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THE BRITISH AMERICAN



CULTIVATOR.

"AGRICULTURE NOT ONLY GIVES RICHES TO A NATION, BUT THE ONLY RICHES SHE CAN CALL HER OWN."—Dr. Johnson.

VOL. 2.

TORONTO, JULY, 1843.

No. 7.



THE CULTIVATOR.

"Agriculture is the great art which every government ought to protect, every proprietor of lands to practice, and every inquirer into nature improve."—Dr. Johnson

TORONTO, JULY, 1843.

THE WHEAT CROPS.

In some sections of the country, the wheat plants have been injured by the mildew, and smut, but on the whole, the yield is much greater than was anticipated, at the date of the issue of the June number.

Prices will range higher the present season than the last. The best evidence that we have for this prediction is, that the crops in the United States are short of their average yield and that an increased demand for breadstuffs and provisions of every description have been created in that country, owing to the changes lately effected in their tariff laws. It is confidently asserted by men of sound judgment and long experience, that the United States will have but a trifling surplus of wheat the present season. Our readers, of course, are aware that the present American tariff approaches nearly to a prohibition of foreign manufactured goods, and consequently the manufacturing interests of that nation are in a most flourishing condition, which is rapidly creating a profitable home market for every description of agricultural produce.

To give our readers some idea of the magnitude of the manufactures of the Atlantic States, we would only mention a single instance, which we quote from a private letter in the *Liverpool Times*, written by an English gentleman, who had travelled much in Russia. "Russia has sent an order to the United States for 500,000 dollars worth of machinery, which has been supplied, and they are now making an almost unlimited quantity. The American and Russian governments are on the very best terms; and they are carrying on a trade with each other mutually beneficial."

The richest and most populous sections of the United States will turn their attention to manufactures, which as we before remarked will provide a permanent and wholesome market for the produce of the soil of that country. This being the case, there need be but little danger apprehended of prices ranging so low, that the American farmer will not be remunerated for the labour and capital invested in agriculture. This will benefit the Canadian farmer, in the same way, that an increased American duty on foreign woollen cloths has benefited the Canadian woollen manufacturer.

A private correspondent of ours, who is a respectable Somersetshire farmer, writes us as follows, under date June 9.—"We have had a continuance of rain, for the last six weeks or more, and within the last week it has been so heavy that all the lowlands in the country are under water, and thousands of acres of wheat, barley, and potatoes are totally destroyed."

The prices in England, as speculators in corn would say, are looking up, and the general opinion is, that they will range within a few months, much higher than

at any other period during the last eighteen months. Much of this opinion, of course, is a matter of conjecture, but we feel no scruples in asserting that better times are at hand, and it only requires a little exertion on the part of Canadians, to make this the most desirable colony, for a home for the emigrant that is under the sway of the British Empire.

We would therefore advise our friends of the "plough," to keep up their courage, and endeavour as far as is practicable to become master of their respectable calling,—all we require is, to become a prosperous and happy people, is that we throw the past into oblivion, and unite in our strength, and fortify our noble country by cultivating a spirit of brotherly love, and endeavour by every legitimate means, to improve the inexhaustible resources, with which an all-wise Providence has blessed us.

A few days since we strolled through the western suburbs of this city, with a view of investigating the progress of vegetation in that quarter. At the head of the splendid Avenue, is situated the very celebrated "Spedina Gardens," which contain upwards of four acres,—these gardens reflect credit upon their enterprising proprietor, Mr. Mansfield, who, we understood was formerly employed in the West Indies by the London Botanical and Horticultural Society, and subsequently by his late Excellency Sir John Colborne. Among many things worthy of notice, and eulogy, we would for the present only mention Mr. Mansfield's very choice and rare selection of the most modern cultivated Gooseberries. We noticed six or five distinct varieties, all loaded to the ground with ripe fruit,—some of which was nearly as large as a medium size walnut. Any person who may be desirous of purchasing a warrantable assortment of this delicious fruit, would do well to call and examine Mr. Mansfield's establishment.

SUMMER FALLOW.

As the season is far advanced, it will be unnecessary to go into detail in the arrangement of making naked summer fallows—we shall therefore merely confine ourselves to a few appropriate hints which we trust will be read with interest and profit by such of our readers as may be engaged in the cultivation of wheat.

Barn yard manure should be employed on land that is characterized for its deep vegetable mould, after it has passed through the stage of fermentation and decomposition;—to attain this point, it will be necessary to draw out the manure in the early part of the season, and make it in large heaps in the fields, which should be covered with a coating of surface soil. This trouble will be unnecessary on light sandy lands or those chiefly composed of calcareous clays.—The best criterion to judge whether the manure should have passed the stage of fermentation before it were applied to the soil or after, will be found in the crop itself. If the crop be subject to lodge and give evidence of an over rapid growth, so that the sap-vessels burst and the exudation cause premature decay or rust, then in that case, the manure should be thoroughly fermented and rotted so that it could only be spread with a shovel. Lime and mail, if attainable, would be productive of benefit on such soils—but if the crop be subject to look a pale sickly colour during the spring and summer months, and if it seldom suffers from rapid vegetation, then the manure may safely be applied in its crude state. From a few experiments that lately came under our notice, we are almost constrained to be a favorite to the system of applying barn yard manure on the surface after the seed were sown and covered—this might be done with two-wheeled cars without injuring the crops. A few of our acquaintances have tried this plan, and while their neighbours will have scarcely their bread, they anticipate at least forty bushels per acre from the ground they have thus prepared. We highly recommend the wheat-growers to try this experiment—a single square rod will be a sufficient trial at first. The coarser the manure the better for the trial.

The practice of drilling, has its admirers, and we are among the number who are of the opinion that the product of the wheat crop might be nearly doubled on most soils, by the introduction of drilling machines. To make the system of drilling safe and practicable, the seed should be deposited in rows full twelve inches apart, and the plants should be horse-hoed at least twice during the month of May. A man and horse will hoe two acres per day. This plan of course will be denounced by most of our readers, but notwithstanding the day is not far distant when the rays of light will have sufficient influence over their dark understandings, that they will be constrained to acknowledge the truth of the above system.

The Drilling Machine advertised by Mr. Wallis, of Yorkville, in the last few numbers of the *Cultivator*, is calculated to do the work in a most perfect manner—a ribbing or double mould board plough will be found to do the work in a very accurate manner, and a good Scotch plough will also be found to answer an excellent substitute for the ribbing plough. If the latter be used, the land should be previously laid up into ridges and harrowed down, and then the furrows are to be made at least fourteen inches asunder on rich deep soils, and about

eleven inches on tenacious clays and light sandy lands. The plough should be held towards the land side, and each furrow should form a separate and distinct ridge. The seed should be sown brought east, and by a single harrowing lengthways it will be found to come up nearly as regularly as if a proper drilling machine were used. This though an imperfect plan, will give the Canadian farmer an idea of the utility of introducing drilling machines. We strenuously urge upon the intelligent farmer to make an experiment as above, and give us the result when the proper time arrives.

Some of our readers would no doubt accuse us of being wild and visionary in our notions on farming, were we to assert that a system might be practiced which would prove an excellent substitute for naked summer fallows, by which the old system might be safely dispensed with, notwithstanding the opposition we may meet with by narrow-minded men in the various improvements which we shall in future recommend and practice, we shall endeavor to convince them before we have closed our career as a journalist, that book-farming, as such instruction as we disseminate, is vulgarly called, is nothing more or less than facts, plain and practicably communicated for the benefit of all who may choose to favor us with a reading—and, that we are not selfishly influenced in disseminating these facts.

The cultivation of pease as we have elsewhere stated is a subject that shall receive full attention by us. By a superior mode of managing land for that crop, it will be found to be one of the best preparatory crops for wheat, as it will leave the ground in a perfect clean state—and may be pulled or harvested in the early part of August.

Clover ley, would be an excellent substitute for naked summer fallows, providing it were free from wild grasses, and the second crop of clover ploughed in with a deep, well proportioned furrow, each furrow slice should be well lapped on its fellow, and laid up as nearly as possible at an angle of inclination of about forty-five degrees with the horizon, which will give the harrows an opportunity of taking hold of the land, by which the interstices will be completely filled up with finely pulverised soil. Previous to sowing the seed and harrowing, we would recommend that the furrow should be compressed with a very simple implement, something after the character of a roller made in such a manner that it will press a certain number of furrow. This implement can be made by almost any carpenter,—the best farmers in England use cast iron presses, each weighing a ton and a half.

Every Canadian farmer feels fully the importance of any change, which would be calculated to fill his coffers with dollars, and at the same time lessen his expense for manual labour. One of the many means of attaining so desirable an object, has been with us a subject of attentive investigation during the last few years. We shall at present only advert to it, as it is highly probably but few will be prepared to take advantage of it to any extent, the present season. Supposing a farmer had an early variety of pease, which would on an average of seasons be ready for harvesting by the fifteenth of July, and that the whole of the land, which he intended for wheat were sown with those pease and harvested by a herd of swine,—the result of such a plan would be that the land would be as clean from weeds as if it had under-

gone a regular summer fallowing, providing the seed were sown at the rate of fourteen pecks per acre,—and the porkers would be two-thirds fattened by the time the farmer were ready to plough the seed furrow. No danger need be apprehended from waste of crop, as the hogs would effectually harvest the whole. To carry out this system completely a number of cows should be kept on the farm, so that the swine would be in a high condition from the refuse of the dairy, previous to entering on the pea crop, and when a number of acres are treated as the above a portion might be harvested, by a very cheap process,—a single horse, attached to a hay-rake, with the aid of one man, will pull at least five acres of pease per day—these may be thrashed at leisure, ground and mixed with steamed potatoes to finish the fattening process of the swine.

There are two variety of field pease in the country which would ripen on an average seasons by the middle of July, both of which are very prolific. We sowed one of these varieties the present season, on the tenth of May, and they were ready for boiling by the first of July. Three years since we sowed the same variety, harvested them, sowed them again, and they were ripe in the first week in October. The only name by which we designate these from other varieties, is the early 'English Grey Pea.'

As an evidence of their value, a bush farmer, twelve miles north of Lake Simcoe, sowed a little upwards of five acres, among the stumps, and he had the astonishing produce of sixty bushels of clean marketable pease per acre.—Many will doubt this statement, but it was communicated to us by the man who harvested and thrashed them, who is a person esteemed in his neighbourhood, for his integrity, and we as much believe it as though we saw it ourselves. We shall endeavor to sow a number of acres of this variety the ensuing season, and shall feel a pleasure in laying before our readers the result of the experiment. Wheat sown on pea stubble should be rolled in the autumn and spring.

We have thus cursorily adverted to a few features of a part of a system which we feel flattered will prove an advantage if honestly and judiciously carried out in all its bearings.

A very essential feature in farming is to have the ground which is intended for seed, in a perfect permeable or pulverised state, which is attained more readily and with less expense by a smothering crop than any other system practiced; this is only a part of a whole which is requisite to make the business of growing crops certain and remunerating; clearing of the surface soil from water, and keeping it clean from weeds, are also points which are of the greatest moment, and no farmer possessed of a grain of common sense would neglect the latter any sooner than the former. We shall then proceed to give a few remarks upon the best mode of preventing surface water from injuring the crop.—Where land is undulating the intervals should be underdrained, a branch of farming but little understood in this country. We so frequently adverted to it in the last volume that it will be unnecessary to repeat what has already been said on the subject. The formation of perfect ridges averaging about four yards wide, the harrowing of these ridges down after the seed has been sown, the cleaning out the furrows with the trench plough, a common plough will answer, and the ploughing cross-furrows in eve-

ry direction across the main furrows that would be of use to prevent the possibility of injury to the plant from the surface water, are the cheapest means that can be practiced to obviate that evil.

The cleaning of the crop can only be accomplished in this country by sowing in rows, and horse hoeing, as it is not probable that either of these modes will be brought into use to any extent, unless a few enterprising individuals set the example, we shall for the present pass over this branch of improvement and give our views on the proper mode of sowing broad cast, and the quantity of seed necessary to be sown.

Nineteen Canadian farmers out of twenty sow their seed out of the mouth of a bag swung across the shoulder, and only use the right hand in distributing the seed;—a better plan is to have a neat and convenient hopper, which would hold about three pecks, and which should be supported about the neck with a strap. By this method the seedman may use his left as well as his right hand, so that on the four yard ridges as above, two casts will be given, by which means the seed will be distributed evenly over the ground, and any desired quantity may be sown per acre;—whereas by the old one cast method, but little more than five pecks can be sowed per acre.

The quantity of seed to be sowed per acre should be in a great measure governed by the state and quality of the land upon which it is to be sowed, soils naturally rich, or such as are highly improved by cultivation and manure, will require much less seed, than those in an unfertile state; on the contrary, the lighter and the less cultivated the soil the greater will be the quantity of seed which it requires. The reason is obvious; plants tiller more in rich and strong, than in unfertile soils, and therefore occupy respectively a greater space. They are also less liable to be killed on good soils in the winter months, and every plant generally comes to maturity, the straw also becomes more luxuriant, and consequently requires a greater circulation of air to preserve it in health and vigour: whereas the plants on light soils will but weakly and partially tiller, therefore a greater quantity of seed must be sown.

One bushel per acre is quite an abundance of seed on newly cleared ground; but when the soil becomes comparatively exhausted, two bushels per acre will not be found any too much. This may be ascertained by actual experiment, which is the surest and best means of arriving at correct conclusions. If seed were sown thick, the crop would ripen at least a week earlier and thereby lessen the probability of mildew.

THE COMING HARVEST.

BEFORE this number arrive at the dwelling of our subscribers, the gathering of the crops will be commenced. The proper performance of this department of business, is of such importance to the well-being of the farmer, that we trust no one will accuse us of presumption, if we should happen to be prolix in our remarks.

The commencement of the wheat and barley harvest will be rather later this season than usual,—probably the fifth of August will have elapsed before much is done in harvesting these crops. Before the commencement of harvest, we presume the farmer had executed all other necessary work, and had prepared himself for the due performance of this: by having his tools in complete condition, his

barns repaired and thoroughly swept out, and his stack yard, if he required one, put in complete order, so that no draw backs would occasion loss of time, or derangement in the order of the multifarious branches of harvest labour. Rainy days, the labourers may profitably employ themselves in grinding their scythes; repairing their tools if they require it; and the straightening and selecting straw for thatch, as well as the making of straw or hay ropes for fastening the thatch, so that every unnecessary delay may be avoided. To insure strict order and perfect good temper among all hands, the farmer himself should participate in the work, and should interest himself in providing the necessary comforts of good wholesome food, palatable and nourishing drinks, for his labourers.—Not being friendly to *Alcoholic drinks*, for to stimulate men to cut each other's legs, destroy tools, and waste and destroy the crops;—we on the other extreme cannot subscribe ourselves friendly to the *fashion* which is gaining ground to some extent by allowing or providing only *pure cold water* to harvest labourers.

