

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Cover title missing/
Le titre de couverture manque

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/
Transparence

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/
Comprend un (des) index

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title on header taken from: /
Le titre de l'en-tête provient:

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments: /
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below /
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

THE COLONIAL FARMER,

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

VOL. I.

HALIFAX, N. S., MARCH, 1842.

NO. 9.

THE COUNTRY GIRLS.

I love the country spinster,
Who turns the buzzing wheel,
Who plies with busy hands, the card,
With merry hum the reel.

I love the country seamstress,
Who makes the household gear,
And who, with industry and art,
Prepares the homespun wear.

I love the country milkmaid,
Whose daily task supplies
A wholesome food and beverage
For country families.

Her neat and ample dairy,
Her industry attest,
And when night finds her weary,
In innocence she rests.

From the Pictou Mechanic and Farmer.

RUST IN WHEAT CROPS.

Mr. STILLS: Sir,—Through the medium of your useful journal, I beg to offer a few desultory remarks on the disease designated "rust," which our wheat crops are particularly liable to—whole fields of which are often found in the tracts of its desolation. It generally occurs about the end of August, in hot sunny weather, under a particular state of the atmosphere; it does not attack the crops gradually, nor en masse; but works destruction in certain situations in the course of a few hours.

Various causes have been assigned by writers on vegetable physiology, for this disease. Some of these opinions are very specious and deserve the study of agriculturists, although others are only calculated to mystify the subject, and perplex the understanding of plain practical men like myself. A writer in a late number of the "Maine Farmer" attributes the cause of rust in plants to a "rupture in their sap vessels brought on by a sultry state of the atmosphere." To my capacity this doctrine is incomprehensible, for the following reasons:—first, if true, how would certain parts of the same field suffer while other parts are exempt? am I to presume from this, that the sultry state of the atmosphere selects its victims from certain parts of a field, allowing others to escape? secondly, if I embrace this faith, I must believe that the fluids of plants circulate in channels like the blood vessels in animals, and there are certain times that the pressure of the atmosphere is not a sufficient counterpoise for the circulating fluids of plants; and that under such circumstances a "rupture of the sap vessels" takes place. I may ask how this cause is not general? and under such circumstances how animal life is sustained? we know that were it not for the uniform pressure of the atmosphere upon all organized substances, the inward pressure of the fluid would burst their channels and instantly cause a suspension of the vital principle. The atmosphere then, in place of being instrumental in causing a rupture in the sap vessels of plants, is the only agent to prevent such an occurrence.

It would be presumption in me to pretend to offer an opinion on a subject on which physiologists are at issue; I shall only state a simple case from my own observation, and the conclusion forced on my mind *Ipso facto*. On the 20th of April, 1839, I sowed a large field in wheat after a potatoe crop, the ground was rich, free from weeds, and enjoyed a south-east aspect; the quantity of seed sowed was 12 bushels, viz.: 10 bushels common bearded and 2 bushels of a new variety of red wheat, highly recommended for its prolific qualities; the season proved favorable to vegetation, and the crop grew luxuriantly under these auspices, until the ear had nearly emerged from the milky state, (as it is called,) when I received on a sudden the red wheat attacked by rust,—the other being entirely exempt from it. From this circumstance, I con-

ceived an idea that there must be some radical difference in the structure of the straw, an opinion which upon examination I found well grounded. The straw of the inflected variety when stripped between the fingers proved soft and spongy, and susceptible of imbibing a large quantity of moisture. The straw of the other variety on the contrary, was possessed of a hard glazed coating, impervious to moisture. In viewing them through a powerful lens, they presented a striking contrast. The organic structure of the red variety appeared arranged in a very incompact manner; the vascular tissue was covered with an opaque cuticle easily permeable by fluids; while the straw of the other wheat, presented a more compact fibrous structure, strongly increased in a transparent cuticle, more capable of resisting moisture, consequently exempt from the vicissitudes of climate to which the soft straw was subjected. I reasonably concluded from these observations, that all soft strawed varieties of grain are liable to rust, and others *vice versa*. I was strengthened in this conjecture, in observing that the grain growing on the sites of old dung hills, have the straw generally rusted. The plant in such situation has generally soft straw, an overflow of sap being induced by a superabundant supply of food in an unprepared state, or undigested in the soil. Under such circumstances the healthy action of the organs are retarded, and the plant becomes an easy prey to disease. If we allow these observations to be correct, and take them in conjunction with the established opinion that rust is a species of minute *Fungi* (a tribe of plants which establish themselves wherever the putrefactive process is going on by rapid decomposition,) we can easily account for this disease under all circumstances. We may suppose that during warm sultry weather, the atmosphere is highly charged with aqueous vapour, which being condensed during the night, falls heavily on the productions of the earth. Such plants as have porous surfaces will imbibe a large quantity of the condensed fluid, and retained until dispelled by evaporation, under the rays of a morning sun. Decomposition follows evaporation, the healthy flow of the vegetable sap is retarded, the organs become vitiated, decomposition prepares a seed bed for the minute germs of the *Fungi* designated rust, from its brown appearance. I have often observed such parts of a field as are under the rays of a bright morning sun, rusted, while other places escaped, from the circumstance of the straw being partly dry before the sun's rays reached them. Many farmers are so well aware of this principle, that they make a practice of sweeping the dew off the grain early in the morning, by a long cord extended over several ridges between two men. Perhaps a better rule could not be adopted to prevent rust. From these premises it will appear obvious that due attention ought to be paid to the selection of such varieties of wheat as are known to be hard strawed. It is also evident that a full east, or south aspect, is more dangerous for rust than a west, or north, where the vapours are dispelled before the plant is subject to the action of the sun. Mildew which attacks culmiferous plants, originates on the same principle. Every person who sows late crops of peas, in rich soil, will easily find a demonstration of the above statement. Mildew, however, is said to be a different variety of the *Fungi*, as also *Smut*, mouldiness which germinates in cheese, &c. and other species of the same tribe, amounting to 1,157 varieties known to Botanists, embracing the mushroom family; and although it has been remarked that these minute and apparently useless tribes are placed at the bottom of the scale of vegetable creation, exhibiting little of that loveliness of form or brilliancy of colour, by which other plants are distinguished, yet they are by no means superfluous in the scale of nature. They prepare a soil fit for vegetables of a higher order and keep up the integrity of the vegetable kingdom. I am, Sir yours truly,

J. IARNS.

Windsor, N. S., February, 1842.

CURE FOR TOOTH ACHES.—Mix alum and common salt in equal quantities, finely pulverized. Then wet some cotton, large enough to fill the cavity, which cover with the salt and alum and apply it. We have the authority of those who have tested it, to say it will prove a perfect remedy.—*Union Agriculturist*.

TRIAL OF PLOWS.

EXPERIMENTS IN ENGLAND AND AT WORCESTER, MASS.

Of all the implements used in husbandry, the plow is confessedly the most important. With other tools, defective, or of an inferior quality, by adding more labour, or employing extra help, the difficulty may be obviated, or the harvest secured; but a bad plow is such a radical defect, that it will be felt in every stage of the farming, from the putting the plow to the ground to the gathering of the crops, and always injuriously. There are, therefore, no questions of more interest to the farmer, than those relating to the proper construction of the plow, its lightness of execution, and the excellence of its work. These two points have of late attracted much attention; and though much light has been thrown upon the subject by the various experiments instituted by competent and skillful men both in Europe and in this country, it may well be questioned whether it is yet divested of all its difficulties. Enough has been done to prove, however, that of several plows working in the same soil and performing equally good work, one will require double the power of another; or, in other words, to make good work with one plow, only two horses will be required, while another will require four. Almost wholly overlooked as this point of ease of draft has been by the farmer, it is not to be wondered at that he sometimes finds his horses much more distressed at the same work some years than in others, or that sometimes they are required to perform work entirely beyond their power, owing to the bad construction of the implement. To show the vast difference in the ease of draft, or the lightness of working, we propose to give some account of experiments that have been made to test this point. To determine the force exerted by the horses in plowing, an instrument called a Dynamometer has been invented, which by the compression of springs in the draft, shows with great accuracy the power expended in the operation.

The most complete set of experiments yet made are those instituted by Mr. Pusey, President of the Royal Agricultural Society of Great Britain, and described by him in the 3d No. of the Journal of that Society. The points Mr. Pusey had in view in his experiments, and it will be seen they embrace the most important questions relating to plowing, were,

- 1st. The comparative lightness in draft of wheel and swing plows.
- 2d. The lightest plow absolutely of whatever kind.
- 3d. The effect of different soils upon the qualities, and chiefly on the draft of the plow.
- 4th. The comparative tenacity of different soils.
- 5th. The power of two horses to plow the strongest or clay soil.

Ten plows, embracing some from the most celebrated makers in England, the highly famed Scotch swing plow, and several of those in common use in the different districts of the kingdom, were selected by Mr. Pusey for his experiments, and he was aided by the presence and advice of some of the most distinguished agriculturists in the country. The plows were worked by skillful plowmen; and, as much interest was attached to the experiment on the Scotch plows, a Clydesdale span of horses and a plowman accustomed to the plow were sent up by Lord Moreton to manage that part of the trial. The Scotch plow has obtained considerable celebrity from the strong praise bestowed upon it by Mr. Loudon, who declares the Improved Scotch Plow to be superior to any similar implement known in England. They are constructed on the principles laid down by Mr. Jefferson, in his celebrated Report on the true shape of the mold-board, addressed to the French Institute, which he showed from mathematical data should be in the form of a gentle hollow curve; while the other plows were more full and short, not raising the earth gradually like a wave, but throwing it over at once. In condensing Mr. Pusey's experiments we shall select as sufficient for the present purpose, from the list given by him, three plows—1st, the Improved Scotch plow, made by Ferguson, and entirely of iron—2d, a one wheeled plow, of wood, with an iron breast, by Mr. Hart, but commonly known as the improved Berkshire plow; and 3d, an old fashioned plow made of wood, and such as is in general use in many parts of England, and is called the old Berkshire plow. Some previous experiments had convinced Mr. Pusey that the Hart plow was of easy draft, and the ones now instituted showed that his impressions were correct.

FIRST TRIAL.—Field, a sandy loam, free in working, a clean wheat stubble; depth of furrow 5 by 9 inches, a depth and width

carefully adhered to; plows drawn by two horses. Power required, given in stones of 14 lbs. each:

Ferguson's improved Scotch swing plow.....	10 stone.
Hart's improved Berkshire, one wheel.....	14 "
Old Berkshire.....	23 "

In this experiment it appears that the Scotch plow was 34 per cent, heavier for the horses than Hart's plow. That a plow with its mold-board rusty, or covered with coal tar as is the practice with the maker, runs 6 stone heavier than when clean and bright, in the same soil. That the easiest plows were wheel plows, and the severest ones for the horses swing plows. That the old Berkshire would be worse by two stone for 3 horses, than Hart's would be for two.

SECOND TRIAL.—Land, a clean bean stubble, with a dark mold on blue clay. The furrow here was 6 inches by 9; and this strong clay was selected to test the question whether there was any plow, with which two horses, without too great distress, could work such lands:

Ferguson's.....	50 stone.
Hart's.....	43 "
Old Berkshire.....	52 "

The difference between the plows was less in this trial than the former; but the power required, and the effect of such severe labor on the horses, were considered as decisive of the question that two horses are not sufficient to plow such lands in a proper manner. The average of the first experiment was 18 stone, that of the second, 47, and this within the space of two miles; a fact that should be remembered by farmers, as near, if not absolutely adjoining fields, may require a great difference of power to plow them thoroughly.

THIRD TRIAL.—As some of the gentlemen at the trial deemed the principal laid down by Mr. Jefferson, and adopted in the Scotch plow, better adapted to sandy than adhesive soils, a field of brown loamy sand was selected, and the plows were tested at the depth of 4, 5, 6, and 7 inches respectively—width of the furrow, 9 inches.

	4	5	6	7	inches.
Ferguson's Scotch plow,.....	18,	19,	19,	22	stone.
Hart's.....	11,	12,	16,	18	"
Old Berkshire.....	22,	21,	24,	31	"

At the depth of 4 inches, the Scotch plow still appears at a disadvantage, but at the depth of 7 inches the plows, with the exception of the old Berkshire, approached in the power required to move them much more nearly. It has been usually laid down as a rule in works on the plow and plowing, that the draft increases rapidly in proportion to the depth plowed, or that if the draft at 4 inches be 18 stone, at 7 inches it will be as 40 to 16, or 54 stone. In mathematical terms, the resistance is according to the square of the depth. This is a very important point, and to test it fully, Mr. Pusey made an experiment with the Scotch plow, in a poor moory soil, of uniform quality to a great depth. He commenced with a furrow 5 inches deep by 9 in width:

Depth in inches.	Draft in stone.
5.....	23
6.....	22
7.....	25
8.....	30
9.....	31
10.....	40
11.....	50
12.....	50

The difficulty of keeping the plow at the proper depth accounts for some discrepancies in this table; but it proves the law of increase laid down in the books altogether erroneous; since, if that were the true rate, the draft at a foot would not have been 50 stone, but 132.

