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THE
Canadian Agriculturist,

AND

JOURNAL OF THE BOARD OF AGRICULTURE

OF UPPER CANADA.

VOL. XI.

TORONTO, APRIL, 1859.

No. 4.

IMPORTANCE OF DEEP CULTIVATION.

There can be no question that the produce of most of our Canadian farms might be greatly increased by deeper ploughing and clean cultivation. Four or five inches may do very well for a few years after the land has been reclaimed from the primeval forest, with a surface rich in organic matter; but after a while such shallow cultivation produces a stationary, or rather a retrograding, condition of agriculture, and recourse must be had to the employment of the best methods of deepening the staple soil, that a greater range may be given to the roots of crops in search of food, and to allow moisture and air to penetrate the soil freely, laden with life-giving power. In order to accomplish this necessary object, the farmer must invoke the aid of mechanical science, and look to the modern implement maker to supply him with such tools and machines as will render tillage more thorough and cheap. What we want, more particularly in this country, are such efficient and economically working implements,—such as scarifiers and grubbers,—as will enable the farmer to clean and deeply pulverize the soil after harvest, and before our long and rigorous winters set in, that the land may be in the best mechanical condition for early working and sowing in the spring. There can be no question that the approval and practice of deeper tillage are gaining ground in our older settled districts. Soils thus prepared sustain healthier crops through the often long and severe droughts of our summers, enabling the plant to search wider and deeper in search of food. Intelligent agriculturists have not worked their teams in herculean ploughing and subsoiling of 15 or 20-inch furrows, in stiff clay soils, without spreading the fame of their results; practice has not toiled or science preached in vain; and at the present time, we believe that the most valued boon to the farmer would be the placing in his hands a power that could make trench-work and deep-stirring cheap and easy, instead of a costly and somewhat dreaded operation.—In the better-cultivated districts of Britain, ploughs to work twelve inches deep are no longer deemed preposterous; and as we come nearer and nearer to the successful hauling of draught implements by steam power, the production and testing of the best heavy land-plough becomes a closer struggle between manufacturers, and a livelier subject of attention to the practical farmer.

There is no occupier who would not like to have his land in as fine tilth, and as clean, as a garden,—deeply worked, pulverized, and enriched; only (as he will tell you) he must raise and be able to market greengrocers' and fruiterers' produce, in order to make such perfect cultivation pay. As long as grain and roots and fodder are worth no more per acre than at present, there is a limit to the amount of tillage it will answer to bestow in growing them. Give him a power cheaper and stronger than that of horses, and still more than that of workmen,—a power that eats only when at work, never wearies, and will accomplish the tillage wholesale at the right time, instead of being obliged to plod on, bit after bit, often in unsuitable weather, and he will soon show what an augmentation of produce, and how many other advantages, follow a better and superior style of culture.

The increased yield of our grain crops by deeper ploughing and underground draining, where needed, would, if fairly calculated, appear to many absolutely incredible. The risks of injury by insects, rust, &c., would be reduced to a minimum, and the average produce probably doubled. Thousands of acres of our grain-producing land has never been cultivated four or five inches deep, beneath which is often to be found a foot of soil abounding in the necessary mineral and organic matter, constituting the food of plants, and which only requires to be broken up and exposed to the action of air and rains, to yield to the growing crop its abundance of hidden treasure. With regard to Indian Corn, it is stated upon good authority, that in the Western States, upon the deep rich soils of the prairies, with the present shallow and imperfect system of culture, the average yield is under 30 bushels per acre, whereas upon the poorer stony soils of the New England States, in consequence of deeper ploughing and more thorough working the land, double and treble that amount is frequently raised. Upon poor sandy subsoils, deeper ploughing should be proceeded with progressively, as the turning up at once a large quantity of such soil, without a heavy manuring, might be temporarily injurious. It is proper also to observe, that upon soils naturally wet, little benefit can be expected from deeper culture till the land is drained. Draining, indeed, is the first indispensable means of improvement on wet lands,—the foundation of all subsequent ameliorations, and should always precede, rather than follow, deep cultivation. In preparing land for spring grain, it will be found most advantageous not to plough generally less than seven or eight inches deep; and for root crops an additional depth of as many inches by the subsoil plough, with a liberal dressing of well decomposed manure, will be found the most remunerating.

PREPARATION FOR ROOT CROPS.

As the live-stock of Canada has of late years been rapidly increasing in quantity, and, in most districts, improving in quality, the supply of a sufficient amount of suitable provender, becomes a question of great moment to every farmer since the mixed system of husbandry, or the breeding of stock and the raising of grain, is the one universally prevailing in this country. The main object of the farmer is to produce the largest amount of grain, and sustain the greatest number of animals of the best quality that his farm will allow, without diminishing, but rather increasing, the natural and permanent productiveness of the soil.

With a view of increasing and improving the domesticated animals of the farm, it has been found requisite in the British Islands, whose soil and climate are so peculiarly adapted to the production of grass and a rich permanent pasture, to cultivate the various kinds of root crops upon a scale of great magnitude

And it is to the production of an ample supply of nutritious food of different varieties that we must mainly look for an explanation of the immense numbers of farm animals, and their superior excellence, which characterise the agriculture of Great Britain and Ireland. Previous to the introduction of the turnip, beet, carrot, &c., into field culture, both the amount and quality of live-stock were very different to the present state of things. The same reasons are equally applicable here. Neither our heavy crops, nor artificial or permanent pastures are of such a character as to support large flocks and herds, without the aid of vegetables cultivated in the best manner and on a commensurate scale. Our farmers are beginning to understand that it must be a losing business to go to the trouble and expense of importing or breeding improved stock, without providing for them a sufficient amount of food of the best quality; and experience has determined that a mixture, consisting of hay, roots and grain, is the one by far best adapted to meet the increasing demands of this new and improved order of things.

The season has now arrived when active preparations must be made to secure these objects. It is generally to be recommended to plough land intended for root crops, deeply in the fall, and to prevent the stagnation of water upon the surface either by underdraining or surface furrows, the former being incomparably the best. Give the land a thorough working as early in the spring as its state will admit, always bearing in mind that for fine seeds especially, the ground should never be touched while in a wet state; a rule which applies with increased force to all kinds of heavy and retentive soils. The thorough *mechanical* preparation of the land for root crops, or indeed for all others, is a matter of primary importance, affecting the growth and amount of the crop in a variety of ways.

The next consideration is the adaptation of the soil to a special object in what may be termed a *chemical* point of view; or in other words the supplying of crops with the necessary kind and amount of food which they require. This brings us at once to the all-important question of manures. And here it may be observed that it will only end in loss and disappointment to attempt the raising of roots, for the purpose of cattle feeding, without first bringing the soil into a suitable condition, first by deep and clean cultivation; and second, by the application of manures, in kind and quantity adapted to the requirements of the crop, and the actual condition of the soil. Farm yard dung, unless thoroughly decomposed, which state generally involves a great loss of manuring constituents, should be evenly spread over the surface and well incorporated with the soil. Bone-dust, guano, and the fine artificial manures, are generally best applied in the drills with the seed, taking care that guano, for instance, does not come into direct contact with the seed, as its germination might thereby be weakened or entirely prevented.

REPORTS OF AGRICULTURAL SOCIETIES.

A correspondent recently called our attention to the fact that in the Abstract, published in the Transactions, of the County and Township Agricultural Society Reports, during the year 1853, the amount of subscriptions received in deposit by the County Societies from the townships, in many cases does not correspond with the aggregate amount subscribed by the Township Societies, as taken in detail from the abstract of the reports of the latter; and further that the amount of Government grant to the several townships in a county is frequently not at all in proportion to the amount of their relative subscriptions. A few words will explain this apparent discrepancy. It arises simply from the fact that a portion, more or less, of the subscriptions of each Township Society, is collected after the

deposit is made with the County Society, which must be done on the 1st of May, and as the amounts collected by the several societies in a county after that date vary greatly in proportion, it follows that the amount of the public grant distributed by the County Society to the various townships is apparently not in proportion to their subscriptions. As it is an object to make the abstract as brief as possible, it has not been thought necessary to state in each case the amount subscribed before and after the 1st May—indeed the reports themselves do not in many cases distinctly show—but a general note in a former issue alluded to the circumstance of the subscriptions being increased after that date as explaining what might seem to be discrepancies. Our correspondent further observes that the sum of the portions of the Government grant received by the several townships in a county, does not apparently correspond in amount with the three-fifths of the entire grant professedly distributed amongst them by the County Society. There are occasionally slight differences, from some cause or other, and probably sometimes from inaccuracy, of a few pence or shillings in the amount stated by the County Society to have been paid to a township, and the amount stated by the township to have been received. The abstract of each report is founded upon the report itself, without reference to how it may agree with other documents, as the endeavoring to reconcile all the reports from a county exactly with each other, would require a great deal of time and labor, and in many cases could not possibly be done from the documents furnished, without the alteration of figures, and is therefore not attempted. It follows that there is sometimes apparently a trifling difference between the amounts stated to be received by the townships and the amount stated to be divided amongst them. Where the amount is considerable, it is in most cases owing to the fact of one or other of the townships having failed to make a report at all. So far as we have been able to observe, we believe that the rate of apportionment by the County to the Township Societies is in nearly every instance quite correct, both in respect to the whole amount apportioned, and the relative amount paid to each society. But, while offering this explanation, we must at the same time admit, that while many of the documents received from Societies are altogether unexceptionable, others are very incomplete, if not inaccurate; some of them so much so, as to make it very difficult to make an intelligible abstract from them, and we would beg to impress upon all the officers of Societies the necessity of having their reports drawn up in future as correctly and completely as possible. With the view of inducing some improvement in this respect, and also of obtaining by this means information of a useful character for publication, the Board of Agriculture at a recent meeting agreed to offer a set of premiums of small amount for the best reports from County and Township Societies, the particulars of which will be given in a future issue.

