of several societies asking the permission to buy seeds with their grant, it was resolved:

That the Board will allow the agricultural societies to buy seeds with their grant, provided they sell them at auction to their members, and report the sale to this Board.

Major Campbell and Mr. Watts, the committee to whom the prize list for this year had been referred for revision, made their report recommending that of last year unaltered. On the application of Mr. Bruce, respecting his fish manure, the asst. secretary was instructed to answer that the Board could take no action respecting it, but that the members individually would be happy to make trial of it.

The Board adjourned  
(By Order)

T. CHAGNON

Asst. Secr. Board of Agriculture  
Lower Canada.  
Montreal February 19th 1858.

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### Land Drainage—Its action and effects.

As a surcharge of water in any description of cultivable soil must at all times be injurious, it becomes absolutely necessary that it be discharged as quickly as possible; and

as the amount of rainfall is different in different portions of the kingdom, the means applied must have relation to the quantity to be discharged by the drains. Consequently, in districts where the rainfall exceeds 30 inches annually, the means resorted to for its removal must be in relation. The permeability of the soil also forms a strong consideration: the more retentive it is, the nearer together must the drains be placed; and *vice versa* the greater the porosity of the subsoil. The depth of the drains will depend upon the nature of the upper soil and substratum: if exceedingly retentive, and only slightly permeable, then the depth of the drains must be compensated by the distance betwixt them. On such soils drains of 30 to 36 inches in depth will be found sufficient, the distance between varying from 15 to 20 feet; but when the substrata become more permeable, the depth of the drain should be increased, and the space between them extended. It rarely happens, however, that any soil affected by surface water requires drains more than 48 inches in depth, or will allow a distance of more than 30 feet apart. This may be accepted as a principle necessary in application, upon soils affected only by what is termed *top water*, or such water only as is supplied from above. Upon the permeability or impermeability of the substratum the application must invariably depend; but as many drainers contend that all soils are more or less permeable, it may be well at once to advert to that point. To a certain depth it undoubtedly is the case; but frequently at a depth of 18 inches some of our strongest clays become impermeable, unless for short periods after excessive drought, when, by their having shrunk, fissures have been formed by which water becomes freely admitted, but which, when again saturated, become impervious to the further ad-

mission of water. Or, as is the case in many tenacious clays, small veins of *silt* exist in stratified order, and accomplish the object of allowing the water to pass off slowly by their assistance. Professor Ansted, in speaking of the London clay, says, "It is tough, and of course impermeable;" and this has been proved over and over again to be correct.

Much of late has been advanced upon the benefit to be derived by not allowing any of the rain water to be carried off by surface drains, but that the whole of it should be admitted, and pass through the soil to the drains below. The argument advanced in favour of such a practice is assuredly carried too far. It is true that rain water contains some fertilizing properties, more especially as regards the ammonia and nitric acid that become combined with it, but which, at all times minute in quantity, during very rainy seasons exist in the smallest perceptible proportions. Whenever these enter into and become combined with the soil, they are by their affinity immediately taken up by it, and retained to be given out to plants vegetating upon its surface. The greatest amount of injury sustained by soils surcharged with water arises from the exclusion of air and the lowering of its temperature, as well as by the admixture of mineral ingredients with it, which become injurious to vegetation. Air contains substances equally beneficial to vegetation as those contained by rain water: those properties in the latter, before referred to, being taken up in its passage through the air as the rain-water descends to the earth. After long periods of drought, when the air has become highly charged with those substances, the quantity brought down by the first shower that falls is far greater in amount than what is brought down by the next and succeeding showers. In long continuous

seasons of rain it ceases altogether. As it is during such seasons that a surcharge of water to the soil becomes most injurious, it is at once apparent that, if a large portion of this matter can at once be carried off from the surface, the necessity of an increased area of drainage below may be dispensed with, especially in districts where the amount of annual rainfall is greatest.

Water in a state of evaporation from a surface discharges the heat also; and, therefore, if no other means exist whereby water can be discharged from the soil, it must remain until sufficient heat is produced by the rays of the sun, or by increased temperature of the atmosphere upon the surface to again convert it into vapour. During this process the heat of the soil becomes diminished, especially at the immediate surface; and a soil of a district of naturally higher temperature is reduced to the temperature of one of higher latitude or elevation. This effect has, however, been greatly exaggerated. It has been recently computed that the heat lost in the process of evaporation by the sun's rays an inch-fall of rain would be sufficient to reduce the temperature of the soil, to a depth of ten inches, no less than 99 degrees! The more porous the soil, the more rapid is the evaporation; and consequently we have an explanation why crops upon gravelly subsoils become most affected in the early spring months, and at the same time arrive at a remedy in relieving them from surplus water by drainage. The radiation of heat from a surface coming into contact with vapour discharges the heat at the immediate point of contact, and explains the cause of hoar frost when the thermometer shows, at a few inches from the surface, no frost actually existing. The drainage of land, therefore, by lessening the amount of evaporation from the sur-

face, consequently lessens the discharge of heat from its surface, and thereby benefits vegetation.

The third point to be referred to, is the injury sustained by plants whenever mineral substances, entering into combination with water stagnant in the soil, rise to the surface, and become injurious to vegetation. This more especially takes place upon soils highly charged with peroxide of iron, which most soils in a greater or less degree contain, especially those wherever the subsoil is of a red colour. To such an extent does this frequently exist, as to tinge the water passing through it with this red colour, and its deposit.

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### Application of Manures.

The various modes of applying manures excite continual inquiry as to the best, the most profitable. Farmers are often induced to change their opinions and their practices after trying new modes which have been recommended or tried by their neighbors.<sup>1</sup>

The inquiry among practical farmers is a very broad one, since there is such a diversity of soil and of crops as well as of the nature of the manure to be applied.

Still there are general principles, applicable to all lands in all latitudes and longitudes. These principles are made up from the actual trials and practices of farmers who have acquired their knowledge in the open fields, and actually reaped what they themselves had sown.

