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THE COLONIAL FARMER,

DEVOTED TO THE AGRICULTURAL INTERESTS OF NOVA-SCOTIA, NEW-BRUNSWICK
AND PRINCE EDWARD'S ISLAND.

No. 1.

HALIFAX, N. S., JANUARY, 1842.

NO. 7.



THE COLONIAL FARMER.

HALIFAX, N. S., JANUARY, 1842.

HORTON, 15th DECEMBER, 1841.

I am instructed, by a Resolution of King's County Agricultural Society, of the 6th inst., to forward the enclosed Speech to you, for publication in the *Colonial Farmer*. Should you deem worthy a place in the columns of that paper, you will confer a favor on the Society by inserting it.

I am, Sir,

Your most obedient Servant,

JAMES HARRIS,

Secretary K. C. Ag. Society.

The Ed. Colonial Farmer.

At a General Meeting of the King's County Agricultural Society, held at Wolfville, on Monday, the 6th day of December, 1841, Judge Marshall, one of the Members of the Society, delivered the following Address, pursuant to a Resolution passed at a previous meeting:

PRESIDENT, AND GENTLEMEN—

In compliance with the request to address this Society, on the present occasion, I feel my own inability to treat of the subject on which we are engaged, in its more scientific principles, or to impart any extensive information respecting its direct and practical applications. Not only, however, are a correct knowledge and skill in the direction of those operations of essential importance in the science of agriculture, but there are numerous subjects and influences more or less affecting it, which it is highly requisite to understand; and on many of which, although of scarcely less importance and practical skill, the husbandman is not sufficiently informed, and therefore does not regard as of serious interest. A knowledge of these, and their due appreciation, are especially important in such a Country as our own, where nearly every trade and employment, as well as civil regulation, have either a direct or remote influence and effect with regard to agricultural prosperity. Some of the most important of those influences which operate injuriously, I shall specify and explain in the course of this Address; and further, shall endeavor to show by what means our agricultural interests may be more speedily and extensively promoted.

With regard to our subject in general, it may here be remarked, that persons in all the various occupations in civilized life, depending chiefly for subsistence on the productions of the ground, so far as the abundance or scarcity of these, will each of those occupations either prosper or languish, and, consequently, so will the whole Society be either wealthy and prosperous, or poor and

embarrassed. It may, indeed, be truly affirmed, that with us, especially, a state of general prosperity can only be reached, through a zealous and persevering attention to our agricultural interest. If we take, however, an extended and unprejudiced view of the several sources affecting that prosperity, it will appear that, during the greater part of our history, none of them were so greatly neglected as our Agriculture — For this, among a number of causes which will hereafter be mentioned, these may be prominently assigned, — that the pursuit of this art was too generally considered of minor consequence towards promoting our general welfare; and that its employments were viewed by many among us, as of rather an inferior or degrading description. On enlightened and unprejudiced consideration, it must, however, be admitted, that there is no occupation in civilized life, more truly honorable, or which tends more directly to ensure the just independence and real comfort of man. It was the express appointment of his Creator, that he should procure the means of subsistence by his laborious cultivation of the ground. In this injunction, the truly enlightened and pious, reflecting on the many vices and follies to the fatal influences of which mankind are exposed, will recognize the dispensation of an all-wise and merciful Providence. In the most enlightened ages, and in many powerful and celebrated nations, Agriculture has been esteemed the most honorable and useful occupation, and some highly gifted characters, have not only employed their talents in studies and exertions for its improvement, but have not been ashamed to engage in its active operations. There is no occupation which, so far as human influences are concerned, so certainly leads to a becoming independence in every respect. The husbandman seeks the requisite means of subsistence immediately from the bounty of his beneficent Creator. However poor he may be at the commencement of his labors, yet in the exercise of prudence, temperance, and industry, and when not oppressed by his fellow men, scarcely ever does he fail to procure an ample supply for all his absolute wants. He is not, like those in many other occupations, exposed to temptations to flatter or palliate the vices of mankind, to minister to their vanities and follies, or to crouch beneath arbitrary and oppressive dictation. Under a free and equitable government, being secured in the enjoyments of his possessions, the habits of his occupation tend alike to invigorate his body and preserve it in health, to nourish the freedom of his mind, and to expand the best feelings and affections of his heart. Whatever may be the fluctuations or changes in other occupations, or in political affairs, or whatever distress they occasion, he need not look beyond his own fields for the absolute necessities of life, and as far as respects himself and his domestic circle, their sources of enjoyment continue the same. His occupation, also, has less tendency than many others, to produce those harassing cares and perplexities which sadden and embitter so many of the scenes of life; and, moreover, he is less exposed to those frauds and that injustice which in many other employments are so frequently dreaded, and through which such numbers have been suddenly reduced from a state of affluence, to dependence and misery. There is also no foundation on which the real wealth and the independence of nations can so effectually be raised, and so securely and permanently repose, as upon Agriculture. This follows, indeed, as a matter of course, if what has just been advanced respecting individuals pursuing that occupation be

admitted to be correct. The real prosperity of a State will ever be found to depend on the welfare of the members composing it. With what propriety, indeed, can that country be said to be truly independent and flourishing, the Inhabitants of which depend upon foreign quarters for the chief necessaries of life, and are in general oppressed by want, and consequently unhappy. A Country, for instance, depending for its prosperity chiefly on Foreign Commerce, can never justly be considered as in a state of sound security, by reason of the fluctuations to which such commerce is inevitably and constantly liable. A change in political relations, restrictions upon trade, or the events of a war, will often suddenly reduce such a Country, from a state of power, abundance and rejoicing, to one of general weakness, distress and despondency. On the other hand, a Country in which Agriculture is so extensively pursued, as to afford its Inhabitants all the absolute means of subsistence, is not exposed to those evils, but if deprived of all foreign intercourse, may still remain comparatively prosperous and happy. It is, indeed, scarcely too much to affirm, that no Country has been invariably and eminently prosperous, in which agricultural occupations were despised or neglected. This has been exemplified and proved by the history of many Nations and Countries, both in ancient and in modern times.

Among the Romans, that ambitious and arbitrary people, who were almost constantly engaged in extensive and sanguinary wars, agricultural pursuits were, from the first period of their story, held in high estimation, and their most celebrated characters were often found actively employed in advancing them. Their improvements in this valuable art kept pace with their conquests, and wherever they established their dominion, they caused the labors of the field immediately to flourish. Not merely to the dread of their arms, and the nature of the government they established, but to that cause may in part be ascribed the acquiescence under their dominion of the Countries they subjugated, and the protracted preservation of their conquests. It was not until late in the decline of the mighty empire they established, that the mistress of so many nations was herself made to depend upon remote parts of her Territories for the first necessary of life; and that in consequence she sometimes experienced the horrors of famine. The neglect of this most important of all occupations may be considered as having accelerated the downfall of that gigantic and close cemented fabric, which the wisdom and the labors of so many generations had been occupied in rearing. Even Carthage, which was extensively busied in commerce, and which carried it to a greater degree of perfection than any other Country of her time, bestowed upon Agriculture particular and assiduous attention. It is recorded, that in the destruction of that City by its exasperated and merciless rival, when every monument of its skill, and nearly every other record or memorial of its science were diligently sought after and destroyed, the valuable works upon Agriculture, found among the spoils, were carefully preserved by that rival, who assiduously employed the information they contained.

In the history of some modern nations also, we may discover the important consequences of a careful attention to extend and improve this most useful occupation. In Great Britain, it has for many ages past been held in very high estimation, and has at this time arrived at a state of advancement which probably was never surpassed. Had there not been an extensive and unremitting application to its pursuit, how deplorable would often have been the situation of that country. At that period, especially, when assailed by the most formidable combination of foes, and when its commerce was excluded from almost every part of the Continent of

Europe, if it had not possessed, within itself, the chief means of subsistence to a sufficient extent, the extremes of distress would have ensued, and the bulwark of freedom would probably have fallen. Through its attention to Agriculture, even more than its Commerce, was that magnanimous country enabled to support those numerous and expensive armies and fleets which were engaged in preserving its own independence, and redressing the wrongs and restoring the freedom of so many other nations. It may be very fairly be concluded, that the power and greatness of France have always been principally owing to its extensive cultivation and pursuit of the several branches of husbandry. Even under the most arbitrary and oppressive systems of Government, heavily burthened with Taxes at one period, and its Commerce driven from the ocean at another, through its attention to Agriculture, the country has almost constantly kept its vast population sufficiently supplied with all the chief necessaries of life.

On the other hand, let us view the situation of some of the countries in which Agriculture has been neglected, or but partially pursued. In Spain, although many parts of it are highly favored by nature, there has long been a general inattention to tillage, in procuring the absolute means of subsistence; and the great improvements in husbandry, which have in modern times been made, are there but little understood. Hence it is notorious, that the peasantry and the lower orders of persons in that country, are in a more impoverished condition, and even more deficient in intellectual improvement, than those of most of the other nations in Europe. When possessed of the most extensive Mines of Silver and Gold, and prosecuting Commerce to a very great extent, yet, as a people, they still were poor and embarrassed. They afford, indeed, a striking example, that neither by the possession of those precious metals, nor by the state of advancement in commercial pursuits, is national wealth to be estimated. The Colonies in the West Indies afford another instance of the dependent and unhappy state of a country in which Agriculture is not pursued to such an extent as to furnish to the population the chief means of subsistence. Although those Colonies supply a great portion of the civilized world with such a variety of luxuries, and though such numbers there dwell with their splendor and magnificence, yet, during former periods the Population generally, according to reiterated complaints, was often but scantily supplied with some of the chief articles of food, and at times experienced even the horrors of want. Through change in political relations, restraints imposed upon commerce, alterations in its channels, preventing them from obtaining regular and ample supplies of those primary articles, or from the price of their productions having been greatly diminished in the markets to which they were exported, they have often been speedily reduced from abundance and rejoicing, to distress and despondency. Frequent and extensive were the distresses and embarrassments they formerly experienced, and so convinced did they become of the true causes of them, that for some years past, they have resorted to the expedient of appropriating greater portions of their land, than they had previously done, to the raising of those articles of food, the most essentially requisite. In consequence of this, they have latterly, in a great measure, prevented the recurrence of those evils. The Colony of Newfoundland, has ever been much in the same precarious and unhappy condition. If not from natural, from several other causes which might be explained, it has remained almost wholly dependent upon other countries for nearly all the means of subsistence. It is true this Colony has afforded an extensive source of wealth, and been of high importance to Great Britain, in many respects; and some within it, engaged in

mercial pursuits, have acquired much wealth; but its Inhabitants, in general, are indigent and embarrassed. Scarcely a year elapses, without at one period or other, in some of the settlements, extreme hardships are experienced, from the want of some of the chief necessaries of life. The prices of these have, in general, been so high as to have prevented the great majority of those engaged in the pursuits, there carried on, from improving their circumstances. It is, surely, unnecessary to adduce any more instances, to show the ill consequences which a Country must experience, from neglecting agricultural occupations, or from its not being favourable to their pursuit.