We have used two harvests in succession a very cheap and nourishing drink, being a mixture of weak coffee with a sufficient quantity of sweet milk to make it palatable without the aid of sugar. Since oatmeal mills have become common, a very palatable, cheap and wholesome drink may be made by stirring a small quantity of the meal into the water. In addition to a constant and good supply of wholesome drinks being provided for the men while at labour, a lunch at half past ten in the morning and at half past two in the afternoon, will have the effect of giving them a stiff back, and stimulate them to work with renewed exertion. These in our humble opinion are comforts which will give the labourer both *nerve* and *spring* when the word "come boys," is sounded in his ears by the owner of the harvest.

Various opinions respecting the best period to cut grain has been advanced, but, the *indications of ripeness* are few and may be embraced in the following:—When the straw exhibits a bright yellow colour from the bottom of the stem nearly to the ear; or when the ear begins to curve or bend gently, the grain may be cut. But, as the whole crop seldom ripens equally, if by selecting the greenest heads, the kernels can be separated from the chaff when rubbed through the hands, it is a sure sign that the grain is out of its milky state, and may be harvested with safety. The sample is superior to the eye of the miller when cut before it is quite ripe—and the loss sustained by the farmer in shrinking may be made up to him from the fact that he will sustain no damage from shedding, and the straw will be much more valuable for winter food for cattle.

The cradle, and sickle, are the only implements used for cutting wheat, rye, and oats.—A crop of wheat that would average 35 or 40 bushels per acre would pay the expence of reaping, and the best implements that we have used for this purpose is the very celebrated *Pennsylvania* sickle. A farmer that has a large crop of wheat to harvest had better pay two dollars for one of the above mentioned sickles than two and six pence for one of European manufacture.—We have used for days together the common English sharpening hook, and would prefer it to any common sickle, if kept in order; they cut perfectly easily, but the greatest objection that we have to them is, that they are unwieldy in their appearances and require as much sharpen-

ing as a scythe. The very high prices of labour and the low prices of bread stuffs, compel the Canadian farmer to adopt the most ready method of cutting and housing his crops. The cradle is by far the most efficient implement in use for cutting standing grain, and even by careful management a laid crop may be mown and laid in swarth with astonishing accuracy with them.—Two acres may be reckoned a fair day's work for a cradler, although we have known two men to enter a ten acre field at six o'clock in the morning and lay the whole field completely and properly prostrate by seven o'clock in the evening. Three persons will rake, and bind and "keep up," as the saying is, to two smart cradlers, without making the sheaves larger than can be conveniently bound with a single band. No double bands should be allowed, unless strict regard be paid to the proper size of the sheaf.—Grain should not be cut and bound when it is wet, as the heads in the centre of the sheaves are subject to sprout by which means the sample will be injured and the straw materially damaged. Wheat, oats, and barley should be mown or otherwise cut low, so that the ground may be raked with a suitable implement drawn by a single horse, or even a large hand rake drawn by a man will be found to answer the purpose. These rakings should be collected and thrashed by themselves. We have known a bushel and a half per acre gathered in this way. A man will rake ten acres per day. Oats after being cut, should lay in the swarth for a few days, and may be drawn into barns or stacks directly after being bound.

Barley harvest at the best is a precarious business, but the cheapest and most economical plan is to mow into swarths with a common grass scythe—in two days after being mown it may be gathered into bunches with a wooden or iron implement which resembles a very large fork, the prongs of which should be about four feet long, set into a handle, two feet long, which should be pushed forward directly under the centre of the swarth and when filled would contain about two common forkfuls of stuff, which should be laid in rows to accommodate the pitchers. One man will gather as above, as fast as two pitchers can fork for the loader.

Stacking is a business little understood by the mass of Canadian Agriculturists, and we must acknowledge that there is but little occasion for much stacking, as wood of every description is very cheap, and large and commodious barns may be built at a very trifling cost.—There are cases however, that more or less stacking must be performed, and therefore we would consider ourselves inexcusable were we to pass over the subject without notice. Some prefer long to round stacks, but the latter are the most convenient and safe—and if built a moderate size, they may be completed in a single day, with a sufficient force. Instead of the stack being built on the ground as is usual for hay, it should be erected upon "staddles," or pillars of a conical form, which should be about two feet in height from the level of the ground—if cedar, oak, or other durable wood be used, and set a sufficient depth in the ground, and the pieces of wood extending from each, and also those that extend across to the centre staddle, are pinned together in a proper manner, by that means a platform will be erected that will stand for a number of years without any repairs, which will prove a safe guard to the grain from rats, mice, and other vermin, and also lessen the probability of injury to the straw and grain

from becoming mouldy, by admitting a free access of air under the frames.

In building round stacks, a sheaf is placed upright on its butt end, as near the centre as possible, around which other sheaves are placed circularly—and also upright, with a small inclination of the tops inwards, until the bottom of the stack is nearly filled. The stacker then places an outside layer of sheaves, horizontally with their ear ends inwards, and pressing them together with a considerable force, he then continues to lay on rows, with their butts all outwards, till he has raised the outside of the stack to nearly the height of the centre—he then builds up the whole of the stack by having the heads of the sheaves inwards, with a regular slope downwards and outwards to the butts. The centre of the stacks should always be fuller and less compressed than the outside. When the stack is built sufficiently high for roofing, the outside circular row of sheaves should have the butt ends projected a few inches beyond the body of the stack, which would form the eaves; after which every successive row should be placed gradually more inwards, and at the same time the middle of the stack should be kept well filled, as the safety of grain much depends upon the absence of this, until the roof is drawn to a narrow circle, when a few sheaves are placed upright in the centre, which they fill completely up. These stacks to be convenient, should be about 18 feet in diameter, and about 16 feet to the pitch of the roof or eaves. Stacks as above directed should be thatched in a few days after being built.—The laying on the thatch being a description of economy but little practiced in even the best agricultural districts of Canada, and one which few regard as being a remunerating concern,—we shall consequently be very brief—but we would just say for the information of our readers, that for the time that is required to execute the more thatching of a few stacks, that no department of farming pays a heavier profit.—We have known twenty bushels of wheat to be destroyed on the roof of one stack, and in one instance, the whole of the roof of a long stack containing the produce of ten acres, was completely grown together, so that it had to be cut down with axes—and all for the want of proper stacking. It is very common with some to leave this branch of business until late in autumn, by which time much damage will be sustained to the grain,—indeed but few attend to it at all. This is not as it should be, and we would remind such of a very excellent maxim, which is in substance this:—that the great secret of amassing riches is not so much in producing property, as properly husbanding it after it is produced.

In laying on the thatch, the thatcher stands upon a ladder resting upon the roof of the stack, & lays it on in handfuls from sheaves placed within his reach. He thrusts his inner ends of his handful of thatch, gathered into a wisp, into the butts of the sheaves, and spreads out the lower end like a fan, overhanging the eaves; and covering as much as he can at arms length, in this way, he works upwards, causing each successful handful to overlap the one immediately below; and he thus covers the roof in triangular portions, till he has gone around the whole of the stack backwards, so that he may avoid treading on his work. When he reaches the top of all, he lays a considerable thickness of short straw upon the

crowns, which should be covered with long thatch drawn to a point at the summit, which should be tied with a straw rope into a peak, giving it the appearance of an umbrella. The whole of this covering should be tied down with straw ropes and pinned at intervals of three feet, so that it may be secure under the severe tempests.

It will be readily seen that none but a careful fellow can be safely intrusted with the building and thatching of stacks, and would be better to give an extra price for a good stacker than to have them done for nothing by a botch.

Before our next issue, more or less thrashing will be performed, and in conclusion would take the liberty of reminding our friends of the necessity of preserving every handful of straw, and if they have no house room—let them stack it as recommended above, and we shall advise them in our August number of the best and proper use for all the refuse straw that they may be encumbered with.

THE HESSIAN FLY.—A Correspondent in the July number of *The Baltimore American Farmer*, gives it as his opinion that this fly deposits her eggs on the upper surface of the leaves, as soon in the autumn as the wheat is up sufficiently high, and that the eggs is about a 50th of an inch long and a four-hundredth of an inch in diameter, of a transparent pale red colour. The egg hatches in about four days, the young larva or maggot creeps down the leaf, enters the sheath and with its head downwards fastens upon the tender stalk just above a joint, which feeds solely upon the sap of the plant. In about five or six weeks the larva begins to assume a brownish tinge, and soon is of a bright chestnut color, at which stage it resembles a flax seed—and remains in this state during winter; the root of the plant, as soon as the weather becomes warm, in the following spring, the insects are transformed to flies, which have black heads, tawny bodies and covered with fine greyish hairs, the wings black, but tinged with yellow at the base, and the body measures one tenth of an inch in length, and the wings expand upwards of one quarter of an inch. Soon as the fly comes forth in the spring they commence laying their eggs on the leaves of the wheat, these eggs hatch, the maggot pass to the stalk, and they become pupae in June and July. They are found in this state at harvest, and are left in the stubble in the fields and these again are transformed to flies as above. The winter recommends, as a preventive, that the farmer should sow about 20 bushels of unslacked lime per acre, over the wheat plants, and contends that the lime will naturally find its way down the leaf and come in contact with the eggs and maggots which will inevitably destroy them.

CROPS IN THE TALBOT DISTRICT.—An agent, under date of July 21st, writes thus:—“Wheat Harvest will have commenced here next week, and the crops will come up to a full average—the very being good and the head well filled, but rather thin on the ground. The Hay has been an exceedingly abundant crop. Corn and potatoes are promising a heavy return to their owners. I find that Plaster is of essential advantage upon the potatoe crop,—the few rows I tried last year gave full evidence of the usefulness of its application, and I consequently used it on the whole of my crop the present year, by sowing it copiously in the drills, along with the potatoes, and now I have the most promising crop in the vicinity. My neighbours are all astonished at

the superiority of my crop to theirs. The land in this neighbourhood is a deep sandy loam, having for its base a calcareous clayey subsoil.”

As the continued existence of *The British American Cultivator* is no longer with us a matter of doubt or uncertainty, and as we have resolved to do our utmost to surmount each and every difficulty that may impede the progress of agricultural improvement in this naturally fertile and highly favored country, we come to the conclusion to throw off all diffidence, and express our views in future in as frank, easy, and comprehensive a style as we are capable of doing, so that our little sheet will be sought after both by the learned and illiterate, as one possessing a fund of useful and practical knowledge, especially beneficial to the classes whose interests and welfare we advocate. It shall ever be our constant aim to elevate the standing and character of the agriculture of the province, and we flatter ourselves that much good may and will be done through the agency of our periodical. As a means of making it more useful and generally acceptable, the Editorial department will be more varied in its character, and more practical and comprehensive in its tone. The list of agricultural exchange papers which we receive, have now become so numerous that it would require a weekly issue as large as the monthly, to give insertion to even a title of the useful matter that pass our inspection: owing to this circumstance we have concluded to open a miscellaneous department, which will contain in a few words, the essence of much information that would otherwise not make its appearance in the columns of our Journal. This department may generally be found under the appropriate heading of **EDITOR'S MISCELLANY**.

AN IMPROVED CHURN.—At a meeting of the Highland Agricultural Society of Scotland, held on the 5th of May last, an improved churn was described, which consisted of one cylinder, placed concentric within another, the object of this arrangement is that water may be put into the outer cylinder to keep the cream at any required temperature.—It has been found by experiment that the greatest quantity of the finest quality of butter, is obtained from cream at a mean temperature of 55 deg. Fahr.; and assuming this is a settled point in practice, the outer cylinder gives the maker of butter the means to reduce the temperature of the cream in the inner cylinder in summer, and to increase it in winter to the mean temperature of 55 deg., and to retain it at that degree.—*Farmers' Herald, England.*

HENS EGGS.—A correspondent of the *Farmers' Cabinet*, states, in often repeated trials he found that the eggs which approached nearest to roundness always produced females, while those which were pointed at one end, always produced males.

It is not by the exclusive cultivation of one faculty—however astonishing the result may be thus obtained—that a truly great mind can be reared; nor is it by the exclusive cultivation of the intellectual powers, while that of the moral feeling is neglected, that a truly great and good character can be developed.

TO THE DIRECTORS OF AGRICULTURAL SOCIETIES.

We extract the following from the *Genesee Farmer*, for 1810, and would recommend the Officers of Agricultural Societies, to take up the subject of supporting our efforts in the manner suggested by our worthy contemporary:

"From much observation and inquiry made during a late tour in Western Canada, we are convinced, that with the liberal aid which is rendered by Government, much more can easily be done for the advancement of agriculture in that rich Province than is done at present.

The principal difficulty which exists, is a want of proper stimulus for the mind. The farmers do not rightly estimate the advantages which they possess; or appreciate the dignity and importance of their profession. Their minds are not sufficiently interested in their calling, and therefore it is obvious that the first thing to be done, should be to persuade them to read on the subject. Let them be often informed what other farmers, and other societies have done, and are now doing, in their own and other countries, and they will not long feel indifferent on the subject of improvement, or be contented with present attainments. An active spirit of emulation and enterprise will soon be elicited, which will effect a most salutary change in the character of their agriculture, and impart new life to their societies. WE ARE CONVINCED FROM OBSERVATION AND EXPERIENCE, THAT NO AGRICULTURAL SOCIETIES CAN LONG BE SUSTAINED WITH MUCH SPIRIT AND USEFULNESS, UNLESS THE MEMBERS ARE READERS OF SOME SPIRITED AGRICULTURAL PERIODICAL; AND NOTHING AT SO LITTLE EXPENSE WOULD DO AS MUCH FOR THE IMPROVEMENT OF CANADIAN AGRICULTURE, AS THE GENERAL CIRCULATION OF A PAPER CONTAINING INTERESTING INTELLIGENCE AND VALUABLE ESSAYS ON IMPROVED HUSBANDRY.

It is admitted that such a paper cannot be published in that country now with much success, and therefore at the suggestion of some warm friends of the cause, we make the following propositions:—If the Directors of the Agricultural Societies will make arrangements to place the *New Genesee Farmer* in the hands of each of their members, we will devote a portion of the paper to Canadian intelligence, &c. If it was made a rule as some have suggested, that when a member pays his annual subscription for the society, it shall be understood to entitle him to the paper for a year, it would doubtless induce many more to subscribe, as two-thirds the amount comes from the government, and thus greatly extend their usefulness. We are certain that so trifling an amount could not possibly be expended in any other way so as to produce as much good to the societies and to the country at large. We hope that all the societies will enter into such an arrangement in order that there may be union of effort and a mutual understanding throughout the province. We shall be happy to hear from all societies on the subject, during the coming month."

