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The Farmer's Journal.

MONTREAL, NOVEMBER 1857.

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De Montigny & Co.

Cattle at the Provincial Agricultural Exhibition. (*)

We closed the study of the fattening breeds, in saying, that on the whole, the animals exhibited at the provincial show, gave but a weak idea of the breeds they represented, and explained to us this fact, in recalling in our mind, what were our climate and culture, compared with the climate and culture of England.

With regard to the milking breeds the difficulties do not exist any more; the importation is possible, even advantageous, and the Ayrshire is of all the english breeds the one which best answers to our wants. Indeed, bred on a loamy soil and unsheltered, already accustomed to a rigorous climate, the Ayrshire succeeds perfectly in his new country, and with some care loses but a few of his valuable qualities.

But because this breed is universally known as excellent milker, does it follow that we must import it, and substitute it every where to our canadian breed? we do not believe it. Besides this means of improvement would be much too long, it would be made impossible by the enormous expense to be made, and which is not within the reach of our farmers.

We believe in the possibility of improving our milking breed by the crossing of the Ayrshire blood, by means of thorough bred bulls; but we cannot suggest the adoption of the pure breed generally. In crossing continually with the Ayrshire, at the 10th crossing, the 1,1024th only of the indigenous blood would remain, which is equivalent to the complete substitution of the improving breed to the breed to be impoved; and the country would have acquired, with little expense, the best now reputed milking breed.

I have said with little expense and indeed: let some breeders import this breed from Scotland and rear it; under their management it will propogate with all its milking qualities, for the young stock, well sheltered, will have plenty of food composed of mangold wurtzel, and farinaceous matters, and with an alimentation as this one and good reproducers, we will certainly obtain choice bulls. These bulls, produced with little expense, in comparison of what they would have cost in England, would not be then beyond the means of our improving farmers, or at least of our agricultural societies, who will be desirous of either increasing the size of their breed, or give it more fineness, precocity or even aptitude to fatten. This is the way we understand the improvement of our milking breed by the infusion of the Ayrshire blood.

Undoubtedly there is another means of improvement much surer and very often preached up by those of our farmers who admit, for our

(*) See the number of October.

canadian breed, no rival superiority. And this means is *the improvement of our milking breed by itself.*

More than any other we are convinced of the advantages of this means of improvement. It is sufficient to select in the breed to be improved the reproducers which present to the highest degree the qualities looked after, and to treat them with all the care which maintains these qualities. Their young products are reared with the same care, and those amongst them which are distinguished from others, are coupled together or with their offsprings and ascendants. We obtain thus after some generations the developement and fixation of the characters we desire.

This process would offer all the chances of success. Operating with a breed which is the result of local circumstances, it is probable that it would experience no unfavourable modification. Besides in coupling in this way animals of the same breed, the characters of which have an equal tendancy to transmission, we would obtain products as ressembling as possible to the generators, result we cannot rely upon with different breeds.

In continuing during some generations the improvement *in and in*, we would have the incontestable advantage of fixing the characters of the new improved breed, of diminishing the bigness of the bones and developing precocity. It is true that, carried too far, this method would lead into serious inconveniences, the principal of which are : the decrease of the vigor and rusticity of the products, of the reproductive power in the males and the fecundity in females ; but we would avoid these evils in selecting, out of the improved family, but always in our canadian breed males, or even females which, ressembling them the most possible by their conformation, would be reproducers. This new infusion of primitive blood would be sufficient, without being considerably prejudicial to the perfection obtained.

The result would be more certain, if the breeder could have subjects from the same stock, but belonging to another family of the canadian breed improved in the same way, living in rather different conditions, and having with its own breed but a remote consanguinity. We would thus follow the process of improvement called by the english improvement *in the same line*, process the most followed in England.

Consanguinity and improvement *in the same line*, separated or combined, are certainly the surest means to succeed in the improvement of our canadian breed, but besides they must be given by adapted alimentation and cares.

Indeed what is a breed ? A breed is a type, modified by the soil, management and care, transmitting by generation the characters it has acquired and which are permanent, *as long as the circumstances which have produced them persist.*

Then if our breed is what make it the soil, management and care, it is evident that if we want to improve one we will have to modify the other. We will have then to wait till we have improved our system of culture before we will understake the improvement of our breeds ? It is not more reasonable to avail ourselves of the infusion of the Ayr blood, in obtaining a greater produce in milk with the same feeding, &c.

But besides the delay occasioned by the improvement of our canadian breed by itself, there is a much greater difficulty. Are we well determined on the characters to be looked after ? Will we give a food apt to bring these characters ? Let us bear in mind that the Ayrshire has only been produced after 50 years of

constant and intelligent cares. The three counties of Ayr, Renfrew and Lanarck it comes from, have increased their population in a prodigious manner since a few years—and with the population the consumption of milk has so much increased that soon they only kept as milking but those having a special aptitude to the production of milk, the middling animals being at once slaughtered. With that system, commanded by circumstances, we soon come to produce a breed which is now the type of the milking cow in all the world. It was considered as such at the universal show of Paris, and the 60 heads exhibited gave a just idea of the characters looked after by the breeders.

The first prize cow was really the type of the *beau ideal* as a milker, therefore £190 were asked for her. This young cow did not weigh 700 lbs weight; as we see the weight is nothing and the conformation is all; however, for many, the size is the greatest merit of horned cattle; generally these colossus will give an enormous quantity of milk, before which we will fall into an ecstacy, without considering the quantity of food consumed. If it was looked to more narrowly, we would be quite astonished, very often, to see that the milk of *such excellent milkers* costs twice dearer than the milk of such other cow, which consumes half less and gives a much richer milk, but which is not remarked, because she does not give a great quantity of it, and, nevertheless, on the whole, the latter will be the more advantageous.

We believe it is useful to give here the description of this type of milking conformation, as we take it from our notes.