Correspondence.

TOWNSHIP OF HOPE FARMERS' CLUB.

HAMILTON GARDENS, March 26, 1859.

MESSRS. EDITORS,—I enclose you a part of the *Part Hope Guide*, containing a report of a meeting of a newly organized Township Club in Hope. The paper was read by a young farmer of that Township, and a very interesting discussion took place on the subject before them. The editor of the *Guide* was there, but as there was not an understanding that the debate was to be published, he did not take any notes, and only gives a brief synopsis of what was said. They resolved however, that when they met again, Mr. Crew should report the speeches and publish them in the *Guide*.

I thought you would hardly be likely to see the paper, and as I know you are anxious

to see all that transpires in the Province in this way, I take the liberty to send it to you; and as you have formerly been in the habit of publishing such reports in the *Agriculturist*, I thought probably you might do so with this.

I was very much pleased with the discussion myself, and from the amount of information displayed by several of the members of the Club, I think they will make it a very interesting affair.

I remain, gentlemen,

Yours truly,

JOHN WADE.

[We are obliged to Mr. Wade for his friendly attention, and shall always feel happy in being informed of the proceedings of the Township of Hope Farmers' Club, which promises to be highly successful; and it is much to be desired that others should follow the example. As the principal object which the *Agriculturist* seeks to obtain, is the recording and diffusing agricultural information for the benefit of the Province at large, the reports of the proceedings of Farmers' Clubs, ploughing matches, &c., will be always acceptable. We must mainly rely on the officers of societies and leading individuals, in all sections of the Province, to keep us posted up in these matters. We shall be happy to hear *direct* from Mr. J. E. Champion, whose paper is highly interesting and suggestive.—EDITOR.]

From the Port Hope Guide.

We stated on a former occasion that the farmers of the Township of Hope had organized a club for the discussion of questions pertaining to farming. The place of meeting is in the Alma Division Sons of Temperance Room, Guide Board. We were present at a meeting of the Club on Monday, and were much pleased with the spirited manner in which the discussions were sustained.

The President, Nathan Choate, Esq., was in the chair, and among others in the room we noticed Messrs. J. E. and Francis Champion, W. F. and J. K. Allen, J. Foott, J. and T. Parker, Oke, Vanstone, Martin, Grey, J. Cann, C. Harris, and J. Wade, Esq., and son, of Hamilton.

The question for discussion was the Preparation of Seed Wheat for Sowing. After a few introductory remarks, the chairman called upon Mr. James E. Champion to read an essay which he had prepared on the subject. The essay will be found below, and we would warmly recommend it to the farmers of this county. Mr. Champion is a young man of considerable ability; and by making proper use of his spare time has acquired a large fund of general as well as agricultural knowledge. He is industrious and energetic; and these qualities, united with his knowledge of agricultural chemistry, will ensure him success as a farmer.

The great sin of young men brought up on farms in these days is an admiration of, or a longing after, town or city life. As soon as boys reach the age of 15 or 18 years, they frequently become discontented with a farmer's occupation; they wish to enter into some lighter, and, as they think, more gentlemanly employment. They must be lawyers, or doctors, or surveyors, or engineers, or "preachers," or something of that sort. It is becoming much too fashionable to decry the farm and farm life; and we are glad to meet occasionally a young man like Mr. Champion, who evidently thinks the cultivation of the soil is an honorable as it is an independent occupation, and who strives by study to fit himself for the proper discharge of the duties of his station.

After the reading of the essay was concluded, Mr. John Foott, President East Durham Agricultural Society, spoke briefly. He advocated the preparation of seed wheat with vitriol, and explained the manner of its application.

Mr. W. F. Allen had prepared his seed with lime and with other preparations, and although he had sown the prepared and the unprepared wheat in the same field he never saw any difference in the crops. One was as free from smut as the other.

Mr. John Cann had tried various ways of preparing seed, but was of the opinion that washing in salt water or brine was the most effectual method he had ever tested. The wheat to be placed in a large barrel or hogshead covered with the brine, and stirred vigorously with a paddle. By this method the germ of the smut that lodged in the "furze end" of the berry was killed.

Mr. C. Harris, had tried many experiments, but was of opinion that seed was as well without any preparation.

Mr. Vanstone took much the same ground as Mr. Harris.

Mr. F. Champion thought that washing seed in a running stream was a good preparation, as all the smut, &c., it might contain would be carried away by the current.

At the close, John Wade, Esq., said that he had been requested to invite the Township of Hope to join Hamilton in getting up a ploughing match, to come off some time in April. No decision was come to upon the matter. Will the young farmers of Hope decline to meet the young men of Hamilton in a friendly strife of this description?

PREPARATION OF SEED, AND TIME OF SOWING.

MR. PRESIDENT AND GENTLEMEN,—The preparation of seed is of vast importance to the farmer; because it is a universal law of nature "*that like begets like*," a law equally as true in the vegetable as the animal kingdom. Such being the case, how essential it is that we select good seed. Every farmer should reserve a part of his wheat, which he intends for seed, and let it fully ripen before he cuts it; by doing so the grain is matured, as nature evidently intended it should be; this is the first important thing in good husbandry, and one, which I think is sadly neglected in the hurry and bustle of our harvests. I would therefore recommend, that, what is designed for sowing the next year remain uncut for a few days later than the rest, or until quite ripe. Great care should be taken that we sow nothing but *wheat* when *that* is the crop we wish to sow. A slovenly farmer will often sow grain which is not properly cleaned from the seeds of the various noxious weeds which infested the crop the previous year; thereby rendering his land a fit nursery for weeds of all descriptions, and the old adage says, "*one year's seedling makes seven year's weeding*," which clearly shows we cannot be too particular in cleaning our seed. We should also endeavor to get the largest and best formed grain for sowing. I know there are a number of farmers who maintain that there is no necessity for doing so; because, say they, "the smaller size will do equally as well, and requires less by measure to the acre." Yet, perhaps those men are very judicious in the selection of cattle to breed from; choosing only those that are perfect in symmetry and of a good size; but if we take a retrospective view of both we shall find there has been more improvement in the vegetable, than the animal kingdom. Great, indeed, has been the improvement in the latter, which our improved breeds will fully testify. But from the most authentic sources our invaluable and staple production, for which our country is celebrated, was once a species of grass—the indigenous production of the shores of the Mediterranean sea, and known by the botanical name *Aegilops ovata*. Now, if by judicious selection of seed, and a proper treatment of the plant, it has been brought to its present state, would it not be wisdom in us to see it does not degenerate; and one preventative of its degeneracy is the selection of the largest and best, and sowing none but what nature has matured. We should change our seed as often as we conveniently could, and always from a light sandy, or gravelly loam, to a heavier one; such a change is generally a remunerative one to the farmer. And experience also demonstrates that every change from a cold climate to a warmer one gives a greater increase in the next crop than seed equally as good raised in the same land: we should therefore import from a higher latitude at least once in seven years, and oftener if convenient. Although it may not be in the power of all to import from a distance, yet all of us may change from a sandy soil to a clayey one.

The principal things with which we have to contend in the cultivation of wheat are smut, rust and midge.

In the preparation of seed we may prevent smut by the application of sulphate of copper. Most varieties of wheat are subject to smut, and I know of but one kind which is entirely free from it—the Fyfe wheat. I cannot speak from a practical knowledge of any other variety.

Almost every farmer has his own specific remedy for smut. Washing the grain previous to sowing, in water, weak ley, brine or urine, and drying it with stacked lime is highly recommended by those who have tried it. I never used any of those solutions, and therefore can speak of their efficacy only from the report of others.

We always use a solution of sulphate of copper, and never knew it to fail in one instance when properly tried.

After thoroughly cleaning the barn floor and the wheat we intend sowing, we wet the wheat on the floor with a solution of sulphate of copper dissolved in urine or brine;

turn it over a few times, that all may be made damp—let it remain so a short time; then mix lime enough with it to dry it,—after which it is ready for being sown. The reason for washing the seed wheat is to destroy the sporules of smut which adhere to the grains of wheat, and as each sporule is capable of producing its kind by coming in contact with the seed we sow, unless washed off or destroyed by some chemical agency, the crop is infested by those dark dwarfish ears, which not only mar the beauty of the growing grain, but leave its poisonous influence to lessen the value when taken to market.

In the year 1854, we sowed a field of 20 acres, with wheat prepared according to the above, except a ridge on one side of the field.

At harvest there was not a head of smut to be found in the field, except in the ridge which was sown unprepared; but in this there was 7 per cent of smut. In the preparation of seed, I know of no preventative to rust, and according to the nature of the disease, I think there can be no remedy applied at the time of sowing. Rust is a parasitic plant, that is, one which lives on, and grows from, other plants. Rust, when viewed under the microscope, presents an appearance as perfect in its form, as any other plant of the same genera.

Although it is out of order, I hope you will pardon me for making a remark or two on rust and its preventative, which I hope may be adopted by all who have it in their power. The cause of rust is a superabundance of humidity in the land, and the presence of too much ammonia. Although ammonia is the most active agent in manure, and one which produces a luxuriant vegetation, yet for a wheat crop it has a tendency of producing too much straw, and, therefore, should be sparingly used on black looking soils.

Underdraining, then, is the only reliable remedy I know of for rust, because it removes the cause of the disease, and must consequently remove the effect. In the cultivation of oats and peas, due regard should be paid to cleanliness from what might produce its species, and the remarks I made at the commencement about *matured* seed, and best quality, are equally true respecting oats and peas.

If we sow *good* seed we may reasonably expect *good* in return; but, if bad, the result *must* be different. Wheat, oats and peas, are exotic plants, and require an extra effort to prevent their degeneracy. *Care and judicious selection* have brought them to their present state, and *care and selection* must be exercised in order to retain their present perfection.