When our friend Mr. Bateham, made a tour through Western Canada, in 1840, his useful magazine had a circulation of upwards of 10,000 copies, although it had not been in existence more than six months,—if the above suggestion had been generally acted upon through the British Provinces, he might have calculated upon other 8,000 at least, which would have given him the largest circulation of any similar Journal in

the United States. To their credit be it spoken, many societies throughout the provinces, acted upon the suggestions, and the result was vividly manifested in extending the general objects of such associations.

Only a few weeks subsequent to the period that the foregoing was penned, *The Canadian Farmer and Mechanic*, made its appearance, which it will be remembered, "died for want of proper care and nourishment" after a severe attack of the brain fever, which lasted exactly three months!!! It so happened that the arduous task fell to our lot of, endeavoring to convince our own countrymen and our neighbours, that Canada has talent, nerve and stability sufficient to look after her own affairs, and as a means of accomplishing our purpose we resolved to make up the losses which the public sustained through a party of adventurers.

We have thus far progressed on our journey without much aid from any other quarter, than our own resources, and we are happy to communicate the intelligence to the few (we speak comparatively) who have so nobly come forward in support of our endeavours to benefit the Canadian Agriculturist, that we have resolved to persevere—regardless of consequences. All doubts about the ultimate results of our exertions, are now thrown into oblivion, and our constant study shall be in future, to instruct our readers on the science and practice of their highly respectable calling.

We have between two and three thousand complete copies of the current volume, up to this period, and if each society would subscribe for a fair quantum, so that the whole would be subscribed for,—we promise our friends that the next volume shall be much improved.

We are desirous, if the public will support us so as to warrant the outlay, to commence a new series of volumes, each volume to contain about 400 pages, on a sheet about one fourth larger than the one we use at present,—and the work to be conducted in such a masterly style, that it may with propriety be introduced into our District and Common Schools, for the use of the senior classes. The general complaint of hard times has operated against us more seriously than could be anticipated, but the sum being so small, that it will require only a trifling effort to place our little sheet in the hands of every intelligent farmer in the province, if the present subscribers, and agricultural societies would take up the subject with a determination to support it.

For the Cultivator.

ETONCOKE, July 28, 1813.

Sir,—It appears to me that you have anticipated every thing that I can say upon the subject of cheese making in your valuable paper already, yet as I believe you made me promise to communicate our way of making cheese in England, I will attempt it, and if there be nothing new or useful in it, it will have the merit of costing nothing as I

desire no reward for any of my communications.

We make rennet, by taking a calf's stomach and hang it up two days, then open it and empty its contents, but not wash it, cure it with salt and Sol Prunella, then make a brine strong enough to bear an egg; put both into a stone jar with a slice or two of lemon and tie it closely down; one quart of brine is sufficient for three rennets, it should at least be one month old before it be used, and will keep two years if made carefully.

We put night and morning's milk into a cheese-tub and make it nearly the warmth of new milk, then take about one quart of the milk into a cheese bowl, take a cake of anatto and a piece of stone or brick, rub them together in the bowl until the milk is of a fine yellow, then strain it through a hair sieve into the cheese-tub, and mix it well with the rest of the milk; then four table-spoonfuls of rennet to every fifty gallons of milk, and so in proportion; if the rennet be good it will be ready in half an hour, then begin to break with the hand; when about half broken, dip out some whey and set it over the fire to warm, make it warm enough to raise the temperature of the contents of the tub considerably, then make it fine and let it settle one hour, then put the curd into a vat or hoop (no matter which) and press it for a quarter of an hour, then take it out of the press, turn it into the cheese-tub again and cut it into slices; it is then ground in a curd-mill fixed on the side of the tub, until it is perfectly fine, then return it to the press for four hours; it is then taken out and a dry cloth applied, then put back again until next morning, when it is salted, and receives another dry cloth. This is repeated three days,—if the cheese be large it is then taken from the press into a dry airy cheese loft, and turned every day for a fortnight; then every other day until sold. Good thick cheeses of forty or fifty pounds weight, and from one year to a year and a half old, have generally brought about £3 to £3 10s. sterling per cwt; older cheese has generally brought £4; but I believe the late tariff has had the effect of lowering prices.

American cheese is very good, but is too mild-tasted, and not thick enough in general for the English market. I received a letter from a relation in England the other day, in which he says, it was selling there at middling prices.

The quantity of cheese per cow, depends on the nature of the soil, it is not always the richest soil that makes most dairy goods. I have known the same dairyman make five cwt. of cheese per cow on one farm, and on another a few miles distant, could only average 4 cwt.

You will perceive this is done in a hurry, but you must recollect I have little time except during thunder storms, or after bedtime.

I am, Sir,

AN ENGLISHMAN.

CULTIVATION OF FLAX.

SUFFICIENT has been said through the columns of the *Cultivator*, to convince any man of a discriminating mind, that the business of growing flax and hemp as articles for the manufacture of cordage for domestic purposes, and also as articles for export, is one which would handsomely remunerate the producer, manufacturer and exporter.—We conceive it therefore unnecessary to enter into any disquisitionary remarks, which would have for their object the effect of convincing the intelligent reader that, the cultivation of these plants would prove a safe business. The best guarantee that we can at present give on the subject, is, that we have made up our mind to enter into the cultivation of both of these plants on an extensive scale, the results of which will be subjects of communication for the benefit of all as soon as the proper season arrive for their publication. As a matter of course we have made ourselves thoroughly acquainted with every department of the management of these plants, and as we do not believe in the doctrine of withholding light from the populace, or in keeping the poor and uneducated in total ignorance about matters and things connected with their own and their children's welfare, we shall endeavour to convey information on these subjects through the columns of our journal that will be adapted to the comprehension of the illiterate as well as the learned.

The remarks in the April number, were written in a style that the reader would be enabled to form a pretty correct and ledge of the mode of cultivating the land for flax and hemp, we shall therefore confine ourselves, at this time, almost exclusively to the after management of the crop. The management of these plants differ a little from each other, and as we conceive flax the most profitable crop of the two, as the seed is more valuable, and the crop may be safely brought into a regular course of rotation throughout the entire farm, without any risk of seeding the ground; we shall give a brief detail of the best mode of preparing the fibre of that plant for market, and also a few seasonable remarks upon the management of hemp.

A good crop of flax may be expected from any strong land which is fit for the growth of wheat,—a crop admirably adapted for a preparatory crop of flax. On light sandy lands, that have been under a long course of tillage, the crop very seldom comes to maturity, or is subject to blight, which renders it scarcely worth manufacturing. The best description of soil for its culture is a deep vegetable mould, resting upon a calcareous or porous clayey subsoil—a quality of land which is to be found in abundance in almost every District of Canada.

The best mode of tillage, was given in the April number of this journal. The whole process may be embraced in a few words—deep autumn ploughing—thorough spring culture—laying up into narrow flat beds—and a light covering of the seed.

The crop should stand till the lower part of the stalk gets a yellowish cast, and the under leaves begin to wither; except when the flax is designed for an extraordinary fine manufacture, in which case it would be better to pull it in a green state. The former is the best time when the fibre is intended for twines, the finest description of cordage, and second rate twines,—the latter for the finest linens. But when the seed is intended for exportation, or

for sowing, it should be allowed to stand until it is quite ripe.

The buds or seeds should not be removed until the plants become perfectly dry. The best mode of drying the seed, is to bind the plants into sheaves the thickness of a man's thigh, which should be set up into long stocks, and allowed to remain until dry.

The proper method of separating the seed from the stems is by a process termed 'rippling' which is performed with an instrument formed of a flat board of about twelve inches wide,—with iron teeth fixed near the end like a comb. The implement is fastened to any standing block, and the stems are repeatedly drawn by hand through the teeth until they are completely cleared of the grain. Thrashing with a flail would answer, if carefully performed. It is then to be again bound into small sheaves as before and either dew or water retted, operations on which the price of the flax more depends, than almost any other which the grower has to perform, the object being to loosen the rind and separate it from the stalk. For common purposes the former way answers, but if an article be required for market, the latter should in all cases be practiced.

The process of *water retting* is one which could be more easily taught by practice than described on paper, as there are so many circumstances which would influence the operation, which it would be impossible to anticipate unless by actual investigation and supervision. We shall notwithstanding venture to give a cursory description of the best method of performing this department of the business. Artificial pits are to be formed at the side of a river, or in such a location that it may be filled with soft water which may be withdrawn when the plants have become sufficiently retted. The depth of the pit should not exceed four feet, and if six feet wide and forty long it will contain the produce of an English acre. The water should stand in the reservoir about a fortnight before the flax is put in, so that it may be of an equable temperature, which must be evenly stored sheaf by sheaf direct and across,—something after the style of mowing away sheaves of wheat; and after it has been heaped to within about six inches of the surface it should then be covered with fine brush and loaded with blocks of wood or stone to keep them down. The depth and choice of the water, and time of steeping, are all matters of more importance than are generally imagined, for if too deep its action upon the surface and at the bottom will not be equal; if hard or taken from a spring impregnated with mineral substance, it is bound to injure the texture of the flax; and the time of drawing it from the water depends both upon those circumstances and upon the state of the weather, hence the water should be clear, but stagnant, and free from mixture with mineral matter;—neither should it be shaded by trees as some have foolishly supposed, as the sun and air should freely act upon it.

The latter part of September and the first of October are the most suitable pe-

riods for steeping in this country, as the farmer would have leisure time, and the weather would be most likely to be of a suitable temperature to give an equal and rapid retting to the plant. No exact time can be fixed for the flax to remain in the water, as it has in some cases been found sufficiently steeped in five days and in others it has remained ten and even longer without injury to the fibre. It requires considerable skill and attention to carry out the process of retting, for if it be left in water too long, the thread becomes soft, weak, and comparatively useless to the manufacturer; it would therefore be better to take it out too soon, than to leave it too long in the pits. This process like every thing else, is governed by certain rules, which if carefully observed, will enable the operator to perform his work with accuracy.

The two best rules with which we are at present acquainted, and which will be a means of avoiding all mistakes, are to remove the plants from the pit when the bubbles of the air disappear from the surface of the water, and the flax seems to have settled to the bottom—and to break some of the stalks about six inches distance, and if the heart of the stem can be easily drawn out of the bark, or lint, then it is time to remove it from the pond; but if it still adheres to the pith, it must be continued in the steep until they are found to part freely. The plants at this stage will have a slimy disagreeable appearance.

When removed from the pit or pond the sheaves are to be unbound and spread upon close-fed grass land to dry—the mode of placing should be similar to the swaths of grain after being laid with a cradle—a shower or two of rain while in this state will cleanse and make the flax more valuable.

An improved mode of retting is practiced in the best flax districts of Germany which differs from the above, which may be summed up in the following:—In placing the bundles in the ponds vertically as close as they can be possibly packed, instead of horizontally; in immersing the flax by means of transverse sticks, with that degree of weight annexed which shall not push it to the bottom, but leave it the power to descend spontaneously towards the conclusion of the steepage:—by leaving at first a space of at least ten inches between the bottom of the pond and the roots of the flax, and by renewing the water, at intervals of two days each. A few experiments would soon decide the difference between the two plans.

The Preparation of the Flax consists in breaking, scutching or swingling as it is generally termed in this country, and heckling, which is the final preparation for market. As the business is yet in its infancy, it will be unnecessary to give a description of expensive machinery for dressing—which will at some future period form a subject of communication for the benefit of the grower of flax on an extensive scale.

The hand-brake or bruising apparatus is a machine so common that it will be unnecessary to give a description of it—but a very cheap and expeditious plan may be practiced to free the fibre from the broken pieces of stems by fixing about a dozen wooden blades on a wheel which may be attached to any horse power, a single man with such a machine will clean, after being broken, 300 lbs per day.

CULTIVATION OF HEMP.

The cultivation of hemp and flax is in our opinion one of the most important subjects that has ever been brought under the notice of the Canadian public. If the cultivation of these plants were entered into on an extensive scale, it would be a means of elevating the standing of the Canadian Agriculturist, higher than if any other mode of farming were adopted. The whole of the best lands in Canada East would produce these plants equal to the most celebrated countries for their culture on the continent of Europe, and if influential men in that section of the Province do not take steps to stimulate the *habitans* into something like action on the subject, they deserve to be branded as being neither worthy of the confidence or affections of the people. Portions of almost every District of Western Canada are suited for the growth of these plants, and it is strange indeed that if an intelligent English population are so regardless of their own and their country's welfare as to be indifferent upon a matter of such magnitude, and one which would alone place the colony in a position to make her exports equal to her imports. We would say then to every intelligent man in the Province, form yourselves into a hemp and flax society—advance your dollar, collect and disseminate all the information you possibly can on the subject, show yourselves worthy of being called the sons, either native or adopted, of one of the brightest and most valuable appendages of the most intelligent, wealthy and noble Empires on the face of the habitable globe.

No method can be so efficient as the formation of societies for the introduction of the cultivation of these plants, we are so convinced on this subject that no time shall be lost by us, in organizing a society for the above purpose in the township and village where we reside. Let others adopt the same steps, and if only twenty members can be found who would be willing to pay the annual sum of five shillings each, the business would be commenced the profits of which would soon influence others to become members of such associations, and enter in a spirited manner into the cultivation of these plants.

We are so well convinced of the importance of the subject under discussion, that we shall not give it up until we see the issue of a fair experiment made in its culture.

The soil best suited to hemp is a strong rich loam, such as may be found near rivers;

any alluvial soils are adapted to its culture providing they are not too wet and cold.—In some parts of the country the soil is naturally too fertile for wheat,—soils of this nature are the best quality of lands for hemp.

Opinions differ in regard to its effect upon the soil, but it may be ranked with wheat as an exhauster, with the difference that it gives no return to the soil. It will therefore be seen that the farmer who turns his attention to the production of this plant, as well as flax, that a large portion of his farm will necessarily have to be sown to grass and fed with stock.

The *harvesting of the crop* occurs about the twentieth of August, which will leave the ground as clean as a garden, and in admirable preparation for a crop of wheat with a single ploughing. By being brought into a state of garden culture for hemp and by heavily dunging, alternate crops of wheat and hemp or flax may be grown upon the same ground for a series of years. Instead of pulling we would recommend knives or hooks for that purpose, which may be had for about seven and six pence, sharpening hooks, such as used for reaping wheat, are the most convenient implements for the purpose. A man would cut a half an acre per day with one of these hooks. Cut hemp is worth considerably more per ton than pulled. The steeping and dressing is very similar to that of flax. The produce of an acre of hemp might be fairly estimated at 600 bls. on the description of land recommended above, which would be worth two pounds per cwt. for exportation, and even more than that for home consumption, until the country produce sufficient for its own consumption. The quantity of seed per acre will depend entirely upon the quantity of seed sown. If the plants are thick on the ground a small quantity of seed may be expected, if they are thin, a large quantity; which has been known to equal 40 bushels per acre. The average may be safely calculated at twenty bushels per acre, if the ground be in a high state of cultivation.