Head dry, covered with a very fine skin, projecting eyes, deep above the upper eyelid and below the lower eyelid. Horns thin, slender, sharp, lightly flattened, shining and of fine texture. Ears fine, transparent, yellowish outside.

Neck very fine, shoulders short, very oblique, poor, lean. About the point of the shoulders, dimple very deep. Breast narrow, very prominent. Dewlap quite developed, thin and flexible.

Chest narrow, short, narrow behind the shoulders. Reins very long and large, flank wide, allowing the finger to feel above the wrinkle which serves to the handling, a large ganglionary cord, thus indicating by its bigness the richness of the milk in butter.

Belly very large, hanging; hips large, certain indication of the duration of the milk and of its quality. Croup strong giving also the time of duration and quality. Rump rather falling as the Durham. Thighs thin leaving a large space for the udder. Veins very appearent, specially those of the teats, ending in front by a hole, in which the finger seems likely to be put into. Tail very fine and long, falling as near to the ground as possible. Skin, fine, flexible, loose. Teats covered with fine, long and scarce hairs.

Such are the characters of all good milkers, and we are happy to say that some types could be seen at the provincial show.

The good canadian cows come near enough to this conformation, and as milkers, they only want a little precocity, and facility to be fattened, when old, we send them to the butcher. These are the conclusions we have been brought to in inspecting the animals exhibited at the provincial show. In our next No. we will examine the swine and agricultural implements.

J. P.

CHINESE POTATO—DIOSCOREA BATATAS.

The new introduction of Chinese potato, is to mightily interesting a subject for agriculture in general, not to find a place in the Farmer's journal. Indeed if its introduction proves succesfull as it very likely will—the farmer will no more be threatened with the loss of his potato crop, through the desease wich has so severely raged since these last 15 years. Many advantages would there be in the culture of this plant as will be seen from the following extract from Wm. R. Prince's address to the American Institute, on the merits of the Chinese Potato "Dioscorea Batatas."

Few persons are fully aware of the advantages which a study of Chinese Agriculture is calculated to impart to our country. The Chinese Empire comprises nearly the same latitudes as our own land, with a climate which in contrariety to that of Europe, is colder by two degrees in similar latitudes than that of our Atlantic States, as the Isothermal Charts of Humboldt reveal to us, and it consequently offers us productions which must here become readily acclimated.

The God of Nature has stamped a similarity of character on the Vegetable productions of North America and of China, far greater and more striking than between any other sections of the globe. More than twenty Genera, comprising a vast number of species, are nowhere found native on our wide-spread earth, save in China and the United States.

On page 241 of the Journal of the United States Agricultural Society, for 1856, is to be found a Report made by its committee at the Philadelphia Fair, highly favorable to this esculent, and declaring it *fully equal in quality to our best Potatoes.*

I will now cursorily enumerate some points of importance, and correct some errors which exist with regard to this plant.

The five Chinese Agricultural Works translated into the French language, which I have consulted, devote a large space to the details of its extensive culture, and they state that more than fifty varieties are there cultivated, as distinct in color and character as the varieties of our common Potato.

In addition to its immense product and great excellence as food, raw, boiled, or roasted, they extol its medicinal properties, and declare it to be remedial in all diseases of the chest. Five varieties have been imported into France, and described in the annals of the Imperial and Central Horticultural Society of that country. The variety which in China obtains preference over all others, is called by the Chinese equivalent of *Blanc de Ris—Rice-White.* The French Institute, through Prof. Decaisne, and others, assert that it has at length found "a more than equal substitute for both the Common and the Sweet Potato, a substitute that has, under its cultivation, produced 800 bushels to the acre."

In one of their quarterly publications they have devoted twenty pages to this one subject, and to recounting the successful experiments in France, and they state as the result of such investigation, that "This Esculent has now been tested in every department of France, even to the shores of the Rhine, and it is to be deemed henceforth incorporated into the Agriculture of France." To no other subject has the French Institute devoted over two pages in the same volume. In their Quarterly, referred to, the "Revue Horticole," we find the following remarks by Prof. Decaisne.

"Independently," he says, "of the fecula which is so abundant in this root, there is a combination of *Azote* which does not exist in the common Potato, and which augments in an eminent degree its nutritive character. The experiments made in France and in Algeria, greatly assimilate in their analyses,

and they both present the characteristics of this root, as alimentary in the highest degree. The primary constituent of the Chinese Potato, are essentially those of the common Potato and if there is a small degree less of starch in the Chinese Potato, are essentially those of the common Potato, and if there is a small degree less of starch in the Chinese root, it is most amply compensated by the *Azote*, which is very remarkably combined, and which I must here state is a most astonishing constituent, and cannot fail to exercise a most happy and important influence on this estimable plant, whose qualities are now submitted to our examination. The mucilaginous principle sequence of the combined *Azote*, and coagulates by heat."

"The Chinese Potato cut into sections, and dried by a stove, attains such a condition that it may be reduced to a powder, and then by the addition of water it forms a dough closely assimilating to that made from Wheat flour."

"We do not assume that the Azote in this root is equivalent to the gluten contained in wheat flour, but we urge special attention to the point, that this root can enter to a certain extent into the manufacture of bread. The chemical analysis demonstrates to us the close relation which exists between this root and our common Potato; and by the unequalled nutritive qualities of the Chinese root we elucidate the cause of its entering so largely into the consumption of the Chinese Empire."

With these remarks of Prof. Decaisne, I will now present the results of my own experiments. During the years 1849 and 1850, my attention and that of many other Americans then at San Francisco, was attracted to the importation from China, by the emigrants, of numerous bags of a root resembling the Sweet Potato, which had been cut into sections and apparently kiln-dried. These roots were ground or pounded by the Chinese and made into bread.