I come now to the second part of my subject, viz.: "The time of sowing." At present it is almost impossible to lay down any definite rules respecting it, because there will necessarily be so many exceptions, owing to the condition of the soil, its quality, and variety of wheat and its enemies.

If it was not for the midge, I would invariably recommend early sowing. Some of the advantages of early sowing are, a full development of the grain on account of a longer period of growth, partial immunity from rust, and likely an earlier harvest, the latter, previous to the ravages of the midge, was synonymous to a good one; but more especially because it is in conformity with its nature.

The club wheat is an excellent variety, and one which has been of great benefit to the Canadian farmer. When first introduced it was very prolific, and I believe still holds a high position on all land naturally adapted to the growth of wheat, such as porous soils and those clayey ones from which the water freely runs off after heavy rains. This variety should be sown early; at present it must contend either with the rust or the midge,—“of two evils choose the least;” sow early and avoid the rust, for experience has taught us it is more destructive in its nature, more baneful in its effects. But we have another variety of wheat which has entirely revolutionized our wheat-growing, and ushered in a new era to those farmers whose lands are located on the “black alluvial deposit.”

Land, which a few years ago would raise no wheat, but what would be shrunk and only fit for “still grain,” now produces a good crop of merchantable wheat, and is highly recommended by millers and bakers. I refer to the Fife Wheat; and, as was stated in the September No. of the *Agriculturist*, 1856, by Mr. Wade of Hamilton, “to know that we can be sure of a crop of wheat sown as late as the 10th of June, and to fill and ripe without a speck of rust, and yield from 20 to 30 bushels per acre, is surely a consideration.”

Those farmers who are in the habit of raising Fife Wheat know full well, by sowing late, they can escape the midge.

I find about the 20th of May a very good time, in this neighborhood, to sow.

In 1855 we sowed very early, when the crop was nearly all destroyed.

In 1856 we sowed our wheat the 12th of May,—a good deal was destroyed by the midge.

In 1857 we sowed the 20th of May,—not very much affected. And last year we sowed on the 21st of May, when it was still less affected; but one reason, I think, why it withstood the attack last year, was owing to the extreme lateness of the season, and by the time the wheat was in blossom, and which is the only time the midge can deposit its eggs, the season had passed with the fly for the propagation of its species.

Early sown oats are always the best in quality and most in quantity; but later sowing gives more straw. Last year late sown oats were rusted, and those elements of nutrition, which should have formed the grain, were absorbed by the rust, and instead of producing developed grain, produced nothing but straw and the parasitic plant. We might as well expect perfect fruit from an apple tree girdled in August, as expect good grain from straw whose nutriment has been absorbed by rust.

I think if more attention were paid to the cultivation of peas, it would be a great benefit to our land as well as our pockets, because a crop of peas taken from the land does not rob it of its mineral constituents, essential to the growth of grain, as some other crops do. It is a law of the vegetable kingdom, "that all broad or large-leaved grains, plants, or trees, require less food from the earth, than the smaller leaved ones; because the large leaf has a greater surface exposed to the atmosphere, and consequently absorbs more carbonic acid and ammonia, the principal food of the vegetable kingdom; hence the advantage of sowing peas.

Formerly, I believe, early sown peas were more liable to be worm eaten, than later ones; this last year or so, there has not been much complaint, and I think early sowing might be resumed with profit, as they generally are a better sample, and therefore command a higher price in market.

To conclude, I would recommend a high cultivation and thick sowing. Aim at the cultivation of a less number of acres of wheat, and a larger yield. Above all, if your soils are deficient in lime, phosphoric acid, or magnesia, do not attempt to cultivate wheat until it is supplied in the shape of a manure, for however rich your land may be in other ingredients, if it is lacking in any of these, your crop will be deficient, and what is produced will be of little benefit as food, which is our aim in the cultivation of wheat.

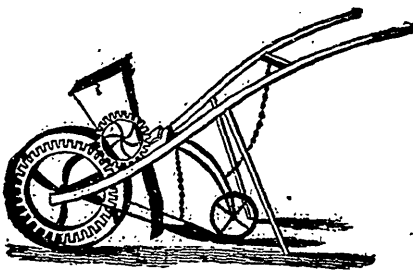
HOPE, March 21st, 1859.

JAS. E. CHAMPION.

SEED DRILL.

To the Editor of the Canadian Agriculturist.

SIR,—I beg through your excellent paper to call the attention of your readers, and the farmers of Canada generally, to the Seed Drill, of which I send the cut for insertion.



Having noted the increasing attention given of late years to the growth of roots, it has been my study to produce a drill which would be generally adapted to the sowing of every description of seeds. I finally decided on the one, of which the annexed cut is a representation, as the most universally applicable.

The drill is not unknown to practical farmers here and in the United States, although I have made some important additions, and I believe the first attempt at domestic manufacture of it.

I need not enter into a minute description of the machine. Suffice it to say that the large wheel in front rolls the ground, and gives motion to the smaller cog wheel, which, turning a brush inside the box, ejects the seed. The seed box is provided with a set

of slides with perforations adapted to the size of different seeds. The coulter or pipe makes the opening and deposits the seed, a metal drag covers it, and the small roller immediately behind completes the process. The drill is compact, and adapted for sowing either in drills or level rows, a gauge being provided to make the succeeding rows.

Finally, the machine is durable, having nothing but the simplest gearing. It is adapted to sowing, with equal success, every variety of field or garden seeds.

Taking into consideration its cheapness, durability, and practical usefulness, I believe the drill is a real desideratum to the country, and I have great pleasure in submitting it to the verdict of an intelligent community.

Yours faithfully,

JAMES GREIG.

Pickering, March 1859.

VETERINARY SCHOOL.

To the Editor of the Agriculturist.

TORONTO, March 20th, 1859.

SIR,—I am confident that the farmers of Canada will hail with satisfaction the prospect of the establishment, at no very distant period, of a Veterinary School in the Province.

In accordance with instructions from the Board of Agriculture, I have addressed a letter of enquiry to my old instructor, Professor Dick, of Edinburgh, which, I am sure, will receive his early and best attention, and that by the month of May I shall be prepared to submit to the Board a satisfactory reply.

Many reasons concur in urging upon us the immediate establishment of a scientific and practical school of Veterinary instruction, as an appendage to our Chair of Agriculture. No branch of agriculture has been so sadly neglected hitherto, as the important department of live stock, and I believe it to be a source of emolument well meriting attention. We are not to expect that every farmer will boast of a thoroughbred herd book stock, but it is always within his reach to command the services of a *pure male of the first class*, and I believe he will be a good deal astonished at the early improvement which may be thus effected through the common cows of the country, *judiciously selected*.

Few Townships, I believe, in Canada, will have any difficulty in providing a sober, intelligent, steady young man, who, (with very moderate pecuniary aid,) may attend the Veterinary School, finding employment in the forge, and who will ultimately, having obtained his diploma, return to settle in his own home, *thoroughly instructed in horse shoeing and in the treatment of all descriptions of live stock, whether under accident or disease*. There can be no doubt that the facility of obtaining trustworthy aid and advice will contribute most essentially to promote attention to live stock, and although every farmer cannot be expected to possess a *herd of thorough bred cattle*, I will venture to assure him, that he will be not a little surprized at the size and early maturity of the produce of his *common cows* which have been served by a *first class thorough bred bull*, if he inclines to adopt the Short-horn cross.

I beg to apologize for this intrusion, but I believe the communication will be acceptable to most of your readers.

I remain, Sir,

Your obedient servant,

ADAM FERGUSEON.

THE POTATO ROT.

To the Editor of the Agriculturist.

MR. EDITOR,—The undersigned begs most respectfully to draw the attention of farmers, gardeners, and others whom it may concern, to the important fact that, after seven years experience and study, he has found a complete cure for the disease commonly known as the potato rot.

It is a well known fact, that the above disease commences in the top of the potato

vines and in a few days works into the roots, which causes the aforesaid rot, and common sense tells us, that if we can find a preventive to keep the disease from attacking the tops of the vines the potatoes at the root will be comparatively safe from its effects, and to find this preventive was my daily study.

After trying various experiments from time to time, with no success, I at last hit upon the method of which this is an explanation, and I found that by treating the potatoes as herein mentioned the disease did not attack them.

Now, in proof of the arguments I hold forth, I beg to say that for several years I have sown the preventive on some of the potatoes in my field and left some of them in their natural state, and the result was that those over which I had sown the preventive were perfectly sound and dry, while the others of them, over which I had not sown the preventive, were rotten and diseased.

The preventive, of which I speak, is made as follows:—

Take 4 bushels of dry common house ashes,
2 bushels of roach lime, (slackened),
6 pounds of sulphur :

Mix and sow over the potatoes, before the dew rises in the morning, to an acre and one half of land.

This preventive must be sown between the 19th and 22nd of July, and for late potatoes from the 19th to the 23rd of August, and if attended to you will find it a perfect preventive.

I understand gardening and raising vegetables of all kinds, and I should have communicated the above to you before, but I wanted to make sure, before it was made public, that it would give satisfaction.

I beg of you to lay this communication before the Board of Agriculture as soon as possible, and if they see fit they can make it public, and if not I shall be satisfied, and if after experimenting on it they find it good they can make me what amends they see fit, as I have spent considerable time in working it out to satisfaction.

I remain, Sir,
Yours, &c.,

SAMUEL S. EDMONSON.

Unionville, March 14th, 1859.

BUCKWHEAT.

To the Editor of the Canadian Agriculturist.

Being desirous of growing a few acres of Buckwheat this year, I would feel obliged, if you, or some of your readers would answer the following questions, together with any hints which might prove useful, through the *Agriculturist*.

1st. Kind of land best adapted to its growth. 2nd. Quantity of seed per acre. 3rd. Productiveness. 4th. Time of sowing.