At this state of the trials, it occurred to Mr. Pusey to ascertain the draft of each plow when merely drawn on the surface without severing the ground at all. The result of several trials was as below, the weight of the plow being also given.

Surface draft.	Whole weight.
Ferguson's.....	12 stone.....15 stone.
Hart's.....	3 "12 "
Old Berkshire.....	8 "

The experiment proved that the surface draft was altogether in favor of the wheel plows, Ferguson's being a swing plow, and the

two others one wheel each The next experiment by Mr. Pusey, was to determine how much of the power exerted in plowing, was actually expended in moving the soil :

	Gross draft.	Surface draft.	Working draft.
Ferguson's,.....	19 stone.....	12 stone.....	7 stone.
Hart's,.....	17 ".....	3 ".....	9 "
Old Berkshire, 21 ".....	8 ".....	13 "	

In this experiment, the situation of the Scotch plow and Hart's is greatly changed, and the disadvantage under which the first has labored, seems to have disappeared. It would seem therefore, that the great difference in working between the Scotch plow and Hart's must arise from the shape of the mold-board, and the want of a wheel or both.

FOURTH TRIAL.—The field chosen was a deep strong loam, good for all kinds of crops, resting on yellow clay. It was selected by Lord Moreton, to prove to the farmers of the country that ground usually worked with four horses might be done with two. It offered great resistance to the plow as the table will show ; furrow, 5 inches by 9.

Ferguson's,.....	35 stone.
Hart's,.....	23 "
Old Berkshire,	36 "

The superiority of Hart's one wheel plow over the Scotch plows was as evident here as before. The Clydesdale horses worked without signs of distress on this ground.

FIFTH TRIAL.—Many farmers attended this trial. The soil was more a clay than a loam. Four strong horses were at work in line, the usual practice, on an old Berkshire plow in this soil, and evidently having enough to do. The gauges showed that in a furrow 5 by 9, the force exerted was 32, and in one of 6 by 9, 34 stone. On this soil the several plows worked as below :

Ferguson's,.....	24 at 5 inches,.....	26 at 6 inches.
Hart's,	27 ".....	30 "
Old Berkshire,.....	32 ".....	34 "

Here it will be seen that Hart's plow lost the advantage, for the first time. This was attributed to the fact, that owing to the soft nature of the ground, the wheel " instead of governing the depth of the plow, sunk in the soil, and dragged through it like a coulter."

The Clydesdale horses were much admired in their work ; and it was the opinion of the bystanders that such land usually worked with four horses in line, might be plowed with two such horses abreast ; though it was said it would cost as much to keep two horses in that condition, as to support the four in their usual working state. On this ground where the horses had a firm footing, they worked with perfect ease.

SIXTH TRIAL.—This last trial was made on a damp moory soil, selected by Mr. Pusey as a kind of ground in which the Scotch plows might excel. The ground was a grass ley, the roots much thrown out by the winter, and the surface more than half bare. The following was the result ; 6 inches deep.

Ferguson's swing plow,.....	22 stone.
Hart's one wheel.....	18 "
Old Berkshire.....	28 "

In this case the Scotch improved plow was half as heavy again in its draught as one of the others, (a two wheel plow) and nearly one third heavier than Hart's.

In summing up the trials, Mr. Pusey remarks that the plow requiring the least draft was Hart's, though in the last trial it was beat by Ransome's two wheel plow, and that of all modern plows the Scotch swing plow was the heaviest, " out of the question on any soil, and by no means the best on a heavy one." The following table shows the average draft of all the plows on the several soils in which the experiments were made :

Trial 1. Sandy loam.....	17 1/2 stone.
2. Clay loam.....	47 1/2 "
3. Loamy sand.....	16 1/2 "
4. Strong loam.....	41 1/2 "
5. Clay loam.....	28 1/2 "
6. Moory soil.....	20 "

It has long appeared clear to us, that in all calculations on the power required in plowing, the important point of friction or adhesion was too much overlooked ; a fact to be regretted, as it is plain that on adhesive ground the great point in the plow is to pre-

sent the least surface, while in loose, light, friable, or sandy soil, surface forms no objection. The experiments of Mr. Pusey fully confirm the correctness of this supposition. The plow made on mathematical principles, (Ferguson's) which, setting adhesion aside, as is seen in trial 3, would require the least power, required the most, owing to its long wedge-like form, the great surface of its mold-board, and its wanting a wheel, which made its surface draft so enormous. In a clay soil, or one of great tenacity, the less surface their is exposed, the easier will the draft be for the horses. If any one doubts it, let him test the difference in the force required to draw a broad shovel or a narrow one over a bed of clay. The difference between Ferguson's Scotch plow and the short open one of Hart, is in this respect conclusive.

There is another error, we believe, quite common among farmers, and that is that the resistance to the plow increases with the rapidity in which the team moves, or in other words, that a team moving one and a half miles an hour, does not exert so great a force in plowing, as one that moves at the rate of two and a half miles an hour. This mistake arises from overlooking the fact that friction or adhesion is rarely, perhaps never, increased by increased rapidity of motion. In plowing, the resistance arises from the weight of the implement pressing against the bottom of the furrow, that pressure increased by the weight of the furrow slice, the rubbing of the plow against the earth on the land side, and the furrow slice rubbing against the mold-board ; a resistance not to be increased by additional speed. It is true the amount of resistance in an hour, is greater at a good pace than in a slow one, as a greater amount of earth is moved, but that does not affect the amount of resistance at any given moment. The following table, showing the force required at different rates of speed, in a series of experiments, made for this purpose by Mr. Pusey, will show the correctness of our position :

Rate of going per hour.	Time required to plow an acre.	Draft of plow.
1 1/2 miles.....	7 h. 20 m.....	23 stone.
1 3/4 ".....	6 h. 30 m.....	23 "
2 ".....	4 h. 0 m.....	22 "
3 1/2 ".....	3 h. 8 m.....	24 "

Thus it appears that a pair of horses walking at a pace which will plow an acre in four hours, do not exert as much force as a pair that requires seven hours to perform the same work.

[Ferguson's improved Scotch plow has a very short beam. Hart's improved Berkshire plow has a long beam—the wheel being placed at about 3/4 the distance from the handles to the fore end of the beam. A very incomplete drawing of this plow is given, shewing only the land side, from which it appears that it has but a part of what is commonly called a mould-board, viz. : a breast or front, and the upper part, which appears to be attached to the beam, and which serves to catch the top of the sward that is raised by the breast, and to turn it. The wheel is fastened to a split iron bar which passes through a perpendicular mortise in the beam, and can be raised or lowered when necessary, being fastened by a screw which bears upon it. It is manifest from the experiments that it is principally to the wheel that the superiority of Hart's plow is to be ascribed, but its shortness and open mould-board also serve to diminish the friction. Most plows are made to work in land that is not stoney, but there are in this province lands that are frequently plowed while they abound in small stones. Our common plows are too heavy to plow between potatoes on such land, for in plowing between drills a horse should always go at the rate of three miles an hour, otherwise he will step wide and tread upon the potatoes. The plow should not be more than half the common weight for this purpose, and should not have that part of the mould board which runs on the ground more than a foot in length, as the shortest plow is by far the most manageable in plowing among rocks. The share should have a very narrow wing or feather, and the point should enter a socket in the back of the coulter, which should have a duck-hill point about one inch broad and five inches long, made of the hardest steel. Whenever a bevel is worn to the

point of the coulter, it must be sharpened and made flat upon the bottom again, and for this reason it should be long, as the principal wear comes upon it. Such a plow will work as well in stubble ground where the soil is gravelly as one that is heavier, and with much less fatigue of the cattle. It is also the best for plowing the land that was in potatoes the preceding year. — *Ed.*

IMPORTATION OF CATTLE.

I have read with some interest Mr. Allen's sketch of what he had done during his trip to England, given in the last number of the *Cultivator*, and wish to express my conviction of the general justness of his remarks on the subject of Short Horns and Horses. Of the first, he says, "of the Short Horns I brought nothing for fear of the disease so prevalent throughout England; and because there is but one man's herd there that can improve our own;" and of the second, he adds, "for horses, England ought to come to us. She has nothing that can compare with our famous trotters; and our Dutch Pennsylvania waggon horses are far preferable in my estimation, to her boasted cart horses."

It has been matter of surprise to me, that the subject of danger from the introduction of the diseases which has been for two years so fatal to cattle in almost every part of Great Britain, by the importation of animals infected, has not been sooner brought before the agricultural public. I venture to assert, that should the epidemic appear here with the same fatality as there, the damage to the country would be estimated by millions of dollars. It was years in traversing Poland, the north of Germany, &c., before it found its way into France and Britain, and in the last of these countries it has been much more destructive than in the former. It appears, like the cholera, to have traveled westward, although the place of its origin is unknown. At the close of 1840, it seemed to have mostly passed from England, but still raged in Scotland and Ireland; but the London Veterinarian of September, a work of authority, now before me, says, "with regard to the epidemic among cattle, sheep, and pigs, we regret to say, that in many parts of the country it has appeared afresh, and is as virulent and infectious as before." Of the infectious nature of the disease, the instances given in the Veterinarian are perfectly conclusive, and the cause of its reappearance is thus stated: "A great number of Irish and Scotch cattle are brought into this country (England) twice a year—in the autumn for the strawyard, and in the spring for grazing purposes. These cattle arrive in large droves, and are sold to a great many farmers in small lots. There are very few of these droves among which some diseased cattle are not to be found; purchasers take these infected cattle, ignorant they are thus diseased, and the infection is thus communicated to whole herds. These droves have been the means of the disease spreading wider and more rapidly than all other causes put together."

The following extract from the circular prepared by Professor Sewall, at the request of the Royal Agricultural Society, on the nature of the epidemic, &c. will show the usual appearance of animals attacked. "The attack does not always commence in the same form, but ultimately terminates in a general disease of the same type and character. In some animals it commences in the feet between the claws, and in others it appears to have begun in the mouth; in others stiffness in the legs of the animal is first perceived, as if treading upon thorns or briars; then follows a discharge of saliva from the mouth, and a clamping of the lips, accompanied with blisters on the tongue, palate, and lips; the blisters peel off, loss of appetite, general debility, and not unfrequently death ensues."

From the description here given it would seem to have resembled the disease called the black tongue, which was so fatal among horses a number of years since, (and which by the way, according to the English journals prevailed extensively in that country in 1836,) but which did not here extend to other animals. A number of instances are reported, in which the meat of diseased animals has been sold with fatal effect to those who partook of it in England, thus proving that like some other diseases of animals, the glanders for example, it may be communicated or prove poisonous to the human subject. It has occurred to me that the case of mortality in calves, recorded by Mr. Merrick, at page 176. of the current volume of the *Cultivator*, does not vary essentially from the disease as it has appeared in Britain, according to the foreign jour-

als. I may add that the disease developing itself so rapidly as to render it nearly impossible an infected animal should reach our shores without exhibiting the complaint unequivocally, will be our great safe guard so long as the frequent importation of animals continues; and I will suggest that no new imported animal of any kind, cattle, sheep, or swine, as all these are attacked abroad, should be suffered to run with others, until a sufficient time has elapsed to prove his freedom from the prevailing epidemic.

The same danger from disease, does not exist in the importation of horses, as in that of cattle; but the necessity, for the sake of improvement, it is clear to all who have seen the best specimens of imported horses, or travelled abroad, does not have an existence. There cannot in England or Scotland, be found a brief of horses equal for both road and field labor to the Morgan horse of Vermont, or the Pennsylvania team horse. To be at the expense of importing is idle, when we have superior materials at home, which was not the case with our cattle, sheep, and swine. As to the race horse, I consider him out of the question. The less we have of them the better; and Prof. Findly never uttered a more indisputable truth, than when he said that "if racing improved horses, it determined war." There cannot be an instance pointed out in which a valuable breed, or even a valuable permanent cross has originated from the modern race horse proper. Their structure demonstrates their worthlessness for any thing but the turf, and there let them remain. In the United States, the horse wanted is one, of which a span will plough of turf land three-fourths, or an acre per day, or travel thirty miles a day with forty bushels of wheat, one possessing form, weight, wind, activity, and such we have already, and may multiply and improve at our pleasure. As a farmer, I have looked at the success of our importations of useful animals with pleasure, because I saw in them the foundation of immense agricultural improvement; but it is a peculiar trait of American character to overdo a good thing, and I am not certain we are not approaching that point in our rage for importations. At any rate it may be well to pause and look about a little, count the cost and estimate the probable results. Occasional importations may be needed for the purpose of crossing; but we have breeds of all improved animals, of such widely different origin, that if our breeders understood their business, deterioration can hardly ensue, on the contrary they start on a high vantage ground, and if they fail, it must be through their own remissness. — *Correspondent of Cultivator.*

HOW TO TREAT THE LIGHT SOILS TO THE GREATEST ADVANTAGE.