On a brief review, it will appear, that during the far greater portion of the history of this Province, comparatively little attention was bestowed upon Agriculture, either with reference to the acquisition of skill in the science, or improvement in practical operations. A variety of causes concurred to produce and continue that neglect, some of which it may be profitable to investigate, before attempting to exhibit and explain the means by which that most valuable source of our prosperity may most surely and speedily be improved. In the first place, it is perfectly obvious, that in this, as in every other Country of comparatively recent settlement, there are numerous difficulties to be overcome, with regard to the clearing and first cultivation of the soil, and which of necessity occasion much discouragement and delay. Next, with reference to the farming population, generally, the greater portion of it has never been composed of persons who, in immigrating to the Province, were in either indigent or limited circumstances; and moreover, the most of them were extremely deficient in agricultural skill. As to those who had been longer in the Country, and inhabited the parts of it which were much longer and further improved, as in this highly favored and valuable county among others, it might even they also, generally, were deficient in that skill, and, as might be supposed, but slowly acquired it, not having immediately before them the advantage which the farmers in the parent countries possess, of stimulating examples, and instances of scientific skill, and extensive improvements. Even in those Countries, indeed, it is only within about the last forty years that those astonishing and most valuable improvements have been made in the operations and implements of husbandry, which have carried both the science and the practice to nearly a state of perfection. This further cause of the slow progress of our agricultural interests has constantly existed, that very few persons having extensive pecuniary means have employed any considerable portion of them, or even of their influence, towards its advancement. The extreme prevalence of commercial pursuits has been another and one of the principal causes which operated to retard that important interest. Those pursuits for a very considerable time held forth such numerous advantages, and such prospects of the speedy acquisition of gain, that numbers of persons, even from the agricultural class, ardently engaged in them, and a still greater number from the most laborious orders were drawn to assist in conducting them. In some parts of the Province, also, the time and attention which have so generally been employed in carrying on the trade in Plaister of Paris, and Amber, have occasioned injurious effects on our husbandry. Again, our farmers, in many parts of the Country, have ever labored under serious disadvantages, with regard to the convenient and profitable sale of their produce; and from the defective state of the roads, or other difficult and hazardous circumstances, have experienced much inconvenience and loss, in the conveyance of their produce to market. There were, also, formerly, in our farming population, as in other classes, several particulars in their ha-

bits, extremely adverse to agricultural advancement, but which, happily, do not now quite so generally prevail. During the seasons of commercial prosperity, many acquired considerable wealth, and in the ardor of enjoying it, indulged in various modes and scenes of dissipation and luxury. The influence of this evil example spread and prevailed among our farming class, as it did in all others; and a larger portion of the profits of their industry was annually exhausted, in ministering to extravagance in apparel and equipage, and in the luxury and profusion of festive entertainments. That season of prosperity came to an end, and the consequences which followed from those expensive and improvident habits, were too fully disclosed, and are too universally known, to require any particular description. Another indulgence which almost universally prevailed, and still in most places extensively remains, was even still more injurious to our agricultural interest. It will readily be supposed that I allude to the free and excessive use of intoxicating liquors. Independent of the time exhausted in this pernicious habit, the expense attending it consumed a large portion of the profits of the Husbandman. There were not a few, who, even during the most precious seasons of the year, while they should have been employed in depositing the seed in the earth, or in securing the harvest, or in other labors of the field, were found engaged in that vicious and injurious indulgence. The farming population are, for a variety of reasons, the most truly important, and valuable description of persons, any Country contains. On their general habits and character, its welfare must ever be chiefly dependent. Temperance, industry and economy, among them, will obviate or overcome nearly every natural or political disadvantage. Even under the most arbitrary systems of government, and with the greatest hardships and difficulties to encounter, possessing those estimable qualities, they will render the Country they inhabit in some degree prosperous and powerful. On the other hand, if the opposite characteristics belong to them, the wisest Institutions and Laws will be quite unavailing towards producing those beneficial results, and all the bounties of nature such a people possess, will be lavished in vain.

In further observing on the tardy progress of our agricultural improvement, it may be remarked, that formerly, and during a considerable period, an erroneous and discouraging impression prevailed with many, that the climate of this Province, and its soil, in general, were quite unfavourable to that object. As to our climate, it must surely be conceded, that it is rather an uncommonly healthy one; and although the season of vegetation is not in general of long continuance, it is superior, in several respects, to that of a number of Countries which, through skill and industry, have carried agricultural pursuits to the greatest perfection. The scantiness of our crops, which at times has occurred, and indeed some of the general failures of them, which in a few instances have happened, may very justly be attributed as much if not more to the neglect of making a proper use of the earliest part of the season of vegetation, as to the shortness of its duration, or any other cause. In many parts of the Province the attention of the greater number of farmers has been so extensively directed to other pursuits, during almost every part of the year, that they have neglected, at the proper period, to place their ground in that state of preparation which would enable them to put in their seeds as early as skill and experience in their occupation require. They have therefore been obliged to make a hurried and defective preparation of the soil, at a time when the seed should have been in its bosom, or rising above it. The consequence has frequently been, that a frost in the autumn has rendered all their labors unavailing; by destroying in

n few hours, all those unripened products, which, if their seeds had been sown sufficiently early, would have been secured from its power. Many others, through extreme unskilfulness, have suffered their doubts and fears about sowing their seeds at too early a period, to occasion the same delay and fatal result. In proof of what is here advanced, may be mentioned, what is well known to have been often the case, that of Farmers residing in the same settlement or neighbourhood, those who being skilled in their occupation, and attentive in its practice, deposited their seeds as early as the season would at all permit, have obtained a plentiful harvest; while those who deferred putting them in until later periods, have had to bewail the reverse.

With regard to the soil, it will in general be found, by the skilful and industrious Farmer, of such descriptions as cannot afford him any reasonable cause for complaint. Much was most ably and justly pronounced in its favor several years ago, by a talented writer, who went through such a course of scientific and instructive information on agricultural subjects, and set forth such powerful arguments to induce a closer attention to them here as awakened and sustained for a time, almost universal zeal and activity in their favor, and led to extensively beneficial results, which, in some degree, remain to the present day. Independent of any chemical explanation of the nature and properties of those ingredients which serve to bring to maturity the several products of the earth, and without attempting to show to what extent they exist in the soil in different parts of the Province, it may safely be affirmed, from facts and experience, which enable the most illiterate to judge, that, in several places, for the raising of grain of various descriptions and those vegetables which are most generally useful, it is fully equal to that of most Countries in the world. It has been declared by many, whose veracity there is no reason to doubt, and who were well acquainted with the soil in most parts of the Continent of North America, that there is scarcely a State or Colony throughout it, in which, within the same extent of territory, a greater portion of land of a fertile description is contained, than is to be found in this Province. With reference, especially, to the extensive tracts lying together in this valuable Country, and also in some others, it has often been proved, that their powers of production are as great, and that they can be made to bring to perfection as numerous a variety of the most useful products, as the most fertile soil in some of those Countries which have greatly excelled in agricultural pursuits. In one of our eastern counties, where the attention of the people has constantly, in a great degree, been led off to other occupations, considerable quantities of native wheat and flour were many years ago frequently exported. In some parts of that County, the returns from grain of various descriptions, and especially from wheat, have, even under a moderately skilful cultivation, been surprisingly great. The same has been the case in many other parts of the Province. Even the soil about the capital, which it is notorious is naturally as sterile and unproductive as almost any we have, has, under proper cultivation, been made to yield in what may very fairly be termed uncommon abundance. In further proof of the capabilities of this Country towards securing agricultural success, may be mentioned, what to many is known to be the case, that the increased attention and activity, which during some recent years, the farmers in this and some other sections of the Province have bestowed on their occupation, have led to a very general relief from incumbrances on their lands, and other pecuniary embarrassments, as well as to almost universal abundance of all the necessaries of life; and in not a few instances even to comparative wealth. Upon the whole, it is by no means too much to

affirm, that there is scarcely one of the counties, in which, in all ordinary seasons, there might not be produced a sufficiency of bread and of other requisite food, for the consumption of its Inhabitants, while in some of them, a superabundance could certainly be furnished. It is true there are some who deny these positions, but many of them being little, if at all, acquainted with the nature of the soil, or the general characteristics of the Country, as to agricultural purposes, are blameable for their hasty conclusions; while others are of that indolent and weak disposition, which become alarmed and discouraged when obstacles arise; and which sink under those difficulties which present themselves in every Country, in the first stages of its settlement and improvement. The misfortune, with us, has ever been, that in general the vegetable powers of our soil have not been sufficiently understood, or called into exercise. The indolent or unskilful husbandman, when he has failed of receiving the fruits of his fields as abundantly as he hoped will ever be more ready to charge it to their unprolific nature, or to any other cause, than to suspect any deficiency or fault in himself.

Having thus far mentioned impediments, and endeavoured to refute objections in the way of our agricultural advancement, it will be well to propose and explain some of the principal means which may most effectually be employed, to invigorate and improve that most important source of the real wealth and welfare of the Province. It may, then, in the first place be observed, that it is highly desirable, that persons, having extensive or liberal pecuniary means, should employ some reasonable and adequate portion of them, in introducing and preserving in the Country, the best and most suitable seeds and descriptions of cattle, and in making judicious experiments in agricultural science, as well as general improvements in its varied operations. It would, doubtless, in the permanent results, be equally, if not still more advantageous, if many of those persons in the upper and middle classes of society, who now indulge the weak ambition of establishing their Sons in some of the learned professions, or other employments, which exempt them from mere manual labor, but for which employments they are not naturally qualified, and therefore never succeed, but often become a burthen to their parents, or society, would, in preference secure their regular instruction in the various branches of scientific and practical husbandry, and their suitable establishments for obtaining a livelihood in that honorable and independent occupation. It is ground for satisfaction and encouragement, that some disposition of this kind is beginning to appear, and that some few instances of such a judicious and liberal minded destination of our youth, are now being exemplified. It is much to be hoped that similar examples of freedom from hurtful prejudice and puerile ambition, will be speedily and extensively multiplied. When such shall happily be the case, we may confidently anticipate through their stimulating operation, the early arrival of that period in our history, when our agricultural interest will take the prominent and respectable place in public opinion, and secure the share of general influence to which it is so justly entitled. Another, and indeed one of the principal means towards the desired improvement and success, our husbandmen themselves, may universally, afford increased and judicious attention and assiduity to the several branches and operations of their calling. The calling is one which demands undivided and persevering application; and which, especially in such a new Country as this, affords ample employment for every season of the year. At the opening of the spring, (which in this Province is of such short duration,) the more active engagements of the farmer commence

and throughout this season, his utmost attention and industry should be kept constantly in exercise. From that period, till the whole of those products of his fields, with which he has been blessed by the kindness of Providence, has been properly secured, the most active and unremitting employment is called for his time and attention. The period which immediately follows, also presents its appropriate and even not less important occupations. It is then that he should again review his fields, and exercise his skill in assigning to each, for the ensuing season, that particular mode of culture which may be best adapted to its state; and employ his industry in ploughing them, or doing whatever else is requisite to be done, to prepare them for undergoing such future cultivation. While pursuing such a diligent and laudable course, he will still be securing information in his art, in doing which, and in the execution of the experiments he will be led to make for enlarging that information, he will not fail to experience more sincere and extensive satisfaction than the idle and dissolute ever can know.

Agriculture, in its most extensive character, is a deep and an intricate science. In order therefore to the utmost improvement and success in its practical labors, it is essential, that at least a suitable and correct knowledge be obtained of those principles and means, on the application of which that success so greatly depends. It will therefore be both prudent and profitable for our farmers, universally, to avail themselves as fully as possible, of the advantages for obtaining information in their calling, at present so extensively afforded, by the publication of treatises and writings of various descriptions, in which those principles and means are so familiarly set forth and explained. In this day, in which literary instruction in all its various branches and departments is so very generally diffused; and in which such numerous facilities are afforded for the acquisition of knowledge of every kind, it will be owing to their neglect, if they fail to secure for themselves and their children all such requisite and useful information.

The continuance and due support of the Agricultural Societies by Legislative and other assistance and encouragement, is also highly requisite, for extending and securing their salutary operations and influence. Frequent and free communications between these Societies, will also be attended with many and important advantages, by imparting the scientific knowledge and experimental improvement which each has been able to secure.

As further and most materially requisite to prosperity and independence, our Farming Population, both male and female, as well as other classes in general, must be content to confine themselves to a more limited indulgence in those foreign articles of apparel and for the table, which are now in such constant and extensive use, and through which so very large a portion of the profits of their labors are consumed. They must learn to be satisfied, on all ordinary occasions, with those articles and productions afforded from their native flocks and fields, and which are both truly suitable and cheap. They must doubtless be convinced, that simplicity as well as temperance in food are essential to health, while sensual or luxurious indulgence is the very lowest of the animal gratifications; and surely they need not be informed, that neither true respectability or worth depend on the cost or fashion of apparel; or to be reminded, that the vanities and fripperies of dress are the sure indications of a weak or perverted mind.