Such farmers often hearken to new theories on the strength of the recommendation of others. Sometimes they are gainers, sometimes losers, by a change of system. Still they never lose sight of the main chance.—They are never so absurd as to place their manures on bean poles, or to bury

them in pits out of the reach of the influence of the atmosphere.

It is not pretty generally agreed among practical farmers that manures of all kinds may be buried too deep in the furrow—so deep with a deep plough as to entirely destroy their efficacy for a number of seasons, if not for ever. The reason why this is so is not very satisfactorily explained—for it is proved that manures never work down to any great depth, else the sub-soil would be valuable after many years of deep manuring.

One great point with farmers should be to prevent loss of their barn manures by checking great fermentation. Strong manures heaped up, soon ferment and burn unless much extra matter is mixed in the pile.—Some heaps heat so much as to turn white. They are “fire-fanged” as the old gardeners used to express it, and they are almost worthless when this excessive heating has been permitted. We incline to think that more of the essence of our manures is wasted by this fermentation—this heating process—than in all other modes of waste.

It is certain that excellent crops of corn are grown where the manure from the barn yard was buried no deeper than a common harrow would bury it when spread on the surface. This we often see on dry ground and in dry summers and with only a moderate dressing of manure.

So we find that all kinds of manure spread in October and November on grass land or meadow land, work well and increase the crop abundantly though exposed through the winter to all kinds of weather.

The truth seems to be that not much of the essence of barn manures is lost by evaporation when they are spread out where no fermentation takes place.

Still if we would secure all the essence of barn manures we must mix

them with fresh earth immediately, or in the yard, or in the field with a light furrow or a harrow.—When this is done no effluvium, or ammonia, is perceived to pass away.

### Farmyard Dung : Preparation and Application.

No subject in the varied course of agriculture obtrudes a more general notice, or deserves a more important consideration, than the application of farmyard dung. The article is produced on all lands on which grains grow and animals are kept, and is the most efficacious of all manures that are yet known. It is a mixed body of straw and excrements urinary and solid, possessing the quick action of the latter substances, and the more durable qualities of the former materials. All other manures are brought from foreign places, and purchased by a ready cost; farmyard dung is daily produced, and of a great value, and the application is no less important.

An approved and long-continued mode of preparing farmyard dung prevails in the celebrated turnip-growing Border counties, of placing the contents of the cattle yards in square piles about six feet in height, in the corner of the fields to be planted with green crops. The yards are concave or dish-shaped, retaining and spreading the moisture equally over the mass, and supplied with straws that absorb all the moisture from rains, snows, and urine. The contents are carried out at two different times during winter, and no pressure is allowed on the piles, except the weight of one or two persons to spread the materials evenly and thinly over the heap. In this condition, a fermentation reduces the heap into a saponaceous mass for use in May and June, and in a condition that is ea-

sily divided by hand-forks, well moistened, and from which the heat of fermentation has in most cases nearly altogether vanished. Much bulk is lost by this mode of preparation, but it is reckoned the best for the use of green crops.

Having been educated under the above system of preparing farmyard dung, I practised the mode with the usual success in various parts of the kingdom. In later years I adopted another mode, from the observation of a very large loss of bulk, and from a wish to use a fresher condition of the dung. At any times of convenience during winter, the contents of the yards are carried to the green-crop fields, and laid in a heap sloping at both ends, over which the carts pass to deposit the loads, and over which the materials are spread evenly and thinly, in order to mix the substances and that no part remain in a dry state. The consolidation from the pressure of the carts prevents the fermentation of the heap which is formed at convenient times, from November to the month of April, and later when the yards are duly moist and the straws thinly used. Potatoes are the first-planted green crop; and about ten days before the dung is required for use, the heap is turned over with forks, laid loosely together and the lumps well broken, and the dry outside of the heap thrown into the middle of the new aggregation. A very active fermentation immediately commences, which is prevailing during the deposition of the dung in the drills, which are immediately reversed and the seed sown. This mode produces fully equal if not superior results to the first-mentioned preparation: it affords a larger bulk, and more convenience in forming the heaps at different times; while the former requires to be done at one time, or not at distant periods.

For some considerable time past,

I have doubted the fermentation of farmyard dung, having had freshly-voided fæces, carried from the cowshed, laid into drills for turnips, which were a superior crop to the parts of the field treated with fermented dung. This result happened on several occasions, constituting a fact, from a majority of similar results. In order to facilitate the application of fresh dung, I have long ago recommended that all straws for litter should be cut into short lengths by the thrashing machinery, and that the dung be mixed with the prepared turnip-lands by contrary workings of Finlayson's harrow, and raised into ridglets by one furrow of the common plough, in which the seeds are sown by the common two-drill machine, or with a portion of bones or guano by Hornsby's drop drill. This practice will supersede the fermenting heap of farmyard dung, and remove the objection of long straws not covering into the ground, by cutting into short lengths. The fæces and short straws will be convenient for Chandler's liquid manure drill, when Mr. Kemp's theory has advanced into a more general notice.

The application is most excellent of farmyard dung as a top-dressing of young grass seeds; and for that purpose, the fresh, strawy condition is preferable. The crops of clover are largely increased, and also the following crops of wheat. I have long ago suggested that the farmyard dung generally applied on bare clay fallows, for wheat, be applied as a top-dressing on the young wheats, in March, by means of moveable timber railways placed on the ground. But, most unfortunately, now-a-days, no opinion, theory, or suggestion meets with any notice, except it emanates from a society or a club. Individuals languish in obscurity, and are held in insignificance.

The use of food being to produce caloric to plants and organic bodies, the chief consideration is, how to apply the manures as food for that purpose, and, in order to yield that element in the least expensive manner and most ample quantity. I wholly dissent from chemistry—that rotten dung is more efficacious than fresh dung: weight for weight, and quantity for quantity, the latter must prevail in the abundance. The many statements made, of chemical agencies and transformations, are of small account.