PREPARATION OF SEED WHEAT.

MR. EVANS, the late Editor of the *Cultivator*, very justly remarked in a late number of our magazine, that the farmers in Western Canada were lamentably indifferent as it regards the proper preparation of their wheat for market, and as a proof of that assertion mentions that he never saw a clean pure sample of Western Canadian wheat in the Montreal Market. Without attempting to chide our brother farmers for their neglect on so important a subject we shall endeavour to give them instructions which will enable them to perform their work in a more creditable manner. Before we proceed, it may not be amiss, to mention a case in point, which will go to illustrate the benefit of carefully selecting and preparing seed wheat. When we first entered on the farm, which we alluded to in the last num-

ber of the *Cultivator*, we found some difficulty to obtain pure seed wheat, of a variety, after much trouble we selected seed from three of the best farmers of the District, and sowed each sort carefully by itself,—in the following summer we made choice of the most promising of the three, and pulled out every branch of rye, chess, cockle, and every other noxious weeds and allowed the wheat to be dead ripe before we cut it. It was then thrashed, and cleaned a number of times through a very excellent double shaking-sieve winnowing machine, and then spread on the granary floor, and underwent the following process: The whole of the seed was passed through a hand-sieve, the meshes of which was sufficiently large to allow about one bushel in five to pass through them; and a couple of days before seeding, it was poured into a large tub of brine made of salt and water, sufficiently strong to buoy up an egg, and well stirred to bring up the remaining light seeds to the surface, which was skimmed off so long as they continued to rise, and afterwards drained into a basket, and the brine into another tub. The seed was then spread thinly on the floor of the granary, when it was sifted with quick-lime, at the rate of one gallon to a bushel,—after carefully stirring the lime through the seed a few times it was allowed to remain a few hours and then sowed at the rate of six pecks per acre. The extra time employed in preparing 40 bushels of wheat in the above style did not exceed two days work for a single man. After sowing the whole of the seed thus prepared, it so turned out that a deficiency in quantity occurred, and to save time, as the saying is, we used a number of bushels of what would be called by the generality of farmers, perfectly clean seed, without bestowing any extra labor in the preparation. The result was as we anticipated. That which underwent a perfect cleaning and *purging* gave a return of pure wheat of the best quality, and that which was sown in its natural state, was infected with *smut*, and had also a fair mixture of chess.

If corroborative proof be required to strengthen the case just alluded to, we might give a thousand, many of which actually underwent an investigation of the most experienced and scientific men of the age. The following will probably be sufficient for the present purpose.

It is stated in a Northumberland Report on Agriculture, that a *Mr. Culley*, who grew annually from 400 to 600 acres of wheat, has had but one instance of smut in a practice of more than 40 years, and this was when the wheat was not steeped. In experiments tried, by another Northumberland farmer on seed, in which were a few balls of smut—one third of which was steeped in chamber-lie and limed; one third steeped in chamber-lie, dried and not limed; and the remainder sown without either steeping or liming; the result was that the seed which was pickled and limed, as well as that

which was pickled and not limed, was nearly free from smut; but that which was unpickled had smutty ears in abundance.

The two following experiments were made by Mr. BLAKIE, a Derbyshire farmer:—The first was on a peck of very smutty wheat, one-half of which was sown in the state in which it was bought, and the other half washed as clean as possible in three waters, and then steeped during two hours in brine, strong enough to carry a new laid egg, and dashed over with lime:—the result was, that two thirds of the wheat grown from the unwashed seed was smutty; while that produced by the pickled and limed seed was a full crop, without a single ear of smut. The second was made upon some very fine wheat perfectly free from smut. A quart of this was washed in three waters in order to secure its thorough cleanliness; it was then put for two days into a bag, in which there was some of the black dust of smutty grain; and the result was, that a large proportion of the wheat thus sown was smutty, while out of twenty acres sown with the same grain—not inoculated—not one smutty ear was found.

It would be superfluous to multiply experiments, as sufficient have been adduced to convince any thinking man, that the evil can be prevented, if only the proper means be put into practice. While upon this subject, it might not be amiss however to mention, that with this as with the various diseases subject to the human body, various cures are recommended, scarcely two of which agree, at the same time, nearly all prove more or less successful.—The most common of these are, *stale urine*, *blue vitriol*, and *sulphate of copper*, but in our opinion none is so cheap and unodorous as brine, as above described, and if it be used as recommended, we will go bail for the consequence.

SPECIES OF WHEAT.

In selecting a variety of wheat, the adaptation of such variety to the peculiar soil which it is intended to be applied, is of more consequence than is generally supposed—the different species of wheat which are the most beneficial to the farmer, must therefore depend upon the nature of the soil upon which it can be best produced. To point out such marked distinctions as would make each variety accurately known, by merely mentioning their names would be a hopeless task—as they are known only by their provincial names in this country, and what would be called Dantzic wheat in the Home District would be most likely called “English white” in the London District—and it is also a well known fact that the various species of wheat degenerate and alter in their character, and in many cases the shades of difference are so small that one might easily be mistaken for another. When a farmer discovers a good variety, and one which is well adapted to the soil he cultivates, he should consider that he had found a *prize*, and should endeavour to keep it pure, and change it occasionally on soils suited for its growth. A species of wheat has been cultivated for many years in the neighbourhood of New-Market, which is the most productive kind in the country, if it be fairly dealt with. We have frequently known fields to yield from 40 to 45 bushels per acre, sown with this variety, and on average of seasons, the farmers who sow it, calculate on at least 30 bushels per acre. The berry is remarkably long and large, and weighs 64 lbs to the bushel when well

filled. We conceive that we would be performing an act of supereogation were we to dictate the sorts of seed that each Canadian farmer should sow,—and we would merely say that the time that may be spent in selecting good seed, generally remunerates for both trouble and expense, and is a sure indication that the individual who practices it, provides himself in his business, and in nine cases out of ten the results are manifest, both in garner and purse.

GENERAL REMARKS ON CULTIVATION.

The soil best adapted for wheat is a clay, mixed with about 15 per cent of lime, and a sufficient portion of *humus* or vegetable matter to prevent it from becoming too much adhesive or surface bound; and a sandy loam resting upon a stratum of calcareous clay. The latter is the most easily cultivated, and in our humble opinion is decidedly preferable to any other soils in the province for general cultivation. The “sandy plains” in the Talbot, Gore, and parts of the Brock Districts, are of this description of soils, and the day is not far distant when these sections of the Province will be considered the most valuable lands in the country, for the purpose of growing clover and “white crops.” Persons that are not judges of land, might mistake the soils that partake of a drifting sand for its subsoil, for these soils, the surface soil of each being very similar.

Were we a farmer on the Brantford Plains, or on the localities mentioned above, the system of husbandry which we would unquestionably practice, would be alternate crops of wheat, clover, wheat, spring crops, summer fallow, wheat, clover, wheat.—The whole of the manure made on the farm would be converted into economical compost heaps and spread over the clover grounds with a liberal dressing of Gypsum. The first crop of clover would be mown for hay, and the second ploughed in with a single, though deep and well proportioned furrow for wheat.

But few farmers in Canada really understand, the system of farming, which would enable them to obtain from 30 to 40 bushels of fall wheat per acre with only a single ploughing, and without being under the necessity of making naked summer fallows—while we attempt to give them instructions on so desirable a desideratum, we wish to be well understood on one point, viz,—that the system can only be profitably brought into use, when the land is in a high state of cultivation, and perfectly free from weeds and wild grasses. To accomplish this, good ploughing is essential and also a thorough knowledge of the nature of the soils, and a certain mode of depositing the seed. As we have adverted elsewhere to the two former, we will for the present endeavour to adduce a few practical and interesting remarks on the latter, and at some future time take up the whole subject of cultivating land for wheat, and give our readers a short essay on “wheat growing.”—Indeed the subject is so prolific with interest to us, that we have at least, a dozen interesting experiments to make, all of which would be a means of advancing the progress of knowledge, on this branch of agriculture.

Most of our readers must be aware by this time, that we are advocates of drilling, or depositing the seeds in rows, so that the rays of the sun and air will have an opportunity to strike at the bottom of the plants, by which means early maturity, less liability to disease, and a less lux-

uriant growth of straw, will be greatly promoted; and also an opportunity will be given to horse-hoe the crop. On very sandy light lands, drilling would be injurious, for in that case the whole surface of the ground should be covered with a thick covering of the plant to prevent injury from drought.

Drilling machines being but little known in Canada, other means must be adopted to sow the seed in rows. The mode of ribbing on naked summer fallows, and pulverised soils, being explained on another page of this sheet, we shall only give the details of another system, which is admirably calculated to bring about the same end, but which requires a very clever workman to execute it in a creditable style. This system consists in ploughing under a clover ley. If the grass on the sward be heavy, it should be harrowed in proper breadths for the ridges of wheat, by this means the plough will not be obstructed in its course. The best mode of performing the operation is with the trench plough, an implement as yet but little known in this country; the furrows being formed narrow, and turned well over, as the complete inversion of the sod is essential to the perfections of the system. The “press” or “Furrow Slice Compressor” has then to be drawn over the land, lengthwise of the furrows, which will leave them flat or oval in the bottom, and make them compact, regular, and in as fit a state to receive the seed as though a regular drilling machine had been used; the seed is then sown broad-cast, which falls in the bottom of these furrows, as the edge and shape of the furrow is not the least defaced, and is harrowed in lengthwise with a pair of harrows.

The plan here recommended will be fairly tested by the writer, as soon as circumstances will admit, in the mean time, the plan of sowing fall wheat on clover ley, may with advantage be experimented upon, with a reasonable prospect of success without the use of the “press,” providing the land be uncommonly clean and in good heart, and the work be performed in the style recommended above.

BOARDS OF AGRICULTURE.

In discussing the propriety of establishing a Board of Agriculture in this Province, it would be quite unnecessary to enter into the details of the requirements of such an Association, as all who have the slightest acquaintance with the subject must be aware that Agricultural improvement is all that the advocates of the measure desire to accomplish through its agency:—although the precise details may very properly be withheld until the association has been organized, as a very great difference of opinion will no doubt be entertained by the several members composing it, as regards the working of the machinery, yet it must be clear to every reflecting mind, that in order to place this *machinery* in proper working order, public opinion must be aroused to the importance of *action* on the subject.

Since the mother country has graciously consented to give us nearly the same advantages in her markets as an English county, we should have sufficient intelligence among us, to unite in our strength, and place the colony in such a position that an advantage would be derived from the change; but we are sorry to say that comparatively few of our own countrymen are public spirited enough to contribute either money or time to the important subject of agricultural improvement, nor to do anything for the

advancement of the prosperity of the country, farther than their selfish and narrow minds consider strictly to be their individual interests.— True benevolence, and love for country must be taught them by example, and if only a few public benefactors can be found in each township, who will engage their services in the task of stirring up their less active neighbours, the work of improvement will soon gain a foothold, & within a few years a large surplus produce may be sent annually to the English markets, to meet the demands against us for heavy importations of British goods. In a country like this, where the great mass of the people are directly engaged in agricultural pursuits, and four-fifths of other classes are indirectly dependant upon the mass for subsistence, certainly no man possessed of a "single grain" of public spirit would withhold his mite from so noble and patriotic a movement as the cause of the advancement of his country's agriculture. We fancy that we shall be ultimately successful in bringing about a healthy state of things, through our advocacy of the rights of the farmer, and we assure our friends that nothing would please us better, nor be more conducive to the welfare of all classes, than if a spirit for agricultural improvement were diffused among the leading agriculturists, sufficient to arouse the whole body from their slumbers, and reconnoitre the whole field of operation, with a vigilance and an energy that would at once declare unequivocally that something *must and shall be done*.

To bring about this desirable state of things, and to place this noble Province in a position that it may worthily be called an agricultural country, we humbly submit the following scheme for the consideration of the leading men in the province, and if upon due reflection, it will be found to have objectionable features, we trust our numerous friends will point out the defects, so that we may be prepared to take another "track,"—as we have firmly resolved to do our utmost to bring out the latent talents of our brethren of the plough.

District Councils have been wisely established among us, for purely local purposes, and all parties are now of the opinion that these "Local Legislatures" will be of a very great advantage to the general interests of the province. As agriculturists are generally selected by the townships, for members of District Councils, it is reasonable to suppose that any subject connected with Agricultural improvement, would receive their countenance and hearty support. We would therefore conclude that it would be sound policy for the Parliament at their next session, to pass a measure constituting District Councils Agricultural Boards for the several Districts throughout the united province. The contemplated General Board of Agriculture, might also by act of parliament, be composed of representatives elected by each District Board or Council, and be paid while in session, from funds raised in each District, at the same ratio that Members of the Provincial Parliament are paid while legislating for the people.

The General Board would not require to be in session more than a fortnight, and in most cases the whole business might be transacted in a week; and these sessions should be either quarterly or semi-annually.

The necessary qualifications for members of the General Board, should be,—that they be thoroughly acquainted with the theory and practice of farming;—that they be competent to ex-

press their views, in a clear and comprehensive style, both on the floor of the council chamber, and on paper;—and that they shall be provided, at each and every session, with a general report of the state of the agriculture of the district they represent, embracing the mode of cultivation generally practised, and the adaptation of the system to the soil and other natural peculiarities; the nature of the improvements recently introduced, and the comments thereupon by the individual who introduced them;—the kinds of live stock, farming implements, varieties of seeds and grains worthy of general notice; and in fact all the valuable information which the several members of the District Councils or Boards, can collect from their several townships; together with the facts and suggestions which will very naturally be produced from discussions on various agricultural topics while these local Boards are in session, all of which should be laid on the table of the General Board,—a fund of knowledge will thus be collected periodically, the facts worthy of notice and general features of which may be published along with other useful information, and proceedings of the General Board, which might make its appearance to the public in a cheap periodical form, and be disseminated or sold by the several members of the Local Boards in their respective townships. Independent of the above features of the contemplated General Board of Agriculture, a suitable apartment for the exhibition of approved models of farming implements, choice varieties of seed, and any ingenious or useful production, should be attached to the place of meeting or "Agricultural Hall," so that the members of the Board may have an opportunity of introducing better implements, better seed, and in fact, better farming in the districts they represent.

The General Board, would be the proper source for local agricultural societies, to obtain much useful instructions on the best mode of conducting their proceedings, and the result would be that a uniform system of conducting agricultural shows, would be practical throughout the entire province.