Above all, our husbandmen should constantly abstain from the use of intoxicating liquors, by indulging in which, the pecuniary means, as well as the bodily and mental energies and activity are so surely reduced, and in very many instances have been irretrievably impaired, or wholly destroyed.

It is now time to mention some of the more active and practical means through which agricultural improvement may be attained. Here, I must again candidly acknowledge my inability to afford much, if any important information or advice. Some suggestions, or hints may, however, be profitably advanced. In introducing them, it may be well to remark, that our Farmers in general, have at the outset, cleared away the wood, and attempted to cultivate larger portions of their land than they had the means of bringing under proper and valuable improvement. Herein they have shown a deficiency, both of agricultural skill, and of knowledge of their interest. By a removal of the wood, and a partial cultivation, the soil is in many instances injured, by being exposed to influences which exhaust or impair those qualities and substances it contains, through which vegetation is produced. Moreover, if by skilful cultivation, the half or other proportion of any given extent of land, would produce as much as the whole would do, under a different course, and which would always be the case, it must be perfectly evident, that a very great saving would be effected as to time and labor, and in many other important particulars.

With regard to the timely and proper preparation of the soil for the reception of the seed, it may be remarked, that the most approved systems of husbandry recommended, that wherever the soil will admit of it, the first ploughing should be done in the autumn. By this, there is not only a gain as to time, but by the action of the frost during the winter, the soil is rendered more mellow and fit for the seed, and also the roots of weeds and useless vegetation become generally decomposed, and contribute to enrich the soil. As a further preparation of the ground, where it is of a wet or swampy nature, the process of draining is requisite; and this also should be performed early in the autumn.

With respect to tillage generally, it may here be remarked as a well known fact, that throughout the Province, there has prevailed the very injurious practice of successive and exhausting cropping. A great number of our Farmers seem not to be aware, that, like the animal creation, the soil by its constitution requires a season of rest. In addition to the other wise and excellent purposes expressed or implied, the necessity for such rest appears to be indicated by the Divine appointment, that the land allowed to the chosen people should remain every seventh year without cultivation. When such scourging and exhausting tillage has been practised, all persons of skill know assuredly, that some rest or a fallow should immediately succeed. During this period for renovation, repeated ploughing, harrowing, and other operations should be performed, for the purpose of pulverising the soil, destroying noxious weeds, and removing the germs of all injurious vegetation. The description of crop which should be taken immediately after, must, of course, greatly depend on the nature and qualities of the soil. And here it may be remarked, that in all cases, a suitable adaptation of seed, of tillage, or other use of land, to its natural properties and state of improvement, should be invariably observed; a general and important truth, which it is apprehended, our Farmers generally have not sufficiently regarded.

With reference to that most essential mode of recruiting and sustaining the soil by manures, it is highly important, that more skilful and extended labor than has hitherto been generally bestowed, should for the future be employed towards their formation, and for preserving their enriching qualities until the season for applying them. Again, in order to successful tillage, and for duly preserving the powers of vegetation, it is also essentially requisite, that a rotation of crops should be carefully observed, and skilfully adapted to the nature and properties of the land. This, also, is a

subject on which many Farmers in this Province are not sufficiently, if at all, informed, and which in many other cases, through lack of persevering attention and industry, is not consistently carried out into practical results.

The qualities of seeds, is also a matter of primary importance. Every person, having the least portion of agricultural knowledge, must be fully aware, that in order to obtaining an abundant and profitable crop of any description, it is indispensably requisite that the seed should at least be of a sound and generative quality. This is a part of our subject to which, in very many instances, too little attention and care have been given. Our Farmers, generally, have not been as assiduous and careful as they should have been, in changing their seeds, and using means for their improvement and best preservation; or in endeavouring to obtain and continue those of the most approved and suitable descriptions. Similar observations will apply respecting the breeds and the rearing of cattle. The last mentioned particular, that of feeding and rearing cattle, is of very high concern, and it is well known has been greatly disregarded by Farmers in general throughout the Province. They seem to have thought, that it was quite sufficient if their young animals, which were not hitherto lately profitable, were fed and kept through the cold and barren seasons of the year, in any such manner as would barely preserve them in life. In this, such persons are in reality as inattentive to their interest as to the claims of mercy. No one expects or supposes that an individual, who, through childhood and youth, has not received sufficient nourishing food, and has been greatly exposed to the severities of the weather, will ever become a strong or healthy person. The like is true in the case of the inferior animals; especially those which are immediately under the care of man. If our Farmers, therefore, would wish to have their cattle healthy and strong for labor, or good for food or other service, they must commence and practise a reform in the particulars mentioned. The best breeds of cattle in the world would speedily degenerate under the severe and improvident treatment which has just been described. With reference to a general improvement in the breed of the several descriptions of cattle, and to procuring the best of such seeds as are suitable and required, our Agricultural Societies will doubtless consider it an important part of their duty, to adopt early and energetic measures for effecting those desirable purposes.

In order, however, most effectually to promote our agricultural and general welfare, increased attention and labor must be afforded for raising the several descriptions of grain, so as at least to supply all our Farming Population with a sufficiency of bread. As a body, it is rather to their discredit, that although possessing the means, they have never yet endeavoured to render themselves even thus far independent of foreign support. On the contrary, a very considerable portion of the profits of their labors, and of the real wealth of the Country, have been annually sunk, for procuring elsewhere that indispensable article. Surely, it never can be for the permanent interest of a Country, to remain in a state of dependence upon any foreign quarter for bread, if its population possess the means of procuring it among themselves. Under the local and relative circumstances of some Countries, it may, it is true, be good policy to employ nearly the whole of their resources and labor in those manufactures or commercial pursuits which will contribute the most to their profit; and to depend upon other quarters for some articles they need. This, however, can never apply with respect to bread; nor indeed to the other chief necessities of life.

In drawing to a close, the following general remarks may safely

be added. As to all those Farmers, whose lands are still under Mortgage, or whose property of every description, is now lying at the mercy of their creditors, in no way but through persevering attention and diligence, with prudence and economy, can they rationally expect to remove that obstruction to the free exercise of their civil rights, and to rise with their families to independence and comfort. Finally, it is presumed, that on impartial and extended consideration, all will admit, that chiefly with our agricultural class the ability rests, of giving vigour to all the sources of wealth we possess, and of exalting the Province to a state of high and enduring prosperity.

TO THE EDITOR OF THE COLONIAL FARMER.

Sir,—A careful perusal of *The Colonial Farmer* cannot fail to impart much valuable agricultural information. It is indeed worthy a place in every Farmer's dwelling throughout the country. And I am fully convinced of the fact, that no *St.* that an Agriculturist spends can be better invested than that which he lays out in the purchase of the Farmer.

Having read various articles in your columns on the different Manures used, and those that might be advantageously used I am led to enquire through the medium of your periodical, whether any, and what benefit would result from the use of coal ashes as a manure?

Until of late but little coal has been used in this quarter; as it is, however, coming into more general use and a great quantity of ashes arising from it, in case the ashes could be beneficially applied to the soil they would be an object worthy attention. Should you think the above enquiry worthy a passing remark you will confer a favour on,
Your's, &c.

A SUBSCRIBER.

Wallace, December, 1841.

P. S.—If useful, is an exposure to the weather before using injurious.

COAL ASHES.—What generally goes by this name is a mixture of ashes and half-burnt cinders, the ashes being much the smallest proportion. It is of some value as a manure on all soils where it has never been used, but if applied to the same ground for a long time, it at length becomes useless, and finally hurtful. In the neighbourhood of Ghent it is said always to have a bad effect, and for a long time it was accounted worse than useless near London but now for a considerable time it has been found useful. The cinders are separated by sifting, and the ashes kept where they are not exposed to wet. They are sold to the farmers at five shillings per load (of thirty bushels) and taken to the distance of, at least, fifteen miles from the city, where four loads are accounted sufficient for topdressing an acre of grass, in the spring. Coal ashes are most useful upon drained swamps, and cold moist ground. There is some coal that contains a great quantity of pyrites, (a substance appearing like brass) of which there was so much in the Government yard the past season, that the puddles formed near it in rainy weather were always a strong ley of copperas.—The ashes of the coal would generally do harm upon dry land, as the greater part of the soil of the Province already contains too much copperas.

WOOL ASHES make a very good and durable manure. It is of most use on moist land that has often been manured with stable dung. When applied as a top dressing to grass, about one third the quantity that would be required of stable dung, should be used. It should not be again spread upon the same land, till after it has had a dressing of other manure. If frequently applied to the same ground, it finally becomes useless to some soils; but I have seen, on a level plain, a field of rich brown loam, separated only by soil fences from fields of light, pale sand, and was informed that this remarkable difference of soil was caused by the ashes spread on the, now, loamy field by a soap-boiler, who had been dead for forty years.

Leached ashes are not equal to those which have not had any of their salt extracted, but they still make a good manure, and generally hold a large quantity of Sulphate of Potash, as this salt is not easily dissolved.

The effect of wood ashes as a manure will be considerably increased by sowing salt with them, at the rate of two bushels to the acre, upon all land that is fifteen miles or more from the sea. The leached ashes that have a considerable mixture of lime, are best for heavy, moist land. There are some women who make soap without lime; their ashes should not be spread upon wet clay, for although it will be useful for a year or two, it will finally make the land more damp and cold than it was before its application. The ashes of beech, which grows upon slaty soils, contains a large quantity of a salt that is worse than useless in making soap; it would save the farmer's wife much trouble, if she would separate this salt from her ley. There are two different methods of getting rid of this mischievous salt. If she has abundance of ashes, let the first ley only be used, and do not run water through the leach as long as ley of any strength can be procured. The Potash dissolves readily in a small quantity of water. The useless salt (Sulphate of Potash, will not dissolve in less than sixteen times its weight of cold water. For this reason—the first ley will always hold a greater proportion of Potash, and a lesser of the Sulphate, than the last; but if all the strength is extracted from the ashes, the whole of the ley should then be boiled as long as it forms a sand-like salt in the bottom of the boiler. This salt should be frequently taken out with a skimmer; and when it is perceived that it has nearly ceased forming, the ley, which will then be reduced to a small quantity, will be fit for making soap. The salt should be hastily washed with cold water, (which may be mixed with the ley) then dissolved in clean water, strained, and allowed to stand till the earthy part has subsided, when it may again be boiled to a salt. This is less nauseous than the Epsom, or common purging salt, and has twice its strength, a half ounce being equal to an ounce of the common purging salts.

The great quantity of Sulphate of Potash in our wood is probably to be ascribed to the abundance of vitriol in the greater part of our soil. It is furnished by the minerals contained in slate, and in the hard fine grained stone that forms alternate layers with sandstone, in considerable quantities. A smaller proportion owes its origin to the blue whinstone. And a vitriolic soil is often found resting on granite, but the vitriol is probably derived from contiguous masses of rocks of other kinds,—for pyrites, it is believed, cannot be found in granite in this Province.

PROBABILITY OF THE PROGRESS OF SCIENTIFIC AGRICULTURE.

Many important and useful changes in the circumstances of nations have been effected in a way wholly unexpected, and without the agency of those who derived great advantages from them.—When the Saracens, rushing on like a flood, appeared about to overwhelm all Europe, and destroy the very name of Christian, and were finally repelled beyond the Pyrenees only by battles, in which we may almost say that nations fell, there seemed great reason to fear that they might again break out with irresistible force, but no such thing happened. On the contrary, during the time they held possession of Spain, this people, who were possessed of most of the scientific knowledge then upon earth, served to introduce considerable useful information among the demi-savage inhabitants of Europe, still in some measure recorded in the number of Arabic terms, used in Chymistry, Astronomy and Medicines.