On my return home, I found, by perusal of the French periodicals, that Mr. Montigny, the French Consul in Northern China, had sent to the Royal Institute at Paris, a root corresponding to that which I had seen at San Francisco; and I took measures to procure some specimens. It was impossible to obtain a full-grown root at any price, but in the course of two months, I received some small weak tubers less in size than a pea. These I planted and cultivated with care, and was greatly amazed to find, in the autumn, that they had formed roots eighteen to twenty-four inches long, and on cooking them they proved so excellent, that the conviction was forced upon my mind, that this esculent must prove a most perfect substitute for the Potato. I took measures at once, to procure a full supply by importations and otherwise, paying in some cases as high as $700 per bushel. These were all tubers or small pieces of root, as I was unable to purchase a perfect root, although I offered, by advertisements, to give $25 each for one hundred. My plantation the past year, covered two and a half acres, consisting of 36,000 plants procured at a great expense.

During the winter of 1855 and 1856, I left a considerable number of the roots in the upon ground, when the mercury fell to 10o below zero; and I have allowed two acres, comprising 33,000 roots, to remain out the present winter, during which the mercury has sunk to 15o below zero, an extreme of cold, never before experienced on Long Island. The success of the former experiment was attested by the roots which I had the pleasure of exhibiting to you last Spring; and with regard to the latter, the perfect condition of the roots which I herewith present, and which were dug during the present week, for the purpose, is sufficiently conclusive.

With regard to hardihood, if the earth becomes frozen to the entire depth of any root within it, that point is tested quite as effectually with the mercury at 10o as 40o below zero. The root in question has been grown successfully in Aberdeenshire, Scotland, lat. 57°, and there exists no plausible reason why it may not be grown at Quebec. Indeed, considering its general character, it would seem destined not only to spread over our own country, but over the Canadas, Sweden, Norway, Denmark, Russia, Germany, and all other countries in the temperate zone, producing a complete revolution in their alimentary basis. In the preparation of the ground for planting, only decomposed manure should be used, and that should be placed as deep as possible, and but little near the surface, as this vertical root seeks the manure below, the lower end of the root being the enlarged portion, which requires the most nutriment for its full development. Coarse manures should never be used; and such manures as are used, must be so applied as not to come in contact with the roots, as they evince the utmost repugnance to any contact with crude manures, and will fail to develop their growth if in proximity with them. This instinctive repugnance of the plant to all filth presents a most peculiar and distinctive character. It can, however, be so easily grown on any loose soil, poor as it may be, that it can emphatically be termed, "*the poor man's Potato.*"

The flesh is snow-white, *not sweet*, delicately farinaceous, being midway in flavor between the finest Mercer Potato and Arrow-root. It can be eaten raw, boiled, or roasted, and requires in boiling, about half the time of the common Potato. In France, excellent bread has been made by adding forty per cent. of it to wheat flour; and the writer has made the richest and most nutritious puddings of it, without any admixture.

The root is of a pale russet color, oblong regularly rounded, and club-shaped, and it differs from other vertical roots in being largest at the lower end. Its culture is the most simple. The plants produce small tubers in great abundance; these, or small pieces (eyes) of the root, may be planted as soon as the frost is out in the Spring, in drills one foot apart, and then be kept free from weeds during the Summer. The crop should not be dug or ploughed out until the last of Autumn, as the roots which have penetrated deeply into the earth during the Summer, make their great increase in size during the cooler autumnal months. When the crop is taken from the ground, the roots should be spread, and allowed to dry for a few days; preparatory to storing them for the Winter, which may be done by burying them, or placing in cellars.

The haulm is so nutritious that cattle and horses eat it with avidity. On small weak tubers, the top growth is but moderate, but when strong pieces of root are planted, the shoots run twelve to eighteen feet, and are strong and vigorous, producing great numbers of tubers.

The Chinese cut off the small neck of the root, to be reserved for planting, making use only of the large part for ordinary consumption.

Heretofore, we have been compelled to plant only the weak and imperfect imported tubers, which were all that could be purchased, and some persons failed of success the past year, from this cause, or from obtaining spurious tubers. Fair tubers, or eyes, such as we now possess of American growth, if planted early, will produce roots the first year, weighing from eight to twenty ounces; and pieces of the root measuring one and a half inches in length, have produced, the past season, one, two, or three roots from each, weighing in the aggregate from twenty to thirty-two ounces, and in

some instances, thirty inches in length, but usually eighteen to twenty-five inches.

Twelve entire roots of only moderate size, which were left in the ground until the second season, formed shoots fifteen to eighteen feet in length, and produced 3,400 tubers, in addition to a mass of roots weighing eighteen lbs. The same root does not continue its growth the second and third years, as has been supposed, but the old roots decay, each giving birth to a number of very large roots, a field of which forms, as the Chinese express it, "A Magazine of food." The product of a crop, when allowed to remain over to the close of the second season, is estimated by the French Institute at two thousand bushels, of sixty pounds each to the acre.

The expense of culture is less than that of the ordinary Potato, and the expense of digging not exceeding one-fourth the usual cost, as the Chinese Potato can be thrown out with the Carrot or Beet plough so generally used in France on the immense plantations connected with the Beet-Sugar manufactories of that nation. It may be successfully grown on any sandy, gravelly, or other permeable soils that are neither very rich nor wet. In China, it is cultivated on terraced hill-sides, in localities where little else could be produced.

The culture of the different varieties is there universal, on account of the certainty and abundance of the crops, arising from the circumstance of this being the only alimentary root, which, by penetrating the earth vertically to a great depth, can make up by its size and elongation, for the great deficiency in the superficial area of the land, when contrasted with its population.

Hitherto, our surmises had fixed upon Rice as the only alimentary plant capable of sustaining the vast population of China, but when we recall to mind the fact that Rice can only be grown on wet soils, and requires irrigation, and that such soils constitute but a small proportion of the land in populous countries, we are compelled to revert to the upland as the only means by which an ample supply of food can be produced.

Heretofore, we have not been cognizant of any plant cultivated on the upland, that would produce a sufficient supply of food for so redundant a population, and we are now amazed to find that the present plant so far surpasses every other in its alimentary results, that a statistical investigation would prove that if China were deprived of this one esculent, and received in lieu of it every other known vegetable, more than one-third of her population would perish from famine.