As it is a crop scarcely ever grown in this neighborhood, I have no doubt that an answer will prove acceptable to many of your readers, as well as

Your obedient Servant,
R.

Peterboro', March, 1859.

We subjoin a few remarks in reference to our Correspondent's enquiries, and shall be happy to receive communications on the subject by such of our readers as have had practical experience in the matter.

The soils best adapted to the culture of Buckwheat are such as are light and dry. Upon wet land, however rich, it will not generally do well, and heavy crops may frequently be got from light sandy lands, on which wheat and other grain seldom succeeds. The application of much rich manure is not to be recommended; its tendency would be to promote a luxuriant growth of straw,

rather than to increase the quantity and improve the quality of the seed. Buck wheat is a plant particularly suited to the lighter and poorer classes of soils. When sown broadcast, which is the usual practice, three or four pecks of seed per acre will be found ample; and if divided, considerably less will be sufficient. The crop is very various in amount; from twenty to thirty bushels of seed per acre, may be considered a liberal produce, but larger yields are sometimes obtained. Much will of course depend upon the character of the season and soil, and the mode of treatment. The time of sowing must, to some extent, be regulated by circumstances. The plant is exceedingly tender, and the seed should be fully ripened before the approach of the least frost. From the beginning to the middle of July in this latitude is a good time for sowing; the operation, however, may sometimes be deferred to a later period, particularly when the raising of seed is not an object, and the plant is to be ploughed under as green manure for fall wheat.

SHORT RAMBLES IN KENT AND SUSSEX.

(Continued from page 57.)

The country around Hastings is very picturesque, and abounds in material of great historical interest. The surface is beautifully undulating, and diversified by woods, corn fields, hop gardens, and green pastures; constituting a landscape characteristically English. Brighton is a much larger place, but the surrounding country is in point of richness and beauty much inferior to that of Hastings. The former is situated on the chalk formation, belonging to the range denominated the South Downs, so distinguished for the excellent and well known breed of sheep, which go by the same name. The specimens of this breed which I have seen in Canada are inferior both in fleece and carcase to the ordinary flocks in this country. The Ellmans, near Lewes, have for generations been distinguished breeders of this variety, and the Duke of Richmond, whose princely residence and estates lie further west in this county, has of late become a successful rival of the celebrated Jonas Webb, of Cambridgeshire. The prevailing rock for many miles round Hastings is a ferruginous sandstone, in which large quantities of iron ore of excellent quality were formerly worked; the remains of some of the old furnaces are yet to be seen. As wood became scarce, the iron manufacture gradually left this part of the country, and became established in Staffordshire, and other places, where coal abounds.

Hastings is one of the principal cinque ports, and its history goes back into the mythical ages of antiquity. Vestiges of a Roman encampment are discoverable on the hill eastward of the town, which appears to have been strongly fortified in those days. The remains of a large and very ancient castle on the western hill, are still carefully preserved: portions of the walls and a tower are yet standing, and the interior is converted into a pleasure garden, the view from this eminence, some five hundred feet perpendicularly above the sea, whose waves wash its base. A few miles to the west lies the rich grazing tract of Pevensey level, agriculturally distinguished for the large numbers of sheep and cattle which are fattened there, and in civil history for having been the landing place of William the Conqueror. Pevensey Castle is a noble old ruin; the date of its erection is unknown, though from the number of Roman bricks employed in it, most antiquarians are agreed to assign it to the Roman period. Its form is circular, enclosing seven acres, and it is supposed to be one of the greatest and most entire specimens of Roman building in Great Britain. It was in this castle Bishop Bayonne and his forces sustained a six weeks' siege, but for want of provisions were obliged to surrender to William Rufus. How suggestive and full of meaning are these monumental remains of old England!

On leaving the coast and rich alluvion of Pevensey, the pedestrian reaches the higher grounds, which are much diversified, and varying considerably in the productiveness of

the soil. After getting a few miles inland the country becomes more wooded, with smaller fields and high hedges. The villages are small and very rustic, the parish churches especially form most picturesque objects. Indeed an English rural landscape is essentially wanting without its appropriate church tower or spire. At length I reached Battle, a considerable market town about eight miles from Hastings, and celebrated in English history as the place where the fate of the great battle was decided between William of Normandy and King Harold, A. D. 1066. To commemorate this event, constituting a most important epoch in England's history, the Conqueror erected the year after the battle, where the action had raged the fiercest, the well known Abbey; the high altar, it is said, standing on the very spot where the dead body of Harold was found. It was dedicated to St. Martin, and filled with Benedictine Monks, from the Abbey of Marmontier in Normandy. Although portions of the Abbey have crumbled into ruins, and their foundations only can be traced, yet there are others in a good state of repair, forming a capacious family mansion, inhabited by the proprietor, Sir Godfrey Webster, Bt. Its ancient magnificence appears by the ruins of the cloisters, and in and by the largeness of the hall, kitchen, and gate house, the last being in an excellent state of preservation, and makes a very imposing appearance as you enter the Abbey from the town. The entire edifice is upwards of a mile in circumference, and the thick covering of the clustering ivy, over its ancient walls and turrets, gives it an air of solemn and impressive grandeur.

In the adjoining church of the Abbey, it is said upon reliable authority, the Conqueror offered up his sword and royal robe, which he wore on the day of his coronation. The monks kept them till their suppression, and used to shew them as great curiosities; likewise a table of the Norman gentry, who came into England with the Conqueror and shared with him the spoils. Below the Abbey, gently sloping southwards, I observed some pretty good pasture land, with some very fair specimens of Sussex cattle grazing, a hardy and useful breed. A low portion of these meadows, now forming a part of the town, still goes by the name of "the lake," formerly indeed, "Bloody Lake"; being almost included within the Abbey walls, the precise spot where the greatest effusion of blood took place. Further down are the extensive mills of the celebrated Lawrence gunpowder, in which a large business is still carried on. The soil in this district I consider to be generally second rate, and the farming similar; oxen are extensively employed in the ordinary work of the farm. There are but few of the improved modern breeds of cattle to be seen. In some of the neighboring parishes to the north, I observed belts of excellent soil, particularly productive in hops, a crop and upwards per acre, not being an uncommon crop. This neighborhood is still well wooded to the north, and at the time the great battle was fought, the surrounding country, into which the vanquished Britons sought a refuge from the enemy, was as dense a forest as any in Canada.

About three or four miles from Battle, is the noble seat of the Earl of Ashburnham, with its beautiful grounds and ancient church close to the mansion. In this church, it is said, were preserved in a chest, the shirt and drawers which King Charles had on when he was beheaded; likewise a watch which he gave to Mr. Ashburnham; and the sheet which was thrown over him after his execution; the touch of which was supposed to have the wonderful efficacy of curing the disease known as the King's evil. People in those days were imbued with the spirit of a large and trusting faith,—some remains of which can be traced in many of the nooks and corners of the more secluded portions of England at the present day. Among some of the farmers of the old school, there yet lingers the belief that the relative positions of the heavenly bodies,—particularly the moon,—have a decided influence on the results of farm operations, cattle, &c.

Upon the Iron or Hastings sands formation the soils are very various—passing through every gradation, from the stiffest clay to poor, and almost blowing sands. The greatest improvement ever attempted in the agriculture of this district has been of late years pretty extensively carried out, as I mentioned before, viz.: underdraining, and enlarging the fields, straightening the fences, &c. To such an extent has the removal of hedges and timber trees been carried of late on some estates, as to excite the fears of the lovers of the picturesque. Much however has yet to be done in this direction, before the full agricultural capabilities of the district can be developed; and sufficient woods, single trees, and green hedges will be left to maintain the richly varied attractions of the scenery of the Wealden.

From Battle I had a very pleasant walk through the rural parishes of Breda, Elwhurst, Bodiham and Sandhurst, in all of which the soil is very various,—passing through the different gradations from a stiff clay to a light sand,—loams, however, of good quality

are extensively distributed. The surface is beautifully undulating, or as it is termed on your side the Atlantic, rolling; and the agriculture seems to be clean and thorough; particularly hop-culture, which is quite equal to that of ordinary kitchen gardens. Indeed I thought in some instances that the farmers cultivated their hop-fields more highly and expensively than they did their gardens. In the numerous valleys of the district, through each of which meanders a stream of more or less capacity, there is always to be found a rich alluvium, generally in permanent pasture, and sustaining large numbers of sheep and cattle. Many of these lands have been in pasture from time immemorial, and unlike such lands in Canada, the grass becomes thicker and more nutritious as they get older; hence the reluctance felt by most landlords to allow the old rich pastures to be broken up, and used for the purposes of arable husbandry, as it takes many years to get them down again into as good grass as before. In these pastures, which are thick and soft, there are frequently to be found a dozen or more different species of permanent grasses. Some coming early and flowering in spring, while others will ripen in succession through the summer and autumn, so that an English pasture has always different kinds of grasses in perfection, which, with its moist and equable climate, renders raising stock so marked a characteristic of British agriculture, and so valuable a source of national wealth. I found, however, from conversation with many intelligent farmers, that only the best pastures were profitable to keep permanently, and that those of second rate quality on poorer or more ungenial soils, it would pay better to subject to the alternate husbandry; when grain is high the temptation to break up old pastures is very great, and it is no doubt profitable on such as are inferior. I passed the fine old ruin of Bodiham Castle, situated on the banks of the Rother, in a valley of surpassing beauty and fertility. The castle, which is surrounded by a moat, with a drawbridge on the north side, is kept in a good state of repair, and in the summer time is a point of considerable attraction to visitors of Hastings, and pic-nic parties from the surrounding country.