With regard to covered and uncovered feeding-stalls, the former may suit in certain places; but in the majority of situations, the straw could not be reduced without the rains and snows that fall in the yards; and, under the covered sheds the want of moisture produces a dry putrefaction. Even with the present open yards, much difficulty is experienced in reducing the straws into an impregnated condition with rain and urine.

I have not the pleasure of an acquaintance with Mr. Baker, of Writtle, nor do I know his appearance from sight; but I have ever admired the sound and enlightened judgment displayed by him on all practical subjects, and the strong sense that he brings to bear on the reveries of cognate auxiliaries. These aids are but puny, shallow, and evanescent; apt to dazzle and deceive, to bewilder and mislead; and often noisy as the tinman's trade. An enlightened practice must lead and confirm.—*Mark Lane Express.*

J. D.

## How to Buy a Horse.

### DEFECTS TO BE DETECTED IN AGE, EYES AND WIND.

In a recent number we pointed out a few short rules for the selection of horses by purchasers not pretending to be perfect judges of the animal; dwelling on the points of excellence in the form of the horse which should be principally sought for in making a choice. We proceed to indicate briefly some of the most ordinary defects, diseases and unsoundness to which horses are liable and for indications of which every buyer ought to look before completing his purchase. The more deeply seated ailments and intricate complaints are not to be detected at a glance, sometimes not even after a thorough examination even by a judge; to allude to them, therefore, for the benefit of a novice, would be worse than absurd.

In speaking of the age of horses we observed before, that the number of years which the animal has lived is indicated, up to his seventh year, by marks in the teeth of both jaws, but principally of the lower jaw, which vary every year until the eighth, when they become obliterated. We added that they are difficult to learn, and impossible to explain without the aid of diagrams. We should perhaps have said also that there is a system of jockey rascality by which false marks are forged on the teeth of aged horses, making them appear to be six or seven years old, which may deceive, and often do deceive novices, but are thrown away on judges and old hands. This system is called *Bishoping*, and is executed by the use of a file and the usual cautery. There are, however, some signs of extreme age in the horse which can easily be recognized by any one, some of which are infallible. One of these

is the fact that in a young horse the crown of the tooth is oblong or rather obovate in form, *lengthwise*, or in the line of the jaw-bone; but that in very old horses the crowns change their shape and become oblong or obovate *across* the jaw-bone. When, therefore, the tooth has assumed this form, or has even become much modified from the longitudinal shape, it is certain that the horse is too old to be a desirable acquisition. A second sign is the length of the teeth from the root to the crown, and their angular protrusion like those of the hare or rabbit; in both which particulars the increase is regular with the increase of age. Indeed, the degree of this protrusion is said to be so certain and infallible that a machine has been invented by the french veterinarians for measuring the angle of protrusion, by which it is alleged that the exact age can be ascertained up to any known period of equine life. Without undertaking to answer for this, we should advise a buyer always to look to the points mentioned; as it is extreme age which one seeks to avoid, with reason, not maturity, or even the commencement of decline. Except to a racing man, it matters little whether the horse he buys be four, six, eight or nine years old, provided that he be sound, suitable in other respects, and free from the effects and marks of hard labor and wear and tear; remembering always that if the buyer requires a horse for immediate hard use, he should not purchase one under six; and, if the animal be perfectly sound, and fresh and clean in his legs, he will be wiser to buy at eight or nine than younger.

We now come to the eyes, which of all the parts of the horse are, except the legs, of the most vital importance, and in which it is often the most difficult to detect imperfection. There are some species of blindness, which to a common observer give no

sign, and in many instances the writer has known the eye of a horse nearly stone-blind to be looked at casually by a purchaser, and passed as needing no further security.

"There is nothing," says Youatt, which deserves so much attention from the purchaser of a horse as the perfect transparency of the *cornea* (or glassy and transparent portion of the eye,) over the whole of its surface. The eye should be examined for this purpose both in front and with the face of the examiner close to the cheek of the horse, under and behind the eye. The latter method of looking through the cornea is the most satisfactory, so far as the transparency of that part of the eye is concerned. During this examination the horse should not be in the open air, but in the stable, standing in the doorway, and a little within the door. If any small, faint, whitish lines appear to cross the cornea, or any part of it, they are assuredly signs of previous inflammation; or, although the center and bulk of the cornea should be perfectly clear, yet if around the edge of it, where it unites, with the *clerotica*, (or hard interior covering of the back of the eye), there should be a narrow ring or circle of haziness, the conclusion is equally true but the inflammation occurred at a more distant period. Whether, however, the inflammation has lately existed, or several weeks or months have elapsed since it was subdued, there is every probability that it will return. There is one little caution to be added. The cornea, in its natural state, is not only a beautifully transparent body, but it reflects even in proportion to its transparency many of the rays which fall upon it, and if there be a white object immediately before the eye, as a very light waistcoat or much display of a

white neckcloth, the reflection may puzzle an experienced observer, and has misled a careless one." It is hardly necessary to observe that the existence of a white filmy spot on any portion of the cornea, or, still worse, an opaque filmy condition of the whole of that beautiful and delicate membrane, is a fatal defect, the latter indicating a total loss of sight, the result either of specific ophthalmia or of cataract. But it may be well to mention a very practical and simple mode of ascertaining how far the powers of sight in a horse are or are not effected. Holding him gently by the head-stall, let the observer place himself in front of the animal, and, after caressing him and rubbing his nose, so as to avoid giving him sudden alarm, let him move his fingers rapidly toward and across his eyes, carefully noting how far he starts back, or winks his eyelids. Care must be had, in this experiment not to move the hand with so much violence as to cause a current of air; for that, striking on the delicate surface of the organ, even when it is totally bereft of vision, will sometimes cause the animal to wink and even to start back, as if he saw the motion which produced it.