One of the most important facts is, its not being subject to rot or decay, and its long preservation in a perfect state, thus rendering it the most important esculent for prolonged sea voyages, and for the prevention of scurvy. And can we over-estimate the importance of introducing this new esculent to general culture throughout our country, when the Potato has so greatly diminished the average crop of that root in most of the States, and when in portions of other States its culture has been entirely abandened? In my own behalf, and after devoting half a century to Horticultural pursuits, I ask of my countrymen no other boon than to award me the claim of its introduction. As it will succeed also in every part of our Southern and Western States, and can be grown at so small an expense, it must become the principal food of the Slave population; and its combination of Azote will render the use of meat unnecessary, as in China, and thereby greatly reduce the expense of their support.

It is a matter of interest that we have here a solution to two enigmas which have long been inexplicable to statisticians and economits. *Firstly* that this *vertical root* by its *small lateral extension*, and conse-

quently, immense product, together with its remarkable nutritive qualities, constitutes the alimentary basis of the300,000,000 of inhabitants comprised within the limits of the Chinese empire. *Sccondly.* That the *Azote* so essential to the formation of muscular fibre, and in the combination of which this root is unique, reveals to us the reason why Chinese laborers are vigorous and healthy without the use of meat. This latter consideration, derived from analysis, forces upon us the conviction that this esculent is destined to occupy in other countries the same position it does in China, that it will usurp a portion of the present consumption of Wheat and Indian Corn, and may, by its cheapness, affect the price of meat. As a summary of its properties, we have, *first*—its perfect hardihood; *second*—its agreeable and higly nutritious quality; *third* its easy and cheap culture; *fourth*—its abundant product; *fifth*—its capacity of being preserved in a dry and perfect state, above a year, free from sprouting and decay. It would be, indeed, a difficult task for the mind of man to conceive and demand a more perfect boon from his Creator.

Flushing, New York, 1857.

Extract from the general statement of agricultural teaching at the Imperial school of agriculture of Grignon.

The royal Agricultural Institute of Grignon has been established in 1827, by an anonymous society, on a domain of 1422 arpents, belonging to the civil list, and granted to them by Charles X, with equivalent charges to those paid by the late farmers.

The cultivation was immediately commenced. It was organised so as become not only a lucrative speculation, but also to be the indispensable auxilliary of the school, and even to reach this destination, it had renounced to some of the special advantages of the locality. It had by its results, the demonstrate that an improving culture is not only the surest base of cheap production, but also the most efficient means of conciliating the interests, so often opposed, of the proprietor and farmer.

(The solution of this problem seemed to the society of an importance and actuality quite from separate the object of extending the limits of science; and this was the reason why the administration refused to give the establishment, the name of experimental farm.)

When the cultivation was commenced, the practise of art had made less progress than theories; before extending these too much, they had to show the advantages of their application.

The school was definitively constituted in 1830, by means of advances made by culture and of three dividends left by the proprietors for this object.

To the foundation of this work presided the love of the public good and the purest desinterestedness; the school had but one object, to give a great impulse to the first of our industries, which for want of knowledge and funds, remained stationary amidst the social progress, and seemed thus to abdicate its supremency.

The propagation and diffusion of a good and extended agricultural education was, undoubtedly of all means, the surest and the quickest to accomplish the proposed object.

For it is most certain that often considerable funds, employed without sufficient knowledge, have been squandered away in agricultural pursuits; while on the contrary we have seen intelligence, with small

capitals, succeeding well in other entreprises of the same kind.

But what class of men is the best qualified for an active agricultural propagand.

This question was carefully discussed when the school was established.

Was it necessary to form men able to conceive and combine a plan of cultivation and realise it by a skillful organisation and management?

Had they only to form active and intelligent subaltern agents, to train them up to all processes, to the management of improved agriculture, and accustom them to follow with docility the impulse which could be given to them?

A school which has to exercise sufficiently its pupils to make them skilful in manual labour, which has to admit them with the very limited instruction which is the ordinary lot of men resigned to such a secondary position, can act but on very few matters.

Its duty is the more difficult that the mode of culture which is perfect in a locality can be defective in another; and, as it is impossible that the school could foresee the circumstances so various in which its pupils could be placed, it would have to vary infinitively its teaching practical.

Moreover Alsace, Flanders, Switzerland England, Scotland and other countries, renowned for their improved agriculture, can furnish and have already furnished many farms servants. Experience has proved that however skilful these subaltern agents could be, they are seldom succesful; they often see their efforts paralised by the resistance or want of reliance of the proprietor. Sometimes also these subaltern agents meet with proprietors who are indulgent and easy: the subaltern agent commands and often abuses, and leads sometimes the proprietor in ruinous losses.

We must guard against this half learning, resulting from the observation of some facts adapted to such or such locality; practised in special conditions, it can, in all others, often have very unfortunate results. How many proprietors have been ruined by the unintelligent application of the best improved methods and implements?

Agricultural Industry wants men knowing thoroughly its resources and condition of existence; who will have sufficiently studied its connexion with wealth, population, commerce, manufactures, to be able to practise judiciously in all localities; men finally, who join to economical science a thorough knowledge of all the technical details of the business, calculated to make them foresee and overcome all the difficulties of practise.

These men will not only be able to select convenient methods to a special position, and have them applied, but even form the necessary farm servants; they will even form these agents with more facility than the schools; their teaching being limited to the useful operations of the establishment, the pupils will much quicker attain the desired perfection. The improvment of each land so constituted will then be placed in the most favorable circumstances, the impulse being transmitted, without effort or resistance, from the motive power to the secondary machineries; each chief will thus be able to form four or five agents: and the benefits the country will reap by such an agricultural instruction will increase in an enormous progression.

We must not forget that agriculture needs great capital. The surest means of getting it employed in the culture of the soil is certainly by enlightening the possessors of these capitals and by gaining their confidence. Now, what means of influence belong to the subaltern agents, who have but an incomplete instruction and whose education is barely sketched.