Those who have acquired the reputation of good farmers do not invariably derive the greatest possible advantage from the land they cultivate; principally for their sticking too closely to some system or rotation of crops, which, in general practice, may be deservedly of high repute. This will more particularly apply to the management of light soils, and in those districts where the turnip system commonly prevails. Hence it is that we would venture to recommend partial and occasional departures from a rigid adherence to certain rotations of crops, because, where this is carried out to the extreme limit, when a very unfavourable season occurs, there necessarily must be a great deficiency in one of the few general crops annually cultivated. Tares may be sown on the better sorts of light lands after a good tillage given immediately after harvest. If they are fed off or cut green in May or June, early turnips may be sown after them, which will be fit to feed off or draw for the cows in September, in good time for ploughing up the land for wheat sowing. In this case the land gets all the ploughing necessary to clean it completely, and exactly at the best time. Three ploughings may be given after the tares, if the land is not clean, and the turnips being well hand-hoed and horse-hoed, the land will be perfectly clean to receive the wheat seed; manure may be put on with the tares or the turnips, and if these are fed off by sheep, they will so enrich the soil that the next crop cannot fail to be abundant. By varying the management of light land according to circumstances, and with some judgment, many more profitable crops can be raised than by the common simple rotation, in which a fourth of the land is sown with turnips. If this crop fails, which is often the case, where it recurs so often, the whole system is deranged, and the loss is very great. The introduction of a greater variety of produce in the cultivation of light lands, in imitation of the Flemish practice, and the increase of stock kept in consequence, would be an important step in the improvement of British husbandry. — *Selected.*

From the Boston Cultivator.

PRESERVATION OF HEALTH.

The possession of every earthly good, without the ability to enjoy, is often the lot of him who has become the victim of disease. In the midst of every surrounding blessing, he is helpless and dependent, his pride is humbled, he feels poor, and "as a man thinketh so is he" in this case to the letter. Food is worthless to him who cannot eat—money is but trash to him who cannot derive any satisfaction in spending it, and the literally poor man whose physical and mental faculties are sound, is the rich man in reality when compared with him. Health is as important to the farmer as to those of other professions, and callings and having had a little experience in the maladies 'incident to humanity' and made observations on the maladies of others, I thought I would express my thoughts, if not for the benefit, I hope not to the injury of others. Farmers, owing to the nature and variety of their works, are more exposed to vicissitudes of weather, and at times to violent efforts and almost unremitting labor, than those of many other occupations, of course are more liable, if the proper precautions are not kept in mind, to suffer in consequence of those irregularities in the weather and undue bodily exertions in pursuing their labors.

If a farmer would wish to preserve his health and insure its continuance he must begin early in life to have a particular regard to the preservation of one of the most important blessings which a kind Providence has seen fit to bestow upon man, a good physical constitution. Many a young man, in the plenitude of health, desisting admonition, has been driven on by the excess of animal feelings, taking no precaution, and fearing no evil, till the hour arrives, never to be forgotten, when he begins to lament a broken constitution, and has nothing left but the shadow of a man.

There are a few rules to which every man who labors ought to pay a religious regard, in order to preserve his health—one is, when labor is over and the temperature of the air is below blood heat, that the laborer immediately put on the additional clothing which was worn by him before commencing his work. The foundation of fevers and many other diseases, is frequently laid, which takes place in the latter part of summer and in autumn by the neglect of the above simple rule. There is always danger that a person may take cold after he has labored himself into a perspiration on sitting or standing without resuming his accustomed clothing. Another important consideration in the preservation of health is, to avoid all stimulating liquors. It is ascertained beyond a doubt that the less stimulating liquor a person imbibes the more able he is to go through a certain course of hard labor, and also execute his work better. Some, notwithstanding, continue steadfast for their sitters, slings and hot drops, which last are the worst, hot they are, and a person's stomach must be formed of first rate materials to resist their fire. They are death to children, and disease to the aged have seldom known a person who has been in the habit of taking such stimulants or any other newspaper medicines for any length of time, who has not become an invalid, and my advice to every one is, not to take medicines, except in time of actual sickness.

Most medicines, by habitual use, are calculated rather to impair the health than to preserve it, the best of medicines loose their good effect on continued use and become a poison, and in time, will undermine the health, and when that is the case, the only remedy is, total abstinence from the poison which produced the malady. To illustrate my meaning, I will introduce the opium eaters and smokers.—Opium is one of the most valuable medicines in use when judiciously administered, but in the perverted use of it, as in the daily eating and smoking the article, it becomes a slow but desperate poison which decoys its miserable dupe to inevitable destruction, and so of all other stimulants in a degree according to their power and activity, therefore the nigher the cold water principle we can live, the greater is the prospect of our continuance in health and the enjoyment of life and its blessings.

As all people are liable, more or less, to be imposed upon, and especially the credulous and confiding part of mankind. I advise all to beware of quacks of every description, especially quack doctors—too many of them thrust themselves into 'high places,' and by their money and importunity exert an influence over the lives and pockets of people which ill requites them for their credulity.

O ye purifiers and sweeteners of the blood, what shall I say to you, ye pickpockets? Let all who would have good blood, make it by good substantial food, and keep it pure by abstaining from all stimulating drinks, and avoiding quack medicines as they would

'the pestilence that walketh at noon day,' and take care whom you trust,—him who has such an over anxiety to preserve your health by selling you his medicines, or him who will give you good advice without reward.

The sages of the present day, who prescribe rules for eating, or rather starving, I have but little disposition to meddle with, as a little abstinence is not so prejudicial to health as continued repletion. I trust that every one is sensible that gluttony is not conducive to health, and as the appetites and tastes among people are so various, I think it best that each individual should have the liberty of selecting articles of food for himself. A physician may prescribe a diet, but he cannot direct the appetite, and on the whole, there is a great deal of good common sense in the world, and if people would but make good use of it the designing and crafty would not thrive by their impositions as they now do.

IMPROVEMENT OF STIFF CLAY SOIL.

A friend who has a lot of very tenacious clay, on which he grew, the present season, a crop of very excellent carrots, both in quality and quantity, but who experienced difficulty in harvesting them, owing to the tenacious character of the soil, having asked our advice to the best mode of meliorating its texture, as there may be others similarly situated, we will avail ourself of the occasion of repeating here what we said to him. He apprised us that he could get any quantity of foundry cinders. With the knowledge of the character of his soil, and the resource just named, we advised him to haul on his lot (about an acre in quantity) in the first place, 100 loads of sand, to spread it evenly over every part of it; then to haul on from 40 to 50 loads of the cinders, rejecting as much as possible of that part which had run into an ear-like substance and to spread that on the sand. This done to plough the whole under, then harrow and cross plough it, and leave the ground in that condition until spring, when if he intended putting on animal or alimentary manures to do so, then plough again, harrow and put on either a hundred bushels of lime, or the same quantity of ashes, when he should finish by harrowing and rolling. Should he follow our advice, we have no doubt that during the next season he will find his tenacious clay converted into a delightful clay mould, relieved from all its tendencies to crack and bake, and that his workmen, instead of finding it irksome toil to penetrate it with their implements, will discover, that it will cut like rich old cheese, crumbling to their touch, and presenting an aspect to their view, no less pleasing to their sight than the improved condition of the soil itself will render their labors agreeable. The soil in one of the very best agricultural counties in England at the present time, was, mainly, fifty years ago, a series of continuous beds of almost floating sand; but now, these bodies of floating sand, by the application of marl, or clay, as either was most convenient to their respective owners, have been converted into sandy loams, that which by proper subsequent treatment, have been rendered as fertile as the hearts of men could desire. If one should be asked, what is the most profitable soil to work? the question nine times out of ten would be answered thus: a deep rich mould—and what is such mould, but a compound of clay, sand, vegetable and calcareous matter? Nothing else, and whatever of all these, which may be deficient, can be artificially supplied whenever required; for there are but few sands beneath which clay may be found. These on the spot, the necessary quantity of lime or marl, in some of its forms, can easily in most instances, be supplied, as but three or four per cent of either of these will be found sufficient to produce the desired change in the condition of the soil.

The Earl of Leicester converted an estate of 2200 acres of almost barren sands into one of great fruitfulness by the means we have just named, and instances are numerous in this country, where great melioration have been produced in the same way. We know a friend, whose garden was of such tenacious clay as to be impenetrable to any thing but the pick, who acting under our instructions, has made it by sand, lime and stable manure, as pleasant a garden mould as any gardener ever spaded—and this spot, which seemed to have been destined by nature for the site of a brickyard, is now one of the most productive kitchen gardens any where to be found.

We will close the article by this remark, that wherever clay lands are to be reduced to mould may lie contiguous to salt-water rivers, that the sand from their shores should be preferred.—*American Farmer.*

ON THE CULTURE OF WHEAT.

I have for some time past, observed several complaints in the papers, of the injury done to the wheat crops by the "*Hessian fly*," and from what I have seen, I am induced to think that it is the farmer's fault if that "*fly*" does his wheat an injury. As you now have my opinion, I will show you how I came to that conclusion.

When I began to manage the farm whereon I now live, twenty-one years ago, I had read and heard a great deal of the ravages of the fly, and of the different "soaks" for the seed to prevent the injury. Some would find a certain preventive in lime water; others in a solution of nitre; others in strong brine, &c. &c., and all said to be from actual experiment, and all based on the idea that the egg or nit from which the fly came, was carried into the ground in the fuzzy end of the grain. For the purpose of trying the different soaks, I prepared some seed wheat in each kind of soak that I had heard or read of; a part of all the seed I had so prepared, I sowed in a lot near the house (about the middle of September,) keeping each kind of soak by itself; the remainder of the seed I sowed on cotton, which I had floating on water in glass vessels in my house. That on the cotton came up about the same time as that which was sown in the ground. I let it all stand until about the 25th of October, when I took up nearly an equal quantity of the plants, from the different kinds of soaks that was sown in the lot, and of those that were sown on the cotton. I then split the plants from the root to the top, and placed them successively under a strong microscope, and to my surprise, nearly every plant that came from the lot was perforated near the top of the ground, and had from three to eight eggs or nits in each, while those taken from the cotton had no perforation nor nits about them. This satisfied me that the cause of the fly was not carried into the ground by the seed. I then tried some of the wheat under the glass, but could not find any thing like an egg or nit about it, and I came to the conclusion that if I kept my wheat out of the ground till after a few good white frosts, (which would likely destroy what flies there was,) I should not be troubled by them, and from that time to this I have never sown my wheat until in October, and I have never found my grain hurt by the fly, although I have not omitted sowing wheat for eighteen years. From this I conclude, that the farmer who sows his wheat before some good frosts, and thereby makes his wheat fields look very fine in the fall, offers the fly a fine shelter for their eggs, and invites them to destroy his grain.—*Correspondent of the Cultivator.*

[From the Albany Cultivator.]

CULTIVATION OF BARLEY.—We have received from C. C. Kelley Esq., of Springfield, Ky., the following inquiries in relation to this crop:

"1. In what spring month should barley be sown? 2. What kind of soil is best suited to its growth? 3. How should the ground be prepared? How much seed is necessary per acre? Should it, as is recommended in Scotland, be cut before it is fully ripe? Will it not, in its crude state, be a good food for stock, and for what kinds mainly?"

Barley should be sown as early in the spring as the ground can be well fitted for its reception. We have known it sown from April to June; but it may be observed, as a general rule, that on soils equally prepared, the early sown grain always gives the best samples. From the 1st to the 5th of May, may be considered the usual time of sowing. It rarely suffers from spring frosts.

Any soil that will produce good roots, or clover, will grow barley. It should be rich and friable, moist, but not wet. Cold, heavy, tenacious soils, are unfit for this crop. Stagnant water is destructive to it.

Barley succeeds best after hoed crops, potatoes, turnips, or corn crops require heavy manuring, and keep the ground clean. Manure, applied directly to this crop, is apt to lodge it, and injures the berry. It is frequently sown on clover sward; and in all cases, the soil must be made fine for the reception of the seed.

Thin skinned, plump, and rather pale seed is to be selected. Soaking the seed in a weak solution of nitre, for twenty-four hours, has proved of great service. We use from two bushels to two and a half bushels per acre. Poor soils require more seed than rich ones, as the plants do not tiller as much. In England, greater quantities of seed are used than here, from three to four bushels being the amount recommended.

Barley should never stand, before cutting, until it is dead ripe.

When the ears droop and bend down to the stems, and lose their previous reddish cast, barley should be cut. The straw will now be of a yellow color, and if allowed to stand longer, becomes brittle, the heads break off, and thus easily wastes. Cut early—the berry will be finer and of brighter color than if allowed to stand longer.

Barley is a good food for any animal, but is generally grown for the purpose of making pork, for which it is only exceeded by corn. Barley, if fed to horses, should be ground and fed with cut straw.