Next to the eyes, the wind, as it is commonly called, or the condition of the lungs of the animal, is to be examined; and this is liable to so many modifications, and affects the animal so fatally as to his utility when required for even moderately rapid work, that too much care cannot be had to detect it. It is needless to say that a horse, with the slightest imperfection of his lungs, windpipe, or breathing apparatus, ought at once to be rejected; as there is no hope of its ever decreasing, being cured, or palliated, either by rest or by work; but, on the contrary, an absolute certainty of its growing worse, day by day, and the more so the faster and more regularly the animal is worked,

until it becomes absolutely broken-winded and useless.

In this stage of the disease it needs no examination to detect it: when at work, the loud, sobbing breath, and the laborious heaving and jerking collapse of the flanks, show it too plainly to be mistaken. It is caused by a rupture of some of the air-cells of the lungs, and the inspiration of the air is readily effected by the animal at a single effort, as usual; but the expiration of the air, from the rupture and ragged shape of the cavities into which it has been admitted requires a double effort; and when the disease is in its worst form, even two efforts are insufficient fully to exclude it. Broken wind is accompanied with a hard, husky cough, which is not easily described, but cannot be mistaken by any one who is used to horses. Broken-winded horses can never be cured, since it is not in the power of human art to build up and restore a broken-down and disorganized structure; but there are jockey tricks by which they can be so far palliated as to be made to disappear, for two or three days time, under any moderate observation. But let the horse be galloped a hundred yards, at his best, up hill; let his rider spring quickly to the ground and apply his ear to the chest, and the double expiration will be clearly heard, even if the flanks do not show—as, however, in ninety cases out of a hundred they will, by their jerking and laborious collapse—the extent of the affection. The minor and secondary modifications of this disease are, thick wind, roaring, wheezing, and whistling—all of which, more or less certainly, degenerate into broken wind, and are to be carefully looked for, and when detected, resolutely avoided. They all arise from a diseased or obstructed condition of some of the air passages, whether of the lungs themselves, the windpipe, the bronchial tubes, or the nostrils.

Thick wind is produced by insufficient space for the play of the lungs, or for the issue of the air through the bronchial tubes, owing to the thickening of their mucous lining consequent on previous inflammation. It produces laborious breathing, only effected by prodigious exertion of the lungs; often extends almost to suffocation, and nearly always leads to broken wind, or total disorganization of the structure of the lungs—of some portion or ramification of which it indicates either an originally faulty formation, or a diseased condition.

Roaring is a modification of thick wind, produced by the existence of a ring of coagulated matter, or of a thickening of a portion of the mucous membrane, within the windpipe, which produces a contraction of that passage, and, preventing the regular issue of the breath, renders some exertion necessary to expel it, and causes a loud puffing or roaring sound, similar to that of strong and hoarse exhalations, the inhalation being noiseless. Roaring occurs on sudden motion. Wheezing is a modification of roaring, and is produced, it would seem, by the lodgment of mucous matter in the bronchial tubes. It differs from roaring, in that it exists even when the animal is wholly at rest, and in his stable.

Whistling is a second modification of roaring, from which it differs in that the noise produced is shriller, and that it does not occur on sudden, but only after continuous motion. It is supposed to be caused by some contraction of the larynx.

Animals subject to any of these diseases speedily become exhausted by exertion, even while the disease is in its original state, apart from the distressing sound which they produce. All the forms are liable to degenerate into the worst form of broken wind, and all constitute an unsoundness for which a horse warranted sound is returnable. The

modes of detecting these diseases are various, but simple and easy of execution. The first is by grasping the horse's throat from the front, and forcibly compressing the mouth of the larynx, so as to compel him to cough. A sound horse will cough *once* and recover his wind, with a clear, sonorous inhalation and exhalation. The diseased horse will utter a broken, ragged, rattling cough, and recover his breath with a long, wheezing and laborious *r le*. This sign is infallible; and the degree of labor and difficulty will certainly indicate the degree of the affection. A roarer may be detected, even in the stable, by approaching him suddenly and hitting him an unexpected slap on the belly, when he will utter a loud grunt, not unfrequently accompanied by a flatulent crepitus. When the affection is confirmed roaring, it will manifest itself when he is put to his speed; but if he is merely a whistler, the noise is often drowned, particularly when the disease is only in its incipient state, by the clatter of the hoofs. It may, however, always be detected by the rider suddenly putting him up, after a long sharp gallop, and listening with his ear inclined forward and downward, and brought close to the windpipe; or, if he be not readily able to accomplish this position while mounted which he may not be able to do if not a practiced rider, by dismounting quickly and listening with his ear applied to the neck, near its junction with the head. If the whistling be bad, it will be heard even without this precaution, and will continue for some seconds, or even minutes, after the motion of the animal has ceased; but this method of auscultation will detect it in its smallest and most incipient stage. There is no point in which a tyro in horse purchasing is so likely to be deceived as in the wind. It requires, therefore, the utmost precaution to detect it; and the

most positive determination when it is detected, even in the slightest modification, to reject the animal, however otherwise irreproachable.

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### Maple Sugar Making.

In response to your solicitation for practical information relative to the making of sugar from the maple I offer my mite. It is well known that Maple Sugar is one of the staple productions of the Western portion of the "Southern Tier" of New York. It has of course, been a matter of no little interest to our farmers to manufacture in the best manner, both as to quality, and economy, an article of so much importance, and many have promptly adopted the means and appliances which ingenuity has suggested and experience proved worthy. The first premium awarded at the late State Fair, was given for an article made in Alleghany County. In offering a statement of the process and implements used, I give those adopted and used by those that are engaged somewhat extensively in sugar making, and who make a very superior article.