The establishment of the General Board of Agriculture as well as the local Boards, must be constituted by act of parliament, and the General Board should have a liberal parliamentary grant of money placed under its control, for the general purposes of fostering and promoting a better system of agriculture among us. In referring back to the Agricultural History of Great Britain and Ireland, many instances are recorded, wherein the government have granted large sums of money to local societies, for the general purposes of agricultural improvement. In A.D. 1737, a parliamentary grant of *Ten Thousand Pounds Sterling per annum*, was granted to the Dublin (Ireland) Agricultural Society, for the encouragement of the introduction of an improved mode of farming in that country. Other similar donations have been recently granted to the leading Agricultural Associations of England, Ireland, and Scotland, which will be quite unnecessary to specify; and as an instance of the very liberal manner, which the Government of Great Britain has treated the subject of agriculture, we would notice the grant of *One Thousand Pounds Sterling*, for the encouragement of the cultivation of Hemp and Flax in the Canadas, which we are sorry to say was so badly expended, that His Excellency Sir John Colborne, sent Home a Despatch informing His Majesty's Government, that the Colony was na-

turally unsuitable for the growth of these plants.

If the people of Canada, would think and talk less about party politics, and read and otherwise inform their minds more, and act in concert on the important subject of agricultural improvement, they would very soon find that such a course, would produce confidence, repose, and security, both at home and abroad; and that the Provincial and Imperial Governments would liberally aid them in so laudable and praiseworthy an enterprise. In addition to the support which they would receive from the two governments, the *Royal Agricultural Society* of England, and the *Highland Society* of Scotland, would no doubt contribute both money and information to a legally established and efficiently organized association, such as we have here cursorily described.

For want of space, we are compelled to draw these remarks to a close, for the present, but we humbly conceive the subject of too much importance and magnitude to relinquish it without adopting efficient means, to canvass public opinion and inform the interested parties of the leading features and practical results that would follow from the foregoing, or a similar system, of organizing and supporting Boards of Agriculture. We will therefore from time to time bring before the notice of our readers, and endeavour to satisfy all parties that something of the kind is really required to give this colony the character of an "English County." In the mean time such of our friends who entertain the same opinions with us, would do well to call on the members and wardens of District Councils, and make known to them their views, so that the scheme may be entered into, at the next session of the Provincial Parliament.

VERMIN ON VINES.—We hope our gardeners will make various trials this summer, to destroy the bugs and worms that are so officious among garden plants. Charcoal dust can be readily procured in most places and this article is beneficial to the plants in several ways—it improves the soil by attracting nitrous substances, and it raises the temperature about the plants around which it is placed, since the rays from the sun are not reflected back as they are from light colored substances. But charcoal dust is always offensive to insects and grubs, and though it may not kill them, it will drive them away. A little may be sifted over the plants every day or two, and we incline to think that charcoal will prove to be as good an article as any that has been recommended, for garden plants.—*Mass. Plough'n.*

THE CURSE OF ILL-TEMPER.—A modern writer thus forcibly depicts the evils of a great infirmity:

"Ill-temper! thou troubled and harrassing spirit, sent by the enemy of mankind to blast the happiness of all who yield to thy influence! who keepest more than half of the human race within thy dark and stormy dominions! What an abode of peace, and joy, and love, would this earth be if thou wert exterminated. Villains and their crimes only disturb us at times, as tempests obscure the summer sky; but when thou spreadest thy dusky wings, the brightness of the daily sun is lost, and the flowers that spring up in the thorny path of life are blighted under thy baneful shadow."

A good example in society, is like money at compound interest; with this exception; the interest is paid by neither party, but received by both.

From the Farmers' Cabinet.

COMPARATIVE ADVANTAGES OF FARMING.

It is a prevalent opinion amongst young men—those who are engaged in agriculture—as well as many who are connected with commerce, that farming is less advantageous, and subject to greater hardships, than most other professions—But this arises, in a great measure, from partial views of the subject, and from an unacquaintedness, incident to the employments of others; they therefore form opinions merely from external appearances, without investigating the disadvantages attendant upon other occupations—and thus, enterprises are commenced and precipitate resolutions are formed, which lay the foundation of many disasters, which daily take place in families and amongst individuals. But the farmer possesses many advantages which these persons are apt to underrate. And first, his moral honesty is not so hardly tried, as it would be in many other kinds of business; and consequently, 'defalcation' is not often charged upon him. Again, he has no knowledge of that competition which exists between those of other trades and professions; so that when he retires from his labour, he is free from those inward rankings, which often harrow up the minds of persons engaged in trade. Nor is he in that danger of losing his property by casualties—fire, the wind and waves, and the deprecation of dishonest men: and as he raises those articles upon his farm that are most necessary for his comfort, and which have always been considered cash articles in the market, he is not so liable to be put to his wits' end to procure money to purchase the necessaries of life. It has been objected, that farming is a laborious and dirty employment; but is there not hard and dirty work in the shop of the blacksmith? and do not the carpenter and mason encounter both, in the repairs of old buildings, &c.? and are the grocer, the ware-houssman, the harness-maker and the shoe-maker exempt? Another objection, it is a slow way to get money; true, there are shorter ways to make money, but it very often happens that those who accumulate property the quickest, cannot produce such a title to their wealth as will procure satisfaction, and a quiet conscience. Multitudes, deluded by the deceptive allurements of trade, have entered into ruinous speculations, to the destruction of their own prospects and the peace and happiness of their families; stamping lasting blight upon their characters and future welfare, and all to gratify an insatiable appetite to make money quickly; overlooking the fact, that generally, the fortunes that have been made the most suddenly, are the most suddenly dissipated, and that those who enjoy the privilege of making money fast, have often to pay dearly for it, both in their persons and characters, and are made to exclaim "all is not gold that glitters." Few know or consider, the personal assiduity, the economy, the self-denial and perseverance which are necessary to insure success in trade: there is no occupation exempt from its peculiar evils and trials—the physician, the lawyer, and the clergyman, have their full share, of which the farmer is little aware; and if he could comprehend all the difficulties and unpleasant occurrences, which even these are continually liable to encounter, he would rejoice at his lot, rather than envy that of others; and bless his "lines that have fallen to him in such pleasant places," and be grateful for his "godly heritage."

S. Browns.

Wilmington, Mass.

ANALYSIS OF INDIAN CORN.—In our paper of March 22d, we gave an analysis by Professor Dana, of Lowell, Mass., of Indian Corn, Ruta Baga, and Potatoes, upon which, among other things we then remarked:

"This analysis presents one other curious fact—it is this—that while the corn gives over 88 per cent of the fat-forming principles, and the potato only a little over 24 per cent; that in the flesh-forming principles, the potato greatly exceeds the corn, the former yielding 2.07, whereas the latter only gives 1.26."

This discrepancy between the product of fat and flesh, in a grain so rich in nutrition as that of corn, appeared to us at the time to be strange, and hence the remarks we then made; we are pleased to find by the following correction, that the result as set down by Dr. Dana, to the flesh-forming principles was erroneous; but while we make this remark we must be permitted to point to another discrepancy which appears between the fat-forming principles as stated in his note of correction, and that given in his communication of Feb. 28th. In that communication they were stated at 84.43, in the present at 77.09, being a difference of 11.34, just the one existing between the present result, as regards the quantum of flesh-forming principles and that formerly ascribed to it. This makes the aggregate result quadrate, but does not account for the error, in the fat forming principles, as the Dr. is silent as to how it occurred.

To the Editor of the New England Farmer:

DEAR SIR,—I ask leave to correct a material error in the statement of the results of the analysis of Indian corn which I sent you, and which you published in your paper of March 8, 1843.

1.26 should be 126. Deducting this number, the product of multiplying the nitrogen of corn by 6.20, from the water of vegetation and the salts, we have 77.09.

The correction thus made, the results are—

Flesh-forming principles—gluten, albumen, &c	12.60
Fat-forming principles—as gum, sugar, Starch, woody fibre, oil, &c.	77.09
Water	9.
Salts	1.31

100

With regard, your ob't serv't,
SAM. L. DANA.

Lowell, June 10, 1843.

SOAP MAKING.—As soap making is a matter of no small interest to every house-keeper, a few suggestions on the process of manufacturing will be of utility. Soap, as every one knows, is made of alkali and fat or oil of almost any kind. Although grease and ley are common in every kitchen, yet few can combine them with accuracy; and frequently much more labor is bestowed, than is necessary. The first consideration is the obtaining a sufficient quantity of alkali. This requires good wood, green is best, and if it be cut in the winter or while the sap is down, the ley will be much stronger. Old rotten wood should not be burnt, when the ashes are to be used for ley.

The ashes being ready, put them into a hogs-head, barrel or old fashioned hopper, and put on water until the strength is exhausted. Next commence boiling to evaporate the water, and concentrate the potash. To be assured there is enough potash, make a trial with an egg. If an egg is supported, all is right, but if it sinks to the bottom, the boiling must be continued.

But often it occurs that the ley is suffi-

ently strong and yet soap cannot be made. This is generally owing to the fact, that the potash of the ley is not sufficiently caustic, or capable of corroding the skin. This lack of causticity is owing to the existence of too much carbonic acid, in combination with the potash. To prevent this, use the ashes fresh, or before the acid is absorbed. The cure for the evil is quick. It has a greater affinity for carbonic acid than potash, and if a half bushel unslacked lime to be placed at the bottom of the hogshead of ashes, the ley will be free from the acid.—The proper causticity will be shown by dipping a feather into the ley while boiling. If the more delicate parts are consumed, the ley is ready for the oil. The fat should be as clean as possible. The proportion should be about three pounds to one gallon of the alkali. The fat of course to be put in while boiling and the whole should be constantly stirred, till the soap is finished.

Hard Soap is made by adding salt to soft soap while boiling. Tallow soap is perhaps the best but too expensive for common use. The Windsor soap is made of tallow and potash, scented with caraway seed. Butter, lard and the finer oils are used for making the fancy toilet soaps.—Tennessee Agriculturist.

SICK HEADACHE.—An article in the Southwestern Farmer,—though not credited, and it does not appear to be original—says that two tea spoonful of finely pulverized charcoal, drunk in a half tumbler of water, will in less than fifteen minutes, give relief to the sick headache, when caused, as in most cases it is, by superabundance of acid on the stomach. It is always on hand and easily tried, at all events.—Prairie Farmer.

A glass of new milk, taken two or three times a day, is said to be a remedy for the headache, when occasioned by a disorderly state of the stomach. The headache may generally be relieved by rubbing fine salt on the head. The hair of the patient should be opened, a little fine salt laid on the head, then it should be rubbed hard and quick with the palm of the hand, until the friction produces considerable irritation which will cause a tendency of the blood outward, and relieve the brain.

This operation should be performed on five or six places on the head. We have tried this and it is the only remedy we use; and we have known it tried in many cases and it seldom fails of making an immediate cure, or mitigating the pain. It is simple and convenient. Salt is said to be good to promote the growth of the hair.—Boston Cultivator.

THE SUN FLOWER.—The propagation of the sun-flower is a branch of domestic industry which has never yet, we think, received the attention which it deserves.—There are but few vegetables that will more liberally repay the cost of cultivation, or that can be used in a greater variety of ways. The soil best adapted to their cultivation, is a light, rich, permeable soil of light and porous sand. It is credibly asserted that in many parts of New England from fifty to sixty bushels of sun-flower seed are often harvested from a single acre, and that has been ascertained by actual and critical experiments, to be equally valuable for fattening hogs, fowls, &c. as the best description of corn. As to its value as a food for the latter, we can speak from actual experience, having for several years made use of it for that purpose to all other grains. As a feed for milk cows it is invaluable, giving a peculiar

richness to the milk without communicating any unpleasant flavor, which is apt to be the case with cabbages, turnips, and the like. We have also thought that cows fed regularly on this food, give more milk, and that a larger quantity of butter may be made from a given quantum: or a number of quarts, than when the animals are fed on other food. Hogs are also fond of the seed, but in feeding those various animals with it, care must be had not to supply them too bountifully, or to the full extent their appetites demand. If supplied liberally or in excess, it tends to promote flatulency, and a slight oversight or remissness in this particular has often resulted in serious loss.—*U. S. Farmer.*

BEES.—To prevent bees from going off upon swarming, take the precaution when they exhibit a disposition to swarm, to stop most of the holes by which they leave the hive, so as to force the swarm to be a good while coming out. The swarm is commonly made up of the young bees, many of whom can scarcely fly; and as nothing can be done by the swarm till all are out of the hive, but fly about in the air, by prolonging the time of their coming out, the feeble ones get tired, and their plans so frustrated, that it is necessary for them to alight for rest, and to re-arrange for their journey. If the swarm be allowed to leave the old hive all at once, they care but little about alighting.—*Prairie Farmer.*

THE MILK CELLAR.

It is a curious fact, but by no means unaccountable, that in many parts of the country the milk cellar is superceding the spring house,—an appendage that has always been considered indispensable for the production of good butter, be the other qualifications of a farm and its appurtenances what they might. While on a visit to Wilmington, Delaware, I had occasion to remark the excellence of the butter at my friend's table, when he replied, he always selected the best cellar butter at market, for the use of his family, giving it as his firm conviction, that butter made in a cellar was far preferable to that made in a spring house, its great recommendation being, in keeping sweet and good much longer, and retaining its fine flavour and color to the last, which spring house butter would not do. And he observed, it is customary to account for the greater price which some dairymen obtain for their butter in the market, by saying it is *cellar butter*; instancing the fact, in the high character of that made by Bryan Jackson, near Newcastle, who never fails to obtain the top price of the market, for butter of the finest quality; he having a cellar that might be taken as a pattern for all that part of the country. Of course, it is readily admitted that much depends on the mode that is adopted in the management of the dairy, commencing with the breed and feed of the cows, and ending with the manipulations of the butter; but the idea is gaining ground, that the best butter is to be made in a cellar, all other circumstances being equal: a remarkable revolution in public opinion truly.

On reconnoitering amongst my friends, I found that several of them had substituted the cellar for the spring-house; and I do not know one who is not satisfied with the arrangement, except it be where the cellar is dug in a damp soil, or has been most injudiciously opened to the well, the evaporation from which fills the room with constant moisture, which may be found adhering to the walls, the ceiling and the woodwork,

and particularly the inside of the door, causing a damp and clammy feel, a nauseous, mouldy smell, which the butter imbibes, to its lasting injury: indeed no good butter can be made in such places. But another revolution is taking place, even amongst the advocates for the cellar; it is no longer thought necessary to dig the cellar very deep, or to arch it over with stone or brick, with an air passage through it for ventilation—a *rault*, as it is more properly then termed; it is found sufficient, if the cellar be sunk a few feet below the surface of the earth, with a wide and shallow window on each side, the bottom of it level with the ground outside; well protected with a wire guard to keep out vermin, large flies, &c., and provided with a close glazed sash, which can be opened and closed at pleasure, by lifting it up to the ceiling, which ought to be no higher than the top of the windows; so that the air of the cellar can be ventilated by opening the windows of the two opposite sides, according to the way the wind sets at the time, shutting them quickly when necessary; for in cold, windy, or damp weather, the sooner the windows are again closed, the better. Indeed, to the management of the cellar in this particular, much of the success of dairying is to be attributed; cold and damp air being unfriendly to the secretion of cream, and its proper and entire separation from the milk.—Hence, therefore, it is a bad practice to set the pans on the brick floor of the cellar; they ought always to be placed around on shelves, about three feet in height, and these after being well washed with hot water, should be wiped quite dry, that no mouldy evaporation might take place to spoil the butter. The air near the floor of a dairy is always impure, being loaded with acid vapours and putrid exhalations, the density of which confines it to the lowest part of the room; hence it is, that the doors of some dairies are made with lattice work, that the air near the floor, as well as that near the ceiling, might be ventilated at the same time; these lattices being furnished with sliding panels, to be kept close in bad weather. The milk cellar ought always to have a northern aspect, and be well shaded by trees, not growing too near the windows, so as to impede a dry current of air, or to create a moist atmosphere; this consideration being of more importance than would readily be imagined.