At a later period, when the Turks, under Mahomet the Second, by taking Constantinople, put an end to the worn out Eastern Empire, the people of Europe saw only the danger to which they were exposed by the neighborhood of these ferocious enthusiasts. But what no one foresaw, happened. The Emigrant Greek nobles, who escaped with life only, attempted to support themselves by teaching Greek and Latin to nations, who, in general, could neither read nor write their own language. Contrary to all reasonable expectation, they succeeded. The newly invented art of printing reduced the price of books so low that they were accessible to all. A host of skillful Grammarians sprung up, who corrected and published the ancient manuscripts; and the knowledge which, for ages, had been concealed in dusty parchments, was spread over Europe, which, from that time to this, retains as much power as was ever possessed by the Roman Empire, being always able, by uniting themselves, to crush any other nation; and, by their superior knowledge, drawing all the superfluous wealth of the world to themselves.

During a long period every proprietor of land was a kind of independent chief. If disputes happened among them, they armed their servants on both sides, and supported their rights, as they called them, more frequently with spears and swords, than with legal arguments. These perpetual internal wars prevented, in a great measure, the cultivation of the land; consequently, the population of Europe was far inferior to what it is at present. When nations had acquired sufficient knowledge to discover that it was for their interest to give the general Government sufficient power to put a check to these internal wars, the population increased, and for a time, without any inconvenience, as the land, no longer ravaged by fire and sword, became more productive. After a time, however, numbers in England began to fear that famine would be induced by an abundant population. Not far from this time America had been discovered, but few were desirous of settling in the land of savages. At length a zealous religious party, who were threatened with fines and imprisonment to compel them to adopt practices which they accounted unchristian, lead the way to this dreaded region. Persecution had raised their zeal to enthusiasm. They were ready to meet every danger and privation for the sake of enjoying their religion undisturbed; and they did meet difficulties which their highly excited feelings, and firm belief that they were under the peculiar care of Divine Providence, soon enabled them to overcome. They were then as ignorant that they were laying the foundation of a mighty nation, as was Romulus, when he formed his slight intrenchment to cover his small band of freebooters. But now that the time has gone by, we can see that the old Puritans were like a set of men created for the occasion, and excellently qualified for the work they performed. Since that period, notwithstanding immense emigrations to America, distress has been produced by the superabundant population. The Potatoe was long since introduced into Europe from America, and necessity had taught the ever-heavy-burdened Irish its value; but it was not generally used in other parts of Europe, up to the time of the French Revolution, when patriotism in France, and the ravages of war in other countries, extended its culture through a great part of Europe in a short time. When, after the return of peace, the population increased in that rapid manner which it usually does after destructive wars, or sweeping pestilence, it was discovered that the potatoe had enabled them to support one third more inhabitants from the produce of the soil than could have been done when grain was the principal article of food. The wholesome quality of this root has served further to increase the population;

and there have not been wanting short-sighted men in Britain who have seriously proposed to enact laws to prevent a large proportion of the laboring class from marrying. Considerable distress is frequently felt in Europe by laborers who own nothing, and cannot find employment, by which they can earn any thing. But it may be considered that extraordinary pressure is necessary to make the greater part of mankind quit their homes, though it should be to remove to a better place. The idea of "home" is associated in our minds with that of our childish pleasures—of that happy period, "gone to return no more," when our enjoyments were not alloyed by the reflection that they would soon be at an end. We have seen Highlanders in this country mourning that they had been driven from their homes, although that home was a place where they were obliged to pay rent for a territory not better than our burnt barrens; and we have seen them after the lapse of years rejoicing that they had settled here, yet still remembering their "home." Countless millions of acres in America and Austral Asia are still unsettled, and the distress of Europe will serve to people them; but the education of most of the laborers of Europe has considerably disqualified them for settling in a forest. The division of labour has reduced them to something like inanimate machines. Having but one thing to do, they have not been accustomed to think on other subjects. The American, brought up in a new country, is obliged to do many things; he learns to think, and when an unexpected difficulty occurs, he believes that he can get over it by exerting his mental powers, and for this reason he does master it. He is the proper person to settle in the woods.—The farmer from Europe is better qualified to renovate the exhausted farm which the American has left. During the long dark night that followed the period when the western Empire was overthrown, and Europe generally subjugated by our savage Gothic ancestors, the great skill in Agriculture, which was possessed by Rome when mistress of the world, was nearly lost. In a part of Lombardy, (the Valley of the Po,) and in Flanders alone, the traces of ancient skill were preserved; but that high opinion of their own knowledge which always attends extreme ignorance, prevented their neighbours from learning their mode of cultivating their land. Flemish skill, however, at last reached, and has pervaded every part of the British Islands: aided by talent and wealth, it is spreading over all the better part of Europe. It has crossed the Atlantic, and is progressing in the neighbouring States. Experience has demonstrated that the produce of most of the land now under cultivation can, by better management, be trebled; while, at the same time, the health of the inhabitants of the towns would be greatly improved by removing to the fields, and applying to their proper use as manures all accumulations of filth which now poison the air, but which are capable of being changed, by the art of the Agriculturist, into wholesome food or delicious fruit. Is it possible for any thinking man to attend to the facts, over which we have cast a hasty glance, without being convinced that we have a Father, who, though unseen, takes care of us,—who relieves nations from distress by means which their own wisdom would never have devised, often turning to their advantage those events from which they feared the greatest evils? Too great a proportion of the human race appear to be disposed to assemble together in Cities, from the various motives of ambition, the hopes of sudden wealth, or idleness and the love of dissipation: yet the experience of all times proves that life is shorter in Cities than it is in the Country.* But were it not that this disposition

* Mr. Farr has compared the mortality of about seven millions of persons, one-half of whom are located in Towns, the

to assemble in Cities receives periodical checks from the destructive pestilential diseases by which they are occasionally swept. The neglect of Agriculture from this habit would often produce extreme distress. And when these dangerous epidemics enter the Cities, can it be believed that it is by chance that the scourge invariably falls most heavily upon the situations where there are collections of those substances which make the most powerful manures? substances which we find disgusting to our senses, but which we can transform into flowering clover, and waving fields of grain. Is it necessary to speak plainer than these facts do, to reason, thinking beings? Great distress is now felt by multitudes in our mother country,—they cannot obtain employment by which they can procure the necessaries of life. It is therefore certain, that too small a part of the productive labor is applied to Agriculture,—too much to manufactures and works of luxury. Wealth is not a stock of the necessaries of life.—It is the power of governing labor. All the necessaries of life are produced by the laboring class; but they who own every thing have obliged too great a portion of those who earn every thing, to expend their labor either in furnishing articles of luxury to the rich, or in manufacturing more goods than they can dispose of: they therefore find it necessary to dismiss many labourers from their employment. There is a remedy for the distress, consequent on this state of things, which will succeed, and probably it is the only one. Let those who have the power of commanding labour, turn that of some millions to Agriculture. It is now well known that the soil of Britain is capable, if managed with the skill that many possess, of producing more food than its present inhabitants need; but if they cannot alter the laws which there throw such enormous burdens upon Agriculture, that not much poor land can be fertilized, they can remove the suffering party to lands free from such burdens. The Cholera and Typhus Fever have pointed out the places where they may find manure, if they wish to improve their own soil. Distress has made the labourers willing to leave their homes, if they wish to remove them to a country where they can support themselves. They are, in general, too poor to bear the expense of removing; but they, whose wealth was amassed by the labor of those who are now starving, are able to assist them. The generous will be willing, and the selfish may be driven to assist them by fear of what may happen when the people are rendered desperate by famine. It is not probable that a nation which has paid twenty millions to liberate negroes, unjustly enslaved by their ancestors, will see their own countrymen starve when they are able to prevent it. A hundred millions were fruitlessly expended in a war to compel the American Colonies to pay some light taxes: a small part of this sum would serve to remove a multitude who are now suffering to situations where they could supply themselves with food by cultivating the soil; and certainly it would be a far better mode of expending their surplus wealth than employing it in destructive war.

Manufactures have raised England to the first place among nations, and of late other nations are attempting to rival her; but there is not an infinite demand for Manufactures, and the business is overdone. It is time to turn a great portion of labour from

other half in Counties. The concentration of the population in Cities doubles the deaths from the epidemic diseases, and those of the nervous system. In Counties, as compared with Cities, the deaths by convulsion are as 1 to 3 nearly; so also deaths by water on the brain; acute diseases of the lungs are in Counties as compared to Cities as 1 to 2½ nearly. The deaths from consumption are increased 39 per cent.—those from childbirth 71 per cent.—those from Typhus 221 per cent. in cities as compared with counties.—Mr. Farr's letter to the Registrar General.

manufactures to Agriculture. When the Manufacturer cannot sell his goods, he dismisses his workmen, who, having nothing to do, are nothing to eat; but if too many are employed in Agriculture, food will be so abundant that famine cannot exist. The Farmer may grumble, that his produce sells so low that he cannot purchase luxuries, but he will have in his hands the necessaries of life. Even where extravagant rents are demanded, food must, in this case, be in the reach of all; for, happily, provisions are perishable, and avarice itself will, for this reason, sell them, because they cannot long be kept out of the market without certain loss.

We now see in Britain, France and Germany, and in the American States, a great and constantly increasing attention paid to the science of Agriculture. Many men of great abilities are now applying their talents to this object, and it is a path to honor in which they will never be checked by the disapprobation of their own consciences. The Press, that Lever which moves the Earth, lending its powerful aid. That the advancement of this art will greatly increase the supplies of the necessaries of life we know; and that it is capable of supplying those with food and employment who now lack both the one and the other we know; and is it superstition to believe that the hand of the Being whose "tender mercies are over all his works," who "gives to all their food in due season" is here; and that this work will progress and prosper. The land in America has been cultivated in such a way in general that it has been constantly losing strength, and it now produces much less than it did when first cleared of wood, and much of it has become so poor, that a greater profit can be realized by cultivating a small part of the farm in the modern improved manner, than is actually obtained from the whole by the old exhausting practice. It is now necessary to collect and preserve all the manure that can be found,—to learn how to increase the supply by a mixture of soils,—by the use of lime, marl, clay, sand and gravel; and each of these substances will improve certain kinds of soil, and the Agriculturist should know when and where to apply them. He should know how to form, and preserve the best breeds of Stock, and should understand the most economical way of supporting them and never forgetting the ancient axiom "That every thing on earth is liable to degenerate," he should pay the same attention to improve and preserve the quality of the seeds he cultivates. The skill of the Mechanic and the Chemist is most usefully employed in assisting the Farmer. The Entomologist discovers the animalcules that blight his crops, and the Ornithologist teaches him what birds he ought to preserve for their protection.

There is no reason for believing that the soil of America is incapable of supporting as great a population as that of China or Japan if it were as well cultivated. We are here free from the burdens that weigh so heavily on many of the inhabitants of Europe, and ought to endeavour to keep pace with others in improving our lands, for we shall always find use for our provisions while the inhabitants of the other side of the Atlantic are in want.

BUCKWHEAT.