In tapping, a  $\frac{5}{8}$  or  $\frac{3}{4}$  auger bit is used, making the hole  $1\frac{1}{2}$  or 2 inches deep. The spout is made of hard wood, four or five inches long, a hole bored with a small bit through its length, and turned in a lathe, one end to fit the hole made by the bit in the tree, and the other with a head, over which the wire loop attached to one edge of the bucket, is slipped and held. The end of the spout is made quite tapering, or "stunt" as it is sometimes termed, so as to fill the hole perfectly tight at its entrance in the bark of the tree. This allows all the sap to pass through the spout, and prevents its escape otherwise. To "freshen" another hole is bored and another spout inserted

near the first, so that the same bucket receives the sap from both.

The buckets are usually made of pine, hooped with ash or iron, and sometimes the outside is painted. On one side at the upper edge of the bucket, a wire loop is inserted, just large enough to pass over the end of the spout after it is firmly driven into the tree, by which the bucket is hung. This dispenses with the sheet iron or tin spout, the gouge, and the nail. Many furnish covers to each bucket, which are made from blocks of pine, sawed of the proper length, from which thin pieces are riven with a shingle frow. On one side or edge of these thin pieces a notch is cut, through which, when properly placed on the bucket, the sap drops from the spout. This cover excludes all rain and snow, leaves and bark. When the "Sugar Camp" is inclosed, (and all should be,) and all kinds of stock excluded, the bucket should be hung near the ground, but otherwise, they may be hung out of the reach of sheep and swine, and reasonably from cattle.

The boiling is done in sheet iron pans, made by the tinner, usually of two or three sheets joined by rivets, the sides and ends turned up five inches, a heavy wire around the upper edge in the manner of a dripping pan. Iron loops are rivetted on at proper distances to serve as handles. Three of these pans placed on a well constructed arch, the two back pans placed each its height higher than the one immediately before it, small faucets placed in the two rear pans so that the back one may be discharged into the one next forward it, and that into the front one is found to be a great convenience.

A large store tub, placed so that it will stand its whole height above the upper or back pan, should be provided with a good cover, a good faucet and spout reaching from the tub to the pan. By the faucet and spout

the sap may flow from the store tub to the upper pan, and from that to the second, and so to the third or front pan. The supply may be regulated by the faucets in each, so that the flow to all will be regular and sufficient. For gathering, a sled should be provided with a moderate sized tub firmly fastened upon it, which tub should have the upper head placed four or five inches below the upper end. Two 2-inch holes should be bored through this head. In gathering a team attached to the sled passes along the roads that traverse the camp at proper intervals, the sap is taken from the buckets in pails, and poured on the upper head of the gathering tub, and passes through the holes until the tub is full. It is then drawn to the proper place to be discharged into the store tub. The discharge is through an inch-and-a-fourth hole in the bottom of the gathering tub, by a spout reaching to the top of the store tub. It will be seen that the ground where the "camp" is built, should be uneven, so that the store tub may be placed above the highest pan on the arch, and the gathering tub when standing on the sled ready to discharge may stand a little above the top of the store tub. The discharge from the gathering tub is closed by a long "plug" which passes through one of the 2-inch holes in the upper head into the  $1\frac{1}{4}$  hole in the bottom. The spout from the gathering tub should be well made, with the end receiving the discharge tightly covered, and a hole through the cover large enough to receive the discharge and not waste. This spout is placed on the sled-runner and easily and firmly secured.

When the season is somewhat advanced, the weather warm, and the buds begin to grow, it is often difficult to make sugar. This difficulty is obviated by putting a spoonful of quick lime in each bucket. The sap

again becomes sweet, and the syrup granulates freely and is quite as white and pleasant as ever. In "sugaring off" the syrup is carefully strained into a medium sized cauldron kettle, and carefully reduced until it becomes sugar, some adding milk, or other substances to "cleanse," and others rejecting it entirely. Indeed, when covers are used on the buckets, the gathering and store tubs, the pans well placed on a well constructed arch under cover, and the whole process conducted with the utmost neatness and order, the "cleansing process" is quite unnecessary.

The cost of buckets and spouts is \$12½ to \$15 per hundred, according to materials and workmanship; pans \$3, to \$5 each, according to size, and quality of materials. Iron bound pine buckets are preferable to tin, and cost much less. The pans made entirely of iron, in the manner described, are far better than those with wood sides, less liable to leak, easier kept clean, sweeter, and more easy to handle. The cost for the same size and quality of iron is not materially more.

With this suit of apparatus, perfect cleanliness may attend the whole process, the sap and syrup are not stained, embittered, nor soured by a combination of sap, rain, snow, bark, leaves, buds, coal, and ashes. An article is readily and economically produced, almost rivalling the snow in whiteness and purity, pleasant to the sight, and exceedingly pleasant to the taste, as I hope you may have the opportunity of testing, when

"Fair handed Spring unbosoms every grace."

S. SCUDDER. *American Agriculturist.*

## Feeding Stock in Winter.

We copy in this number an article from a New York Journal on the subject of *winter feeding*, and particularly on the question whether the cutting of fodder fine *will pay*.

The speakers are generally well known as practical men, and giving their opinions after trials of artificial modes of feeding.

Some of the speakers allude to what has been recently published in the Albany Cultivator, in regard to the effect of cutting corn butts fine and mixing with them something valuable in order to induce cows and other stock to swallow the whole.

Dr. Waterbury particularly alludes to the statement that after many months the corn butts have been found stored up in the intestines and undigested. He lost a young cow by this method of feeding.

We have never recommended the practice of cutting corn butts fine and mixing something good with them to induce cattle to swallow the whole mass. Indeed, we have long doubted whether it is not better to let cattle chew their food and eat it slowly, than to make artificial messes to be swallowed in haste.

It is true that cows will yield more milk on cut feed and slops than on the best of hay alone, and when the hay is not of so good a quality as to induce cattle to fill themselves with that alone, it may be profitable to cut the hay fine and mix meal of some kind with it—for if it is not cut it cannot be well mixed.