There are many nooks and corners of great interest and beauty which I have visited in the adjoining County of Kent, but want of space forbids particularizing. With the country around Maidstone I was highly delighted; anything approaching to the richness of the scenery and the garden-like cultivation I never saw before. This district has for centuries been designated "the garden of Kent," as Kent itself has been called "the garden of England." The soil is a limestone rock, belonging to the geological formation of the green sand; so called from the greenish particles of silica often observed in it. It is excellently adapted to agricultural purposes generally, and to the growth of all kinds of fruit suited to the climate. In looking over a few square miles around Maidstone, you may see thousands of acres in hops and fruit; the latter including apples, pears and cherries, with large quantities of gooseberries, currants, &c, which are of the finest quality. The filbert-nut is raised here in large quantities and of the best quality. It is cultivated in orchards in which are other kinds of fruit, the tree is not allowed to grow more than five or six feet high, the shoots being annually cut back and the centre kept clear, the whole assuming a sort of inverted bell-shape, which allows light and air freely to reach the clustering fruit. Some of this fruit-land will rent for forty or fifty pounds an acre per annum. In different parts of this country, I observed that fruit trees are sometimes planted with hops; so that when the latter are taken up, in the course of ten or a dozen years, the fruit trees will have attained considerable size, and will be coming into full bearing.

By the way I may mention that of the beautiful and extensive views which I have yet witnessed in old England, that on the top of Bluebell Hill, on the southern escarpment of the chalk ridge, between Maidstone and Chatham, really surpasses all. In one direction the whole extent of country bounded by the Nore and the Isle of Sheppey, with an extensive sea view, was before me, whilst from east to west could be traced the semi-circular direction of the chalk range, from Shakspear's cliff near Dover, to the bold promontory of Beechy Head in the vicinity of Brighton, thus bringing into one view the interesting valley of the Wealden, in which the late Dr. Mantere, and others, made such discoveries in fossil remains, as to throw a flood of light on the geological history of this singular formation. From Bluebell Hill there are unbroken views of land and sea,—with the Midway gracefully winding through the valley,—of fifty or sixty miles.

There is a very singular monument near this spot, called *Kil's Coty House*, consisting of four great stones, taken from the formation below, that is the green sand, or as it is provincially designated, Kentish Rag-stone. Two of them are firmly set in the ground, partly upright, forming two sides, and a third stands in the middle, the fourth,

which is the largest, is laid transversely over, and serves for a covering. The two side stones are about seven feet high, and are computed to weigh upwards of eight tons, while the top one, which is twelve feet long and upwards of nine feet wide weighs nearly eleven tons. These stones are quite rough, having no marks of workmanship on them. There have been many speculations as to their origin and significance. Of their great antiquity there can be no doubt. Some antiquarians affirm that Kit's Coty House was the tomb of Catigern, brother of Vertimer, King of the P-ritons, who was slain fighting hand to hand with Horsa, brother of Hengist, the Saxon, in a famous battle fought in this parish of Aylesford, in the year 455. Others again regard it as an altar connected with religious rites, and it is looked upon as of Druidical origin.

I may here mention that the information which I obtained while attending the classes of University College, particularly from the lectures of Professor Chapman in geology, and those of Dr. Wilson in history, I have found of much service to me here. Three or four distinct geological formations may be seen within a day's ride, each of which has its own characteristic agricultural management, and I felt much surprised to find so great a variety within such limited areas. While in roaming over the country one is every now and then coming in contact with castles, monasteries and churches, some of them now in ruins, which recall to one's remembrance certain pages of old England's history, which record the state of her earlier civilization and subsequent advancement. In Western Canada, and many of the States, one has to travel over immense tracts of country on similar parallels of latitude, in order to find much variety either agriculturally or pictorially; while in this comparatively little island of Britain, is to be found the geology of the world epitomized, and as a consequence all the diversities in the pursuits and habits of a teeming population naturally arising therefrom. I experienced as great if not greater change, in going from the manufacturing districts of Lancashire to those of the pastoral and agricultural of Kent and Sussex, as I did in coming from Canada to England. These British Islands, although of very limited superficial extent, from their geographical position, fertility and diversity of soil, inexhaustible useful minerals, combined with the indomitable energy, industry, and freedom of their people, are in every way qualified to form the vital centre of an empire upon which, it is our proud boast to say, the sun never sets.

G. W. B.

Agricultural Intelligence.

AGRICULTURE IN ENGLAND AND ON THE CONTINENT: A CONTRAST.

G. H. STURT, Esq., M.P., in addressing the members of the Sturminster Agricultural Society, said: Perhaps you will permit me to congratulate you upon the prosperous and flourishing condition of the Society—upon the numerous, respectable, and influential assembly I now see before me—and also upon the first rate exhibition of stock which we have all witnessed in yonder meadow. I must confess that I am a better judge of oxen on the table than in the field; but still I have seen quite enough to convince me that, in point of quality, some excellent specimens of cattle have been exhibited on this occasion. I should say that the exhibition was well nigh perfect, but we have been told that if we wish to make progress we must always be a little disappointed with what we have already accomplished. If one man, for instance, says, "I have done my best, and can do no more," and another, "I have done well but will try to do better," which of the two is most likely to succeed? Why, of course, the man who knows that as long as he has eyes to see, and ears to hear, it is never too late to learn. He is never too old to improve. One of our public writers has said that Time is represented with a scythe in one hand and an hourglass in the other, in order that by consulting the hourglass while we use the scythe, we may most thoroughly keep up with the improvements of each succeeding year. It is this which has enabled British agriculturists to fertilize the fens of Lincolnshire, to reclaim the sands of Norfolk, and even in this county of ours to make much of what was once a mere expanse of marsh and wood, contribute largely to that common stock upon which the strength and prosperity of the nation so much depend. My experience in agricultural pursuits is of an exceedingly limited character, and not being an occupier of the soil, I feel that there is great truth in the

remark which has somewhere been made, at a meeting of this kind, that an ounce of experience is worth more than a whole ton of advice. Nevertheless I feel that societies of this kind are made chiefly useful by each contributing to the common stock of information that which by his opportunities and abilities he is best fitted to impart. I have this year travelled considerably abroad for the benefit of my health, and having thereby had an opportunity of instituting a comparison between British and foreign systems of agriculture, I have no hesitation in saying—and I believe I shall be borne out by all great authorities—that within the last half century, British agriculture has made an enormous advance over that of foreign countries. In many important respects the foreigner is woefully behind us. The power of steam, as applied to agricultural pursuits, seems to be entirely unknown to him. I heard the old flail going by the road-side, and I believe that if a thrashing machine or steam plough were suddenly landed on any of his farms, he would regard it as the result of supernatural agency. I saw also that for the purpose of winnowing he resorts to the novel expedient of placing the corn on a large sheet, and leaving it to the four winds of Heaven to separate the chaff from the grain. But what struck me more, perhaps, than anything abroad was the extent to which female labour is employed. That may arise, in some degree, from the complicated state of society in foreign lands, and to the system of conscription—or its equivalent—by which men are taken from the farm at an early age and converted into soldiers. As a consequence the land is obliged to be cultivated by women, who, at the age of twenty, when they ought to be better looking than at any other period of their lives, appear to be between forty and fifty. There is no kind of labour which women do not perform in foreign lands. They weed, they hoe, they sow, they till the land, they load the carts and even drive them—such is their habitual occupation. Now I am glad to say that such labour is more the exception than the rule in this country. There are several other features of contrast between English and foreign agriculture, but it is unnecessary for me to waste your time in explaining them. Suffice it to say, that I am convinced that the English system is one which not only contributes in a larger degree to the wealth of the nation than that of foreign countries, but also to the social attainments of the people—to the maintenance of healthy relations between tenants and proprietors, and to that happy constitution of society which will ever make us the envy and admiration of the world. We are not, it is almost unnecessary to remind you, working alone, for I believe there are no fewer than four hundred Agricultural Societies and one hundred-and-fifty Farmers' Clubs in the United Kingdom. I say success to one and all of them, for we must recollect that in promoting the progress of agricultural improvement, we are not only lightening the national burden, and alleviating the distress of the poor, but that we are also engaged in one of the noblest and highest tasks that can be conceived—namely, that of improving the condition of all classes in this country.

THE INTRODUCTION OF STEAM-POWER INTO COMMON PRACTICE.

BY A PRACTICAL FARMER.

The chief topic now under discussion amongst the farming community, is the modern introduction of steam power into ordinary farm practice; and the advocates of the different systems of culture, or application of the power, are alike equally sanguine as to the important change and ultimate benefits. That this gigantic power will be so modified, so simplified in its general character, as to become applicable to the common routine of modern farm practice, I do not entertain a doubt—it is merely the work of time, and engineering, and mechanical skill.

I shall not attempt to compare the various systems of cultivation, or even allude to them further than to show what may be the provable alterations in the management of those farms where this new system will be introduced; and the power of steam is adopted in lieu of horse and manual power whenever it can be found practically beneficial. My own impression is, that the order of culture will be so surprisingly improved, that the enhanced produce it will achieve will be so considerable, that the inducements continually opening out before the steam-power farmer, of still greater results, will satisfy him; that he will be readily disposed to employ both more horse and more man-

ual labor, rather than displace either one or the other—in fact, he will be glad to retain every horse and man he now employs, in addition to the power of steam.

Take an arable farm of 350 acres, of medium quality and fair depth of soil—a useful loamy soil; begin your steam cultivation immediately after harvest, or rather during harvest, or so soon as the implement can be put to work after the crop is reaped. The whole breadth of the farm under corn-cropping would be wonderfully advantaged by being broken up and deeply cultivated during the closing months of autumn. The power of steam, in addition to the team labor, could alone achieve this grand desideratum. Here, then, is profitable employment for every horse and man, which I will call occasion number one.