This grain is very useful to new settlers in the woods: it succeeds well where it is sufficiently sheltered from wind; but in very bleak, open situations, it is exposed to be broken down by the storms. It should never be sowed before the twentieth of June, and, in situations not exposed to early frosts, may be sowed as late as the twentieth of July. That which is sowed latest in the season always gives the heaviest crop, provided it escapes frost. There is such a quantity of sweet scented honey in the flowers of the Buckwheat, that the multitude of bees which it attracts, when sowed early, destroy the greater part of the blossoms; but near the

end of August, about the time the swallows leave us, the bees are mostly gone, and very few flowers left open at that time mischance. This late season of sowing is an advantage to the new beginner, because it never interferes with getting in his potatoes, wheat, and oats. Another advantage attending the culture of Buckwheat is, that the first crop of hay on new land is always better when sowed with Buckwheat than that which was sowed with wheat or oats. Buckwheat should be cut when there are but few grains that are still unripe, and have not changed their colour.—It will generally be necessary to let it lay upon the ground for at least a fortnight, as it has a succulent stem, which, like that of the onion, retains life for a long time. When the small branches upon which the grain grows have become dry, it is fit for threshing, although, at the same time, you can wring water from the butts of the straw.—Unless it grows very near the barn, it must be threshed upon a temporary floor made in the field,—where the soil is loamy, and free from gravel, this is often made by levelling a piece of ground, and then heating and rolling it; but on gravelly soils, either an old sail is spread on the floor, or it is covered with boards lapped on each other, and slightly nailed at the edges. When the dew is off, the Buckwheat must be turned, after which it will soon be fit to thresh, should the day be bright. Two hands, with a long, light handbarrow, are employed in carrying it to the floor, where it is threshed by others. No loitering can be allowed, for should the straw be permitted to remain for fifteen minutes in a heap, the dry tops being placed in contact with the juicy butts, would grow so damp that it could not be threshed.—It is beaten off from the dry tops very easily, and, for this reason, must not be allowed to remain in the field till the butts of the straw are dry, for, by that time, most of the grain would have fallen off. The best threshing days are those usually called weather-breeders, (calm, bright days, preceding a rain;) no attention need be paid to this circumstance.—Thresh, if you cannot finish, till the approach of evening makes the straw damp; then make up your grain, mixed with the chaff, into a round heap, and it will remain dry through the heaviest rain, unless your floor should be made in a hollow where a pond can be made by the rain. Water cannot enter the heap to the depth of a sixteenth of an inch. You may winnow as soon as the wet has dried off from the green grass. Buckwheat chaff is often used to cover fox traps in winter, for, should there come a rainy day, followed by severe frost, so very thin a crust will be formed on the chaff that the weight of a fox will break it. When the grain is winnowed, it is still unfit for grinding; the dry blossom sticks to the base of the grain, generally holding a quantity of sand collected during the time it was lying upon the ground in the rainy weather. After the grain has been housed about two months, two bushels should be put into a three bushel bag, and the children, taking their shoes off, should tread it for half an hour, when nearly, or quite a quart of the bushel, of dark dust may be sifted from it with a wire riddle that will retain the grain. This dust is formed by rubbing the dry blossom to pieces during the treading—there being always a proportion of earth mixed with it.

There are mills which have machinery that will quickly give Buckwheat the second cleaning, but most small country mills lack it. It should not be ground with sharp mill-stones, as they will cut up a part of the outer husk, which always, when well ground, separates into three pieces only. Buckwheat flour is best made into pancakes, to be eaten warm. Two pounds will make nearly the same quantity that can be made with three pounds of wheat. It is probable that the great quantity of water required to make Buckwheat into cakes is connected with the appetite for this grain that most people acquire by using it. There are few but will, at

first, prefer wheat to it; and but few, who, after using it for a considerable time, will not prefer it to wheat. It contains less solid matter in a given bulk, and therefore it is that we do not pall our appetites by eating too much. It was for a long time imported here in considerable quantities, selling usually for about four dollars a barrel; but the Act of the Imperial Parliament, which laid a duty of five shillings, sterling, upon wheat, beat it out of the market. It belongs to a very different family of plants from wheat and barley; but a course of Botanical Lectures does not, it should seem, form a part of the education of Revenue Officers; the unlucky word "wheat" was found in its name, and so we lost our Buckwheat pancakes. I have often wished that our forefathers had borrowed from the French their much more appropriate name of Black grain, (*Bled noir*,) for, in this case, giving a good name to an article, has done more harm than could have been effected by giving it a bad one.

Sixty-five years ago Buckwheat pancakes and tea almost invariably made the supper of the low Dutch Farmers near New York. The batter was mixed after dinner, with a little yeast, which soon produced fermentation. I still seem to see the woman dressed in linsey-woolsey of her own spinning, with a piece of fat pork on a long flesh fork rubbing over her hot griddle; then with the wooden bowl in one hand, and the ladle in the other, covering it with little cakes; and, after taking her knitting work, and knitting a round, turning them with a diminutive thin wooden shovel—knitting another round—taking them off, &c. When a sufficient quantity were baked, she removed them to another plate, spreading first butter and then honey over each, and few, I believe, of the hungry Dutchmen who came in from the cornfield, ever wished for any thing better.

Half a bushel of Buckwheat is enough to seed an acre of ordinary land.—On very rich soil a peck is sufficient.

APPLES—SHELTER.

There are many places in this Province where Apple Trees formerly succeeded well, but now for a considerable time have become nearly worthless. This failure in general is to be ascribed to the destruction of the adjoining forest wood. There is a very great difference in the summer's heat between fields of ten acres sheltered on every side by broad belts of forest wood, and land in similar situations perfectly open and unsheltered. It is at least equal to a degree of latitude. At the close of the American War the Blacks who were settled in Preston, generally upon land covered with tall hemlock, brought green peas, beans, and such articles to market ten days or a fortnight earlier than the Halifax gardeners. Their fields, then not exceeding two or three acres, were sheltered from all winds by the high woods which surrounded them—while the open land near the town was exposed to the chilly South-west sea breeze, which seldom fails to blow in the afterpart of every warm day. Now that the wood has mostly been destroyed, their crops are as late as those raised near the town. But while the summer is made colder by destroying the wood, the winter is warmer, and there is a shorter period in which the ground is covered with snow. Land in an elevated situation bears the same analogy to the low ground, that naked land does to that which is sheltered. Upon a high hill in the fall we may find the fruit of the Withrod and Huckleberry still green when in the land five hundred feet lower it had been all ripe for three weeks, a certain proof that there had been more summer heat in the low ground than on the hill, but whenever there is uncommonly severe cold in winter, the low sheltered valley will be found the coldest place, while the Thermome-

ter will be five or six degrees higher on the top of the high hill. Many must have observed that Clover and Timothy have stood in winter without injury in small fields surrounded with wood; seasons in which they were winter-killed upon unsheltered ground; they may also recollect that those small sheltered fields were covered with snow, while the bleak exposed ground was naked and bare.

Winds from the sea are unfavorable to the growth of all the plants we cultivate except Turnips, Cabbage, and Beets. Along the Southern coast of the Province a North East aspect is best for Fruit Trees and best for Potatoes, for in all those seasons in which the black blight kills the leaves of the Potatoe, it strikes first, and falls heaviest upon those which are most exposed to the South-west sea breeze, and fields sloping to the Northeast, and sheltered by woods on the South and West, have continued perfectly green, and ripened well, while all in the adjoining open ground were killed by the blight when the roots had not more than two thirds their growth.

In much the greater part of Nova Scotia Apple Trees will thrive and bear plentifully if well sheltered by forest wood, but if all the wood is destroyed they will thrive only where sheltered by lofty hills. A stoney and gravelly soil on broken hills at the lower part of a lofty hill which does not face the South, is the best situation for Fruit Trees. The late Governor Des Barres said to me one day—"I was, when young, brought up to the employment of cultivating the Apple Tree and the Vine, and I still remember what I learned. I would now undertake to supply Halifax with Apple from the face of the Hill on the west side of Bedford Basin. There cannot be a better soil or situation for the Apple, nor, if the climates were warmer, for the Vine. The hill faces from the sea—it is broken and unequal upon the face, the soil gravelly and stoney with many small brooks. I would clear in the glens and valleys small tracts for my orchards, never exceeding a quarter of an acre and leaving two or three firs in each clearing. I would not clear the land entirely from stones, but only remove so many that could be planted with potatoes, of which I would raise a crop, manuring them well, and the next year plant the Apple trees. I would still cultivate the ground with some hoed crop most of the time and if it should be found necessary to sow grass, would always break it up again the third year, taking care that the forest wood with which my orchards were surrounded should never be destroyed, and I am confident they would succeed." Many things which we cultivate require shelter from winds as much as the Fruit Tree. If there are now living in settlements that have five miles in length and half a mile in breadth entirely bare of wood, persons who remember when this land was first cleared, they will be able to recollect that their Springs were once a fortnight earlier, and their Summers warmer than they are at present.

In Europe belts of forest wood are now planted at a great expence to improve the climate and bring forward the grass in the Spring. Here we are too negligent of leaving clumps of wood for shelter, (we need not plant them) and in consequence the trailing Juniper and other useless plants root out the small grass which cannot stand the cold winds. None of our valuable forest trees thrive without shelter. When a grove of young hardwood of this kind springs up, it always has an edging of thickset evergreen trees on the open side or sides, whether it be cleared land, but barrens, lakes, or the sea. Many have an idea that the soft wood grows only on an inferior soil, but a little attention will convince any one that it grows where it is wanted to shelter the Hardwood and Hemlock, be the soil what it may. If the side of a hill facing a harbour is occupied by hardwood, it will have an edging of the water, of Fir or White Spruce—let a piece a quarter of a

square adjoining the water be cleared of wood, and within twelve years that part of the clearing which adjoined the hard wood will be found edged with Firs. Wherever land is cleared adjoining the sea the breadth of 100 yards of the Fir edging should be left undisturbed—Clover and Timothy need this shelter as much as did the hardwood which preceded them—and when a tract is left for fire woods, roads should be made into it, and all the wood which is wanted should be cut within the grove, but the edge, which will become a thick fence of firs, should never be cut away.

EXPERIMENTS.*

Choose in the garden a part overrun with Chickweed; divide it into three equal parts, spread a good dressing of manure upon one, and dig it, manure another and leave it undisturbed till spring; manure the remaining third part in the spring, and as soon as the ground is dry enough put it all in good tilth and sow it with beets in drills two feet apart.

When this last experiment was tried by the writer the manure that was dug into the ground in the fall appeared to be wholly lost, the part upon which the manure remained all winter on the surface produced a crop little inferior to that which was manured in the spring. In the experiment of planting potatoes without manure mentioned in page 14, No. 6.) the part not ploughed till planting time produced a third more than that which was ploughed in the fall. The soil was gravelly, with the upper layer loamy in consequence of long cultivation and manuring.

It will be found, it is believed, that working the ground late in the fall exposes it to have a considerable portion of its most fertile part carried by the rains below where the roots of the crop can reach it, but it is always useful to have a growth of green herbage in the ground when winter commences; vetches, winter rye, or even chickweed will preserve the fertility of the soil, and this last is not capable of doing much injury to crops of oats or potatoes. It is, notwithstanding, sometimes useful to sprinkle lime on the surface of a garden, and dig, and throw it in ridges in the fall to destroy grubs and wire worms, but remember it will want an extra portion of manure the next spring.

Grass land receives very little injury from fall ploughing, and ground designed for a crop of wheat *must* be ploughed in the fall loamy, but stubble ground in general is better left till Spring.

CALVING COWS.

Sometimes a Cow soon after she has calved is attacked with an inflammation of the womb and bearing, which soon proves fatal if not relieved; she appears to be in extreme pain, lying down and rising very often, and when up, she stands with her back arched upwards, straining violently. The external swelling sometimes becomes so large as to be mistaken for an inversion of the womb. The following treatment has proved successful in such cases. Give the Cow immediately two quarts of molasses slightly warmed; then prepare a fomentation by putting half a peck of hardwood shavings into two buckets of boiling water. Take two pieces of old carpet or rug, each about a yard square, and put them into the tub which contains the hot liquor. Take one of them out and spread it by holding it by two corners, and as soon as it is below scalding heat spread it over the hips and hinder part of the cow. When it cools below blood heat, return it to the tub, and use the other, till the whole fomentation becomes too cool, when, if the restlessness has not ceased, it must be heated again, and the fomentation continued till the cow becomes quiet, when she should be

well covered with cloths or straw, leaving the wet cloth next to the skin. Molasses has a very sudden effect upon some inflammatory complaints, as is well known to many persons who are in the habit of swallowing a gill at a draught to remove the pain of the piles, which it seldom fails to do in a short time. The potash of the ashes is necessary in the fomentation. The outer or scarf skin of animals is almost impenetrable to water and air, but the salts of the ashes soften this dry skin giving it a soapy feeling and making it so open that vapoury matter perspires freely through it. If a blow of the hammer should unluckily be given to the end of the finger it will generally cause great pain; but this pain will cease within two or three minutes after it is put into a mixture of hot hardwood ashes and water, in the proportion of half a pint of ashes to a pint of water.