Cellars thus constructed and carefully attended, will, no doubt, supercede the use of spring-houses generally, before many years have passed away; by which the business of the dairy will be rendered more agreeable, less laborious, and far less inimical to the health of those, particularly of females, whose occupation it is to attend to its never ceasing duties.—*Farmer's Cabinet.*

MULTIPLYING AND EQUALISING BEE-HIVE.

Increased attention has, within a few years, been given to the raising of bees—by some as a source of pleasure and amusement, and by others as one of profit; and among them all, there has existed a variety of opinions in relation to the manner of treatment that would be the most successful, and as a natural result, many different kinds of hives have been constructed, some of which seem to have the recommendation of a correct theory.

In the construction of a bee-hive, the objects which seem to the writer most desirable to be gained, are simplicity and economy of construction, in such a manner as to save the time, trouble, and labour, of watching

and living bees; afford the best protection against the intrusion of the moth or miller; save the increase of the bees; keep the swarms equal; make them most secure against robbing; change the comb before it gets to be so old as to injure the bees; save all the labour of the bees during the working season—which is but short—and have an opportunity to take away at pleasure, a portion of the best honey, without any injury whatever to the swarm.

Jones' "Multiplying and Equalising Bee-hive," enjoys a pre-eminence over all others—from its construction—to accomplish the above-named objects. It is simple, and may be made either plain or ornamental. It has two equal parts, which when joined, make the whole size of the hive 21 inches, from the top to the bottom; 19 inches in breadth, and 10½ in depth. It divides perpendicularly in the middle, and the bottom of each part, may be so graduated as to make the aperture for entrance large or small, as necessity may require, and in the upper part, about six inches perpendicular, are partitioned off, so as to make room for the boxes or drawers, in which the bees deposit the best honey, which may be taken out when they are full, and others supplied. Its advantages and the manner of treatment, I cannot now give in detail, and therefore must be brief.

When a fulness occurs, or the bees show indications of swarming, the hive is to be taken in the evening, when the bees are all at home, and divided, and an empty half added to each full half, when the bees will immediately commence working to fill the empty half; and you have, in fact, accomplished all that was necessary in swarming, as you have two swarms which are nearly equal in size, and with comparatively a very small amount of labour. The increase is made sure, and the swarms equalised, and they will be much more profitable to the owner than when they swarm, and are hived in the old fashioned way. It affords greater protection against the moth than any other kind of hive, and for this reason, when a swarm leaves the old hive, they always take more than half the quantities of bees, and frequently swarm again in three or ten days, when the quantity of bees in the hive becomes still further reduced, and the comb unprotected; then the miller enters and deposits its eggs, which soon hatch into moths, and destroy the swarm, and no construction of a hive can prevent their entering; the only protection is to have the comb well covered with bees—all apiarians agree that a strong swarm is not liable to danger from the intrusion of the moth—which Jones' hive effectually secures—as the same bees and the same quantity occupy the same comb after the division that they did before, so that no part is left uncovered. The bottom may be closed during the robbing season, so as to leave the aperture so small that but two or three bees can pass in and out at a time; which aperture they can easily protect. By the process of division, one portion of the comb is always new, and when one part gets to be three years old, take the hive as late as the 20th of July, divide as for swarming, and add an empty half to the new part, lay the half containing the old comb near by, and rap on it until the bees leave and return to the hive, which they will readily do, if the comb be old.

It not unfrequently occurs that swarms in the old fashioned hives, hang upon the outside of the hive for some days before swarming, and sometimes they hang out for weeks, and sometimes for the whole season, without swarming. By the division of Jones' hive, a vacancy is made, and they immediately commence work to fill it, and

thus save the labour during the best part of the season, which is so frequently lost. The boxes or drawers at the top, are made so as to hold about eight pounds of honey, and may be removed when they are full, or sooner if desirable.—*ib.*

OF THE MANAGEMENT OF MILK AND CREAM,
AND THE MAKING AND PRESERVA-
TION OF BUTTER.

The quality of milk greatly depends on the nature of the food, and which likewise materially affects the quantity that the cows will yield. This last circumstance is, to a certain degree, influenced by the manner in which the cows are milked; the dairy-man therefore, should pay a little more attention to this introductory process, than he is always accustomed to do. If a cow is roughly handled, it is not only painful to her, but will also cause her to withhold a portion of her milk, whereas, if it is gently drawn, she will yield it freely; and it is of importance that it should be drawn to the last drop, or it will otherwise decrease at each succeeding meal. As it sometimes happens that cows are fidgety and restless, they should by no means be harshly or severely treated. If the udder is hard and painful, it should be fomented with lukewarm water, and stroked gently, by which simple expedient the cow will generally be brought into good temper, and readily yield her milk. It is also proper to feed the cows at the time of milking, for, while eating, they give out their milk with greater freedom. They are also prevented by the motion of their jaws, from the habit of withholding their milk, by means of which, if it is not properly prevented, they would soon become dry.

In this country, it is the general practice to milk cows twice in the course of twenty-four hours, throughout the year; but in summer, the proper periods are at least three every day, and at intervals as nearly equidistant as possible, viz. very early in the morning, at noon, and a little before the approach of night. It is a well known fact, that cows when milked thrice in the day yield more milk in point of quantity, and of as good, if not better, quality, than they will under the common mode of milking them only in the morning and evening. Very particular directions should be given that the cows are driven slowly to the place of milking. If they are hurried, although in a very slight degree, the separation of the milk into its constituent parts, will not so readily or perfectly take place. If cleanliness were attended to as much as it ought, the teats would be washed with water and a sponge before the milking commenced.

After the milk is drawn from the cow, it should be carefully strained through a gauze or linen cloth, stretched on an open-bottomed wooden bowl, or a hair sieve, in the cream-pans, which should never exceed three inches in depth, though they may be made so wide as to contain any quantity required. If any ill-flavour is apprehended from the cows having eaten turnips, &c., the addition of one eighth part of boiling water to the milk, before it is poured into the dishes, will in a great degree remove it, or the solution of nitre may be used. These pans when filled should be set upon the shelves, there to continue until the cream is removed.

In the process of milking it should be remembered, that the milk first drawn from a cow is always thinner, and inferior in quality to that afterwards obtained, and this richness increases progressively to the very last drop that can be drawn from the udder.

It should also be recollected in the after process, that the portion of cream rising first

to the surface, is richer in point of quality, and greater in quantity, than that which rises in the second equal space of time, and so of the rest; the cream continually decreasing, and becoming thinner and poorer.

The milk produces a smaller proportion of cream than that which is thinner, though the cream of the former is of a richer quality. If thick milk therefore is diluted with water, it will afford more cream than it would have yielded in its pure state, though its quality will be inferior.

Milk carried about in pails, or other vessels, agitated and partly cooled before it be poured into the milk-pans, never throws up such good and plentiful cream as if it had been put into proper vessels immediately after it came from the cow.

From these fundamental facts, some important inferences, several of them already hinted at, and serving to direct the proceedings of the dairy, may be deduced.

1. It is evidently of much importance, that the cows should be milked as near to the dairy as possible, in order to prevent the necessity of carrying and cooling the milk before it is put into the dishes; and as cows are much hurt by far driving, it must be a great advantage in a dairy-farm, where the practice of house-feeding is not adopted, to have the principal grass fields as near the dairy homesteads as possible.

2. The practice of putting the milk of all the cows of a large dairy into one vessel, as it is milked, there to remain until the whole milking be finished, before any part is put into the milk-pans, is highly injudicious, not only on account of the loss sustained by the agitation and cooling; but also because it prevents the owner of the dairy from distinguishing the good from the bad cow's milk, so as to guide him with respect to the profit that he derives from each cow. A better practice, therefore, would be to have the milk drawn from each cow separately, or from only two or three cows, put into the creaming-pans as soon as milked, without being mixed with any other.

A small quantity of clear water, cold in summer, and warm in winter, put into the bottom of the milk-pan, will assist the rising of the cream; but some persons imagine that it is prejudicial to the butter.

3. If it is intended occasionally, or generally, to make butter of a very fine quality, the milk of all the cows that yield cream of a bad or inferior quality should be rejected, and also the milk that is first drawn from each cow. The quality of the butter will also be improved in proportion to the smallness of the quantity of the last-drawn milk that is used, as it increases in richness to the very last drop that can be obtained from the udder. The best butter will consist of the last-drawn milk, and also of the first-drawn cream.

Milk consists of three component parts, the butyraceous, or oily substance, of which butter is composed; caseous matter, from which cheese is formed; and the serum, or whey. The comparative value of different dairies, and of different cows, in each dairy, consists not only in the quantity of milk—the compound of these three substances—but also the quantity of butter in a given quantity of milk. These three ingredients differ materially in specific gravity or weight, and to separate them is the chief object of the dairy. The cream is the lightest—next in specific gravity is the whey, and the curd is the heaviest. The manufacture of butter consists in the separation of the butyraceous part, and that is a mere mechanical affair. The milk is left undisturbed, and thus the lightest portion mechanically quits the heavier one, and floats on the top. The separation of the curd from the serum—the man-

ufacture of cheese—is a chemical process, and is effected by means of a peculiar acid.

The cream, having separated from the other component parts of the milk in about twenty-four hours, in a medium temperature, is carefully skimmed by means of a skimming dish, and poured into a vessel, until enough is obtained for churning, or the milk is let off by taking out a plug in the bottom of the pan. When the cream has been thus collected, it should be put into a deep covered vessel, for the action of the air on the surface dries it, and also stirred with a stick or spoon, once or twice a day, until made into butter. The object of this is to produce a slight acidity, by which the after process of churning is much accelerated. The time of keeping depends on the weather: if the cream from each milking has been kept separate, it may remain from two to four days, in most seasons, without being injured; but if the cream is mixed with that which is sour, they ferment and soon become putrid. This is partly prevented by the stirring: but it is best to keep the cream from every milking apart, and thus allow each to become sour of itself. The contrary practice should never be adopted, unless it be intended to churn the moment the whole mass has become acid.

In some counties the separation of the cream from the milk, is not thought to be sufficiently complete by this mechanical process, but after the milk has stood twenty-four hours in the pan it is put over a slow fire, and there it remains until it begins to simmer, or is about to boil. As soon as the first bubbles rise to the top, the pan is taken off from the fire, and put carefully away for twenty-four hours in order to cool. At the end of this time, if the quantity of milk is considerable, the cream will be an inch or more in thickness upon the surface. It is then divided with a knife into squares of a convenient size, and removed by means of a skimmer, and is called *clotted* or *clouted* cream. It is more solid than the cream obtained in the usual way, and has a peculiarly sweet and pleasant taste. It is the usual companion of the breakfast table, and much valued as an addition to the fruit pie, or some kinds of fruit in their raw state, or in the manufacture of that unrivalled Devonian compound, the *syllabub*. The milk thus treated yields one-fourth more cream than is produced in the common way, but it is at the expense of the remaining milk, to which little is left but the watery particles that entered into its original composition. It more readily churns than cream produced in the usual way, and forms a butter retaining the peculiar taste of the *clouted* cream.

The cream thus preserved consists of the butyraceous portion of the milk with some quantity of the serous fluid, and these must be separated from each other. This has been found to be best effected by agitation. It might be effected on a small scale, by means of a bottle, but is best accomplished by the help of a machine called a *churn*. This is either formed of a revolving barrel, or of an upright one, wider at the bottom than at the top, and with a moveable cover affixed to it, pierced by a hole. In this hole works a stick or pole, four feet in length and two inches in diameter, to the bottom of which is affixed a circular board, somewhat smaller in diameter than the upper part of the cask, and pierced with several circular holes. The cream is poured into the churn until it is about two thirds full,—the stick with the circular board is then introduced, and the cover placed over this, admitting the end of the stick to pass through the aperture in its centre. The churner now grasps the stick in both hands and moves it rapidly and forcibly up and down. The

cream is violently agitated, and broken down into the smallest particles. The churning works away for nearly an hour, until some small particles of butter begin to appear, or, in the language of the dairy, the butter *begins to come*.

There is a considerable art connected with this apparently simple manipulation. The churning must not be too rapid and violent, nor must it be too slow and gentle. In the first case, and especially in summer, it would ferment and become ill-tasted,—in the latter it would not form at all. The temperature should be carefully regarded. In summer it will be necessary to immerse the pump churn,—the one that has been thus described, about a foot deep in cold water, or to throw water over the revolving churn. In winter it will be necessary to add a little warm water. The manipulation is continued, until the particles of butter which have begun to come accumulate, and unite at the bottom of the churn, and form a solid mass of butter, and to which, at length, there are no farther additions. The butter is then removed into another vessel, and the fluid—the *butter-milk*, is set aside for the pigs.

After the butter is formed, the usual practice is to *wash it* in several waters until all the milk with which it is yet mixed is removed; but care should be taken not to knead or beat it too much, and the less it is handled, after being once made, the better. Some advise that the milk should be forced out of the cavities of the butter by means of a flat, wooden ladle, furnished with a short handle.

In the neighbourhood of *Epping*, which has long been celebrated for the quality of its butter, the following is the common process:—the milk, after standing twenty-four hours, is *fleeted*, or skimmed, and the skimmed milk is drawn off into vessels of an increased depth, which is called *doubling*. There it remains for twelve or twenty-four hours more, as the weather permits, during which time, as the cream rises, it is fleeted two or three times. It is then *trebled*, or put into deep tubs, where it is again occasionally skimmed, and kept so long as any cream forms on the surface. The butter made from these after-fleetings is of a paler color and inferior quality to that made from the first cream; it is, therefore, usually churned apart. In making the first quality, when the butter is *come*, the dairy-woman throws it first into clean water, and then upon a board, and with her hand squeezes out all the water; sprinkling, at the same time, a little salt over the whole mass, which is then divided into pounds, and they, as they are weighed, are again squeezed and rolled out to the length of about fourteen inches. So far, the method nearly accords with that in most other districts; but there is this peculiarity in the management of the *Epping* dairy-women, that they consider a small proportion of acid, either natural or artificial, necessary to ensure a good churning; and for this purpose they either mix sour cream with the sweet, or they employ lemon juice, and sometimes rennet. This practice merits attention on dairy farms which possess pasture of a short and sweet nature; but where the herbage is coarse, or the cows are fed on roots, or other succulent artificial food, the fresher the cream is churned, the more valuable will be the butter.