What proprietor, (in France), has not been startled by some reverses, and is not

now convinced that the prospect of Agriculture does not reside in more or less perfect systems, but in a good organization, in the good use of making economical and physioligical circumstances of the lands to be improved?

It is not sufficient to have good crops, we must moreoverproduce them advantageously that is, to draw the highest possible interest on the capital engaged in Agricultural industry.

Therefore logic wants us to place, in the second rank of usefullness the agricultural education of the secondary agents; we must proceed to the formation of the head before other members; it was then to a superior school the administration had to give the preference. They made an appeal to this class of men who, by their wealth and position, have the greatest influence on agriculture.

They offered to sons of proprietors the whole of that knowledge which could render them to administer their lands, to create improving farms, form their agents, and afterwards before the legislature that knowledge, that experience which enlightens and make fruitful the discussions in which the interets and destinies of a country are discussed. But how many proprietors, living at a distance, either by to fulfil taste, or from their farms their social duties, cannot occupy themselves with agricultural improvements? We must offer them the means of giving their cooperation to the great agricultural regeneration.

They will find these means in enlightened farmers, disposed to sacrifice these ancient causes which habits, a permanent hostitity, between the interets of the proprietor and the farmer, and which allowed the latter to grow rich only by exhausting the soil of the proprietor.

They will also find them in administrators, who conversant which all the desirable theoretical and practical knowledge, can, by the execution of a plan discussed and adopted before hand, by a rigorous responsibility, offer then all guarantees of fidelity and success.

These three classes of men, who must mutually help one another, to march on more surely to the same object, were called to a similar teaching; for all must learn study thoroughly the economical and physiological circumstances of a county, to conceive a plan of improvement, and direct even the least details. All, finally, must perform, the duties of skilful engineers who can, in the most various positions, make the greatest possible use of the powers put at their disposal, maintien their plans by careful discussions, support them by budgets supported by proofs, and finally, when needful, expound with success, at the tribune or in the professional chair, the principles and facts which are called to deriet agricultural matters.

Then the model farms have to form the secondary agents: disseminated in all the agricultural regions of a country, they must renounce to generalities and confine themselves to the circle of natural production in their respective localities; they have to demonstrate, by profits, that they have appreciated justly, their special circumstances, and selected the best adapted systems to these circumstances.

To the agricultural engineers, the care of these appreciations, and the hard duty of directing the models towards this solid end of a an advantageous production: it is the best example to be offered to farmers, possessing alone the power of leading them in the way of progress.

But to form agricultural engineers able to perform such duties, let us not be deceived, it is not sufficient to have this incomplete, surperficial instruction, neither this lounging which, in agricultural institutes, is too often dignified with the name of *practise*.

It is not even enough to know all the details a director has to have executed by his servants, from the phoughing to the sowing; we must add to that the careful study of all the scientific branches which give their support to the extended science we call *agriculture*; we must have the babit of this rigourous analysis which dissects each of the operations, and reduces to their best proportions the productions of the soil, so often exaggerated.

Finally we must have this continual exercise which forms the sight and hand, and developpes this spirit of observation which must be the complement of all the qualities of the director of an improving farm.

The results obtained during the first ten years have fully corroborated the justice of the thought which had presided to the organization of this schooling, and have shown small reseful modifications to be made.

The government, appreciating these results, has taken a part in this work and has made it more accessible and useful to the country; it took charge of the costs of instruction.

This measure has been, for Grignon, the commencement a new era; it has lessenedd the priceof boarding, releived gradually the culture from the advances made by it to the school, diminished the natural distinction between the two branches of the establishment, and given to the shool all the desirable developement.

In another respect, the farm has son acquitted a remarquable portion of its rents; it has doubled the lucrative value of its lands; the average of its annual profits represents 10 per cent of its capital. The domain feeds now five times more stock than it could do before. The average produce of its crops is increased fourfold.

Then the object proposed by the establishment of Grignon may be considered as reached, and the efficiency of its programme of teaching is henceforth perfectly demonstrated.

The courses are of two years and a half, and as this space is hardly sufficient to embrace the teaching of all the indispensable branches to the agricultural engineer, this term being expired, pupils are bound to devote three months to the study and confection of a plan of culture.

The time of pupils, during all the course, is divided between theoritical studies and practical exercises. Generally, and principally in agriculture, the difference which exists between practise and theory is very wrongly appreciated.

Theory is reputed to be an assemblage of ideas and abstracted principles, of a more or less impossible application.

Practise, only, would be the positive part; and, alone, would deserve the attention of serious men.

It was the duty of the Institute of Grignon to protest against such a definition.

For Grignon, *theory*, is first, principally the study, the proof of facts in general; it is the knowlegde of numerous and perfectly characterised facts: and secondly discussions, explanations which lead to the appreciation of these facts, establish their classification, impress them in the memory of the pupils, to be later useful to them in the application of principles. Undoubtedly there are false theories; but they are not supported by facts, or rely on facts, too scarce wrongly observed and not circumstanced: they cannot withstand a serious discussion.

Practise at Grignon, is the application of theory as above discribed; it is the excercise, the development of all the necessary faculties to observe and repeat the facts which have been described.

The practical instruction which the director of a model farm must have is quite different from the one which is suffoient to

the chief of workman's hop or a cowherd.

The first duty of the agricultural engineer is the study of the locality; and for this, the knowledge he acquired in the theoritical courses is totally unsufficient; he must necessarily have this spirit of observation, this habit of seeing which makes him appreciate measures and values, and shows him the strong and weak side of things.

When the time of farming will be come, he will have to join to these faculties this habit of the hand which always imposes to workmen, and which has an immense influence on the good execution of labour; he must finally have this activity, these habits of business which have also alarge share in the success of agricultural enterprises.

Chronicle of the Month.