WARTS UPON THE TEATS OF COWS.

It should always be remembered that this troublesome complaint is infectious; and that the warted cow should always be milked last, otherwise the hands of the milker will communicate the warts to the other Cows. If a single cow has a small number only, they may be cured by cutting them off with a very sharp penknife and then slightly touching the place with lunar caustic (nitrate of silver); but when a cow has a great number of these excrescences, it is better, if she is not an extraordinary milker, to fatten her, than to run the risk of communicating the warts to all the rest.

SCOURING IN CALVES.

When calves are deprived of their milk while very young and fed with a portion of some kind of meal, they are very liable to be attacked with the Flux or Scouring, and if this is checked by astringent medicines they grow poor and fall off in their growth. The best remedy is new milk, which quickly stops the scouring, and should be continued for some days after it has ceased. It may then be mixed with a portion of skimmed milk, to which, after a few days hay tea may be added, for calves will thrive upon hay tea when so young that any kind of meal will bring on scouring. After they are six weeks old they will generally live upon it without any milk. As much hay should be daily boiled for a calf as can be crowded into a pot that holds two buckets; it should be wholly upland grass and clover without weeds of any kind. After they are two months old they will generally bear meal without injury, and will also bear to have a portion of the broth of salt pork mixed with their drink. From the time that milk is taken from them a small quantity of salt should be put into their drink.

Many Cows are liable to have a swelling of the Udder when they calve; this is sometimes attended with inflammation, when it proves very troublesome. One of the best applications, and which should be used from the first appearance of swelling, is cream or fresh-churned butter fried till it ceases bubbling and is a little burnt. The same ointment is very useful for chopped or cracked teats.

SCRATCHES IN HORSES.

There are many young horses, between three and six years old, who will bear to work moderately, but cannot be made to carry much flesh. Should such a Horse, when the spring grass comes, get the scratches, do not be in haste to cure them. The horse will probably thrive better than ever he did, becoming more lively as he gains flesh, and the scabs will disappear without assistance. But should the scratches degenerate into the grease, that is to say, begin to run a pasty matter, give the horse every morning a teaspoonfull of Antimony, a teaspoonfull of finely powdered Gum Guaiacum, and a tablespoonfull of Flour of Sulphur. It may be

* The first part of this article appeared in the previous number.

first mixed with wet bran and then mixed with his feed of oats. After this has been given for ten days, the Verdigris ointment may be applied if needed, after washing the legs well with strong soap suds, but do not use any outward application till the medicine has been taken for ten days.

It is very customary to burn or scarify the Lampass. It is often much better to let it alone, as it frequently prevents worse complaints. It should never be meddled with if the horse has weak eyes, as burning the lampass in such cases, has often been quickly followed by blindness. If the swelling should continue long, it may generally be removed by giving a little saltpetre and sulphur.

The dangers from fire may be greatly diminished by the following simple mode of making wood less combustible.—Make a strong Allum-water, and in the cold season, when large fires are kept up, let the floor near to Stoves, and the boarding about the chimney, be wetted with it several times in the day for a week. When the wood is saturated with Allum, coals thrown upon it will not produce flame, and if a board thus prepared has a quantity of chips or shavings burnt upon it, the fire on the board disappears as soon as they are consumed. A solution of copperas has the same effect but it stains the wood.

SCRAPS.

Cheese shipped from New-York, recently, has been sold in the Liverpool market in large quantities: and about 1000 kegs of Lard has been exported to England within a few weeks.

A new article, under the name of Stearic Candles, is now manufactured in the United States. The oil is pressed from the tallow, and then the substantial matter is made into canoles. They are said to burn as beautifully as candles of sperm or wax.

It is said, that in many localities, a cheaper mode of breaking up rocks, may be used, instead of drilling them and blowing them with gunpowder; simply to build a fire with dry wood upon them, and when they are well heated, to throw water upon them.

An ingenious Mechanic in Massachusetts has invented a loom that will knit a perfect stocking or glove without a seam. It may be propelled by hand or foot power, or by water, and will cost about \$35 or \$40.

Molasses can be made from cornstalks by pressing out the juice and boiling it down.

Reading aloud in a full, but not too much elevated tone of voice, should constitute a daily exercise of the lungs.

We have received a Report of the York County (N. B.) Agricultural Society. It is written in a familiar style, and contains some useful hints. The Society consists of 184 members, including the Nova Scotia and New Brunswick Land Company. £205 0 7 has been expended during the past year; of this sum £50 has been paid as premiums. The Society is represented as in a flourishing condition, and as the means of doing much good. The want of information among Farmers, seems the greatest obstruction to a better system of Agriculture.

We beg to apologise to Subscribers for the delay in the publication of the present number.—Sickness in our establishment has been the cause.

Some of our Subscribers in the West, who were, by some mistake or other, overlooked in Mailing our December Number, will bear with us, for this time—and trust to our attention in future.

Extract from the Report of the York County (N. B.) Agricultural Society.

That the Agricultural character of the County is fast improving no one can deny, and in proof of this I need only refer to the extensive fall ploughings we now see, as compared with late years, and to the general anxiety of our Farmers to obtain improved breeds of Stock of various kinds. But while these things speak well for the present, and augur favourably for the future, we are still as a farming community most lamentably deficient, both as regards the cultivation of the soil and the breeding of stock.

One great impediment to the advantageous diffusion of information respecting the improved systems of the present day, is the prejudice with which many adhere to their own modes of cultivation, which, perhaps, have descended unaltered through several generations, and are viewed with such filial regard as to be considered indispensable to a successful cultivation of the soil. Where these prejudices exist modern improvements are treated with ridicule—the inlets to the understanding are closed—and “father did so” will furnish a sufficient justification for the most absurd misapplication of labour—the most extravagant waste of time, and the most destructive abuse of the soil.

One great error among Farmers, generally, throughout the Province is the working of too much land—by this I mean the attempt to cultivate more than can be well done. Both labour and manure are extended over too great a surface, and the result is too evident not to be seen in every direction—a scanty—sickly produce. A Farmer has a four acre field he wishes to break up and plant with potatoes; he ploughs the whole, and is determined to plant the whole; he is not particular first to ascertain whether he has enough manure for the extent of ground, but having ploughed he thinly strews his compost to make it hold out, and as a sure reward he gets a short crop, with loss of seed, land, and labour. But I do not stop here—the following spring he sows this field with wheat or oats, and at harvest time he is reminded of his ungenerous cultivation, by the short and puny stalk, and half filled ear; and if laid down to grass, as long as he keeps it under the scythe he can see the ill effects of trying to do too much. Should our Farmer, in the case put, get one hundred and fifty bushels of potatoes from the acre he will be exceedingly fortunate, and yet he might with the same manure, half the seed, and half the labour, have grown as many on two acres as he has taken from the four. Mr. William Davidson of Dumfries grew this year 600 bushels from the acre. Now no person will say that there are not hundreds of acres in this County which may be made as productive as Mr. Davidson's, and yet no one has equalled him in produce. “*What is done should be well done*”—should be inscribed on every enclosure of every Farm, and engraved upon every door post of every Farm House.

The writer of this Report has seven and a half acres under cultivation, including a Garden, and the following is as near as he can estimate the produce of this year:

Ten tons Hay; 76 bushels Oats; 280 bushels Potatoes; 3 tons Straw; 35 bushels Carrots; 20 bushels Turnips; 15 bushels Beets and Parsnips, besides an abundant crop of other Garden produce. And from the time that Clover was fit to cut for soiling, four cows were liberally fed every night during the season, and two horses occasionally in every week. Now, I have no doubt that some may equal and even surpass this amount with the same extent of ground, but I also know that very many with four times the quantity of land, professedly under cultivation, do not grow half as much.

One capital principle in all Roman Agriculture was to “*go less, and plough better*,” since there was more gained by cultivating a small spot well than a larger one indifferently. This they illustrated by many short sayings and stories. Pliny mentions a freed man who made his vineyard produce crops so much larger than those of his neighbours that they accused him of Witchcraft, and accordingly brought him to trial. When he appeared in the Forum he produced a stout daughter and some excellent implements, such as iron spades, shears, &c, and presenting these together with his oxen to the Senate, said “these Romans are my charms.” He was acquitted with honor. The following fact was also frequently advanced in favor of the above maxim. A vine dresser had two daughters and a vineyard. When his eldest daughter was married he gave her one third of his vineyard. For a portion notwithstanding which, he had the same quantity of fruit as formerly. When his younger daughter was married he gave her the

half of what remained, and still the produce of his vineyard was not diminished.

I have been so much impressed with the evil effects which many are continually suffering from extending their labour over too great a surface, that I have felt it my duty to direct the particular attention of the Society to the subject.

The next point upon which I would offer a few remarks is, as to the cultivation of wheat, a branch of Agriculture, in my estimation, far beyond all others in general importance, and which should receive the greatest attention and encouragement not only of the Legislature, but of all the Agricultural Societies in the Province. When we bear in mind that this Province has paid during the last ten years, at a low estimate, over £500,000 for foreign bread stuffs, the truth and force of my observations must be admitted by all.

The old cry, that "this is not a wheat growing Country," is practically contradicted every year by those of our Farmers who pay due attention to the mode of cultivation. Those who fail invariably attribute their loss to the climate, while their want of success is generally chargeable to their bad husbandry; and it is to be regretted that this class so far outnumbers that of the attentive and successful cultivator, that the good reports and favorable opinions of the latter are drowned amidst the noisy condemnations of the former.

As to *Soil*, we have as good this Province as can be found in any section of the North American Continent; and how can we justly attribute the partial failure of our wheat to climate when every year some good crops are grown in every County of the Province.

The climate in this County is surely the same in every part, and yet during the last year, while some were charging their failures to climate others were growing fine crops. At Stanley, for instance wheat was produced weighing upwards of 70lbs per bushel, and free from all defects; and finer wheat cannot be grown in any Country than was this year exhibited at the Society's Show. And I may venture to assert that there can be found persons whose fields adjoined those of the successful cultivators who are attributing their want of success to climate, when it is imputable to their own neglect and ignorance.

While on this subject, I would urge upon the attention of the Society, the importance of introducing the cultivation of winter wheat and rye. These grains have lately yielded abundantly in some parts of the Province. A very fine crop of winter wheat has been harvested this year by Mr. Hansard, in the vicinity of Frederickton, and he has another crop now sown. I shall endeavour to procure from that Gentleman a particular account of the mode of cultivation, and amount of produce, and shall communicate the information to the Society.

In the whole range of Husbandry, there is not a more important subject for the constant and unremitting attention of the Agriculturist than the collection and increase of manures. In vain the Ploughman "sidelong lays the glebe"—in vain

—"the Sower stalks

With measured step, and liberal throws the grain

Into the faithful bosom of the ground"—

In vain the fertilizing rains and dews of heaven descend upon the soil if it be not enriched with those valuable salts and gases which constitute the principal food and nutriment of vegetable life, and which are chiefly produced by the decay of vegetable and animal substances.

In the course of my yearly and extensive tours through different parts of the Province I am often amazed and grieved at the conduct of many Farmers with regard to manure. Indeed, by some this indispensable article is viewed as an incumbrance, so much so that they have erected their barns by the river side, or near a brook, in order that the floods may cleanse their premises, and by others this source of wealth is collected into heaps and burned.

Doubtless, you who hear these statements are partaking of my astonishment at such a prodigal waste of manure as shewn in the instances just now mentioned and at the same time some of you from year to year are "yarding" your cattle in the highways during the summer's nights, which is at once a loss to yourselves and a nuisance to travellers—and during the winter's days you allow your cattle to stand about the water holes and springs, when they should be enclosed in the barn-yard, or kept in the stable. You, therefore, who pursue such a neglectful course as this, are very lit-

tle in advance of those who call to their aid the fire and flood to purify their premises.