Butter, thus freed from the remaining milk, is called *fresh butter*; and, when sold on the spot or in the neighbouring markets, is formed into rolls weighing half a pound, or a pound, or into lumps of 24 ounces, termed *dishes* in Somersetshire and some other parts of England. Where it is intended to be kept, or sent to a distance, it is salted by

the process immediately to be described, and is put into casks, containing 28, 56, or 84 lbs., and usually denominated half firkins, and tubs. Previously to putting the butter into these vessels, especial care must be taken that they are well seasoned by frequent washing and exposure to the air for two or three weeks. As it is very difficult to season new firkins, it will always be preferable to employ those which have been already used where they can be returned to the dairy owner. The most speedy method of seasoning the firkin is by the use of unslaked lime, or a large quantity of salt and water well boiled; with which it should be repeatedly scrubbed, and afterwards thrown into cold water, to remain there three or four days until wanted. It should then be scrubbed as before, and well rinsed with cold water; and, before the butter is put in, every part of the inside of the firkin should be well rubbed with salt.

The ordinary process of *salting butter*, after the milk has been forced out of it in the manner already described, is, to work into the butter one or two ounces of salt, so thoroughly that it shall be equally incorporated with the mass; for if it be not equally mixed in every part, the butter acquires two colours, becoming yellow where the salt has fallen, and white where it has not, and in some places is termed “*pyety*” or “*pinsowed*.” The salt employed for this purpose should be of the purest kind, well dried and broken down, but not completely pulverized. If the salt is pure, the butter will retain its flavour as long as it is wanted, but bad salt will soon cause it to become rancid. Dr. Anderson recommends the following preparation as not only preventing the butter from becoming tamed or rancid, but also improving its colour, while it imparts a sweeter or richer taste than could have been effected by the use of the common salt only.

Let two parts of the best common salt, and of sugar and saltpetre each one part, be completely blended together by beating, and add one ounce of this mixture to every pound of butter; incorporate it thoroughly in the mass, and close it up for use.

It will be necessary to keep butter, thus prepared, for two or three weeks before it is used, otherwise it will not taste well; but, if properly cured, according to the above prescription, it will continue so perfectly sweet for three years, as not to be distinguished from newly made salted butter. It is said that in Holland the salt for butter that is intended to be kept, is mixed with the milk before it is churned, by which means both its flavour and preservative qualities are more effectually imparted.

Before the butter is put into the firkin, it should be made as dry as possible. A thin layer of salt should then be strewed on the bottom of the cask, and each successive layer of the butter thoroughly moulded into that beneath it. When the cask is full, some more salt should be strewed over it, and the head put on. If the butter had been previously well freed from the milk, and the salt moulded into it, quite dry, it will not shrink in the cask. This is always regarded as one criterion of the goodness of the butter.

Butter is a most valuable article of commerce. It is produced in the greatest perfection in Holland and in England, and from the former more than 100,000 cwt. is yearly exported to England alone. The whole quantity that is manufactured in England is consumed at home. More than 400,000 cwt. of butter is imported from Ireland every year, a great part of which is consumed in Great Britain, and the rest exported to our West India possessions, except a little to Portugal and South America.

Of the average quantity of butter produced from one cow or from a dairy of cows, it is impossible to form any accurate estimate. It would vary with the breed, the pasture, and the management. Four gallons of milk will probably produce about a pound of butter—and a good cow, in order that dairy husbandry may remunerate the farmer, should yield about 200 lbs. in the course of the year. 200 lbs. at 10d. per lb., would produce £2 6s. 8d.; the calf would probably sell for 20s., and there would be considerable feed for the pigs, while a valuable quantity of skim-milk cheese could be manufactured. A cow, including pasture and hay, can scarcely be provided for from less than three acres of tolerably good land, the rent of which, with the taxes, costs, casualties, and servants' wages and food, will scarcely leave more than a moderate remuneration to the farmer.—*Complete Grazer*.

EXTRACTS FROM A CORRESPONDENT.

“It is to be regretted that practical farmers do not contribute more to such a work as you have undertaken. I feel no scruple in asserting, that every farmer in the province would be benefited by the perusal of the many valuable articles that appear in your Journal, still if every intelligent farmer in the province would not only take in the work, but write for its columns such successful experiments as they may have made, or such useful facts as they may be in possession of,—the work of improvement would go on with rapid strides, and the character of the country would very soon change, and the sun-beams of prosperity would shine on the countenance of our farmers, with a resplendency that would speak louder than words, that their profession was one of the most lofty and noble that could possibly attract the attention of mankind.

Although I am not a farmer, I shall at all times feel a pleasure in advancing the prosperity of your praiseworthy enterprise, and shall for the present mention a single fact, which lately came under my notice.

Two farmers in this neighbourhood prepared their seed wheat in the following manner,—one dissolved a pound of arsenic and thoroughly mixed it with eight bushels of wheat, and distributed the application throughout the whole mass, he then limes it in the usual manner,—he has just commenced harvesting 55 acres, thus prepared, and thinks there is not one head of smutty wheat in the whole, and expects upwards of 40 bushels per acre. He has practised this mode of preparing his seed for the last seven years, and has not had any smutty wheat, whereas his neighbours have had plenty and to spare.

The other party prepares the seed thus,—he takes his seed to the river, and washes it in a tub, and changes the water very often, until it runs off quite clear, he then puts the wheat thus washed, into bags that he cleaned the day before, and carries it to the granary, and soaks it a few hours in strong brine, and afterwards dries it with lime,—he also has a good crop, which is quite free from smut.

CHATHAM, July 25, 1843.

If there is a man who may eat his bread at peace with God and man, it is that man who has brought that bread out of the earth by his own honest industry. It is cankered by no fraud—it is wet by no tear—it is stained by no blood.

BLACKSMITH'S WORK.

As many of our farmers have blacksmith's shops of their own, the following directions for working steel and making edged tools, plain and simple as they are, may be of great value to them, if carefully enjoined upon the smiths, who are frequently great bunglers in this kind of work.—*Southern Planter.*

WORKING CAST STEEL.—We have recently obtained information on this subject from the most skillful and celebrated workman in the United States, Capt. J. Hill, of Billerica, Mass. We were a little surprised to learn the difference in the management of cast steel, from that of the German.

There is something yet remaining mysterious with regard to the nature and management of this article, which no cyclopaedia or other vehicle of intelligence have as yet developed.

The process of manufacturing cast steel, it is not our purpose at present to describe; but it is evidently composed of refined iron and carbon in very nice proportions. In the process of shaping it into cutting blades and other articles, it is heated and hammered in the manner of other steel; when tempered for this purpose, it is first heated to a full cherry red, and plunged into water till cold. It may then be held over a moderate charcoal fire, until the color of any part which has been filed or made bright after hardening, changes to a reddish orange color.

This is the temper for cutting tools, but if a spring temper is required, it is heated over the charcoal till the color approaches a blue, or rather blue inclined to red. In either cases when the steel is brought to show these colors, it is to be plunged in oil—common lamp or linseed oil—which will not effect the color.

If the steel is to be rendered soft for turning or cutting, it must be heated to a full red, and left to cool in partially ignited charcoal; in this way it may be made so soft as to be cut or turned into shape as easily as copper, or even common pewter.

But the most curious and peculiar process is that of welding. In welding iron, a white heat is indispensable, as every body knows; but not so with cast steel.—When the steel is to be welded to iron, neither are to be heated above a full cherry red. The two parts are to be previously lashed or gripped together, and in that condition heated: they have then only to be immersed in calcined borax, or to have the prepared borax (borax of soda), sprinkled over the joint, and are ready to adhere by being hammered together.

The borax for this purpose is to be prepared by being previously heated to a full red, and kept heated till it becomes a soft powder like flour.

What the chemical effect of the calcined borax on the metallic surface is, is not perfectly understood farther than that its affinity for oxygen is such as to deprive the jointed surfaces of any portion of oxygen which might prevent a ready union of the surfaces.

When small pieces of steel are to be welded, they are to be heated to a full cherry red, immersed in the calcined borax, and then to be hammered together.

The most extraordinary point in the process is the fact, that if the steel is but a little overheated, it will immediately crack into fragments; but by a shifted process, and with the use of borax, the cracks and defects may be healed and rendered sound and solid. We have witnessed the fact, that by a judicious management, a fine tempered cutting edge of cast steel may be bent, warped, and hammered, and its shape materially

change without breaking or affecting the temper.

More may be said on this subject in a future number, but we close for the present with the remark, that even Anderson & Co., the celebrated manufacturers of cast steel, are evidently unacquainted with all the merits of its peculiar properties.—*American Mechanic.*

TO PREVENT THE DECAY OF WOOD.

Take twelve ounces of rosin and eight ounces of roll brimstone, each coarsely powdered, and three gallons of train oil.—Heat them slowly, gradually adding four ounces of beeswax, cut in small bits. Frequently stir the liquor, which, as soon as the solid ingredients are dissolved, will be fit for use. What remains unused will become solid on cooling, and may be remelted on subsequent occasions. When it is fit for use, add as much Spanish brown, or red, or yellow ochre, or any colour you want, first ground fine in some of the oil, as will give the shade you want; then lay it on with a brush as hot and thin as you can; some days after the first coat is dried give it a second. It will preserve plank for ages, and keep the weather from driving through brick-work. Common white paint may be used on top of it, if required, for the sake of appearance. Two coats should always be given, and in compound machinery, the separate parts should be so varnished before they are put together, after which it will be prudent to give a third coating to joints, or to any other part which is particularly exposed to the action of moisture, such as water-shoots, flood-gates, the beds of carts, the tops of posts, and all timber which is near or within ground. Each coat should dry before the parts are joined, or the last coat applied. The composition should be applied when the wood is perfectly dry. It is necessary to mention that compositions made of hot oil, should for the sake of security, be heated in metallic vessels in the open air; for when the oil is brought to the boiling point, or 600 of Fahrenheit, the vapor catches fire, and though a lower degree of temperature should be used in this process, it is not always possible to regulate the heat, or to prevent the overflowing of the materials; in either of which cases, were the melting performed in a house, fatal accidents might happen.—*Archives of Useful Knowledge.*

TO KILL WHITE WORMS ON CABBAGE.—Strew the bed of Cabbage with the *Nitrate of Soda* after a rain, so says Mr. MUREL of England.

TO TAKE FILM FROM A HORSE'S EYE.—Blow loaf sugar and a little salt into the inflamed eye, and in most cases it will be relieved. Sassafras buds pounded, and put in water to stand till it becomes nearly as thick as cream, applied to the eye is an excellent remedy for inflammation.

TO RELIEVE CHOLIC IN HORSES.—Rub spirits of Turpentine in the breast of the horse, and if he be drenched with it, he will be relieved.

It has been said, that Farmers, Mechanics and Laboring men add to the wealth of any country, and when they are well paid, a nation has genuine prosperity.

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THAT man is far behind the spirit of the age, who follows a system of husbandry or agriculture, merely because his father followed it before him, and without looking into the reason or propriety of it, or reflecting on its susceptibility of improvement.—It is not reverence for example, but ignorance of improvement, that influences a man to do so.—*Main Farmer.*

AIR-SLACKED LIME is innocuous to growing plants generally, if we except mosses and lichens, to which it is fatal. Hence it is constantly employed by gardeners, to dust their peas and other crops liable to be infested by slugs, and also to remove moss, &c., from gooseberry and current bushes, which it speedily and effectually cleanses. Mixed with coal soot, it causes the extrication of much ammonia, and therefore should never be added to liquid urinous manures, as it volatilises their ammonia.—*Farmers Magazine.*

BE SOMETHING.—Be something—says the talented Kingsbury, no matter what. Throw aside all collateral aids—off with your coats—and determine to work your way up.—Providence has provided the ladder; there it is before you; come mount, mount. Don't fold your arms until you find something that suits your talents. Take the chisel—the saw—the axe—the hammer. We recollect a young gentleman—an intimate friend—who was a few years since wealthy, being worth some fifty thousand dollars—he did an excellent business; but the last panic, like a whirlwind, swept his whole property over board and left him a bankrupt. Did he remain idle? No. He braced himself up for a fresh struggle. He minded not his delicate hands; but worked his passage from a western port to New Orleans. Finding nothing to do there, he worked his passage to New York. There we find him busy and contented as of old.

"What are you at now, Bill?"

"At!—Oh, I'm porter to a broker in Wall street."

"Pay well eh?"

"Why, enough to live on. I receive nine pence a day, and have the privilege of sleeping on the counter at night. Ha! ha! —a broker's counter makes rather a hard bed."

"But, Bill, you ought not to live thus.—Your talents should make you look higher."

"Ay, and so you would have me run the risk of starving, out of respect to my talents? I must do something. All I want is a foothold. Inquire for me in a year from now."

In a year he had worked himself up to be confidential book-keeper in a large New York establishment. He will be admitted as a partner soon, and will acquire another fortune. He adopted the true method to keep out of mischief.—*American Paper.*

THINGS TO BE REMEMBERED.—Horses should never be put to severe work on a full stomach. More horses are hurt by hard driving after a full feed, than by a full feed after hard driving.

If the farmer wishes to have his pork barrel and meal chest hold out, let him look well to his kitchen garden. Plenty of vegetables conduce not more to health than to profit.

In laying in a stock of winter fodder for animals, let it not be forgotten that a little too much is just enough. Starving animals at any time is miserable policy.

As you treat your land so it will treat you. Feed it with manures liberally, and it will yield you bread bountifully.

Avoid debts as you would the leprosy.—If you are ever tempted to purchase on credit, put it off for three days. You need time for reflection.

Never beg fruit, or any thing else you can produce by the expenditure of a little time or labor. It is as reasonable to expect a man to give away the products of his wheat field, as of his orchard or fruit garden.

If you keep your sheep and cattle in your meadows until June, don't complain next winter because you are compelled to purchase hay for your stock.

The man who uses good seed, has a good soil, and works it in good season, rarely fails of having a good crop to reward his toil.

Never forfeit your word. The saying in truth, of any farmer, "his word is as good as his bond," is worth more to him than the interest of 10,000 dollars annually.—*Albany Cultivator*.

THINGS A FARMER OUGHT NOT TO DO.

1. A farmer should never undertake to cultivate more than he can do thoroughly, half-tilled land is growing poorer, when well-tilled land is constantly improving.