If given them in the same manner and quantity as oats, is apt to produce fever—a proof that its nutritive powers are great, and that some more bulky substance is required for distension of the stomach.

D. S. HAGGERSON'S EXPERIMENTS WITH MUCK OR PEAT.

I send you an account of experiments made on the farm of J. P. Cushing, Esq. of the different composts used as manures, and the apparent effects of each.

Meadow muck or peat has been used in various ways, and found so very beneficial, that two thirds of the manure used on the farm is dug from the swamp.

A compost for top-dressing mowing land is made from leached barilla ashes from the soap-boilers' and meadow muck, in the following manner. The muck is dug from the swamp, the last part of August, or early in September, and lies one year on the surface, after it is thrown out of the pit. It is then carted to a convenient place to make the compost heaps, which are formed by spreading a layer of muck ten feet wide, eight inches thick, and of any length desired; on the muck four inches of ashes are spread, then another layer of muck, and so on for five layers of each, which makes a pile five feet high, in the form of a ridge. This is to lie through the following winter. As soon as the frost is gone in the spring, the pile is turned over, well broken and mixed together. It then lies till the October or November following, when it is spread on the land at the rate of fifteen cart-loads to the acre.

Two accurate trials of the above compost, in comparison with decomposed stable manure, resulted as follows: four squares of equal size which are kept as lawns and mown seven or eight times in a season were manured, two with the leached barilla and muck compost, and two with a compost of well rotted stable manure. It was spread at the rate of twenty cart-loads to the acre. The grass on the different squares was much the same in quantity, but on the squares manured with the muck compost, it was decidedly of a darker and richer colour, and the manure introduced a greater quantity of White Dutch clover or honeysuckle. The second trial was in a field mown for hay, two and a quarter acres. The field was divided into two equal parts, as near alike as possible, one half manured with muck compost, the other half with rotted manure, at the rate of fifteen cart-loads to the acre. Eight tons and eight pounds of hay were cut from the field. No difference could be discovered in the parts manured by the different composts. This proved that for a top dressing, the compost of leached barilla and muck is equal to stable manure. After using it to a large extent for several years, I am still in favour of it as a top-dressing. The compost manure, which we use for ploughed land, is made up of two-thirds muck, and one-third manure. The muck in all cases is mixed with the manure before it ferments, and care is taken not to put in so much muck as to prevent the compost's heating. The fermentation of the manure decomposes the muck rapidly, and I am convinced the greatest art in the use of muck, as a manure, is to have it in a proper state before it is put upon the land. To do it from the swamp and apply it before it undergoes a chemical change is undoubtedly injurious. This change is brought on rapidly by hot horse manure or unslacked lime, but with cold substances it requires longer. For mixing with cow manure, or putting in hog styes, it ought to be dug from the swamp, at least six months, and it is better that it should be exposed to a winter's frost, before it is used. The air then, in some measure, effects the change. The action of the manure soon decomposes the fibre in the muck. It falls to pieces like lime, and then has an earthy appearance. In this state, a mixture of one third manure and two thirds muck has never failed with me to produce better crops of all kinds of vegetables than clear manure. For the last five years we have thought it wasteful to use manure without being mixed. Before coming to this strong conclusion of the benefit of muck when used as a manure, many experiments were made, and universally resulted in favor of muck.—*Colman's Fourth Report.*

[From the Genesee Farmer.]

The following memoranda contains so much good sense, given in a plain, familiar manner, that I believe you will think them worthy of a place in your columns. They are extracts from the letters of a practical man to a novice in the business of farming, yet may perhaps give instruction to some "old hand at the plough."

SHEEP.

I consider them the most pleasant as well as most profitable branch of farming—indeed there is no doubt of it. The experiments I made were under disadvantageous circumstances, but convinced me perfectly. I think I have heard you say there are some on the farm now. Look well to them this winter, and you will be convinced of the justice of my remarks before many months. You will find that your flock is doubled (with proper care and attention) every year—that the manure will pay all the trouble and what it takes in the way of fodder to support them. In the summer they will live where nothing else can, and improve, or rather give barren fields more than they take off, and the wool, in consequence, will be clear profit—thus :

100 sheep cost, \$3 per head,	\$300
100 lambs worth \$3 per head,	300
3 pounds wool each, 300 lbs. at 35c	105

One of the principal maxims as regards these, as well as cattle, is to have them well attended to in winter. Economy, to say nothing of humanity, requires it—for if neglected at this time they get out of condition, and it will take half the summer to restore them to good order, and all the time they are recovering, they are not profitable—hence the economy—for just so much time is lost. The best plan to winter cattle, is to get them into as good condition as possible in the fall—keep them up in good condition during the winter, and they enter spring profitable at once.

TURNIPS, RUTA BAGA, AND BEETS.

You will have to be careful to raise a crop of turnips, for the fly is very severe on them when young. Fine lime dusted over them is a great protection. For winter use I would advise you not to depend on them, as they do not keep longer than Christmas; after that they get watery and hollow. Ruta Bagas are much better, and are sound and good the whole season. For cattle they are not so much liked as beets, and are not near so profitable. I would advise you, by all means, to pay every attention to the latter—where there were potatoes last year, particularly if it was well manured, is the very ground for them. Have it well prepared—plowed deep and well, to make it fine—cultivate with the plow, keep the weeds out, and you will be astonished at the result. Cabbage, ruta baga, and indeed almost every vegetable can be cultivated with the plow, not only as well, but better than with the hoe, and at a great saving of expense.

MANURING GARDENS.

If your garden has been manured regularly with stable manure, I suppose it has, you would find a great advantage in trying lime and ashes—the latter from the lye tub are very good—and all the stable manure you will want in the fall for the garden, should be hauled in (April) be hauled into a snug pile; and you will find it when wanted, rich and mellow.

FARMING GENERALLY.

The grand secret in farming, I am well satisfied, is to be early planting, and having the ground in good order—well plowed and harrowed.

Get your oats in as soon as the ground is fit for plowing—be sure to roll them when about two or three inches high, and do it well, just before a shower, if possible.

Finish planting your corn one day before any of your neighbors, and if your hand or help are wet by rain in covering the last hill, much the better. Keep working at it until it is above knee height, and you will have no further trouble, except, perhaps, to engage your crib.

SCOURS IN CALVES.—When the calf is attacked, it should be put in a warm, dry stable, and not be permitted to suck more than the quantity of milk it is wont to do; but should be put to the teats regularly three times a day. Make a tea of equal portions of white oak, beech, dogwood, and slippery elm bark, and give small quantities twice a day, and the calf will soon recover.—*Agriculturist.*

THINGS WHICH WE WANT.

We want, imprimis, stronger inducements to agricultural labour, through our public authorities by means of a liberal policy of patronage, in bounties and rewards; and we want a stronger guarantee for recompense, in the establishment of a better system of practice.

We want more public, and less party spirit—more devotedness to the state and the interests of the people at large, and less to local interests, individual cupidity, and personal aggrandizement.

We want more stimulus to individual effort, and less to joint stock companies. Men will be guilty of acts of injustice and oppression, in a corporate capacity, which they will be ashamed to commit on their individual responsibility. In the one case they do but share, and they generally contrive to shift on to others, the odium of a bad act. But alone, they have no subterfuge, no excuse.

We want, for our boys, who are destined to till the earth, scientific and industrial schools, that they may acquire, simultaneously, and in the scholastic period of life, a knowledge of the best practices in farming, and of the principles upon which it can now alone be judiciously and successfully conducted.

We want more practical business men in our legislative halls as well as upon our farms—men of sound judgement and independent bearing—and who, though they do not talk as much, can think and act as correctly and as promptly, as professional talkers; and who, knowing best the true interests of the mass of our population, are likely to do the least injury, if they do not do the most good.

We want a more extended circulation of agricultural periodicals—because they disseminate useful knowledge, stimulate industry, call into action latent genius, awaken laudable competition, induce general improvement, bring into exercise the noblest feelings of our nature, and inculcate good will to our fellow-man.

We want to have inculcated and taught, by precept and example, in our public halls, in our social circles, and in our schools, high and low, the great moral and political duty, of identifying our individual with the public interest, and of considering the one as in a great measure inseparable from the other.

ON OUR FARMS.

We want more system—more employment for our females, that they may be more healthy, more robust, and more serviceable to posterity—more contentment with our rural employments—a greater desire to increase our knowledge, to improve our practice, and to bring our sons up "in the way they should go"—as independent tillers of the soil.

We want more attention paid to augment our manures, the food of our farm crops, that our lands, instead of growing poorer every year, may increase in fertility, in products and in profits.

We want to understand, better than we do, the principles and practice of draining, that much of our best land, now unproductive and noisome, may be rendered productive, profitable, and healthy.

We want to extend the culture of roots and clover, as tending to perpetuate fertility, fatten cattle, furnish manure, and fill the granary.

We want the conviction that we can improve, the determination that we will improve, and we shall then soon become conscious that we have improved, in the management of our farms.

WOOL IN AUSTRALIA.—Perhaps the records of any country do not furnish an instance of more rapid increase in the production of wool, than the original convict settlement of Australia. We say original convict settlements, because, though such at first, they are now the chosen point of emigration of multitudes in England, offering advantages which it is thought the Canadas do not possess, for successful agriculture. In 1807, the whole quantity of wool grown in Australia was only 345 lbs. In 1839, it had increased to 20,128,774, equal to one-fifth of the whole consumption of Great Britain. A large part of this wool was exported to England, and the trade in Australia wool is becoming rapidly of great consequence to both countries. We see too, that a large number of the finest improved stock sold at auction at the late Fairs in Britain, has been purchased for that region of our globe.

TO HORSEMEN—The N. Y. Standard mentions seeing a horse that refused to draw, start off without difficulty, by tying a string tightly round his ear close to his head.

ON CUTTING CATTLE FOOD.—A diversity of opinions exist among some of our correspondents, as to the length which hay and straw is most advantageously cut for horses and cattle—one party contending that an inch is short enough, and the other that it is not. We incline to the former opinion, and we would respectfully offer our reasons. The object in using the straw cutter is to prevent waste, and to facilitate the process of mastication. It is not enough to get the food into the stomach, but it should go there in a proper condition for easy digestion—in a perfect masticated form, the fibre broken down, and intimately incorporated with the saliva of the glands. It is uniformly enjoined upon persons who are sickly, or have weak stomachs, and it is a common admonition to the hale, to eat slow, and to chew well their food before they swallow it, that it may more readily digest. And we see that cattle, high fed with corn and oats, often void the perfect grain, without its having benefited them a particle. Whether this would not be more or less the case with fine cut hay, we cannot judge from observation, but we are told it would be so. There is another difficulty to be apprehended from short cut food, if given to ruminating animals, as cattle or sheep, which chew the cud—that they would be very liable to lose this indispensable requisite to health. At all events, there can be no doubt, that all solid food should be perfectly chewed, and mixed thoroughly with saliva, before it passes to the stomach of the animal—the grain crushed, and fibre of hay and straw broken by the teeth. To ensure this we doubt whether forage should be cut shorter than an inch, or an inch and a half.—A gentleman who had fed largely with very fine cut hay, found that much was voided in an undigested state, tinged with blood from the intestines, and that his cattle, after a few weeks, ceased to thrive.

SUGAR BEET FOR MILCH COWS.—An intelligent gentleman from the eastward, assured us a few days ago, that by giving his cows a peck of sugar beet twice a day, cut up with their hay, he was enabled to get just as rich milk and butter during the winter as in summer, when the pasture was at its best. Now, as an acre of ground well manured, planted in this root, and well attended, would yield beets enough to keep ten cows, from the 1st of November till the 1st of May. Should not every farmer make this arrangement for planting beets this spring? From our own experience, we have no doubt, that this addition of beets to the ordinary feed of the cows, would make a weekly difference of 2 lbs each in their product of butter. From the 1st of November to the 1st of May there are 26 weeks. This number of weeks at 2 lbs additional butter, would give us 52 lbs. for each cow during the period named, or 250 lbs. for the ten cows, and if we set down the butter as being worth 25 cents per lb., it will give us \$130 as the value of additional yield brought about by the feeding with the product of an acre in beets. But this is not all—the proprietor of the cows in the spring, would have the gratification to know that he had treated his animals well, and the satisfaction of seeing them in good condition.—*Farmer and Gardener.*

ACCUMULATION OF MANURES.—It should ever be an established principle with the farmer, never to cultivate more land than he can cultivate well. Even when the soil is new, and the vital principles of fertility unimpaired by cultivation, manure should be applied in such quantity, as to supply the demands of the crop, with the execution of the food furnished by the decaying substances in the soil itself. By giving to the soil as much as we take from it—and by adopting this as a principle, we should be able to retain it a state of the most perfect fertility, and to reap crops of an undiminished luxuriance and richness of character, indefinitely from the same soil.