Some there are, however, who pay a great deal of attention to this subject, and who often complain of a scarcity of manure when they might add largely to their stock by availing themselves of the valuable vegetable deposits which are found in greater or less quantities on almost every farm in the County. The black rich mould of swamps is an excellent manure, and may be very much improved by the admixture of lime, or by being thrown into compost with the barn manure. I am aware that lime cannot be had in most parts of the County for such price as to justify its use as a manure, but wherever it can be had it will be found an excellent stimulant and decomposer, and will, in general, produce the most satisfying results, especially in the culture of wheat.

I would fain enter at some length upon the management of different kinds of stock, but at the present I must confine myself to a few brief observations as to Sheep and Horses.

Many of our Farmers have been unpardonably neglectful in their management of sheep; and it is really surprising that a stock so valuable both for food and raiment, and which makes such quick and profitable returns for the capital invested upon it should have been so generally and so long neglected. Some, I am happy to say, are now atoning for their past mismanagement by procuring improved breeds, and I would earnestly recommend those who still retain the old worn out stunted stock, to supply their place as soon as practicable with a better and more profitable kind. This, I am in hopes, will soon be done by many, if I may judge from the numerous and anxious enquiries which have been made from time to time respecting the sheep ordered from England by the Society. I very much regret that those sheep will not arrive during the present season, as our Vice President, Colonel Hayne, finding that the autumn would be far advanced before they could be shipped, very prudently countermanded the order until the next spring, when, I hope, we shall receive in good order and condition eight Rams and four Ewes of the improved Dishly and Leicestershire breeds. But we need not wait until these arrive, as all cannot be supplied by our limited importations; those who wish to obtain a superior breed need only apply to some of our agricultural friends in the County of Carleton. The most unwearied pains have been bestowed, and great expense incurred by some gentlemen in that County, and especially by Charles Perley, Esquire, in procuring the most approved breeds of sheep and other stock. That gentleman, and enterprising Farmer, may be emphatically called a benefactor of the Country in this respect, and I am happy to hear that the admirable stock of his farm is fast finding its way along the shores of the Saint John. His flock of sheep, I am sure, cannot be equalled in the Province—I have seen none like them out of England.

It is a very mistaken opinion, which prevails to a considerable extent in the Country that sheep will thrive as well exposed to all the storms and inclemency of the winter as if they were carefully housed. Too great pains cannot be taken after the cold weather sets in, and until the storms of April are over, to protect sheep from rain and snow, as by exposure to these the fleece becomes wet and frozen—the animal is rendered uncomfortable, and is thereby not only prevented from thriving, but is exposed to the ravages of disease.

Protection from the inclemency of the winter weather, however, is not of itself sufficient. *Feed well*, not wastefully, but judiciously, and let it be borne in mind that no improved breed can sustain its growth and character through our long winters without being fed occasionally (say once a week at least) on esculent roots, such as the potatoe, mangle-wurtzel and turnip—and of these the last is decidedly the most preferable. In England fields of turnips are sown expressly for the use of sheep, and during the winter they are turned in and allowed to eat them out of the ground, but in this Country we must supply our stock from the root house and cellar; and be assured that he who attempts to keep up an improved breed of sheep, and allows them to run at large in all kinds of weather during the winter, and feeds them on nothing but dry hay, and that, perhaps, the refuse of the cow and horse stables, will very soon find himself sadly disappointed.

I would here respectfully recommend for the consideration of the Society; that in order the better to encourage the immediate improvement of this valuable stock, a premium of £10 be awarded for the best pen of five Ewes to be exhibited at the Society's Cattle Show in October next.

Having already extended my observations on other subjects to such a length, I shall shortly remark upon one or two points only with regard to the treatment of colts.

A very absurd notion universally obtains in this Country, that colts should not get any oats the first winter after weaning, as such feed would have the effect of foundering or otherwise injuring the animal. This is a radical error, and has, no doubt, had the effect of preventing our horses from being much better grown than they are.

In England the usual allowance of oats for a colt, during the first winter, is 15 bushels or 4 quarts a day for four months. Such a course of feeding is also accompanied by bran mash—potatoes and carrots to prevent costiveness, and to keep the blood cool. In conversation with the celebrated Tattersall, in London, on this subject, he informed me that he allowed his choice thorough bred colts as much oats as they would eat the first winter, and that they were never injured by such feeding, but very little if any grain is given during the next winter. Since receiving this information I have put it in practice, and the result has been highly gratifying and successful.

I would be happy to proceed further on this interesting subject, but as I have trespassed so long upon your time and attention I must now draw my observations to a close.

I would earnestly impress upon every Member of this Society the necessity of doing all in his power to promote the interests of agriculture throughout the County. Obtain all the valuable information you can on the subject, and freely circulate all you obtain. As Farmers you have great reason to be content with your lot. You have seen from time to time the depressions of trade. You have seen many of those engaged in Commerce, and whose once fortunate career you may have almost envied, brought low by reverses of fortune, and deprived of their property; but to such vicissitudes the faithful tiller of the earth is rarely, if ever, exposed in this Country. We are blessed with a fertile soil, and he who works his allotment with industry and a due regard to his means, will surely receive an ample reward for all his toil.

Doctor Johnson has beautifully observed "Though mines of gold and silver should be exhausted, and the species made of them lost; though diamonds and pearls should remain concealed in the bowels of the earth and the womb of the sea; though commerce with strangers be prohibited; though all arts which have no other object than splendour and embellishment should be abolished; yet the fertility of the earth alone would afford an abundant supply for the occasions of an industrious people, by furnishing subsistence for them, and for such armies as should be mustered in their defence."

BREEDING HORSES.

This may be a proper period to recur to the important subject of breeding, particularly important, when there cannot be a doubt that our breed of useful horses has, within the last twenty years, most materially degenerated. Our running horses still maintain their supremacy; but our carriage horses are not much lessened in excellence and value; but our hunters and hackneys are not what they used to be. We shall endeavour to point out the cause of this.

Our observations must be of a general nature, and will be very simple; and the first axiom we would lay down is—that "like will produce like"—that the progeny will inherit the qualities, or the mingled qualities of the parents. We would refer to the subject of diseases, and again state our perfect conviction that there is scarcely one by which either of the parents is affected that the foal will not inherit, or, at least, the pre-disposition to it. even the consequences of ill usage, or hard work, will descend to the progeny. We have already enlarged on this, but its importance will be a sufficient apology for the repetition. We have proof upon proof that blindness, roaring, thick wind, broken wind, spavins, curbs, ringbones and founder, have been bequeathed both by the sire and the dam to the offspring. It should likewise be recollected, that although these blemishes may not appear in the immediate progeny, they frequently will in the next generation. Hence the necessity of some knowledge of the parentage both of the sire and dam.

Peculiarity of form and constitution will also be inherited—This is a most important but neglected consideration; for, however desirable, or even perfect, may have been the conformation of the sire, every good point may be neutralized or lost by the defec-

tive form, or want of blood of the mare. There are niceties in this, of which some breeders used to be aware, and they employed their knowledge to great advantage. When they were careful that the essential points should be good in both parents, and that some minor defect in either should be met, and got rid of, by excellence in that particular point in the other, the result was creditable to their judgment, and highly profitable. The unskilful or careless breeder will often so badly pair the animals, that the good points of each will be, in a manner, lost: the defects of both will be increased, and the produce will be far inferior to both sire and dam.

Of late years these principles have been much lost sight of in the breeding of horses for general use; and the following is the explanation it: There are nearly as good stallions as there used to be. Few, but well-formed and valuable horses will be selected and retained as stallions. They are always the very prime of the breed; but the mares are not what they used to be. Poverty has induced many of the breeders to part with the mares from which they used to raise their stock, and which were worth their weight in gold; and the jade on which the farmer now rides to market, or which he uses on his farm, costs him but little money, and is only retained because he could not get much money for her. It has likewise become the fashion for gentlemen to ride mares almost as frequently as geldings; and thus the better kind are taken from the breeding service until old age or injury renders them worth little for it. We would wish therefore to impress it on the minds of breeders, that peculiarity of form and constitution are inherited from both parents; that the excellence of the mare is a point of quite as much importance as that of the horse; and that out of a sorry mare, let the horse be as perfect as he may, a good foal will rarely be produced. All this is recognised upon the turf, although poverty or carelessness have made the general breeder neglect or forget it.

It is recognised in the midland Counties in the breed of cart horses; and the strict attention which has been paid to it has brought our heavy horses to almost the same perfection, in their way, as the blood horse. It is strange that in our saddle-horse, our hunters, and, to a great degree, our carriage-horses, this should be left to chance. The breeder begins to care little about the quality of the mare, and the progeny is becoming comparatively of little worth. Experience, it is said, will make fools wise, but experience will here be bought at a very dear rate, both as it regards the breeder and the community.

That the constitution and endurance of the horse are inherited, no sporting man ever doubted. The qualities of the sire or the dam descend from generation to generation; and the excellencies or defects of certain horses are traced, and justly so, to some peculiarity, in a far distant ancestor.

It may, perhaps, be justly affirmed, that there is more difficulty in selecting a good mare to breed from, than a good horse, because she must possess somewhat opposite qualities. Her carcass should be long, to give room for the growth of the fetus, and yet, with this, there should be compactness of form and shortness of leg.—As to the shape of the stallion, little satisfactory can be said. It must depend on that of the mare, and the kind of horse wished to be bred; but if there be one point which we should say is absolutely essential, it is this "compactness"—as much goodness and strength as possible condensed in a little space. Next to compactness, the inclination of the shoulder will be regarded: a huge stallion, with upright shoulders, never got a capital hunter or hackney. From him the breeder can obtain nothing but a cart or dray horse, and that, perhaps, spoiled by the opposite form of the mare. On the other hand, an upright shoulder is desirable, if not absolutely necessary, when a mere draught horse is required. It is of no little importance that the parents should be in full possession of their natural strength and powers. It is a common error, that because a mare has once been good, she is fit for breeding, when she is no longer capable of ordinary work. Her blood, and perfect frame may ensure a foal of some value, but he will inherit a portion of the worn out constitution of her from whom he sprung.

On the subject of *breeding in and in*, that is, persevering in the same breed, and selecting the best on either side, much has been said. The system of crossing requires much judgment and experience; a great deal more, indeed, than breeders usually possess. The bad qualities of the cross are too soon engrafted on the original stock; and once engrafted there, are not, for many generations, eradicated. On the other hand it is the fact, however, some may deny it, that strict confinement to one breed, however valuable or

perfect, produces gradual deterioration. The truth here, as in other cases, lies in the middle. Crossing should be attempted with great caution, and the most perfect of the same breed should be selected, but varied, by being taken frequently from different stocks. This is the secret of the course. The pure south-eastern blood is never lost, but the stock is often changed with manifest advantage.—*Youatt.*

From the New York Spirit of the Times.

SECRET FOR TAMING VICIOUS HORSES, &c.

Dear Sir,—My secret for taming vicious horses is gentleness and patience, which removes fear and gives the animal confidence in man. Rubbing a horse in the face will cause him to present his head to you, and talking kindly to him will attract his attention. After having cleared the stable or paddock of every thing (dogs, chickens, etc.) that will tend in any way to frighten the horse, drive him as gently as possible into a corner and approach him by degrees, that he may see there is no cause for alarm. You must now rub his face gently downwards, (not across nor "against the grain" of the hair,) and, when he becomes reconciled to that, as you will perceive by his eye and countenance, rub his neck and back till you come to his tail, repeating the operation several times till he will permit you to handle his tail freely. You may now lead him out, and call upon him constantly, in a steady tone, to "come along!" (whispering the words, to some horses, is better than to speak aloud,) and, in about ten minutes or less, he will follow you about quite tame and gentle.

In breaking a horse to harness or saddle you must be very gentle with him. For the former, you may commence by throwing a rope over the back, and letting it hang loose on both sides, then lead him about, caressing him as above, until he becomes satisfied that you will not hurt him; then put on the harness, and pull gently on the traces. In a short time, by this kind treatment, he will be prepared for work.