SUMMARY.—Provincial Agricultural Exhibition at Brantford, Upper-Canada.—Show of the County of Vercheres.—Easy use of hard waters.—Report to the Minister of Agriculture.—Essays on the deseases of the wheat.—M. Alfred Turgeon's departure for the Imperial School of Agriculture of Grignon.

The Provincial and County shows have been the principal events of last month. The provincial Agricultural Exhibition of Upper-Canada, took place at Brantford; we have attended that Exhibition, and we must confess that in Cattle, Sheep and Agricultural Implements it was far superior to our Provincial Exhibition of Montreal.

This is the fact in general: now we believe we are able to explain it, in one respect by the apathy of too large a number of our farmers for these demonstrations, the importance of which they do not understand; in another respect, on the contrary, by the earnestness of the Upper Canadians to compete from all parts of the province at this Grand Agricultural fair. Therefore in Upper-Canada, the Provincial show is quite the expression of what can be produced by agriculture; while at home the best products we have, often remain in our countries, and he who would judge our farmers by one or our Provincial shows would have a very false idea of them.

The Durhams exhibited at Brantford were certainly remarquable. Those which were imported presented well the characters we admired in Master Butterfly, and would have competed with honour even in a show in England. The Durhams bred in Upper-Canada, had lost somewhat, but they were yet Durhams by their conformation.

The number of Devons was considerable, and some heads left nothing to be desired. This breed is ructic and small sized, and perfectly inured to the climate, I was told. The Hereford, Galloway and Ayrs, were as good as the former. In fine, I was quite astonished to find there a complete show of the best English breeds and good specimens in each class. We can account for this fact if we consider the sums the Upper Canadians give for the purchase of imported stock. If to this we add good pasture lands in summer, and a feeding of roots in winter, mangold wurtzel, turnips and sometimes a portion of farinaceous matters, and during the warm days of summer an allowance of forrage, cut green and stallfed it will be understood that it is possible to have the fine results I have stated. This speculation would be bad if so expensive products were not easily disposed of; but with a population which has been able to judge in the mother country of the advantages of a good breed of cattle,

the prices obtained for the young stock, destined to the improvement of breeds by crossing, make of it, on the contrary a very lucrative speculation, advantageous for both the breeder and farmer of the country generally. What we have said of cattle applies to the sheep and swine. Well selected breeds, convenient management and easy sale, at renumerative prices.

In the class of Agricultural Implements the success was not less remarkable. Perhaps that as a whole the collection was not better than that we have admired at our Provincial Exhibition, but there is in the two shows all this difference, that in the second case, a great number of implements where of foreign manufacture, while in the first they were all of Upper Canadian manufacture. This is a fine result owing to the good spirit of entreprise of the Upper Canadian manufacturers who since a few years only have adopted the manufacture of foreign implements. Let us hope our manufacturers will follow this good example, and that in a few years, they will supply us with them.

We have noticed with pleasure at Brantford, that at last they have abandoned the way we generally work thrashing machines, which is really a means of killing horses. It is given up every where, except here, to move these machines we must employ the best horses of the farm, which are soon overtired. With the other system on the contrary, we employ the least good horses in the stable, and these old horses like this comparatively easy work. Among the 24 Reaping machines, all more or less ingenious but well finished, we have noticed a machine provided with an automaton rake, destined to replace a man. This machine, said the Judges, had a very fine prospect.

At a meeting of the Agricultural Association for Upper-Canada, we have been happy to meet the approval of an Agriculturist as distinguished as is Colonel Thompson, of Toronto, relatively to the opinion we gave in our last number, on the necessity there is for us to cross our breeds with the pure English breeds. Colonel Thompson communicated to the Association the success he had obtained by such crossings. And the results were so fine, he wanted the animals called to compete to that class to have their pedigree.

We receive the following Report of the County of Verchères Agricultural Show, we are happy to offer it to our readers, as a specimen of the manner in which these family feasts ought to be celebrated in all the Counties of our province.

Varennes October 13th 1857.

M. EDITOR.—I had to fulfil since several days a very agreable duty, that is to communicate to you an agricultural fair which took place on the 7th instant in our county, but my numerous occupations prevented me of doing so till to day.

It is nothing less than our County Annual Exhibition. It was a very good one, and the county will long remember it. It has proved that there is a great improvement in that part of the District. All the friends strangers to the County attending that Exhibition, have been astonished, and many competent persons, namely Joseph Laporte Esq., Member of Parliament, remarked that he had seen nothing better elswhere.

I beg to state that we have much regretted not to have had the honour of seing you on this occasion, as we understood we were to hope that favor from you, we would have been glad to show you our improvements, but I presume good reasons prevented you of doing so.

The prizes offered by the County were numerous. There were fifty eight classes, and six prizes in each class, even ten prizes were offered in a class.

I have noticed but three or four classes which were not entirely filled up, in a great number of which the prizes were warmly contested. Generally the stock and articles exhibited were remarkable.

Horses were well represented, from the stallion and the aged mare, to the yearling colt; they were hundred and thirty seven in number, divided in eight classes, all good canadian horses. It has often been difficult to make a choice, principally in the class of brood mares and foals, and in the class of fine mares without foals. The mare of M. Chicoine, of Verchères, had more difficuty to take the first prize than at the provincial Exhibition in September last: she perhaps owes this second victory to a recollection of a first one; for the mares of MM. Beauchemin, Archambault, Blanchard, Lussier and Dansereau had the same right to the first prize. These gentlemen are to be blamed for not having exhibited their mares at Montreal.

MM. Thimothé and Pierre Dansereau, of Vercheres, deserve the same reproach for not having exhibited their stallions which are really superior.

Cattle was also well enough represented in nine different classes; many were of the Ayrshire and Durham breeds, but the greater number of them were of mixed breeds. The best specimens were exhibited by MM. Archambault, Massue, Lussier and Collet of Varennes. There were some very remarquable.

Sheep and swine were numerous and of good and fine quality. For these classes MM. Dansereau of Vercheres are redoutable competitors.

Poultry were very fine; grains of all kinds were in great quantity and so where the thimothy and clover seeds.