The simplest food is best for all animals, and they will live longer, and continue more healthy on such than on any artificial feeding. Variety of food is useful, and we see how cattle thrive on the variety of herbage which is found in all our summer pastures. But cut feed with much grain to make it go, is a different thing. Cows that are kept on

the richest food never live long. There are not many that will stand two quarts of Indian meal per day for a great length of time.

We ought to contrive to have a greater variety of dry fodder through the winter. Corn husks are of much importance, and all farmers in New England who keep stocks of cattle ought to have a good supply. This they can have by planting an extra acre of corn for the single purpose of saving the stalks for winter feed. An acre will yield a great supply without a large quantity of manure. Still it may be a better course to plant for the purpose of securing the corn as well as the husks.

A little more time spent in increasing the manure heap, and in stirring the ground between the rows of corn, will aid farmers to procure winter food quite as much as the growing of acres of roots which must be wed at much greater cost than is usually expended on corn.

Oat straw, wheat and barley straw are all good to increase the variety of winter feed—and all these may be profitably mixed with husks at the time of harvesting. All may become a little mouldy, but eating this is no worse thing than eating mouldy cheese which many prefer to that which is green or dry.

Buckwheat straw is another article, which was formerly burnt in the field as soon as it was threshed, in order, as it was said, to prevent the scattering of the seeds among the manure, in the solemn fear that when once scattered over a farm it could never be rooted out. It was thought to be a greater nuisance on a farm than thistles or witch-grass.

But look around you, farmers, and find any wild fields of buckwheat if you can. This grain never flourishes without cultivation, and you may exterminate it if you wish, as easily as you may rye or wheat.

The straw of buckwheat is really

worth something as a variety for cattle in winter. They will eat some of it at any rate, but they will eat more when you mix it with husks at the time of husking. People err more in letting this grain stand late in the field than in letting corn or rye stand late. They are deceived by the late blossoms which are not to be regarded. Look to the main chance, and cut early.

### Why use cut feed?

An intelligent farmer asks for the philosophy of cutting hay. He can understand that it is useful to cut corn stalks, and coarse fodder, because the cattle will eat them better. But when cattle will eat up good English hay perfectly clean, why should it be passed through the hay cutter?

Our friend evidently supposes, that the stomach does its work upon everything that passes into it, with equal facility, and without any tax upon the rest of the system. This is manifestly an error. All food has to be ground up before it can be assimilated, and pass into the circulation of the animal. If food is not artificially prepared by cutting, grinding, or steaming, the animal has to prepare it himself, so far as he is able. Certain kinds of food will pass through the system, imparting to it only a part of their nutriment, because the teeth of the animal have not perfectly masticated it. Whole kernels of corn or of oats are frequently seen in the fœces of an old horse.

The more perfectly food can be prepared, the more completely will the system appropriate its nutriment. If the whole labor of grinding up the food is thrown upon the animal it is a serious tax upon the vital energy, which every good farmer wants for other purposes. In the case of the horse and the ox, you want the

strength applied to locomotion and to labor and grinding food, is so much taken away from their capacity for labor. If three or four hours of strong muscular labor are spent in working up hay and straw into a pulp, there is a great loss of strength and of time.

In the case of fattening animals, you want the aliment to go to the formation of fat, and flesh. This process goes on successfully, just as the animal is kept quiet, and comfortable. No useless labor should be expended in the grinding up of food. The straw-cutter, working up the hay into fragments of all an inch in length or less, performs a good part of the work of the jaws, and makes the feeding of the animal a light matter. If the hay could be ground up into a fine meal, it would be still better; as it would more completely yield up its nutriment. If it could be steamed it would be best of all as it would then be wholly appropriated.

We have not a doubt that it pays quit as well to pass hay through the machine, as the coarsest fodder.

A root-cutter is also an indispensable adjunct to the barn, and the more perfectly it comminates the roots the better.

The farmer who has ever experimented with these machines, and marked the results of feeding with hay, and roots prepared in this way, can have no doubt of their utility. Laziness, we apprehend, has quite as much to do with the neglect of these machines as ignorance. It is work to turn the crank to cut up hay enough to feed twenty head of cattle, and in prospect of spending the elbow grease, it is very convenient to believe that it will not pay. Sloth, however, is a poor counsellor in this case, as in all others. We should as soon think of feeding cattle in the open field in this bleak Winter weather, as of feeding them uncut hay. A warm stable and a straw cutter are both good investments.

## Carrots for Stock.

Can any thing be better as Winter food for all kinds of animals, than this familiar root? We have used it for several years with most gratifying results. It is not only as useful as a "relish" with the fodder, as apples and vegetables are for mankind in the Winter, but it contains valuable nourishing properties, and may be used as an alternating substitute for other food. We are not surprised to learn that the keepers of livery stables in cities are beginning to use carrots for horse food. They hold that a peck of carrots and a peck of oats are better for a horse than two pecks of oats. All animals require for their health and comfort green food to mix with their dry fodder, and their winter bill of fare is deficient, if it does not include carrots.

We have the report of an experiment made by a careful farmer to test the relative value of several kinds of food for milk cows, with the following general result; three pounds of carrots, equal to one pound of hay. This would make three tons of carrots equal to one ton of hay—*i.e.*, for producing milk; but for fattening purposes, we should place the carrot nearer upon a par with hay. This also is true of it, that it yields larger crops than the potatoe, is more nutritious, is better adapted to this climate than rutabagga or turnips, can be more readily and better kept through the winter, and is more easily prepared for feeding, as it does not require boiling or steaming, unless it be for swine. We sometimes meet in our exchanges, with various recipes for coloring Winter made butter a rich golden hue, like grass-made butter; but we believe the best way to accomplish this is by feeding the cows on good orange carrots, and leave to them the work of coloring the butter.

THE CULTURE is not difficult. Give

the ground a liberal manuring with well decomposed dung, and if to this is added a mixture of muck or chip dirt, it will help the matter. Of course the plowing and harrowing must be thoroughly done. Sow in drills two feet apart, if for horse tillage; if done with the hand, at less distance. Sow when the soil is a little moist, and press the earth firmly over the seed.