Then comes the wheat seeding, and occasional labor in various ways. The farmer requires, first, seed-wheat; secondly, a customary lot for sale to replenish his purse after an expensive harvest, and to meet sundry payments: these must be provided for. The teams are therefore engaged in the several processes of business, while the steamer is thrashing the wheat. The team labor will consist of the harrowings and the scuffings of the deeply broken-up soil effected by the steam plough and cultivator, the cartage of collected weeds and rubbish, the manuring of the land intended for wheat; the preparation of the seed-bed for the wheat-sowing, and the subsequent completion of the wheat-seeding. At the same time also come in season the taking up of the potato crop, the securing the mangold crop, and all other root crops not generally grown; besides many collateral and necessary jobs, such as the marketing and the delivery of corn, the obtaining supplies of manure, the carting of field-stacks and stubble to the fold-yards for winter fodder and lairage: these and similar engagements employ much team labor. This I shall call occasion number two.

If there is during the year to be a dormant time, it will be during the severer part of the winter months; but it will be found that the new and novel courses of culture incident to the adoption of steam-power, will provide much extra work for the teams and laborers. For instance, all lands requiring subsoil drainage must be so drained; this of course involves cartage to a considerable extent. Then all lands having high-backed ridges will require levelling; all borders and ditch banks, &c., will require carting into the hollows and furrows; then all over-grown hedge-rows and rootings will have to be carefully dug close, to give room for the steam-ploughs, and prevent harm and breakage. Then comes the cartage of lime, chalk, and manures from fold-yard, where required. I also anticipate a large increase of cattle and sheep required for the consumption of the root and straw crops; these will during the winter months require a large amount of cartage: the roots from the fields to the fold-yards, the manure from the fold-yards to the fields. I also anticipate a large amount of field labor will be done by steam-power during the winter—such as trench-ploughing in fine weather, subsoil ploughing, and the ordinary ploughing of such lands as were unavoidably left over in the autumn, or were required for some specific use. Then there are the winter thrashings—the chaff-cuttings; for I am sanguine enough to think that most of our cattle fodder will be ultimately cut into chaff. Then the cake-breaking, turnip-cutting, pulpings of mangold, and other roots—all these, I consider, will be greatly extended, owing to the enhanced produce of the farm by deep steam culture; so that from one source of employment or other, the teams will not have much idle time during the winter.

But spring is coming in, and all attention must therefore be given to get in the spring crops well, and in good time. The steam-ploughs and cultivators are again at work; and as there is no treading by horses in the culture, the land will work freely, and is soon ready for seeding; this is put in by the horse teams with the greatest expedition, so that the spring crop has the whole spring to grow and luxuriate in. This is very different from the old course, which generally occupies the whole spring up to the month of May before all is completed. Moreover, the land has had the advantage of a thorough pulverization, which as it disintegrates the ammoniacal salts, &c., in the soil, adds much to its fertility, and produces the more abundant crops; and in a way which could not be accomplished by team labor. This is more particularly the case with the autumn-worked soils: the more they are cultivated in suitable weather, the more calculated are they for producing the most abundant crops of wheat. The spring seeding then I call occasion number three, when all team labor finds full employment.

We now come to the fallowing and the putting-in of fallow crops. The ways are various; but all concur in the view that fallows cannot in reason be too highly worked. We have broken them up in the autumn at great depth; some we have laid up for the winter in trenches. These we respectively desire to cultivate at great depth, and very

frequently in suitable weather: for this purpose all our power of steam and team power is required. The steam power we would employ to cultivate deeply; the team power in the top scarifyings, harrowings, rollings, and draggings, and subsequently in the manuring, ridging, and nicer work of seeding. In carrying on these various operations simultaneously, the whole strength of the farm will be more than requisite, and it will be found to yield a far more profitable return than the tardy slow process now generally followed, to the manifest waste of much manure, and much valuable time in its growth: besides, if a fallow crop, *i. e.*, mangolds, turnips, &c., is put in quickly and together, it will all grow up more steadily and safely. The fly has no power over a large field growing all at once; but after the old fashion these pests can find food at one side of the field which is first sown and fresh come up, and so feed their way to the other as it comes up, to their liking. The fallow-seeding then I call occasion number four.

Well, now come hay and corn harvests, and the clearing of the fold-yards and preparations for these harvests. The horse-hoings of the fallow crops, and the little necessary works and improvements generally left for completion between seeding and harvest, occupy the teams. I need not say that the harvest occupies all hands and all teams. This I shall call occasion number five.

Now, I think I have fairly shown that the adoption of steam-power will not necessarily displace much other labor; but if it is to be carried out in its full efficiency, I believe the farmer may best look upon it as a great and powerful auxiliary, and which he ought not to be slow in adopting. It will, he may rest assured, better execute his harvest work than it can be done by horses, and will always make him in a great measure independent of our fickle climate, so that he will never lose his season if he only acts judiciously.—*Mark Lane Express.*

THE FALL WHEAT.—From what we can learn, the fall crops in the County of Middlesex present a very promising appearance, and in no solitary instance do we hear of its being winter killed. The danger, however, is not yet past; still we hope for the best, and trust that, through Providence, we may be blessed with a bountiful return, to make amends for the past failures which have taken place in the grain crop throughout Canada.—*Prototype.*

Horticultural.

BRIEF HINTS ON SOWING AND RAISING CULINARY VEGETABLES.

[The following plain directions for cultivating the ordinary crops of the Kitchen Garden, taken from Mr. Fleming's Annual Catalogue of Agricultural and Garden Seeds, will be found useful to many of our readers.]

In selecting seeds, the first thing to be attended to is to choose the best to be had, and if possible obtain them from a responsible seedsman. Never buy those which are "cheap" because they cost less, for they will prove the "dearest" in the end.

Most kinds of seeds grow more freely if soaked in soft water from 12 to 48 hours before sowing. Seeds of a hard nature, such as blood-beet, mangel-wurzel, nasturtium, &c., often fail from want of attention to this circumstance. Indian Corn, Peas and numerous others soaked four hours in a tepid solution of chloride of lime and water, mixed in the proportion of one-fourth of an ounce of the lime to a gallon of water, and then sown in the ordinary way, have been known to throw out germs in twenty-four hours.

The seeds of common garden cress, immersed in oxygenated muriatic acid, will germinate in six hours; whereas, when immersed in water alone, they will not show signs of vegetation in less than thirty hours.

Kidney or *French Beans* may be planted any time in May in drills, two inches deep, the beans two inches from each other, the drills about 18 inches apart. If a regular succession is required, sow a few every few weeks, from the 1st of May to the 1st of July.

Broad or *Windsor Beans* do not succeed well in this climate, the summer heat coming on them before they are podded, which causes the blossoms to drop off. The

best soil to grow them is in a rich stiff clay, and on a northern border, shaded from the mid-day sun. Sow in drills two feet apart, the drills two inches deep, and the seeds three inches apart.

Blood Beet, Long and Turnip, may be sown in a good rich, deep soil, about the first week of May. Draw drills about a foot apart and one inch deep; sow moderately thick; when the plants are up strong, thin them out the distance of six inches from each other in the rows.

Brocoli and Cauliflower require a deep rich soil, of a clayey nature and highly manured. To produce early Cauliflower, or Brocoli, the seed ought to be sown in a hot-bed early in March. When the plants are quite strong and hardy they may be planted out in the garden about the middle of May. Plant in rows two feet square. The kinds that will do well in this climate are the Early London and French Cauliflower, Purple Cape, and Walcheren Brocoli.

Cabbage, both early and late, maybe sown any time in May. The best situation for raising the plants is a rich damp piece of ground, partially shaded. Seed sown in a situation of this kind is not so subject to be destroyed by the black flea. When the plants are strong they may be planted out in rows and managed the same as directed for Cauliflower. The best kinds for summer use are the Early York, Battersea, and Vannack; for winter use, the Drumhead, Large Bergen, and Flat Dutch.

Cucumbers may be sown in the open ground any time in May. They require a good rich soil. Sow in hills four feet apart, leaving only three plants on each hill. The cucumber and melon vines are liable to be attacked by a yellow fly or bug. Soot, charcoal dust, and soap suds, applied to the plants, will assist in keeping them off.

Musk and Water Melons may also be sown at the same time, taking care to sow the different kinds a good distance apart from each other, as they are apt to mix. Plant in hills, six feet square, leaving only three plants on each hill. When the plants have grown about six inches, stop or pinch out the top of the leading shoots; which will make the plants throw out lateral shoots, on which you may expect to have fruit.

Carrots.—The most suitable ground for growing Carrots is a deep rich soil, that has been well manured the previous year. Sow any time in May, in drills one foot apart and one inch deep. When the Carrots are up, thin them out, four inches apart, and keep the ground free from weeds. The kinds that are generally sown in gardens are the Early Horn, Long Orange, and Red Surrey; for field culture the White Belgian and Altringham. The produce of one acre of field Carrots, when properly cultivated may be rated at from 600 to 800 bushels. In cultivating them on the field system, the drills ought to be two feet apart, and the Carrots thinned out, at least twelve inches asunder.

Celery.—This vegetable is much esteemed as a salad. It requires considerable attention, to grow it to perfection. To have early celery the seed requires to be sown in a hot-bed in the month of March; for winter celery, the seed may be sown any time before the middle of May. Sow on a small bed of rich fine earth—beat the bed down with the back of the spade; sift a little fine earth over the seed; shade the bed with a mat or board until the plants begin to appear. Celery plants ought to be picked out into a nursery-bed as soon as they are two or three inches high. Cut their roots and top a little before planting; water them well, and shade them from the sun until they begin to grow. Let them remain in the nursery bed about one month, after which they will be fit to transplant into the trenches. The best sort of soil to grow Celery in is deep rich loam, and in an open part of the garden. Mark out the trenches a foot wide and three feet between each trench. Dig the trenches one foot deep, laying the earth equally on each side. Put three or four inches deep of well-rotted manure into the bottom of each trench; put a little of the surface soil over the manure; dig it well up, incorporating the soil well with the manure; dress the plants by cutting off the long leaves and the ends of the roots. Plant in single rows along the centre of each trench, allowing six inches between each plant. Water them well, and shade them from the sun until the plants begin to grow. In earthing up Celery great care should be taken not to cover the heart of the plant.