Besides were to be seen enormous pumpkins, fine apples, fine grapes, cabbages, turnips, carrots, mangold wurtzel in quantity, good honey; cheese, and firkins of butter in great quantity.

The departement of domestic industry was admirable and well represented. The etoffe du pays, flannels, shawls, blankets, counterpanes, under petticoats, mantlets, knitted woolen stockings and socks, home made, covered an immense table and excited the admiration of visitors.

This fine feast took place at Vercheres on Mr. Charles Amiot's farm, near the village. This young gengleman is the worthy inheritor of his father's politeness, the late Pierre Amiot, Esq.; who so long represented the County of Vercheres.

For such feasts the locality is the most advantageous and charming. The weather was fine, and the visitors numerous. The feast was fine in all respects.

The committee spared nothing to make it as interesting as possible, and to make the members, who are most all farmers, understand how they ought to esteem their condition so noble and advantageous.

All was well managed. Three fine flags were floating upon Mr. Amiot's house. This gentleman and M. Collette deserve certainly the greatest praises for the cares they brought to make the preparations; and I would be ungrateful not to thank MM. the musicians of Vercheres for the interest they took in our feast by their presence, in playing at different intervals the finest and best executed airs; the canon itself was heard now and then.

The feast ended very late by the proclamation of the premiums awarded, and the distribution seemed to be satisfactory. However, I like to acknowledge that MM. the Judges

who had the kindness to act on this occasion, have fulfilled their duty with skill, justice and impartiality; they deserve the most sincere thanks.

After the proclamation of the premiums awarded. the President of the Society addressed the meeting,which was still numerous; offered the ordinary thanks to those who had contributed to the pomp of the feast, and gave some words of encouragement to the members of the Society,which seemed to be well relished. This feast was crowned by an excellent diner at Mr. Amiot: MM. the Juges the members of the committee, the musicians and some friends were present. At half past seven o'clock the guests left the table quite satisfied, well disposed to make new efforts for next year. Every one went away peaceably, for temperance reigned as a sovereign in that fine meeting.

But M. Editor do you think the pleasures of the day ended with the dinner. Certainly not, M. Collette always so polite in these circumstances would have believed himself at faultif he had not crowned this day with a meeting of friends; he invited them to meet at home and they had a charming soiree.

If you think, M. Editor, this report whatever imperfect it is, worthy of being published in your Journal, I authorize you to do it. At the first moment of leasure, I propose to give you a report of the state of the last crop in the County.

I have the honour to be, M. Editor,

Your obedient servant,

THE PRESIDENT OF THE SOCIETY.

One of our subscribers asks us an easy means of using hard waters.

We know that in many localities of our province, hard waters drive our house maids to despair; here the washing is difficult, there peas and beans do not boil; and yet nothing is easier than to obviate to these inconveniences.

Professor Clarke of Aberdeen gives us a means within the reach of all. By adding lime water to hard waters in quantity, without excess, hard wa er will become milky; we will add until there will be no more change, and let it all settle. By that process will be obtained sweet water, as sweet as rain water, either for washing or cooking. Now, will I be asked, what is the way of *making lime water*? A piece of lime, well burnt, will be taken and put in a pot, with water. After being well mixed, it will settle, and when the water will be clear, we will have lime water? As the pot empties we will add water and the same lime will be of long use.

We have been ordered by the Minister of Agriculture to make a report on the improvements of our agriculture since last year. The Honorable P.M. Vangoughnet desires us to have the assistance, for this important work, of the most experienced agriculturists of the province who will have the kindness to give their opinion on this subject. We are happy to. offer our farmers so good an occasion to show, with honour, a report on our agriculture, subscribed by some canadian names. We hope the Secretaries and Presidents of our Agricultural Societies will endeavour to answer this demand. All correspondances on the subject will much oblige us, having thus the expression of the wants of the great number.

The essays on the deseases ef the wheat, published by the Minister of agriculture, are so good that it is very difficult to make an analysis of them.

When we take off something from the subject, it looses its perspicuity and coherency. We believed we

could do nothing better than to offer our readers a copy of each essay.

THE EDITOR.

We close our chronicle by acquainting our readers that the last steamer which left Liverpool, had aboard one of our young Canadians, future pupil of the Imperial School of Agriculture of Grignon. This is a first success of our paper, we have drawn a partisan over to our cause. M. Alfred Turgeon, son of M. A. Turgeon, of Terrebonne, member of the Board of Agriculture, could since four years witness the labours of a farm of 400 arpents, managed with skill and success. Formed at such a school, M. Alfred Turgeon is prepared, we cannot better, to profit by the courses followed at Grignon, and by the different systems of culture he will see applied in France and England.

Therefore we have no boubt that back from his long journey, M. Turgeon will be for his county a model of practise and skilled in theory. It is in that conviction that in shaking his hand for the last time we will say to him: Take courage until we see you again.

Petite-Côte, 24th October 1857.

SIR,—I would beg leave to state to you and through the medium of your Journal to the public; my surprise on seing my name attached to a paragraph in your October number of the Farmer's Journal purporting to be the decision of the Judges at the trial of reaping and mowing machines which took place on Mr. Kidd's Farm on the 19th ult, as I had neither signed the said paragraph nor agreed to award the prize as there stated. Our decision, which was publicly made known at the time, awarded the first prize for reaping to the machine manufactured by W. A. Wood, of Hoosick Falls N. York, George Hagar, Montreal. Agent owned by F. Hedly, and for mowing, to the machine manufactured by Messrs Paige, French and Co., of Montreal.

Yours truly,
JOHN DRUMMOND.

☞We have just been informed that Mr. Prince, of Flushing, Long Island, N. Y. offers for sale his Chinese Potatoes at $10.00 the hundred and at $80.00 for a thousand.