As carrots germinate slowly, look out for the weeds as soon as they appear, or they will get the start of the carrots and overshadow them. If this seed is drilled in, two pounds to the acre will be sufficient; if sown by the hand, three or four will be needed. Thin the plants at each hoeing, until they are four or five inches apart. By good management a crop of 500 to 700 bushels to the acre may be expected. The Long Orange is generally considered the best variety; though the White Belgium is very nutritious and is most easily harvested.

### To have Eggs in winter.

The question is often asked, "Why cannot hens be made to lay as well in winter as in summer?" They can to a certain extent; but they require, as a condition, that they be well provided with warm and comfortable lodgings, clean apartments, plenty of food, pure water, gravel, lime, fine sand, and ashes to roll and bathe in.

There seems naturally to be two seasons of the year when hens lay; early in the spring, and afterwards, in summer; indicating that if fowls were left to themselves, they would, like wild birds, produce two broods in a year.

Early spring hatched birds if kept in a warm place and fed plentifully and attended to, will generally commence laying about Christmas, or

even somewhat earlier. In cold and damp weather, this is not to be expected, and much may in different seasons, depend on the state of the weather and the condition of the bird.

It is a well-known fact, that from November to February, the very time when we want eggs the most, they are to be made a bill of expense without any profit. To promote fecundity and great laying in the hen, it is necessary that they be well fed on grain, boiled potatoes given to them warm, and occasionally animal food. In summer they get their supply of animal food in the form of worms and insects, suffered to run at large, unless their number is so great as to consume beyond the supply in their roving distance. I found it advantageous in the summer to open the gates occasionally, and, give the fowls a run in the garden and in the field adjoining their yard, for a few hours in the day, when grasshoppers and other insects were plenty. I had two objects in view; one to benefit the fowls, and the other to destroy the insects. It will be found that the fecundity of the hen will be increased or diminished according to the supply of animal food furnished.

Hens moult and cast their feathers once every year, generally commencing in August and continuing till late in November. It is the approach, the duration, and the consequences of this period, which puts a stop to their laying. It is a critical time for all birds. All the period while it lasts, even to the time when the last feathers are replaced by new ones, till these are full grown, the wasting of the nutritive juices, prepared from the blood for the very purpose of promoting this growth is considerable; and hence it is no wonder there should not remain enough in the body of the hen to cause her egg to grow.

Old hens cannot always be depended on for eggs in winter, they scarcely being in full feather before the last of December; and then probably may not begin to lay till March or April, producing not more than twenty or thirty eggs, and this is probably the cause of the disappointment of those who have supplied themselves at the markets with their stock to commence with, and get few or no eggs. As pullets do not moult the first year they commence laying before the older hens, and by attending to the period of hatching, eggs may be produced during the year. An early brood of chickens by being carefully sheltered from the cold and wet and fed once a day on boiled potatoes warm, with plenty of grain, and occasionally a little animal food, will begin to lay in the fall or early in the winter.

*Poulterer's Companion.*

—No country in North America can exceed this in the production of apples, pears and plums. Apple trees begin to bear here at two years old and pear trees begin to bear fruit at three years old! No business in Oregon has ever yet yielded such profit as fruit growing. More than half a million dollars in gold has been added to our cash circulation in Oregon this year, for fruit for shipment. Hundreds of thousands of apple and pear trees have been transplanted in Oregon this year. California, Australia, Polynesian Islands, much of China, and other parts of Asia, will be partly or wholly supplied with Oregon apples and pears in time to come. Wheat, pork, beef, peas, onions, potatoes, oats, butter, hides, sheep, lumber and shingles can be produced here in vast abundance and of the best quality. The climate of Oregon is so mild that grass remains green all winter, and

stock live with but little attention from their owners. Irrigation is not needed in Oregon. The seasons are generally good and crops are always well saved. The price of land is astonishingly low, in the great Willamette Valley, which is called the great granary and storehouse of Oregon. Congress has been generous in donating lands to actual settlers in Oregon, and as titles to those lands are now mostly perfected, very many wish to sell a part of their section claims. First rate farming, grass and timber lands can be bought in the settled portions of Oregon now at from \$2 to \$8 per acre, according to improvements and location. I have never seen such a country as this is for cultivating grasses.—*Letter from Oregon.*

### Roots for Cows.

MR. EDITOR,—I wish to inquire of you whether Sugar Beets will increase the quantity of milk if fed to cows and how many bushels can be raised on an acre of good land; and which is best for milch cows, Sugar Beets or Rutabaga Turnips, and how many bushels of Turnips can be raised on an acre.

W. H. T

§ We have heard that more than 1000 bushels of sugar beets have been grown on a single acre, and that more than 1200 bushels of the Ruta Baga have been harvested from a like quantity of land. If you obtain half as much by ordinary cultivation you will do well.

Sugar beets are better for cows in milk than any kind of turnips. In the winter season one peck of roots per day for each cow will very sensibly increase the milk.

EDITOR.

(*Mass. Ploughman.*)

MONTHLY METEOROLOGICAL REPORT

For December 1857.

BAROMETER.

Mean reading of the barometer F inches corrected and reduced to...	32° 29 743
Highest reading of the barometer the 20th day .....	30° 346
Lowest reading of the barometer the 31st day.....	28° 880
Monthly range.....	1° 466

THERMOMETER.

Mean reading of the standard thermometer.....	14° 96
Highest reading of the maximum do the 1st day.....	46° 0
Lowest reading of the minimum do the 27th day.....	13° 2
Monthly Range.....	59° 2
Mean of humidity.....	0° 800
Greatest intensity of the suns rays.....	59° 0
Lowest point of terrestrial radiation .....	13° 5
Amount of evaporation in inches.....	0 000
Rain fell on 5 days amounting to 1,350 inches, it was raining 32 hours 30 minutes	
Snow in 10 days, amounting to 26,81 inches, it snowed during 63 hours and 50 minutes.....	
Most prevalent wind N. E. by E.....	
Least prevalent wind E.....	
Most windy day the 24th day, mean miles per hour.....	16 m. 40
Least do do the 25th day do do	0 , 00
Ozone was present in rather large .....	
Aurora borealis visible during 3 nights.....	