But in order to do this, we must attend to the manure heap with the same unflinching industry and perseverance with which a miser watches the opportunities for increasing the treasures of his idolized purse. No one who does not possess experimental knowledge in this business, can form any adequate idea of the vast amount of "wealth" which an industrious and well-informed farmer can thus accumulate in a single year. The idea that the excrement of animals is alone capable of nourishing vegetation, and furnishing the proper pabulum or food of plants, has now become in a great measure obsolete. The resources furnished by the animal and vegetable kingdoms, in this particular, are of trivial importance in comparison with those with which nature has supplied us in the inexhaustible riches of the mineral world, and to a just and fair appreciation of which, Science is now so benignly occupied in directing our halting and too dilatory steps.—*Boston Cultivator.*

CURE FOR SCAB IN SHEEP.—The modus operandi was this. I bought fifteen or eighteen pounds of cheap, shilling tobacco, cut it to pieces to get the strength easily out, put into a large kettle and boiled it as long as I thought necessary. I then took a forty gallon cask, with one head out, saved the end so as to nail a wide board on the edge of the cask, and the other end of the board was fastened to the yard fence, enough higher than the cask to have the liquor run back into the cask. The tobacco liquor put into the cask hot, as soon as cool enough not to injure the sheep, put into the liquor about a gill of spirits of turpentine; this should be repeated about once to every twelve or fifteen sheep; if all put at once, a few of the first put into the cask will catch the whole of the turpentine. Take the sheep by the forelegs, and put him in tail foremost, as you would a pig to scald, the liquor coming, as you crowd him down, up to his head and ears; turn him round to the cask, to have the liquor touch the sheep all over. I had many of mine ducked head under, then pulled them up on the board, and held them to drain a few minutes, and let them go. Having saved them all in this way, I turned them to pasture, and have not lost a sheep since, except by accident. If done effectually, it kills all the ticks. In shearing, the next year, we discovered only two ticks. The lambs were dipped as well as the old ones. The sheep were all fat the next fall, fat for mutton. I fully believe this mode of treatment will prevent the disorder, make the sheep more healthy, the wool better, and by the improvement of the flock, pay the expense and trouble many times over. Some think the scab cannot be cured, when the fleece is on in cold weather; others mention the expense. For my part, I believe the cure can be effected in moderate weather in winter, though I never tried it. It will in this case, be necessary to use a much greater quantity of tobacco; but what is the expense to the value of the sheep? If the complaint comes on in the early part of winter, the wool is poor, and the sheep will die before the next summer, if not cured. And furthermore, one infected one will ruin the whole flock.

URI TRACT.

TO COLOR Madder Red.—For 10 lbs flannel of yarn, take 1/2 lbs lb. cream tartar and 1/2 lbs lb. alum—pound them fine and boil 15 minutes in sufficient rain water—then add a little cold water and put in your cloth and boil it 3 hours, stirring it often—take out and air it well, throw away your alum water—put in a sufficient quantity of water so as not to crowd your cloth; then put 3 lbs madder, and heat it over a moderate fire as hot as you can bear your hand in; then put in your cloth and keep it stirring 2 hours at the same heat. Then take out your cloth and add 1/2 quarts of soap and stir it up well, put in your cloth for 20 minutes and then it is ready for scouring. The cloth or yarn should be well washed and put in the alum while wet. The cost will be 6 cents per yard.—*Cultivator.*

[It should be done in copper or brass.]

CURE FOR BLOATED CATTLE.—In the month of August last, discovered that a yearling of mine was very much bloated, groaned at every breath. After cutting off the end of her tail, I boiled strong dose of thoroughwort with a little tansy, poured it down as soon as it was cool enough, and on application of the first bottle it started the wind. I gave the second, then turned the animal into the yard, and drove it about a few moments, when the bloating disappeared and the groaning subsided.—*Cor. of Cult.*

CROUP, OR HIVES IN CHILDREN.—Cut onions into thin slices between and over them put brown sugar. When the sugar is dissolved, a teaspoonful of the syrup will produce almost immediate relief. The Editor of the Farmer's Advocate, says he has known the onion used for this formidable disease, but prepared differently—"Wrap the onion in a wet cloth, or cabbage leaf, cover it with hot embers, and roast it slightly which may be done in a few minutes; the juices then pressed out and sweetened with sugar. Prepared in either way, it is pronounced effectual.

TO CURE SCRATCHES IN HORSES.—Wash the feet, or parts affected, with soap suds, wipe them clean and dry, and then apply white lead ground in oil, as thick as can be smoothly and evenly laid on. Exercise moderately, keep the animal dry, and in some cases the first application will cure effectually. Should a second be necessary, wash off the old lead, and apply with a brush at first. Six or eight days should intervene between the application.

NOURISHMENT OF PLANTS.

The best method of producing artificial Humus, the material from which plants chiefly derive their food.

Calcareous earth may be applied advantageously to soils in three different forms:

1st. In the form of calcined lime, either slaked or unslaked.
2d. In the form of carbonate of lime, either powdered limestone or shell marl, or marly clay, or in any other form in which it can be procured and incorporated with the soil.

3d. In the form of sulphate of lime, or gypsum—plaster of paris.

Dr. Dana and Professor Hitchcock recommend the use of lime on soils, and state that its action is threefold, each distinct. 1st. It is a neutralizer. Lime, either in its calcined state, or in the form of a carbonate, will combine with any acids that may exist in soil in a free state. If the carbonate of lime is employed, the carbonic acid which it contained is set free, and becomes food for plants. 2d. It is a decomposer. Many of the metallic oxides will be decomposed by lime, and their components will form new combinations, or be absorbed by plants. But according to Dr. Dana's views of geine, the soil may contain abundant geates; that is, geic acid will combine with the earths and metals and form salts, not easily soluble, but which lime will decompose and render soluble. 3d. It is a converter. "The great use of lime is a converter, turning solid and insoluble geine, nay, I go farther, solid vegetable fibre into soluble vegetable food."

Sir H. Davy says, that when lime, whether freshly burned or slaked, is mixed with any moist fibrous vegetable matter, there is a strong action between the lime and the vegetable matter, and they form a kind of compost together, of which a part is usually soluble in water. By this kind of operation lime renders matter which was before comparatively inert, nutritive.

Dr. Jackson, in the Geological Report of Rhode Island, recommends the use of lime in combination with vegetable and animal matters in the compost heap, and depends upon its property of neutralizing the acidity of the humus of soils, after the compost has been incorporated with the soil.

Mr. Edmund Ruffin, in his Essay on Calcareous manures, gives the following as his view of the action of "carbonate of lime" in soils. Calcareous earth possesses the power to combine with and retain putrescent manures, (whether of animal or vegetable origin) in the soil, and they undergo a chemical combination of such nature that the air, sun, or rain cannot separate them, and nothing but the attractive power of growing plants can effect the separation of the parts of this compound manure. And the second property of calcareous earth is the power of neutralizing acids which the soil or manures may contain. He says, page 31: The presence of acids, by preventing or retarding putrefaction, keeps the vegetable matter inert, and even hurtful on cultivated land; and the crops are still further injured by taking up the poisonous acid with their nutriment. A sufficient quantity of calcareous earth, mixed with soil, will immediately neutralize the acid, and destroy its powers; and the soil, released from its baneful influence, will be rendered capable for the first time, of exerting the fertility which it really possesses. Calcareous earth has the further power of altering both the texture and absorbency of the soils.

Hitherto, gypsum has been supposed to operate as a stimulant in its action upon growing plants. The discoveries of Professor Liebig have afforded an elegant solution of the action of gypsum on lands. "The carbonate of ammonia, contained in rain water, is decomposed by gypsum, and soluble sulphate of ammonia and carbonate of lime are formed; and this salt of ammonia possessing no volatility, is consequently retained in the soil." Both these salts, however, act upon the humus contained in the soil, and prepare it for the use of growing plants.

The cheapest and perhaps the best method of producing artificial humus, and applying it to exhausted soils, is that of turning under green crops. For this purpose, clover and buckwheat have been principally used, in consequence of these plants exhausting but little humus from the soil; and obtaining their principal nourishment from the atmosphere, up to the time of flowering. When these plants are turned under and completely imbedded in the soil, the vegetable matter undergoes fermentation and putrefaction in from ten to fifteen days, according to the favorable or unfavorable state of the weather. The gaseous products of the fermentation are imbedded by the soil lying over the vegetable matter, and the solid and fluid products remain in the soil, and at length if not disturbed,

become incorporated and mixed with it. But should the ground be again ploughed before the decomposition has been completed, for the purpose of putting in the crop, as is the general practice, the greater part of the gaseous and fluid products of the vegetable matter becomes dissipated in the air and age lost.

To prevent this waste of vegetable matter, and also to bring it more rapidly into a state fit for the use of the growing crop; it is proposed that immediately before turning under the green crop, that fifteen to twenty bushels of fresh stacked lime be sown upon each acre, and that the crop be immediately ploughed under, and the soil laid flat by the roller. Upon this a crop of wheat may be sown, or corn planted, as may best suit the convenience of the farmer to plough in his green crop in the spring or fall. The lime will produce fermentation in the vegetable matter immediately, and will absorb the carbonic acid gas, and will also combine with the vegetable matter in such manner as to retain it and prevent its waste in any other manner than by the action of the plants growing upon the soil. If clover be employed, its growth may be augmented by the use of gypsum.

If a sufficient quantity of lime has been spread upon the land, it will also neutralize any acids which the soil may contain, or which the vegetable matter thus added to it may produce. And should there be any insoluble "original" humus still remaining in the soil, the lime will convert that likewise into food for the growing crop. Such plants, also, as require lime, to perfect their seeds, [and all plants cultivated for food require it,] will be thus furnished with that essential ingredient.

In the process of ploughing in the green crop, the plough should go to the depth of the roots, and a second plough should follow the first in the same furrow, and turn up an additional quantity of earth upon the sod to receive the enriching and fertilizing matters generated by the decomposition of the sod.

The primary importance of the presence of lime in soils is a subject of controversy among scientific men, and its effects upon the soils and manures, whether chemical or mechanical, is but little understood by them, and the subject is still less understood by the practical farmers themselves. Whoever shall publish a concise and practical work, suited to the comprehension of the practical farmers of the United States, on the various "chemical changes, combinations, and decompositions that take place in manures and soils, by which certain known elements are brought into action and made to subserve the wants of growing plants," will confer a great blessing upon his fellow man, and supply a desideratum very much needed.—Western (Ohio) Farmer.

From the Mass. Ploughman.

ON RECLAIMING MEADOW LANDS.

1. Let it never be forgotten, that the first step in the improvement of all meadows is *draining*. Take off the water—and all the water. Do not fear making them too dry. It is something worse than useless for farmers to work in or under water, to get a crop. This will do for the oysterman, the clam-digger and the fisherman, but not for farmers. Now *ditching* or *draining* is a matter of skill and judgment. My meadow is of the second or peat quality. The ditch is opened down to the hard pan, four or five feet below the surface, kept clean and free from obstruction, so that the water is conducted off, and away, as quick as possible. A farmer, who is about to improve his meadow, should first ascertain whence the water comes that infests it; whether from springs from the adjacent banks or highlands, or from springs from the bottom or hard pan. In my meadow it comes from both. Having settled this matter, let him cut his ditches in that direction, which will take the water nearest to its fountains and conduct it off soonest, and that is, in the direction it would naturally have run before there was any alluvial deposits. He can easily do this, by taking a rake's tail or cane and *sounding* his meadow till he finds the *bottom of the tray*, and then digging his ditch along the lowest part of the substratum or hard pan. By not attending to this rule, I have filled up more ditch in length, than I now have to drain my meadow. It is true, the contents of the ditches paid me well for digging and filling up—but this is not always the case; and a farmer had better dig his ditch in the right place than in a wrong one. I do not now propose to consider the various forms, or kinds of ditches, though this is an important matter; but to make a few remarks upon the method of cultivating meadows after they have been drained. This I may do in your next, or some future number.