☞We beg to call the attention of our subscribers to Mr. J. Dougall's advertissement of Agricultural Books, among which will be found, the "Annual Rural Register" for 1858. This work cannot but be of advantage to our readers, and we would advise them to secure at once a copy. It will be sent by mail to any part of the country free of postage on receipt of ONE and THREE pence.

MONTHLY METEOROLOGICAL REPORT

For August 1857.

BAROMETER.

	F.	inches
Mean reading of the barometer corrected and reduced to...	32°	29 723
Highest reading of the barometer corrected the 31st day		30° 052
Lowest reading of the barometer corrected the 28th day.		29° 344
Monthly range.....		0° 608

THERMOMETER.

Mean reading of the standard thermometer.....	65°	07
Highest reading of the maximum do 7th day.....	90°	4
Lowest reading of the minimum do 25th day.....	45°	2
Monthly Range.....	45°	2
Mean of humidity.....	0°	848
Greatest intensity of the suns rays.....	120°	0
Lowest point of terrestrial radiation	41°	4
Amount of evaporation in inches.....	2 i.	84

Rain fell on 11 days amounting to 4,580 inches. it was raining 43 hours 10 minutes and was accompanied by thunder on 3 days.....
Most prevalent wind S. W...
Least prevalent wind E. by N.
Most windy day the 28th day, mean miles per hour..... 12 m. 45
Least do do the 3rd day do do 0 23
Ozone was present in large quantity .....
Aurora borealis was visible on 1 night.....

Montreal Market Prices.

CORRECTED BY THE CLERK

OF THE

Bonsecours Market.

Montreal, Oct. 17, 1857.

Flour, Country, per quintal,	....	....	14	0	to	15	0
Oatmeal,	do	....	12	6	to	13	0
Indian Meal,	do	....	0	0	to	0	0

GRAINS.

Wheat, per minot,	....	....	5	6	to	6	0
Barley, new,	do	....	2	0	to	3	0
Peas,	do	....	3	9	to	4	0
Oats,	do	....	1	10½	to	2	0
Buckwheat,	do	....	2	3	to	2	6
Lower-Canada Indian Corn,	do, yellow		0	0	to	0	0
Rye,	do	....	3	0	to	3	9
Flax Seed,	do	....	6	0	to	6	3
Timothy,	do	....	9	0	to	10	0
Bran,	do	....	0	0	to	0	0

FOWLS AND GAME.

Turkeys (old) per	couple,	....	5	0	to	5	6
Do (young)	do	....	4	0	to	4	6
Geese,	do	....	4	0	to	4	6
Ducks,	do	....	2	6	to	3	0
Do Wild,	do	....	1	6	to	2	0
Fowls,	do	....	1	10½	to	2	0
Chickens,	do	....	1	6	to	1	8
Pidgeons, Tame,	do	....	1	0	to	1	3
Partridges,	do	....	2	6	to	3	0
Hares,	do	....	1	0	to	1	3
Plover,	do	....	0	10	to	1	0
Woodcock,	do	....	3	0	to	3	4

MEATS.

Beef, per lb	....	....	0	2½	to	0	10
Pork, do	....	....	0	6½	to	0	7
Mutton, do	....	....	0	5	to	0	7
Do per qr.,	....	....	1	8	to	6	0
Beef, per 100 lbs.,	....	....	30	0	to	45	0
Pork, fresh, in carcass,	....	....	47	6	to	50	0

DAIRY PRODUCE.

Butter, Fresh, per lb.,	....	....	1	2	to	1	3
Do Salt	do	....	0	9	to	0	10
Cheese (skim milk) per lb	....	....	0	4	to	0	5
Do (sweet)	do	....	0	11	to	1	0

VEGETABLES

Beans, American, per minot,	....	....	0	0	to	0	0
Do Canadian.	do	....	7	6	to	8	0
Potatoes, per bag	...	....	3	3	to	3	6
Turnips,	do	....	0	0	to	0	0
Onions, per minot,	....	....	3	4	to	3	6

SUGAR AND HONEY.

Sugar, Maple, per lb.	....	....	0	6	to	0	6
Honey,	do	....	0	7	to	0	8
Bee's Wax	do	....	0	0	to	0	0

MISCELLANEOUS.

Lard, per lb.	....	....	0	9	to	0	11
Eggs (fresh) per dozen,	....	....	0	8	to	0	9
Halibut, per lb,	....	....	0	6	to	0	7
Haddock,	....	....	0	0	to	0	6
Apples, per barrel,	....	....	15	0	to	20	0
Oranges, per box,	....	....	0	0	to	00	

AGRICULTURAL SOCIETY

OF THE

County of Bellechasse.

NOTICE

IS hereby given that the first Agricultural Exhibition of the County of Bellechasse, will take place on the Public Square of the

VILLAGE OF ST. MICHEL,

AT 9 O'CLOCK A. M.

ON THE 5TH OF NOVEMBER NEXT; the second at St. Gervais,

ON THE 22nd OF DECEMBER,

also next.

P. FORGUES,
Secretary-Treasurer,
A. S. C. B.

October 1857.

AGRICULTURAL SOCIETY

OF THE

Electoral Division

OF

THREE RIVERS.

THE Annual Cattle Show of this Society, will take place in the

CITY OF THREE RIVERS,

On the May Market,

TUESDAY, 17 NOVEMBER INST.

AT TWELVE O'CLOCK.

(By order,)

L. G. DUVAL,
Sec.-Treasurer,
A. S. E. D. T. R.

Nov. 1857.

Crown Lands Department.

TORONTO, OCTOBER 27TH, 1857.

NOTICE

IS hereby given that about NINE THOUSAND ACRES of LAND in the 5th, 6th, 7th, 8th and 9th ranges of CHERTSEY, County of Montcalm, L. C. will be open for sale to actual and intending settlers at ONE and SIX per acre on and after the 30TH OF NEXT MONTH, on application to A. DALY, Esq., AGENT at RAWDON in said County.

November 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 Setlement.

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 paralled 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 whatever 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 be 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 whith 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 full 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 neighborbood 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 ressources 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 worke 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.