2. A farmer should never keep more cattle, horses, sheep, or hogs, than he can keep in good order; an animal in high order the first of December, is already half wintered.

3. A farmer should never depend on his neighbour for what he can, by care and good management, produce on his own farm; he should never buy fruit while he can plant trees, nor borrow tools when he can make or buy; a high authority has said the borrower is a servant to the lender.

4. A farmer should never be so immersed in political matters as to forget to sow his wheat, dig his potatoes, bank up his cellar; nor should he be so inattentive to them as to be ignorant of those great questions of national and state policy which will always agitate, more or less, a free people.

5. A farmer should shun the doors of a bank as he would the approach of the plague or cholera; banks are for traders and men of speculation, and theirs is a business with which farmers have but little to do.

6. A farmer should never be ashamed of his calling; we know that no man can be entirely independent, yet the farmer should remember that if any one is said to possess that enviable distinction, he is the man.

7. A farmer should never allow the approach of neglected education to lie against himself or family; if knowledge is power, the beginning of it should be early and deeply lain in the district school.

8. A farmer should never use spirits as a drink; if, while undergoing severe fatigue and the hard labour of the summer, he would enjoy robust health, let him be a teetotaler.

9. A farmer should never refuse a fair price for any thing he wants to sell; we have known a man who had several hundred bushels of wheat to dispose of, refused \$1, because he wanted \$1.03, and after keeping his wheat six months, was glad to get 75cts. for it.

10. A farmer should never allow his wood-house to be empty of wood during the summer season, if he does, when winter comes, in addition to cold, he must expect to encounter the chilling looks of his wife; and, perhaps, he compelled, in a series of lectures, to learn that the man who burns green wood has not mastered the A B C of domestic economy.

11. A farmer should never allow a window to be filled with red cloaks, tattered coats, and old hats; if he does, he will most assuredly acquire the reputation of a man who tarries long at the whiskey, leaving his wife and children to starve at home.—*Maine Farmer*.

We look upon a good book on agriculture, as something more than a lucky speculation for the publisher, or a profitable occupation of his time, for the author. It is a gain to the community at large—a new instrument of national wealth. The first honour or praise in reference to every such instrument, is, no doubt, due to the maker or inventor—but he who brings it into general use, merits also no little approbation. It is

to the more general diffusion of sound agricultural literature among our farmers, that we look for that more rapid development of the resources of our varied soils, which the times so imperatively demand.—*Blackwood's Magazine*, April, 1843.

PLOUGHING IN GREEN CROPS.—Living plants contain in their substance not only all they have drawn up from the soil, but also a great part of what they have drawn down from the air. Plough in these living plants, and you necessarily add to the soil more than was taken from it; in other words, you make it richer in organic matter. Repeat the process with a second crop, and it becomes richer still; and it would be difficult to define the limit beyond which the process could no further be carried.—*Johnston's Lectures on Agricultural Chemistry*.

IMPORTANT TO THE LADIES.—An English paper has the following card to all fair lovers of worsted work:—

"Half a pound of soft soap, half a pound of honey, one pint of Egnlish gin, mix all well together, and, with a sponge, clean the work with it, and then apply cold water in the same manner; dry with linen—the brightest colour will be uninjured."

WANTS FOR THE YEAR 1843.—More industry, and less idleness; more economy, and less extravagance; more honest men than rogues; more money than credit; more shirts than ruffles; more mortality than grog-shops; more mechanics than dandies; more stocking yarn than street yarn; more stability than excitability; more education than ignorance; more labourers than loungers; more justice, and less law.—*Selected*.

REMEDIES FOR DISEASES OF CATTLE

Redwater.—Bleed (says Youatt) first, and then give a dose of 1 lb. of Epsom salts, and 1-2 lb. doses repeated every eight hours until the bowels are acted upon. In Hampshire they give 4 oz. bole armeniac and 2 oz. of spirits of turpentine in a pint of gruel.

Blackwater is the concluding and commonly fatal stage of redwater.

Cleansing Drink.—1 oz. of bayberry powdered, 1 oz. of brimstone powdered, 1 oz. of cummin-seed powdered, 1 oz. of diapente.—Boil these together for ten minutes; give when cold, in a gruel.

Colic.—The best remedy is 1 pint of linseed oil, mixed with 1-2 of laudanum.

A **Cordial** is easily made by 1 oz. of caraway seeds, 1 oz. of aniseeds, 1-4 oz. of ginger powdered, 2 oz. fenugreek seeds. Boil these in a pint and a half of beer for 10 minutes, and administer when cold.

Diarrhœa.—Give 1-2 oz. of powdered catechu, and 10 grains of powdered opium, in a little gruel.

Dysentary.—The same as for diarrhœa.

Fever.—Bleed; and then if the bowels are constipated, give 1-2 lb. of Epsom salts in three pints of water daily, in gruel.

Hoove or Hoven.—Use the elastic tube; as a prevention, let them be well supplied with common salt, and restrained from rapid feeding when first feeding on rank grass or clover.

Mange.—1-2 lb. of black brimstone, 1-4 pint of turpentine, 1 pint of train oil. Mix them together, and rub the mixture well in over the affected parts.

Milk Fever or Garget.—2 oz. of brimstone, 2 oz. diapente, 1 of cummin-seed powdered, 1 oz. of powdere nitre. Give this daily in a little gruel, and well rub the udder with a little goose-grease.

Murrain.—1-2 lb. of salts, 2 oz. of bruised coriander seed, 1 oz. of gentian powder. Give these in a little water.

Poisons swallowed by oxen are commonly the yew, the water dropwort, and the common and the water hemlock. 1-2 pint of linseed oil is the best remedy.

Purge, in poisoning—either 1 lb. of salts in a quart of water gruel, or a pint to a pint and a half of linseed oil.

Sprains.—Embrocation: 8 oz. of sweet oil, 4 oz. spirits of hartshorn, 1-2 oz. oil of thyme.

Sting of the Adder, or Slow-worm.—Apply immediately to the strong spirits of hartshorn; for sting of bees, apply chalk or whitening mixed with vinegar.

Worms.—Bots: give 1-2 lb. of Epsom salts, with 2 oz. of coriander seed bruised in a quart of water.

Yellows.—2 oz. of diapente, 2 oz. of cummin seed powdered, 2 oz. of fenugreek powdered. Boil these for ten minutes in a quart of water, and give daily in a little gruel.—*Johnson's Farmer's Encyclopedia*.

GOVERNMENT GRANTS TO AGRICULTURAL ASSOCIATIONS.

We give below, the principal clauses of an Act to establish Agricultural Societies, and to encourage Agricultural improvement in the several Districts of Western Canada—and we would take this opportunity of assuring our friends in Canada East, that proper steps will be taken by us to convince the Executive Government of the necessity of enacting a similar grant for the improvement of agriculture in the several Districts of that portion of the Province.

SECTION I.—That when any Agricultural Society, for the purpose of Improving valuable Live Stock, Grain, Grass, Seeds, useful implements of husbandry, or WHATEVER ELSE MIGHT CONDUCE TO THE IMPROVEMENT OF AGRICULTURE, shall be constituted in any District in the Province, and shall make it appear by certificate under the hand of the Treasurer of such District Society, that a sum not less than Twenty-five pounds has been actually subscribed and paid to the said Treasurer; and the President of the said society shall make application, enclosing the said certificate to the person administering the Government of this Province, it shall and may be lawful for him to issue his warrant to the Receiver General in favor of the Treasurer of the said society, for double the sum that shall have been paid or subscribed in said District. Provided always that the annual sum to be granted to each District shall not exceed the sum of Two hundred pounds.

II.—And be it further enacted, That in the event of there being County, Riding, or Township Agricultural Societies established, there shall not be more than one society in each county or riding of any District within this Province, and a proportion of the District Bounty shall and may be granted to each County, Riding, or Township Agricultural Society, and paid to them by the District in proportion to DOUBLE THE MONEY THAT EACH COUNTY, RIDING, OR TOWNSHIP AGRICULTURAL SOCIETY SHALL HAVE SUBSCRIBED: Provided nevertheless, that the whole granted to the District together shall not exceed the sum of Two hundred pounds in each year.

III.—And be it further enacted, That in the event of more than Fifty pounds being subscribed by the several societies in any District the said grant of Two hundred pounds shall be DIVIDED TO EACH SOCIETY IN DUE PROPORTION according to the amount of their subscriptions respectively.

IV. *And be it further enacted,* That such Agricultural Society shall and may elect such officers, and make such By-Laws for their guidance as to them shall seem best, for promoting the interest of Agriculture, according to the true intent and meaning of this act.

V. *And be it further enacted,* That the Treasurer's account of the receipt and expenditure of the preceding year, shall, after the first year, always accompany the application for grants in aid of the said Agricultural Societies.

VI. *And be it further enacted,* That when County, Riding, or Township Societies shall have been established in any District, the Treasurer of such County Societies shall, on or before the first day of September, in each year, pay over the amount of money subscribed by said societies into the hands of the Treasurer of the District Agricultural Society, who shall then make an abstract of the sums subscribed in said District.

(Abstract and the 7th clause omitted, not being very important.)

VIII. *And be it further enacted,* That if the Treasurer of any Township society shall, on or before the first day of February, in each and every year, pay into the hands of the Treasurer of the District or County Societies, he shall be entitled to receive the same again, so soon as the Legislative grant, shall have been received, with a proportion of the Legislative grant, equal to the amount so paid, or in proportion to what shall fall to their share upon an equal division being made, in proportion to the sums paid in by the several societies in the District or County.

Difference of opinion exist in regard to the real meaning and spirit of some of the details of the above Parliamentary grant, as there appears to be a certain degree of incongruity in the wording of the different clauses, but one thing is certain that the real object is the advancement of the prosperity of Canadian Agriculture. But few governments can boast of so liberal a grant for so noble and patriotic a purpose, and how miserably degraded and indifferent to their own welfare must be that people who would not make the most of so magnificent a bounty, granted as a stimulus to individual exertion and enterprise. If the several Districts in the province have not fully and fairly availed themselves of the entire benefit of the boon so liberally granted them, let them take proper steps at once to organize District and Township Societies,—and as a stimulus for the farmer of small means, to enrol himself in Agricultural Associations, put the annual subscription down to a sum not exceeding one dollar,—and if efficient steps be taken Two HUNDRED POUNDS may be collected in *Bona Fide* subscriptions in each District, which with the government grant, will be a means of stimulating the whole community into action.

By carefully reading the act, it will be seen that the Township Societies are entitled to a full share of the bounty, in proportion to the amount that each society pays in to the hands of the Treasurer of the District Agricultural Society.

EXHIBITION OF CATTLE

AND FARM PRODUCE,

BY THE

Huron District Agricultural Society.

AN Exhibition of Cattle, Seeds, &c., will be held at Goderich on Tuesday, the 17th of October next, when the following Premiums will be awarded:

PREMIUMS.

HORSES.

For the best brood Mare and Foal.....	£3 0 0
Second best.....	2 0 0
For the best 2 years old Filley....	1 10 0
Second best.....	1 0 0
For the best 2 years old Colt.....	1 5 0
Second best.....	0 15 0

CATTLE.

For the best Bull from 3 to 6y's old	2 0 0
Second best.....	1 0 0
For the best Milch Cow.....	2 10 0
Second best.....	1 15 0
Third best.....	1 5 0
For the best 2 year old Heifer....	1 10 0
Second best.....	1 0 0
For the best 1 year old Heifer....	0 15 0
Second best.....	0 10 0
For the best 4 year old Steer....	1 10 0
Second best.....	1 5 0
For the best 3 year old Steers....	1 5 0
Second best.....	1 0 0
For the best 2 year old Steers....	1 0 0
Second best.....	0 15 0

SHEEP.

For the best Ram, not exceeding 4 years old.....	1 10 0
Second best.....	1 0 0
For the best Ewe.....	1 0 0
Second best.....	0 15 0

SWINE.

For the best Boar.....	1 10 0
Second best.....	1 0 0
For the best Sow.....	1 5 0
Second best.....	1 0 0

BUTTER AND CHEESE.

For the best 25lbs. Salt Butter....	0 15 0
For the best 25lbs. Fresh Butter..	0 15 0
For the best 25lbs. Cheese.....	0 15 0
Second best.....	0 10 0

GRAINS AND SEEDS.

For the best bushel Fall Wheat....	1 5 0
Second best.....	0 15 0
For the best bushel Spring Wheat.	1 0 0
Second best.....	0 10 0
For the best bushel Oats.....	0 10 0
Second best.....	0 5 0
For the best bushel Barley.....	0 15 0
Second best.....	0 10 0
For the best bushel Pease.....	0 10 0
Second best.....	0 7 6
For the best peck Clover Seed....	1 0 0
Second best.....	0 15 0
For the best 25 Swedish Turnips..	0 10 0
For the best 25 White Globe do..	0 7 6
For the best Yellow Aberdeen do..	0 7 6
For the best 2 bushels ears of Corn	1 0 0
Second best.....	0 15 0
For the best bushel Rye.....	0 10 0
For the best Fleece of Wool.....	0 10 0
Second best.....	0 7 6
For the best 5'bs Hops.....	0 10 0

RULES OF THE EXHIBITION.

1st.—All subscribers having paid their subscriptions, and only such, to be entitled to compete for any premium.

2nd.—Any persons neglecting to pay their subscriptions on or before the 15th August, will be debarred from competing or entering for any premiums offered; unless they pay a sum equal to the proportion which such subscriptions, paid on or before that date, would have secured from Government, or other sources, so as to place their subscriptions on the same footing as that of others who pay in time, to get such addition to the funds.

3rd.—All stock exhibited shall have been the *bona fide* property of the exhibitor 3 months before the show; and all other articles shown must have been produced on

the farm of the exhibitor. Any person violating or attempting to violate this rule, shall be rendered incapable of competing on any future occasion.

4th.—Bulls, Boars, and Rams must have served in the District the season previous to the show.

5th.—Bulls must have a ring or screw in the nose, with a rope or chain attached, to prevent accidents.

6th.—All competitors for Prizes, must give the Secretary notice of the description of Stock or Produce they intend to show, on or before 4 o'clock, P. M. the 16th October.

7th.—All Stock and Produce to be on the show ground by 8 o'clock of the day of show. The show to be at 10 o'clock A. M.

FAIR.

His Excellency the Governor General, having granted a Charter to the Society for holding two Fairs annually at Goderich, one on the third Tuesday in June, and the other on the third Tuesday in October, the first of these Fairs will be held on the same day as the Cattle Show above advertised.

GEORGE FRASER, Sec'y.

Huron District Agricultural Society.

Goderich, 6th July, 1843.

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Dundas, May, 1843.

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PUBLISHED MONTHLY.

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To whom all Orders and Communications must be Addressed, (Post-paid).

TERMS—ONE DOLLAR PER ANNUM.
PAYABLE INVARIABLY IN ADVANCE