Having made some remarks upon the draining of meadows, I proceed to say—

2. Having thoroughly drained his meadow, the farmer will proceed to destroy the natural growth, and substitute a better. How is this to be done? *Surely not by carting on gravel.* There is no virtue, richness, or food for vegetation in gravel. It is in and of itself a *caput mortuum*—a dead substance. It constitutes perfect barrenness; and no farmer ever yet derived much advantage from carting gravel on to his meadow, except to raise it, make it drier, or bring it out of the water. But the case supposes that he has, *first of all, drained his meadow.* If he has not done this, and can do it, let him go back, and begin at the beginning, and do it. If his meadow is not capable of being drained, there is an end of the business; unless indeed, he chooses to raise it, and thus bring it above water. But this is *making land*,—and for this purpose, doubtless gravel, for a substratum is his best material, because it is plenty and good for nothing else. But I am treating of *cultivating, not making land.* Well then, the meadow being drained, if it is of the first kind before mentioned, that is, if the soil is sufficiently adhesive, the farmer may proceed and plough, and cultivate it for grass, or other crops as he would any other rich soil; adapting his manures, of course, to the nature of the soil. But if it is of the second quality, that is, the soil partaking of the *peat* quality, light, and *non-adhesive*, the surface should first be made smooth or level. This may be done by a sharp bog-hoe, cutting off the hassocks close, and burning them, or carrying them off to the compost heap; then without ploughing, or disturbing the surface, cover it all over an inch thick with pure clay, seed it down with herds grass and redtop, and *nothing else*, and roll it well in a dry day. If the process of levelling by the hoe is too laborious and expensive, use the plough, taking care to plough with as little depth as possible to kill the natural growth, and take a crop of potatoes. After the surface has become reduced and rotten, level it with a cultivator and roll it—then cart on the clay and proceed precisely as pointed out above. The owner may take a succession of crops of from two to four tons to the acre, including both crops for years. My experience goes back fifteen years, and I can discern no difference yet. I used *pure clay*, happening to have enough of it. But this is not always, nor perhaps often, to be had. Let the farmer then take clay-loam, clay-soil, clay-gravel, not for the sake of the gravel, mind, but for the clay that is mixed with it. In short, let him take any soil or substance he can get, which has the most clay in it; always remembering, that the less clay there is in the substance he puts on, the more of it he must use.

The fact is, Mr. Editor, clay is an *essential ingredient* in every good soil,—and go where you will among our farmers, you will find the best crops of grain and grass on those farms, where there is the largest portion of clay mixed with other earths,—not exceeding perhaps one fourth or fifth of the soil. In Maine and some of the other states, clay too much abounds,—but in the other New England States most of the lands would be made better by an addition of clay to their soils.

Watertown, Jan. 23, 1841.

AGRICOLA.

HOW TO MEND APPLE TREES THAT HAVE BEEN GNAWED BY MICE.—A. J. Downing, in a note to Lindley's Horticulture, says, that when trees have been girdled in the winter by mice, they may be preserved by cutting the edges of the bark smooth and inserting a ring or patch of bark taken from a limb. The new piece should fit snugly, and then be bound up, being covered with grafting mortar. In this way the edges of the old and the newly inserted pieces unite, the sap will have a passage and the life of the tree be saved.

THE COLONIAL FARMER.

HALIFAX, N. S., MARCH, 1842.

GARDENING.

CABBAGE PLANTS.—Many persons in the Country find it difficult to raise cabbage plants, as they are destroyed as soon as they appear by the Hopper or Ground Flea, (*Podura*.) It should be remembered that these insects do not set upon ground which is damp upon the surface; as by attention to this circumstance they may be avoided. Chuse a situation upon the east or southeast side

of a building or high fence, which will of course be shaded in the afternoon; sow as early as you can work the ground properly, making it very fine, and raking in the seed *very lightly*; let all small stones, chips, and other things which will quickly become dry in sunny weather be removed, and then beat the surface with the back of the spade till it is quite smooth. Should the soil be very dry and gravelly, sprinkle fine salt over it, in the proportion of a quart to a rod of ground. If the weather should be bright and sunny when the plants appear, water the bed at nine in the morning, and again at twelve, for three or four days. If these directions are attended to, there will, it is believed, be no difficulty in raising plants in the open country, notwithstanding the immense numbers of these insects.

As the Farmer has land enough, he should always chuse a situation for his cabbage where it has not been grown. Grass land that has been broken up and produced one crop will answer well, but it should not be wet land. Spread upon the ground about three times the quantity of manure that would be required for potatoes, and plough the patch immediately, three or four times, for the purpose of loosening the soil as deep as possible. Pigs manure is very good for cabbage, and so is stable manure mixed with an equal quantity of kelp or rockweed, and allowed to lie in a heap for three weeks before it is used; but particular care should be used that no portion of the scrapings of a cellar, or of the rubbish near a sink, where the roots or parings of turnips or cabbage are thrown should ever be placed on land designed for cabbage or Swedish turnips, as it would certainly introduce the eggs of the bug which causes the club foot upon the roots of these plants.—Should the weather be dry when the plants are grown, do not wait for rain. It does not take a large piece of ground to raise all the cabbage that one family can eat, and the large heading cabbage generally needs the whole summer. Water the places where the cabbage are to be set (giving to each a quart) in the afternoon, and near night set out the plants, pressing the earth hard against the stems; the next morning put to each plant half a pint of salt water,—this should be prepared by putting half a gallon of the pickle of fish or meat, to two gallons and a half, or three gallons, of water; within a week or ten days the application of salt water should be repeated, this is designed to destroy the eggs of the maggot fly, which will be deposited by the cabbage the first warm evening after it is transplanted; three feet, each way, should be allowed between the plants that are to stand, but not less than three should at first be planted within four inches of each other, and when they have become so large as to be out of danger from grubs, let all the supernumeraries be taken out, leaving but one in a place.

When the cabbage is considerably grown it should be looked over every four or five days, to see if lice appear upon any of the plants; they are readily discovered by the unnatural curl of the leaf; when any are found they should be immediately destroyed, or they will soon become flies, and spread over the whole patch. Half an hour employed twice a week in destroying these vermin will generally be sufficient to prevent any material damage from this source, in the Country; although in Town it is sometimes impossible to save cabbage from being destroyed by them, because a person may have a neighbour who neglects his garden, and breed green-winged flies enough to cover all the cabbage within a hundred yards. An open situation is better for cabbage than sheltered ground, and it thrives well where it is exposed to the sea breeze. It may be thought that the quantity of manure directed is extravagant, but when seven years have elapsed it will be known that it was not wasted, as it will, generally, at that period, still produce better crops than the adjoining ground. Plenty of manure, and

plenty of room, are necessary for the production of a good crop of cabbage, and many believe they have a bad kind of seed, when the real cause of their failure is, *placing four plants on the ground that only required one.*

EARLY PEAS.—Early peas generally succeed best when sowed as soon as the frost leaves the ground; the ground should be dry and gravelly, and should not have had a crop of peas on it within seven years; if sowed frequently on the same ground, in the Country, the roots will be much injured by a small hair-like worm, which, when once attracted by the peas, will continue in the same ground for several years; there is no ground more certain to produce a good crop than that which was two years back in grass; the early dwarf is one of the best kinds, as it does not grow tall; they should be planted in drills not less than three feet apart, and manured with stable manure. Two furrows, with a light plough, should be run between the rows, when the peas are an inch high, throwing the earth from the peas; and between the fifth and tenth of June two or three light furrows may again be run between them, and the ground planted with potatoes, planting a row within six inches of a pea row; they should not be of an early kind, as they would be exposed to be stunted, beyond recovery, by the peas. As soon as the peas have done bearing, the straw should be taken off, and the ground ploughed between the potatoes, which will probably yield at the rate of 120 to 150 bushels to the acre. The late kinds of garden peas are far the most productive, but are here almost invariably affected with mildew; it would perhaps be possible to prevent this disease, by frequently sprinkling them with a very weak pickle, but the crop would hardly pay for the trouble, especially as we have, at the time they are bearing, abundance of other vegetables.

BROAD BEANS of every variety succeed best when planted very early. They may have their bearing hastened by soaking them twelve hours, and then mixing them in a box with three times their quantity of garden mould, and placing them near a stove. They should be planted as soon as they sprout, which will be in a few days. Unlike the kidney beans they thrive best in a wet cold season. Most people lessen their produce by planting them too close. Many have a custom of taking off their tops; this hastens their bearing, but diminishes the crop.

BEETS.—This root will have sufficient time to grow if sowed the first of May, but if the ground is full of wire-worms they will not come up if sowed so late, as this insect will destroy the sprouts from the seeds before they reach the surface; for this crop the land can hardly be over-manured; pigs manure and manure which has received the wash of the kitchen answer best; the ground should be worked deep; sow in drills thirty inches apart, when as large as the little finger, thin them to four inches apart; half the remainder may be afterwards pulled out, as they are wanted; they make excellent greens, the roots and tops cut up together after they are cooked; they may be used for this purpose till they are an inch and a half thick. As soon as they are strongly rooted, let them run the ground between the roots frequently hoed deep, with the fork hoe; this should be continued as long as it can be done without breaking the leaves. Remember, that in all root crops, the location of roots to the leaves will always be greatest where the ground is kept most loose and mellow, and where the air can most readily reach the roots, and that where there is the greatest proportion of root to the leaves, it will be of the best quality. As the root approaches its full growth the lower leaves dry up and fall off; some people thinking this a waste, pull off the lower green leaves to feed their cows; this practice injures the root; those leaves are

not lost as they suppose, their juices descend to the root as they decay. Beets give the largest crop in the warmest seasons.

ONE HUNDRED YEARS AGO.

The first Settlers of New England, who occupied the inland part of the Country, chose the best land along the rivers. They had, at first, but a very poor, or no market for their produce; and they were obliged, for a long time, to lodge in stockade forts, and to keep sentinels day and night, and to go to their work in large parties, with their guns and swords always near them; roads in many places were simply blazed paths for a considerable time. They were obliged whenever there was a French war, to keep up a line of stockade forts along the whole frontier, which were four or five miles apart, patrols being constantly travelling from one to the other. They were also obliged to raise and maintain an army, to oppose that which the French sent every summer from Canada. The Narraganset Indian war caused the destruction of one-tenth of those that were able to bear arms, and of one-tenth of the Towns in New England. Yet, notwithstanding all these difficulties, or perhaps, in consequence of these difficulties, they went forward, and prospered,—compelled, for the sake of defending their lives, to support these enormous burdens, they were obliged to think as well as act. When the energy of the mind is roused, mountains shrink to molehills before it. Arms and ammunition, salt and iron, were accounted the necessities of life; and many young Farmers purchased nothing else for many years. The farm furnished bread, beef, pork, mutton and fowls,—the clothing was made of their own wool and flax; and (for in early times, although drunkenness was unknown, this people was remarkable for good "eating,") their only feasting day, "Thanksgiving," was furnished with the usual provision of custards and puddings, minced and apple pies, and cakes, without an imported article, except salt. Maple sugar and honey, dill, sweet fennel and coriander, with thyme, sage and capsicum, served for condiments. While the villages were very small they would hardly support Tradesmen. The Tradesman, consequently, often found it necessary to have a Farm, upon which he depended for a part of his support; and in many new settlements every Farmer made his own bricks, framed his house and barn, and made all the wood-work of his farming utensils. The Cabinet Maker and Joiner were generally paid in produce. Pottery of coarse ware were soon established, but wood commonly supplied the place of earthen ware. From the white wood, or tulip tree, the Turners formed plates, dishes, and bowls of every size. Articles of dress, for extraordinary occasions, were dear, but were carefully preserved, and rarely was the fashion altered. The chintz gown, and black silk cloak, which the woman owned before she was married, were good enough to wear at her daughter's wedding. The form of the black silk bonnet, and straw hat, was never changed. The long tortoiseshell comb, set with crystals, or sometimes with pearls, was preserved for life; as were the gold beads which it was accounted sinful to wear except as a medicine; but, unfortunately, it generally happened that almost every woman who could afford to purchase them was attacked with those complaints for which they were found to be the grand specific. My Grandfather, who was married about 120 years ago, preserved for the greater part of a long life his wedding dress, consisting of trunk hose, of which either leg would easily go over his body, and so long that when fastened with the drawing string at the knee they hung double to the shoe; the long coat had on it seven dozen sugar-loaf shaped brass buttons; there were short flaps to the silver-laced waistcoat—such waistcoats were still worn sixty-five years ago, by the Farmers, when full dressed; as was the sword, a weapon which

in a time and Country where every man was compelled to be a soldier whether he would or no, it was necessary that every man should have, and learn to handle, as bayonets were not in use. As deer were plenty, the inconvenient trunk hose were soon exchanged for buckskin breeches, and tow-cloth trowsers, but no other change appeared in the Farmer's dress for a long time, all the zealous religious people accounting such changes to be unchristian.