Lettuce is easily raised from seed, which may be sown from the first of April to the end of June. If good headed Lettuce is wanted, the plants should be transplanted out on a rich piece of ground in drills, 12 inches apart, and six inches in the drill. The Malta, Green Coss, and Victoria Cabbage, are the most suitable kinds to sow, as they head without tying up.

Onions.—The yellow and large red are the best for a general crop. The ground for

Onions should be well prepared, by digging in plenty of well-rotted manure. The seed may be sown from the middle of April to the middle of May. Sow in drills one inch deep and twelve inches apart. When the young Onions are up, thin them out to the distance of three inches apart.

Parsnips require a deep rich soil. Sow in drills, one inch deep, and the drills 15 inches apart. Cultivate the same as directed for Carrots.

Radishes should not be sown in the open air sooner than the middle of May. They require a deep, sandy soil, that has been well cultivated and manured the previous year.

Rhubarb is a perennial plant and may be raised from seed. Sow about the middle of May. When the plants are one year old, they should be transplanted into very deep rich soil, in rows three feet apart. The foot stalks of the leaves should not be cut until the plants are two years old.

Salsify is an excellent vegetable. The roots, when properly cooked, resemble oysters in flavor. The seed may be sown from the first of April to the middle of May. They require the same kind of soil and cultivation as directed for Carrots.

Spinach is a useful vegetable, and very hardy. Seed sown in the month of September will stand over the winter, and come in for early greens in the spring. For summer use, seed of a round Spinach may be sown from May to July. It requires a rich soil. Sow in drills, one foot apart.

Tomatoes are much cultivated for their fruit. To have them early, the seed should be sown in a hot-bed, early in March. When the plants are a good size, and Spring frosts are over, plant them out in the garden; let the plants be four feet apart. Plant on a south border near a fence, and they will produce abundance of fruit.

Turnips.—One of the best sorts for the garden is the Early White Stone, which may be sown from the middle of May to the end of August. Sow in drills, fifteen inches apart, and thin out the plant to eight inches asunder. Field Turnips, such as Swedish, Aberdeen, Yellow, &c., may be sown in drills, two feet apart, about the middle of May. White Globe, and Flat Norfolk, will do to sow about the middle of July. Turnips are very apt to be eaten by the black flea. A good remedy is to steep the seed one night in train oil. This will greatly promote germination, and the growth of the young plants.

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GARDEN HINTS FOR APRIL.

[We take the following from an excellent periodical, entitled "*The Gardener's Monthly*;" ably conducted by Mr. Thomas Meehan, of Philadelphia. Some of the directions will apply a little later in Canada. We would strongly recommend the *Gardener's Monthly* to such of our readers as require a reliable guide, neatly printed and illustrated, with good, sound, original matter. Mr. James Fleming, Seedsman, of this city, is an agent for the work,—only \$1 per annum.]

FLOWER GARDEN.

The most active period of the year in this department has now arrived, and much of the success of the season will depend on how the work is performed now. In preparing beds for flowers, it is of first importance that the soil should be deep. It should be dug up or subsoiled to the depth of eighteen inches at least, and a fair dressing of enriching material given them. The best kind of soil to grow flowers is in the top soil—say two inches in depth—of an old piece of woodland. This may be mixed at the rate of about one half with the natural soil. Where this cannot be had, some very rotten stable-manure or the old soils from the surface of a common will do. It is not well to have the soil very rich, or more leaves than flowers will result.

As soon as all danger of frost is over, the border plants will have to be planted out. They should not be taken at once out of the greenhouse to the open

ground. It is better to set them in a sheltered spot in their pots for a few days, until the leaves have become somewhat hardened. Before turning them out of their pots to the flower-beds, water well *first*; the soil must be pressed firmly against the balls of the roots, as they are planted in the ground.

Where bedding-plants have to be bought, it is not good policy to choose tall, delicate plants, that have been forced early into growth. Select such as are green, dense, and bushy, and have vigorous looking foliage. Fine leaves, at this season, is a greater sign of health than fine flowers.

As soon as the grass on the lawns commences to grow, if it has had a top-dressing of manure in the winter, whatever straw may be on should at once be cleanly raked off, and as soon as it is long enough to *take* the edge of the scythe, it should be mowed. It is of first importance that the first mowing should be done as early as possible in the season. If left to grow long before the first cutting, the leaves get yellow at the base, and at every cutting after the yellowness appears, totally destroying the fine green color which gives the lawn its chief attractions. Where a first-rate mowing is desired, it is best to roll the grass the day before cutting. The grass is then pressed all one way, and cut evenly, and any dirt or stones pressed beneath the surface that would otherwise take the edge off the scythe. A good lawn-mower keeps his scythe very sharp. Some grind a little before each regular set-to at mowing. Those who are not accustomed to mowing lawns, should take but a few inches in width at a time, so as not to "score." With a little thought and judgment, any field-mower can soon become a good lawn-hand. A sharp scythe is the chief element of success.

In planting out for summer show, climbing vines must not be forgotten. Screens can be formed of them, besides many beautiful and fanciful objects, and then their training over strings, wires and arbors, afford much pleasant and interesting occupation for the ladies.

The sowing of hardier annuals should be finished as soon as possible, according to directions furnished last month. The tender kinds, such as Balsams, Globe Amaranthus or Bachelor's Buttons, Thunbergias, &c., should be put in about the end of the month. There is now pretty well known an Orange Globe Amaranthus (*Gomphren* Hoveyi*), introduced several seasons ago from Mexico by Mr. Hovey, of Boston, and in an open sunny spot, is really a very beautiful kind to grow. The Cypress vine, both white and crimson, is rather impatient of cold, and had better not be sown till the end of the month. Gladioluses are becoming a very popular summer-blooming bulb, as Hyacinths are for winter and spring. They are very beautiful, and thrive in any rich sandy soil. They also may be planted the end of the month. The same may be said of Tuberoses. Do not forget when the autumn comes, to take up the roots, as they are injured by the first frosts.

I prefer the present and May to any other for trimming box-edgings. They look much better when cut to a conical form, than when squared at the top, and besides, are much less liable to die out in patches.

This is the best part of the spring, on the whole, to plant evergreens. For immediate effect, they are usually planted much thicker than they are ultimately able to occupy with any credit to themselves. In planting, take care to plant those that will finally remain first, and fill in the temporary ones after. It is not uncommon to see trees—a Norman Spruce, for instance, that will in a few years possess a diameter of thirty feet, planted perhaps but six or eight feet from the edge of a walk, and no other near to stay when the one so inconveniently close has to be removed.

Deciduous trees and shrubs may still be planted,—the longer, however, they are delayed till the middle of May, the more severely they should be pruned at planting. If this be attended to, there is no risk, if even the tree has burst nearly fully into leaf.

FRUIT GARDEN.

Grafting can be continued till the buds of the trees are nearly pushed into leaf. Sometimes, from a pressure of other work, some valuable scions have been left on hand too late to work. It may be interesting to know, that if such scions are put into the ground much the same as if they were cuttings, they will keep good

for six weeks or two months, by which time the bark will run freely, when the scions may be treated as buds, and will succeed just as well as buds taken from young summer shoots.

In planting dwarf Pears, it is very important to have them on a spot that has a moist subsoil, either naturally, or made so by subsoiling or mixing some material with the soil that will give out moisture in dry weather. Trees already planted on a dry gravelly subsoil, should have a circle dug out two feet deep and two or three feet from the tree. This should be filled up with well-enriched soil. If the dwarf Pear does not grow freely, it is a sign that something is wrong. It should at once be severely pruned, so as to aid in producing a vigorous growth. The dwarf Pear, and many other kinds of fruit trees, are often liable to the attacks of the scale, a white insect, which gives to the tree a powdered appearance. These may be readily destroyed before the buds burst, by syringing the tree with water heated to 160°.

Strawberry-beds are very frequently made at this season, and though they will not bear fruit the same year, are much more certain to grow, and will produce a much better crop next year than when left till next August. Though it is a very common recommendation, we do not value a highly-manured soil. It should be well trenched or subsoiled; this we consider of great value. In rich soils there is too much danger of having more leaves than fruit.

VEGETABLE GARDEN.

Those who look with peculiar affection on the "sour kraut" barrel, must look out at once, if not already sown, for good cabbage seed. The Drumhead is the kind most generally used; but those in the secret give a knowing wink when the Savoy is named in that connection. Purple Cape Brocoli, Autumn Cauliflower, and Red Dutch Cabbage, by those who "love" pickles, must also be sown. After all the receipts given for preserving these seeds from the Turnip fly, the best plan is to sow the seeds in a frame or box with high sides. The "little jumper" does not seem to like to risk his limbs by a high leap, or his nasal organs may not be good—or "what the eye does not see the heart does not grieve for," or for some other reason, he leaves them alone under such circumstances. Celery, with most families, is an important crop, and should be sown about this period. A very rich moist spot, that will be shaded from the mid-day April sun, should be chosen; or a box in a frame by those who have the convenience.

Tomatoes, Egg-plants, Peppers, and similar plants, every gardener tries to get as forward as possible. South of Philadelphia they may be out unprotected by the middle of the month. Here we seldom risk them before May. The same may be said of Sugar Corn, dwarf and Lima Beans, Okra, Squash, Cucumber, and Melons. No "time" can be set for growing these, except not to sow till the ground has become warm. A few warm days often makes us "feel like gardening," but unless the ground is warmed, the seeds will be very likely to rot. Here we sow about the first week in May. Onions for seed should be sown in rich soil, but very thickly, so as not to become larger than marbles. Very far North, where they perfect in one year, this advice is, of course, not intended. A crop of Carrots should be sown the end of April. In moist seasons the earlier crops are liable to run to seed.