Montreal Market Prices.

CORRECTED BY THE CLERK

OF THE

Bonsecours Market.

Montreal, March 1st, 1857.

Flour, Country, per quintal,....	11 6 to 12 0
Oatmeal, do .....	9 6 to 10 0
Indian Meal, do .....	0 0 to 0 0

GRAINS.

Wheat, per minot, ....	5 0 to 5 6
Barley, do .....	2 6 to 3 0
Peas, do .....	3 9 to 4 0
Oats, do .....	1 6 to 1 9
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
Brui, do .....	0 0 to 0 0

FOWLS AND GAME.

Turkeys (old) per couple, ....	8 9 to 10 0
Do (young) do .....	0 0 to 0 0
Geese, do .....	5 0 to 5 6
Ducks, do .....	3 0 to 3 6
Do Wild, do .....	0 0 to 0 0
Fowls, do .....	3 0 to 3 6
Chickens, do .....	0 0 to 0 0
Pidgeons, Tame, do .....	1 0 to 1 3
Partridges, 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 5½ to 0 6
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, ....	25 6 to 33 6

DAIRY PRODUCE.

Butter, Fresh, per lb., ....	1 3 to 1 6
Do Salt do .....	0 7½ to 0 8½
Cheese (skim milk) per lb .....	0 6 to 0 5
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 ...	3 9 to 4 0
Turnips, do .....	0 0 to 0 0
Onions, per minot, ....	0 0 to 0 0

SUGAR AND HONEY.

Sugar, Maple, per lb. ....	0 6 to 0 6½
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 11 to 1 0
Halibut, per lb, ....	0 7 to 0 0
Haddock, ....	0 3 to 0 0
Apples, per barrel, ....	10 0 to 20 0
Oranges, per box, ....	37 0 to 0 0

## FRESH SEEDS, 1858.

LYMAN, SAVAGE & CO. (successors to Wm. Lyman & Co.) have just received from Europe and the United States their usual and very extensive supplies of GARDEN, FIELD and FLOWER SEEDS, which they offer to Country Merchants, Farmers and Gardeners, upon liberal terms. The Seeds are the growth of 1857, imported from the most reliable houses, and are warranted true to their names. Amongst them are the following:—

200 lbs Blood Beet  
 100 lbs Sugar do  
 200 lbs Early York Cabbage  
 200 lbs Drumhead do  
 100 lbs Low Dutch do  
 50 lbs Large French York do  
 50 lbs St Denis do do  
 28 lbs Red Dutch Pickling do  
 20 lbs Assorted Paris Cauliflower  
 500 lbs Long Orange Carrot  
 400 lbs White Belgian do  
 200 lbs Early Farm Cucumber  
 100 lbs Long Green do  
 500 lbs Mangle Wurtzel, Long Red  
 200 lbs do do Yellow Globe  
 4000 lbs Red American Onion  
 500 lbs Yellow do do  
 100 lbs White do do  
 50 bushels Assorted Garden Peas  
 10 do Radish assorted  
 20 do Yellow Aberdeen Turnip  
 60 do Yellow Sweede do  
 20 do White Globe do  
 10 do Early Stone do  
 200 do Indian Corn, various kinds  
 50 do Spring Tares  
 Long Vermont Clover  
 Do Rawdon do  
 Do Dutch do  
 Upper Canada do  
 White Dutch do  
 Lucerne  
 Timothy, English Lawn Grass  
 Hemp, Canary and Rape Seeds  
 &c., &c., &c.

March 1st.

3

**THOMAS COUILLARD,**  
**IMPORTER,**

No. 165, ST. PAUL STREET, MONTREAL.

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

—ALSO—

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

**Shelf Goods.**

Nov. 1857.

## FRESH GARDEN SEEDS, 1858.

LAMPLOUGH & CAMPBELL have imported from Europe an extensive supply of GARDEN and AGRICULTURAL SEEDS, which they offer to Country Merchants, Market Gardeners, &c., on liberal terms.

Their Stock comprises, in addition to the kinds usually imported, some new and choice varieties of Melons, Cucumbers, Lettuces, Garden Peas, &c.

LAMPLOUGH & CAMPBELL,  
 Successors to A. Savage & Co.,  
 Next the Court House.

100 lbs LARGE RED AMERICAN ONION SEED, warranted Fresh Seed.

For Sale by

LAMPLOUGH & CAMPBELL,

75 BAGS Prime Upper Canada Clover Seed  
 4000 lbs prime red Dutch do do  
 3000 lbs do White do do do  
 5000 lbs do Long Vermont do do  
 5000 lbs do Rawdon do do

For sale by

LAMPLOUGH & CAMPBELL.

March 1st.

1

**J. LEDUC,**

LATE AGENT OF L. RENAUD & FRERE,

MONTREAL,

COMMISSION & BROKER,

CHICAGO, ILL.,

Office:—No. 6, Dearborn St.

March 1858.



**Crown Lands Department.**

Toronto, 10th December 1857.

NOTICE is hereby given that about 21,800 acres of Crown Lands in the 4th., 5th, 6th and 7th ranges and range A in the Township of Ashford will be open for Sale on condition of actual settlement, on and after the 11th day of January next.

For particulars, apply to the local Agent F. Têtu, Esq. at St. Thomas, County of L'Islet, C. E.

**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 5s 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. Boa, 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 Library 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 these of any other book store.

September 1857.



**Bureau of Agriculture  
and Statistics,**

Toronto, July 29th, 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 1 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, Anglesea, 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 his 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 **ELGHT 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.