As the soil was poor on the sea-coast of New England, and often exposed to early frosts which damaged the Indian Corn, it became customary for persons to go up the valley of Connecticut River to purchase corn, when the crops failed near the shore; and when the corn was not in demand, it was used to stall-feed cattle, who were driven to market in the spring. The Farmer received the cash for his surplus produce generally but once a year, and regulated his expenditure according to his income. There was a great difference in the earnings of different Farmers, in proportion to their industry and intelligence, but it very rarely happened that any man lost his Farm. Not long, however, after the conquest of the Narragansets, a body of Merchants began to move into the Country, and establish stores in the different Towns. They sold every thing that the Farmers had been accustomed to purchase, together with many new articles. They generally offered to give three months credit, and at the expiration of the three months to accept notes upon interest, if it was not convenient for the Farmer to pay; they also agreed to accept grain in payment for their goods. It was at first generally believed that this would be very useful to the Farmers—the reverse was the fact. A great number of new articles of dress were introduced; the houses were generally furnished with many things which had never before been thought necessary; few of those who feared they were spending too fast, had the fortitude to resist the powerful arguments of their wives and daughters,—stating that every body now used the articles they wanted—that they were purchased by neighbours less able than themselves, and that unless they purchased them they should be ridiculed for stinginess. Every year added to the list of their new necessaries; and the consequence was, that in every Town where a Merchant settled, at least one-third of the Inhabitants were obliged to give up their land to their creditors, and many others were for many years hampered with debts. They were taught in the dear school of experience that the Farmer who is compelled to raise a considerable sum of money, is always obliged to give more for it than it is worth, and that the expence of taking produce to market absorbs a large portion of its price; and that the Farmer, to be independent, must live chiefly upon the produce of his Farm, and purchase few cash articles. There were many who had witnessed the effects of dealing upon credit, that adopted, and strictly adhered to, the rule of never buying any articles whatever from a Merchant upon credit, and by this means became wealthy; while their neighbours, who spent their income before they earned it, became poor.

Soon after the conclusion of the American Revolutionary War, a Village was settled on the Banks of the Ohio, chiefly by Officers who had served in the American Army; their land was of the most fertile description;—wheat yielded 40 bushels—Indian corn, 75 bushels, to the acre. Half a dozen pigs turned into the woods, in the course of three years, became a drove of two or three hundred. The horned cattle also increased rapidly,—those that were not needed for work, or milk, supporting themselves, in winter, in the cane brake. As many swine as they had corn to fatten were driven home in the fall, and shut up in pens. There being then an immense immigration of new Settlers, all the provision they could raise found a ready market, at a good price. These officers were generally sons of New England Farmers, but in the army, in

company with the French officers, they had all received a new education,—they had become gentlemen; and they had married ladies who thought it degrading to work; and were therefore obliged to be perpetually getting up Balls and Parties to prevent dying with "Ennui." Whenever one gentleman called upon another, it was necessary that a bottle of high priced wine should be drawn. Every one was dressed as fashionably as the Inhabitants of the Seaports; while every imported article cost ten dollars per hundred weight for land carriage from Philadelphia to Pittsburg, besides the expence of boating down the river. This mode of Farming did not succeed; in a few years most were obliged to dismiss their servants; and the Colonel, or the Captain, might be seen milking his cows or feeding his pigs in the morning while the ladies were in bed. These last, however, might be seen in the afternoon, dressed in white muslin, with their parasols, enjoying the breeze along the banks of the river. In the course of a few years the greater part of these Settlers left the Country, their Farms having passed into the hands of their creditors; but there were in the village four or five old-fashioned Yankee Farmers, who were ridiculed by their neighbours at first, for they refused every invitation to Balls and Parties.—Their wives and daughters were milking their cows before the sun was up, and chose to spend the winter evenings at the spinning wheel, rather than go to card parties.—They purchased scarcely any imported article except salt, iron work, and tea, (maple sugar and honey the Country furnished in abundance,) they worked industriously, lived well, and became wealthy. Every kind of business is subject to fluctuation, being at some times more profitable than at others; but no employment suffers less, few so little, by these changes as that of the Farmer, if he lives, as he ought to live, chiefly upon the produce of his Farm; the value of what is consumed by his family is unchanged, he has as much wool, as much bread and meat for his labour, when the price is low, as when it is high; but the Tradesman must purchase all his necessaries of life, and is consequently much more distressed when he cannot procure employment, than the Farmer when he gets a low price for his surplus produce. There is no employment in which men are less exposed to fail, from causes for which they cannot blame themselves, than that of the Farmer, he always has something laid up for the future; his meat and potatoes, the milk of his cows, the wool of his sheep, form a stock in his hands. The Tradesman, and the Lumberer, when they have spent their money, have nothing; and if their business fails, they run in debt. There is no business in which the intemperate will not fail; nor any in which the indolent will not be poor. A man may be very industrious, yet always continue poor, if he lacks economy; it is not sufficient that he should earn enough; it is necessary to take care of what he earns. An old milk man, who was accustomed to draw three or four hundred loads of coal from Town yearly, used to predict the future fortunes of young Merchants very accurately, by their ashes. Of one he would say, "he will get on, his ashes are pretty good," of another, "he will soon fail, his ashes are not worth hauling, they are almost all cinders and small coal," and of a third, "he will never break, but will not get very rich, he has the best ashes in Town, there is not a cinder in them bigger than a pea."

The Tradesman is very fortunate who does not lose a part of his time for want of employment. The Farmer has always something to do which will be profitable; his occupation conduces to his health and cheerfulness; nor is there any class of men who enjoy a greater portion of the real good things which this world furnishes; with all his advantages he as well as others must practise economy and keep his expences within his income.

FALLOWING.

It is believed that a naked fallow, *invariably*, in a greater or less degree impoverishes the soil, and should therefore never be resorted to without it should be absolutely necessary. When a rich soil under tillage is covered with a crop, that part of the putrefying animal and vegetable matter which flies off from the soil in an aerial or gaseous state is arrested by the leaves, which, retaining what is useful to them, perspire pure air, nearly free from any mixture of carbon. The leaves of all plants possess this property in a greater or lesser degree; those which are most succulent, deriving the greater part of their nourishment from the air which they purify. The melon thistle is a green block of juicy vegetable matter, with a flat bottom, without roots, (the surface set with the usual stinging prickles of the Cactus or Prickly Pear,) which thrives upon the arid sands of Arabia and Africa. Into one of these Cacti, which may be about 15 inches diameter at the bottom, and about the same height, and 12 inches diameter at top, the Arabian makes a small incision and inserts a melon seed, which drawing its nourishment from the juices of the Cactus, has time to produce a good crop of fruit before it kills the plant which nurses it. The lack of roots is a great advantage to the Cultivator, for the Cactus may be carried a considerable distance and set upon the ground where it is wanted without any injury.

A sprig of Houseleek put into a tumbler filled with small shells placed on a shelf over a fire place in a warm room, in which a number of persons were generally sitting, has in the course of the winter grown 6 inches, without earth or water; and a sprig of another kind of Sedum, suspended by a thread over a pigpen, which was under cover, has (in summer) grown 10 inches in 6 weeks. We see that the soil of the forest, in its natural state, is never deteriorated; and we also see that it is, in summer, always overshadowed with green leaves, and in winter always covered with dry leaves or moss.

Attention to these facts will explain the reason why a piece of deserted land that has been highly manured will retain its fertility for many years, while adjoining land that has been slightly manured becomes barren; instances of which we often see, where men have settled upon, and afterwards abandoned, some unfavorable situation. Upon the very rich ground such an abundance of leaf is produced that the fertilizing portion of the exhalations from the soil cannot escape; it is arrested by the leaves; but as the leaves do not wholly cover that which was slightly manured, the strength of the soil is constantly passing on the wind to the neighbouring forest, or to some cultivated ground abounding in leaf. It appears, therefore, that the most economical way of using manure is, always to give heavy dressings, rather than light, to manured crops.

As Fallows are often found useful, theories have been framed to prove that by some chemical process the soil was improved while laying naked, exposed to wind and sun; but it is believed that a few careful experiments upon a thin soil will convince any person that the reverse is the fact. The real advantage of fallowing is probably to be ascribed to the destruction, by starvation, of the worms and insects; every plant which we cultivate is more or less injured both in the roots and leaves by them; and they generally increase rapidly where the plants they prefer are constantly grown; our crops are probably as much injured by those which are so small that we do not see them as by those which are larger, for the least are the most numerous; of these some attack many plants which differ from each other, but the greater part, feed only upon plants which are nearly akin. There are winged insects which can hardly be avoided; but there are many worms which breed

upon the roots of plants, which do not remove far from the place where they were bred. If peas are grown for several years in succession upon the same ground, they will generally become sickly, their leaves will turn yellow before the flowers open, and the roots will be found devoured by small hairlike worms, who will continue to infest them as long as they are grown in the same place; yet, if the soil has not been shifted by the plough, a good crop may be grown in a following season within three yards of the unhealthy ground. The same, or a similar worm, generally attacks the roots of red clover, which belongs to the same family of plants as the bean and pea. Many vermin of such kinds are destroyed by fallowing, but if we can learn to get rid of them without the loss of a crop, and without impoverishing the soil, it will be a great advantage. By a rotation of crops, such creatures as live upon one species only will be as surely destroyed as by a fallow. Every kind of weed will be destroyed by a well hoed crop; and if the plan recommended by Mr. Jackson, of allowing land to be pastured for a few years whenever the crops begin to fail while it is well manured, should be adopted, it is probable that it would rarely be necessary to recur to fallowing. There are troublesome insects which are not hurt by fallowing, that will be diminished, though not destroyed, by pasturing; the wireworm is of this kind, feeding mostly upon dead and half decayed roots, but cutting the shoots from many different seeds at their first sprouting beneath the surface of the ground; the woodcocks feed their young upon these worms, but it does not seem possible to prevent sportsmen from destroying them wherever they are found.

The writer is aware that he is, on the subject of fallowing, opposing commonly received opinions, opinions which he had learned to believe upon authority, and has learned from experiments to think erroneous. It would be easy for any person to try experiments on this subject upon a small piece of ground, and also upon ploughing stubble ground, designed for potatoes, in the fall. By this practice very little is gained in the tilth of the ground, and there is reason to think that a considerable portion of soluble matter will be carried too deep, in ground loosened up to prepare it for the many rains to which it will be exposed before it can be planted. Long experience has convinced me that ground covered with green herbage of any kind retains its strength through the winter better than that which is naked; and that it is of considerable use to sow oats or turnips very thick on a garden soil in the beginning of September, provided the crop should have then been taken off the ground, as the soil will, the next season, be more mellow, and require less manure.

A Statement of the Agricultural Exports from the Port of Dnyby, for the year ended 6th January, 1842.

Apples, 1733 bushels, 75 boxes; Barley, 500 bushels; Butter, 4152 pounds, 24 kegs; Beef, salt, 3 barrels; Calves, 17 head; Cattle, horned, 253 head; Cheese, 4171 pounds, 4 barrels, 2 drums; Cider, 404 barrels; Eggs, 19,020 dozen; Horses, 12; Hops, 6 hales, 400 pounds; Meat, fresh, 14,268 pounds, 48 carcasses; Potatoes, 13,870 bushels; Poultry, 3097 pounds, 19 barrels, 6 boxes, 2 coops; Pears, 420 boxes; Peas, 6 barrels; Plumbs, 90 boxes; Sheep, 1480; Smoked Meat, 1600 pounds; Turnips, 162 bushels; Beets, 8 barrels, 2 boxes.

We have received a sample of 270 bushels of remarkably plump heavy Wheat, raised on new land by Hiram Downing, of the township of Sterling, in 1841. It yielded about 30 bushels to the acre.

SAVING WEAK COWS IN SPRING.

It frequently happens that when there is a scarcity of Hay a number of cattle die in the spring after the frost is out of the ground, but before the grass has sprung up. These cattle generally belong to poor men who have at this season neither money nor credit, and to them the loss of two or three cows is a great injury, and they do not soon find themselves able to replace them. It should be generally known that on most farms where there is a part of the ground in good order, one mans labour is sufficient to procure roots enough to support five or six cows. The roots of clover, couch-grass, dandelions and crowfoot or butter cups, will be found fully equal to green grass for feeding, and if given to cows who have as much hay as they will eat, will considerably increase their milk. Roots can most easily be procured from red clover sowed the preceding season, and from couch-grass adjoining ploughed ground. The roots should be spread in the sun till the earth which sticks to them is dry when by throwing them into heaps and beating them it will fall off,—in wet weather it will be necessary to wash them by throwing them into a pond or brook and stirring them with a stick. Upon newly cleared woodland where there is a thick turf in a state of decay, a growth of what is commonly called Prickly Sarsaparilla occasionally springs up, and flourishes while the rotten turf continues mellow. This plant fills the ground with abundance of long cord-like roots, and cows have been observed to learn to tear them up with their horns as soon as the frost left the ground, and had manifestly gained flesh after living upon them for three weeks during which they had no hay. In the droughts of India it is often necessary to feed cattle with grass roots for several weeks during which the green herbage is all dried up.

After the first of April if cattle that are in good order are turned into the woods there will be no danger that they will perish with hunger, but many poor farmers, in every sense, knowing that they have not fodder enough for their cattle, give them such a scanty allowance that when the ground thaws they are so weak that instead of browsing, they lye down most of the time till they become unable to rise. I have known of a man who kept a horse and four or five cows, whose hay always run short in the spring, yet he made more butter from his cows than any of his neighbours. In summer his cattle were always left in a pasture at night, and never kept in the stable except while they were milked. His hay was a mixture of foxtail, white clover, and couch-grass, and in winter his cows had as much as they could eat, and were very carefully fed and watered; but when the hay was reduced to the quantity that he thought would be required for his horse, he drove his cows to the ground upon which he had been cutting cord wood, to browse upon the branches of the beech, they being then (owing to the superior quality of his hay, and careful feeding) in as good condition as many that are slaughtered for beef. When the cows came back to the barn he would not put them into the stable, but in the morning drove them again into the woods. After three or four days they left off returning to the barn, and though they were sometimes turned out as early as the middle of March, when the snow was deep, they never became very poor, nor had any mischances in calving. These cattle did not appear to be of uncommonly hardy breed, for when the old man died, and the cattle came into the hands of his son, an idle dissipated character, the horse and all but one of the cows perished within three years by the common accidents which destroy starved neglected cattle.