Much has been written about growing Potatoes, and the plan of covering the sets with straw, leaves, or brushwood, before covering slightly with soil, is quite popular. Early York Cabbage sown last month, or kept over the winter, must now be planted out where there is a demand for summer greens; and to meet this want, another crop of Spinach may yet be sown.

Few things mark a well-kept garden better than an abundance of all kinds of herbs. Now is the time to make the beds. Sage, Thyme, and Lavender, grow from slips, which may be set in now precisely as if an edging of box were to be made of them. They grow very easily. Basil and Sweet Marjoram must be sown in a rich warm border. Salsify and Scorzonera like a damp rich soil.

TREE LABELS.—The correct labelling of trees, shrubs, flowers, &c., cultivated in our orchards, shrubberies, and gardens, is a matter of much practical importance,

especially with reference to distinctness and durability. Many plans have been adopted with more or less success. A correspondent of the *Country Gentleman*, speaking from personal experience, recommends *sheet zinc*, fastened to the tree by copper wire, the name of the variety being written thereon by a black lead pencil. A pencil is far better and more durable than ink. Old zinc, the surface of which has been roughened by oxidation, is better than new; but in case the former is not readily procurable the application of strong acetic acid (vinegar) to the surface of new zinc will speedily effect the desired purpose.

Miscellaneous.

THE COTTON-GROWING CAPABILITIES OF SOUTH AFRICA.

On Monday morning, a meeting was held in the Council Chamber of the Town Hall, to hear a statement from the Lord Bishop of Cape Town with respect to the commercial resources of South Africa. There were about 200 gentlemen present, including deputations from the chambers of commerce of Bradford and Leeds.

The Bishop of Cape Town said he believed that Englishmen had been planted on the western coast of Africa, and at the southern extremity, in order that we might diffuse Christianity throughout that land, and raise up one of the most degraded countries in the world to take rank amongst the civilised nations of the earth. In the Cape Colony there was a population of 300,000 or 400,000 persons, but the country, which was 600 miles in length and 400 in breadth, would accommodate as many millions of population as there were now hundreds of thousands. The inhabitants were chiefly engaged as a pastoral people. The chief production of the country was wool. Year by year the produce was increasing, and last year the exports amounted to about £1,000,000. In the western parts of the colony wine was produced of good quality, and no doubt large quantities of it had been sold in this country as port and sherry. Hides, skins, and ivory were imported from the north, and exported from the Cape. The climate was one of the finest in the world, and it was in the south in the same latitude that Gibraltar was in the north. There was a want of internal communication, and the country was not favourable for the construction of railways, although a line was being made from Table Bay through the vine districts, and another was in contemplation from Port Elizabeth to Graham's Town, a distance of eighty or ninety miles. In the Cape Colony there was no cotton culture carried on. He considered that British Kaffraria was a fertile country, and it was now being given out to farmers in small parcels with a view to people the country. Kaffraria Proper was one of the finest countries of the world, and one of the rivers by which it was intersected was finer than the Orange River. No country offered so fine a field for emigrants. Along the coast of Kaffraria Proper he had seen the cotton plant growing, and if we could succeed in civilising the country we might have cotton grown there to a considerable extent. Natal, which was populated with about 120,000 loyal Zulus, was a cotton-growing country; but the cultivation of the sugar plant was likely to thrust out the cotton culture. In that portion of country under King Pandar there was a large heathen population, and it was his intention to try to establish a missionary station there. The Griquas was not a cotton-growing country, but all along the banks of the Zambesi, as Dr. Livingstone had stated, the country abounded in the cotton plant. Dr. Livingstone had also found the coffee plant, the sugar cane, and the castor oil plant there; and the resources of the country were capable of great development. His lordship then described the plans he had in view for the extension of Christianity and civilization to the interior of Africa. Fifty of the sons of the leading chiefs from the interior were now being educated at Cape Town at the expense of the governor, Sir George Grey, and one object he had in view was to raise funds to found a permanent institution to educate natives. Miss Burdett-Coutts had given £2,500 for this purpose, £1,500 of which was to be devoted to building purposes; and the Society for Promoting Christian Knowledge had given a donation of £500 towards establishing the institution. The cost of supporting and educating the pupils in this institution was £16 per annum each, and if fifty persons in England would each adopt a child, he should feel he had established an institution which would be of the very greatest advantage to Africa. (Applause.) In answer to questions put to him,

the bishop said the place where he had seen cotton growing abundantly, and dropping on the ground for want of gathering, was inhabited by heathen, and was beyond our dominions. The children who were now under education at Cape Town made rapid progress in their studies, and were wonderfully intelligent. Dr. Livingstone spoke of flax being grown in the interior, but in the Cape Colony there was nothing of the kind known.—*Manchester Examiner*.

 AN APRIL DAY.

When the warm sun, that brings
 Seed-time and harvest, has returned again,
 'Tis sweet to visit the still wood, where springs
 The first flower of the plain.

I love the season well,
 When forest glades are teeming with bright forms,
 Nor dark and many-folded clouds foretell
 The coming-on of storms.

From the earth's loosen'd mould
 The sapling draws its sustenance and thrives;
 Though stricken to the heart with winter's cold,
 The drooping tree revives.

The softly-warbled song
 Comes from the pleasant woods, and coloured wings
 Glance quick in the bright sun, that moves along
 The forest openings.

When the bright sunset fills
 The silver woods with light, and the green slope throws
 Its shadows in the hollows of the hills,
 And wide the upland glows.

And, when the eve is born,
 In the blue lake the sky, o'er reaching far
 Is hollowed out, and the moon dips her horn,
 And twinkles many a star.

Inverted in the tide,
 Stand the gray rocks, and trembling shadows throw,
 And the fair trees look over, side by side,
 And see themselves below.

Sweet April!—many a thought
 Is wedded unto thee, as hearts are wed;
 Nor shall they fail, till, to its autumn brought,
 Life's golden fruit is shed.

LONGFELLOW.

COLIC IN SHEEP.—Sheep kept on dry food during our long winters, even when turnips or other kinds of roots are given them, will occasionally be subjected to the colic, a disease which unless timely checked, will often prove fatal. The following remedy, when administered in time, seldom fails:—

Mix together ten drops of laudanum, ten drops of essence of pepperment, one tea-spoonful of the spirits of turpentine, and one table-spoonful of sweet oil. Give this in one dose, and if relief is not afforded in the course of a few hours, repeat the dose.

CONDITION POWDERS.—The following powders will be found excellent for horses kept on dry food:—Take crocus of antimony, finely levigated; nitre, cream of tartar, and flour of sulphur, of each four ounces: Powder and mix them well together for use.

One table-spoonful to be given every night and morning, in a mash of scalded bran, or a feed of oats, moistened with water, that the powders may adhere thereto.

OPENING FEVER BALL.—Take, calomel, camphor, and Turkey opium, of each one drachm; Barbadoes aloes, three drachms; ginger, two drachms. Make them into a ball with palm oil, and give it to the horse, and the following drink two or three hours after.

PURGING DRINK FOR A HORSE.—Take, Lenitive electuary, four ounces; cream of tartar, one ounce; ginger, in powder, half an ounce; castor oil, eight ounces. Mix in a quart of gruel.

A POWERFUL MIXTURE FOR FEVERS IN HORSES.—Take, emetic tartar, one ounce; calcined antimony, two ounces; calcined hartshorn, one ounce. Mix and grind them in a mortar to a fine powder, and then put them in a bottle for use. Two drachms of these powders are a proper dose for a horse, given twice or three times a day in a pint of warm gruel.

Editorial Notices, &c.

WINTER WHEAT.—From almost all parts of the Province the reports are favorable of the growing wheat, which is represented as looking particularly strong and promising, except in low and wet lands, on which it always more or less necessarily suffers. The late cold winds and frosty nights checked its growth and caused it to assume a brown appearance, but upon sound land, in good heart, no injury worth mentioning has been sustained. Never perhaps was a harvest looked forward to with so much anxiety in this country, as the one which now promises so well, and all must devoutly hope that those promises may be ultimately realized. Good crops at moderate prices would at once turn the tide of affairs in the right direction, and form an epoch in our commercial history, from which we might reasonably expect the commencement of a career of prosperity. It is true that the wheat may be as the season advances, exposed to the attacks of the midge and rust, but we should do well to bear in mind that the autumn sown wheat was never put in earlier or in better condition—that it has become strong rooted, and now (April 14th,) almost beyond all risks of becoming heaved out by frost. We get similar accounts generally from the Northern and Western States. The season has been pretty favorable for making maple sugar, of which large quantities will be obtained in some parts of the Province. The present wet and stormy weather keeps back spring work; the ploughing has been extensively performed, but as yet little sowing. Better to wait for dryness and warmth.

BROCKVILLE HORTICULTURAL SOCIETY.—We are in receipt of the Premium List of this useful and flourishing Society, for the current year. The first Exhibition will take place on the 30th of June, and the second some time in September. The list embraces the usual varieties in the Floricultural, Fruit and Vegetable Departments; and we hope the Directors will see that the Society is as well represented at the Provincial Show in Kingston, as it was last year in Toronto.

HOW TO HARDEN SOAP.—We publish the following with a view of meeting the wants of a Subscriber:—

Soft soap may be hardened by adding salt, in the proportion of one pint of the latter to three gallons of the former, boil the mixture five or ten minutes, and put it into a shallow vessel to cool. Next day, cut out the soap, melt it, and cool it again; this takes out all the ley, and keeps it from shrinking when dried. The fat should be prepared previous to soap-making, by boiling it in clear water and carefully straining it. Keep it in a dry place, when it will gradually harden, and in a short time will be fit for use.

SEEDS.—Mr. Simmers, general seedsmen, offers a variety of garden and field seeds, suitable to the season. His advertisement appears on the cover of this issue.