In breaking for the saddle you may begin by showing him the blanket, rubbing him with it, and throwing it on his back. In a short time you may lay the saddle on; and, after fondling him for a few minutes, you may fasten it, and ride him with perfect safety. It is better for one person to stand by his head at first and keep him quiet, and then to lead him along until all danger is over. If he is dangerous, you may exercise him for some time by leading him, and leaving him, as he becomes more and more gentle in working. You can then manage him with more safety. It is better to work a horse to make him very gentle, but if this cannot well be done, I would recommend the use of bit and harness, that he may learn to be governed by the bridle. Be careful not to get his mouth sore. Put on at first a loose harness, and let it remain on for some time; if the harness is tight it will make an unbroken horse sweat and faint. You may, in the case of a very vicious horse, side-line him. In a little time, he will pass a carriage without shying, and will not caper in gear or under the saddle.

If a horse lies down, and will not get up, drive a stake in the ground and fasten him down for ten or twelve hours; then loosen him, and he will "know better next time."

A vicious Cow may be cured by the same treatment.

To make a horse follow you.—You may make any man's horse follow you in ten minutes, or sometimes less. Go to the horse, rub his face, jaw, and chin; leading him about, still saying to him, "come along." A constant tone is necessary. By taking him away from persons and horses, repeat rubbing, leading, and stopping. Sometimes turn him round all ways, and keep his attention by saying "come along;" put your arms around his neck, whispering in his ear, saying "come along." I suppose in some horses it is important to whisper to them, as it hides the secret, and gentles the horse. You may use any word you please, but be constant in your tone of voice. The same will cause all horses to follow. If a horse has an injury in his face, you had better put off taming him until it is well.

To accustom a horse to the use of Gun, Umbrella, etc.—Commence showing your friendship, by rubbing the horse's face with your hand; then snap and explode percussion caps with a pistol. Let the horse frequently smell the powder and smoke. Then you will fire small reports, until you shall see fear removed; then overhead, and behind the horse, until all is free. If you have a very wild horse, place him in a stall, or a small pen, so as to have him safe: then fire a gun all around him, and go often up to him, speak to him, and rub him in the face, and then

fire the gun again, until he is free from starting. To make a horse used to an umbrella, walk before him, raising it up and shutting it again. Let him smell it and rub it over his head. Then get on him, gently raise it, and ride him along, until the fear is over. It is, in all cases, better to take the horse to some new place away from home; for if you go to the place where he has been spoiled, you will find he is apt to prove unkind there than elsewhere. Sometimes horses will remember for five years places and habits, both good and bad. You must rub your horse on both sides; for he may be gentle on one side, and not on the other.

How to manage a kicking Horse.—First make a stall, or pen, for your horse, in which he cannot turn round, and with slats, through which you can put your hand to rub him. Then commence by rubbing him in the face, and all over, two or three times, raising his tail gently, three or four times; then touch one of his fore-legs, and say to him "foot," "foot," until he shows willingness to raise his foot. Raise the foot up, and put it down some three or four times; then go all round, until all fear is removed. All you wish a horse to do ought to be done three or four times, repeated two or three days in succession.

How to manage a Cow.—Tie her to some place, so that you can rub her all over, then salt her from your hand, feed her from your hand, on half-feed, and in three days you may do as you please with her. Rub her near the root of the tail, as that has a good effect.

In breaking a shy or skittish Horse, never strike him for swerving; but if he is frightened, be gentle. Get down, rub him in the face, lead him to the cause of alarm, then back to where you got off; and then ride him back again to the object. Repeat this in the force of his habit, and he will be submissive. If an old horse, you may mend his habits. In training horses to go over bridges, it is a good plan to lead them over some three or four bridges.

To make a Horse stand still while you mount.—Get on and dismount four or five times before you move him out of his tracks, and by repeating this any horse will stand still.

In conclusion, I would advise all breeders to be kind and gentle to their foals, and by so doing I will venture to say they will seldom have vicious horses to tame. D. O.

AGRICULTURE.

Many of the remarks made in introducing the last subject, may, with slight alteration apply to this. A Bill provides for a Board, and discussions, if any, will probably arise on the Report of the year's proceedings. The formation of many County Agricultural Societies, the prizes awarded, the stock and implements imported, the books and papers distributed, must, one would hope, have produced considerable good.

There is something in the very name of Agriculture that bespeaks men's sympathies. The antiquity of the culture of the soil, and the cultivation of grain and fruits and flowers, is at once suggested. We think of Adam's amusement before his fall; and his labour after, when the "world was all before him where to choose." We see the patriarchs amid their fields and flocks,—Boaz among his reapers, and the great Shepherd of Israel, and his disciples, walking by the ripe corn, plucking and eating as they went.—We acknowledge the vast importance of the art,—as the basis of manufactures and commerce and nobility,—the first essential to the existence of mankind, the mother of nations.—We consider its haunts, amid the lovely solitudes of nature; by streams and groves and surrounded by fragrant zephyrs,—we behold it subduing the forest and the barren,—making gardens amid the swamps, and rearing cottages and mansions where the wild fox and the bear had their dens. This great humanizer and precursor of civilization, blends the essential and the picturesque, in its recommendations, and every man feels as if he had somewhat of the nature of a farmer in his own bosom. To keep his horse, and cow, and to till his garden, form the usual day dreams of the citizen, as he rises above dependence, and feels himself able to select his lot for the evening of life. No wonder then, that the practical agriculturist sometimes, in legislation, expects his full meed of attention, if he does not "o'er step the modesty" of his profession, and ask for more than the claims of his fellow men would warrant.

Many complaints have been made since the setting in of winter, by farmers who resort to the Halifax Market, respecting the prices obtained. Very often these were fair; sometimes, owing to an accidental glut, and the perishable nature of the articles in unexpectedly mild weather, the prices were wretchedly low; and in a

few instances almost total loss was incurred. These adverse cases, perhaps, might be said to be only of trifling amount, in the whole; but where a farmer travels an hundred miles to market, for the purpose of bringing supplies from town in return for his produce, disappointments such as we mention cannot, in themselves, be trifling. It has, accordingly, been said, that more produce is raised than is profitably disposed of.—and that more could be raised if outlets for it existed. To some extent this is true, yet we must also recollect, that the farmers themselves purchase imported articles of food, which should be raised in the province. The questions then are, Can better markets be provided for what is produced? Can importations be superseded by the growth of the Province?

The latter question, to a great extent, includes the former. If the articles imported could be kept out by fair competition, more steady prices, and a wider sphere would at once be opened. Pork, grain, flour, and meal, are among the chief Agricultural importations. Specimens of the first, produced in the Province, would seem to prove, that nothing but a good system was requisite for a full home supply. Persons acquainted with Agriculture say the same, respecting the other articles. Farmers have asked for protecting duties as checks to importation; but taxes on food involve questions of the most serious nature. They have been branded as infamous and impious in older countries; they have arrayed class against class in fearful opposition, and have sometimes threatened public convulsion. The tax which distance imposes, in the shape of deterioration by delay, cost of transit, and various commissions, would seem sufficient to guard the native producer, if his land were at all fit for his purposes, and if his own energy and perseverance were of the requisite character. Openings for exportation might be made by commercial arrangements; but of that we need scarcely speak, until the home market be supplied. One means, of at once increasing the produce and the markets, would be the judicious increase of population, and the consequent formation and growth of towns. The fact, that there are only five or six towns, in a country nearly as large as England, shows a great paucity of internal markets, and a cause of much waste of labour and expence on the part of the farmer. There can be but little regularity, and few guards against glut and dearth, while farmers, within an arc whose radius is an hundred miles, have to make one market town their centre. Such a state would appear monstrous in an old and well peopled country. Some encouragement to the growth of villages and towns might be given, and the farmer might multiply his hands, in effect, by the judicious use of machinery. One custom, although having the appearance of much industry, may operate injuriously respecting the growth of communities which would be customers of the Agriculturist. In many instances, the farmer aims at producing every thing within his own precincts,—even to the entire formation of all his articles of wear. This saves money in the first instance; but it seems calculated to distract attention from the main business, it prevents the employment of small tradesmen, it induces village mechanics to become half farmers, and thus it militates against the "division of labour," and the perfection to which this division conduces.

Legislation cannot do much for such a class as Agriculturists, in this country, excepting by prohibiting taxes, which may be considered out of the question. Improvement rests mainly with themselves. Increased intelligence, doubtless, would do wonders, in some quarters; to that we may suppose that the exertions of the Board have been mainly directed, and it will probably form the chief burthen of the Report. Free criticism of the operations of the system which was established last session, may be expected this, but, probably, not much new or important. All must hope that the painful exhibitions of former years—in which the house seemed divided into angry parties, consisting of agriculturists at one side, and fishing and trading interests at the other—will never be repeated. The interests of all are similar;—what promises the most prosperity to the country, should unite all parties,—whether their hopes be confined to the green acres which surround the farm-house, or wander unconfined over the blue waves which are every where within a few miles of the heart of the country.—*Novascotian*.

A Yankee in Boston has set up a one horse thrashing machine, for the convenience of parents and guardians having unruly boys. He'll lick an urchin like thunder for fourpence. Small lickings done for two cents only, and the most entire satisfaction warranted.

From the Farmer's Journal.

LIME FOR ORCHARDS.

MR. COLE,—Please answer the following questions in your next number:

- What is the benefit of lime on an orchard?
- Which is best, as to its use in the stone or slacked?
- What is the best season for applying it?
- What is the average quantity to the tree or acre?

A SUASCOTIAN.

By the Editor.—Lime is useful in destroying insects, and it serves as a stimulant, and has valuable effects in promoting the growth of fruit trees. Many successful experiments have been made in improving and renovating fruit trees, by the use of lime. It serves to make a hard and tenacious soil more light and mellow, both by its mechanical effect, as it is less tenacious than clay, and by its chemical effect in uniting with and decomposing and neutralizing other substances. Lime contains one of the principal constituents of wood. There are many kinds of insects that injure trees and fruit, and it is important that manure be used which will destroy them; and there is probably none more efficacious for this purpose than lime.

Lime in the stone is in a good state for agricultural purposes, if it can be reduced fine enough, as it then contains a larger portion usually about 50 per cent. of carbon, which enters largely into vegetables. But the cheapest way to finely pulverize lime, in most cases, is to burn it, then slack it, or let it become air-slacked, then it becomes very fine. When it has been slacked for some time, or when air-slacked, it is mild, because it has taken up carbon, which was driven off by calcination. In this mild state it is the same as when in the stone. These processes only serve to render it fine, which is probably cheaper than grinding. Quick lime is not in a suitable state to apply to the soil, and when newly slacked, it is still in a caustic state, only changed by being pulverized, and being an addition of water. In this condition it is suitable to add to a compost heap, a compound of vegetable and animal manure, by its union with the latter, it produces an alkaline gas which pervades the whole heap, corrects the acid in the vegetable matter, and renders it a valuable manure. This process fixes the gases in the heap, which otherwise would pass off by fermentation.

Lime may be applied at any season. Its effects are generally slow and lasting, and will do more good the first season if it be applied the previous fall. Some Farmers use fresh slacked lime the spring, and are disappointed in not finding a great advantage the first season. Old lime might have a more immediate effect, and in this case the benefit would probably be as great for several years to come, as at first. In some cases the effects of lime have been perceptible for 20 years.

As to the quantity of lime, much depends on the price, and the nature of the soil as containing more or less of this principle in well constituted soil. In some lime-stone regions, there is an abundance, or too much of this property for a fertile soil. But most parts of New England there is but a small portion of lime. When the price of lime is moderate, three or four casks to the acre may generally be applied to orchards with profit. A peck to a middling sized tree, and half a bushel to a larger one, is quite moderate quantity. A Farmer who was very successful in improving fruit trees, took off the sods and surface soil, and made into a compost manure for his trees, and after removing this, he put lime around the trees one inch deep for several feet.

The modes of application and the quantities are various, and are the effects in different soils, and under different circumstances. We may attend to this subject again in a future number. Our readers are requested to give the result of their experience and observation on it.

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