Parasip seed from Jersey or Guernsey gives the largest crop, and of the best quality; it soon degenerates when grown in England or in the Eastern American States.

ADDRESS,

Read to the Annapolis County Agricultural Society, at their Annual Meeting, March 4, 1842, by *James R. Smith, Esq.*

GENTLEMEN,—It may be deemed presumption in me, not being a practical Farmer, and so recently coming among you, to attempt offering any remarks on the subject of a science with which most if not all present should be so much better informed, from daily practice, and long experience; but an anxious desire to see Agriculture improve, in a County so abundant in all those resources best fitted for its developement, and so qualified, from the fertility of its soil, and the advantages it otherwise possesses, to become one of the first Agricultural Counties of the Province, compels me, at this, the General Meeting of the Annapolis County Agricultural Society, to address you; in the hope, if practicable, to arouse the Agriculturist of this County to the importance of the subject, and, by stimulating their energies, aid in bringing about a better and more perfect system of Husbandry—by which alone the wealth now lying dormant in the soil may be extracted to the enrichment of yourselves and families.

These, together with a conviction of the imperative duty on every man, by every means in his power to render the talents with which he is favored useful to his fellow men, have induced me, at every risk, to offer my ideas on the advantages of Agriculture generally, and to this County in particular, to your consideration.

The subject affords too extensive a field to be entered upon fully, at a time like the present; but if every Member of this Society would, from time to time, contribute his share of information on particular branches of it, for the general good, the field may ultimately be ranged over usefully, and I trust not unprofitably to all those who, like you, are so materially interested in it.

Permit me to enquire of you, in the first place, why it is that Agriculture in this Province proceeds at a much slower rate than many other sciences? The answer is obvious. It arises from prejudice on the one hand, and the absence of the desire for research on the other. Every man becomes wedded to his own system, and hence arises an overweening conceit of himself as an Agriculturist. Against this the promoters of this Society have had to contend, when urging the advantages of Agricultural Union; many objecting to the benefits to be derived from such Societies; or that any more extensive information can be imparted to them, than that which they already possess.

Many, less anxious in the progress of Agriculture, might, from such perverseness, have been induced to abandon the cause in disgust. Fortunately, however, Gentlemen, for this County and the science of Agriculture, this has not been the consequence of such lukewarmness, it having been attributed to the true cause, and not as affording an evidence of the hopefulness of the attempt to arouse the Farmers, ultimately, to a proper sense of the tendency of Agricultural Societies, to diffuse a spirit of emulation and research among the Farmers, and thereby make them good, practical and scientific, Agriculturists.

Nor can it be wondered at, Gentlemen, that such men are to be found among us, when it is considered that the Farmers in general are not readers; from which they lose all the recorded improvements of individuals, and of Agricultural Societies.—Having no system of education in this Country whereby the first principles of Agriculture may be acquired, the Farmer is driven to receive his Agricultural Education from the practice of his Father, and the neighbourhood in which he dwells; and which, having been handed down to him, unadulterated and unimproved, through

ny a year, is adhered to with an obstinacy which no reason can induce him to give up, or to change.

To break through these prejudices, by stimulating the Farmer to enquiry and investigation—to set before them the improvements of other Countries—and to introduce to their notice the variety of examples in which the Farmer has been enriched, by procuring the most from the soil, at the least possible expence, should be the object of all persons desirous to see a Country advance by the increased wealth of the Farmer, arising from an improvement in its Agriculture.

It is a science more advantageous to a Country than any other, inasmuch as it is more certain and lasting, and forms the basis and support of all others;—"the productions of Nature being the materials of Art."

Many causes have occurred to retard the progress of Agriculture in this Country; among them stand prominent—the high price of labor, the limited capital of the Farmer, and the deficiency in the means of agricultural research.

Few, if any, have the means or can venture an experimental Agriculture; and therefore the system, however erroneous, is continued; and, whilst the science is advancing in other Countries, in this, it remains nearly as in the earliest state of the Province.

To obviate these difficulties, should be the study and aim of every Farmer; and it may not be unprofitable to consider how far we have it in our power to accomplish so desirable an object.

A knowledge of the science of Agriculture must be sought after, through the medium of works on Agriculture; a diligent and attentive perusal of these, will enable us to discriminate between cause and effect, and to increase our product, at the same time we diminish our labor.—We should become more intimately acquainted with the science of Agriculture,—obtain a knowledge of the result of experiments in other Countries,—and be able to apply such of them as we may deem suited to this Country to our own Agriculture, and ultimately arriving at perfection in our system, obviate all the difficulties which at present apparently impede our progress in advancing in so noble a science.—By knowing the most efficient mode of accomplishing our work, and avoiding all useless labor, the productions of our soil would be increased at the least possible expence.

Such are the means by which, to a very great extent, our system of Agriculture will be improved. The increased production enriching the Farmers, and the evil in the high price of labor met by the diminished quantity required.

Other advantages would arise from a reference to Agricultural Works. We should thereby be enabled to form opinions on the experiments of other Countries,—acquire a knowledge of the variety and utility of Grass and other Seeds, and determine which of them would best suit our climate; and obtain information on the several varieties of Stock which could be most advantageously introduced into this Country.

To obtain these results, we require a well selected Agricultural Library, as well as the means of obtaining from other Countries such Seeds as may be considered worthy of trial in ours; and for procuring such Stock as we deem best adapted for improving the Breed of our own.

If such, then, be the requisites to enable us to obtain the advantages open to us, and to bring this County to that condition in which it should be, as an Agricultural County, permit me to enquire where is the Farmer by whose means alone these requisites can be supplied? Such a Man is not to be found among us! Must we then abandon the hope of obtaining them? Is there a Man among you who will not, with me, say decidedly, no? The

way, Gentlemen, is open to us, the means are in our own hands,—by union,—by an Agricultural Society.

Such a Society has been established among us, and we are met this day, for the second year, to give our assent to its continuance for another; and to testify our conviction of its benefits, by enrolling our names among its supporters; and thereby afford evidence of our desire for improvement in a science so well calculated to enrich ourselves, and give a character and standing to the County in which we live.

Let me, therefore, invite you, Gentlemen, to give efficacy to these objects, and to aid in rendering this Society conducive to the end contemplated, by uniting in the common cause, and by contributing but a tithe in value of the product of the soil, establish an Institution, which will not only enable us to obtain riches, but the only riches which we can call our own,—by living by the product of our own hand, improved by our own labor.

Let all petty jealousies in such a cause be buried—suffer no local feelings to deter you—abandon your prejudices,—and being actuated by the one great and worthy motive for the general good, unite yourselves in a band of union for the promotion of a science which, enriching and fertilizing as it advances, will ensure for you the enviable distinction of being truly good, practical British Farmers.

My labors are at your service; I wish for no reward, other than the satisfaction I shall ever feel in seeing the County of Annapolis advancing, as it should, in wealth and independence, and taking its station as one of the first Agricultural Counties in the Province of Nova-Scotia.

LEGISLATIVE REPORT.

The Committee to whom were referred the matters connected with Agriculture beg leave to Report,

That they have examined the Report and Accounts of the Central Board referred to them, and find the accounts correctly stated, and the Committee are satisfied that the Central Board have conducted the business entrusted to them upon a system calculated to insure the most favorable results to the Province, and although the Board have had many difficulties to encounter at the commencement in arranging their plans for the importation of stock, seeds, and improved implements of husbandry from Great Britain and the United States, the committee are persuaded that by the arrangements made by the Board, much inconvenience which attended the importations made last year will in future be avoided.

Some of the most approved breeds of Cattle, Sheep and Swine, together with some Seeds and Implements for Agricultural purposes, have, during the last year, been imported by the Board and distributed into almost every County of the Province. Local Societies have been formed in every County of the Province except the County of Yarmouth, which Societies are in correspondence with the Central Board, and have been aided by the Board in making such importations as their several circumstances required. And a spirit of enquiry and emulation has been diffused throughout the Country which cannot fail of having a beneficial influence upon the minds of that part of our population engaged in Agricultural pursuits, many experiments that have proved beneficial in other Countries have been commenced which the Committee feel persuaded will have a tendency to introduce a better system of cultivating the soil, and of producing a more abundant supply of the necessary articles of food.

With regard to the plan suggested by the Central Board in their report of holding public annual shows in some of the most populous districts for encouraging the best productions of Stock, Grain, and other Agricultural improvements, the Committee are of opinion that such plan, if carried into operation, would have a very beneficial effect in raising a laudable competition among the farming classes, but whether part of the funds at the disposal of the Board could under the present circumstances of the Country be thus more advantageously employed than upon those objects in which the Board have hitherto been engaged, the Committee forbear to make any recommendation.

The Committee are, however, of opinion, that in the course of a few years when breeds of Stock lately introduced into the Country become matured, that such a course ought to be adopted in order to test the improvement made, and the relative value of the imported breeds to those of the ordinary stock of the Country.

By the accounts submitted, it appears that of the sum of £1275 granted at the last Session of the Legislature to be drawn by Local Societies at the rate of £75 in each County, the following sums have been drawn or allotted to the several Counties:

Halifax.....£75 00	Annapolis.....75 00
Colchester.....75 00	Queens.....37 10
Pictou.....75 00	Lunenburg.....75 00
Cumberland.....75 00	Shelburne.....37 10
Sydney.....75 00	Guysborough.....75 00
Inverness.....75 00	Digby.....75 00
Cape Breton.....75 00	Richmond.....75 00
Hants.....62 10	Yarmouth.....}
Kings.....75 00	no application }

making £1,112 10s. and leaving a balance of £162 10s. undrawn.

The sum of £500 granted at the last Session of the Legislature and placed at the disposal of the Central Board, also £225 granted in 1839 for the importation of Stock, making together £725, have been expended as follows—

123 copies of Jackson's Work.....£20 9 9
Implements imported from Boston.....12 3 9
Horse <i>Montreal</i> cost, landed in Halifax.....94 15 5
Loss on Stock imported by Central Board, and sold at Public Auction.....262 1 10
Expenses on Do. in Halifax.....46 2 0
Loss on Stock imported for Societies, and borne by Central Board.....136 8 8
Expenses on Do. in Halifax.....8 11 11
Loss on Pigs imported from Buxton, and sold by Auction.....7 10* 0
Cash paid for 250 copies of Colonial Farmer.....50 0 0
Loss on Jackson's work, Stationary, &c.....15 5 6
Cash in hand.....21 11 2
Cash paid Secretary, half a year's salary.....50 0 0

£725 0 0

The Committee have also had under their consideration the Petition of King's County Agricultural Society, asking aid for the establishment of an Agricultural School in that County; and although the Committee are of opinion that such an establishment might prove useful and beneficial, yet the Legislature having already made so large an appropriation for the encouragement of Agriculture, the Committee cannot recommend to the House to make a further grant in favour of the object which the Petitioners have in view.

The Committee have also had under consideration the Petitions of James Smith and others, of Stewiacke, of John Murdoch, of New Annan, and Stephen Knowlton, of Parrsborough, praying aid for erection of Oat Mills. Upon this subject the Committee are of opinion that the manufacture of Oat Meal has already received liberal encouragement from the Legislature, and that the preparation of that useful and necessary article of food may now be sustained without Legislative aid, except in very peculiar cases; and the Committee cannot help considering the application of Stephen Knowlton, of Advocate Harbour, in the Township of Parrsborough, as one of those cases, and beg leave to recommend to the House to grant to Stephen Knowlton, of Parrsborough, the sum of Ten Pounds, to aid him in the erection of an Oat Kiln, in conformity to the regulations adopted by this Hon. House.

The Committee have also considered the Petition of Thomas Blackie, asking remuneration for improvement made upon the Threshing Machine; and the Committee are of opinion that the security given by an Act of the Legislature, in favour of persons making new discoveries and improvements in Machinery, as a sufficient encouragement in all such cases, and therefore cannot recommend a grant of Money to the Petitioner.

All which is most respectfully submitted.

BENJ. SMITH, Chairman.
JOHN HOLMES,
SAMUEL B. CHIEFMAN.
GAIUS LEWIS.
MAYHEW BECKWITH.

Assembly Room, 3d March, 1842.

AGRICULTURAL EXHIBITIONS.

Scale of Premiums to be awarded for Stock, Agricultural Produce, &c. under the direction of the Pictou Agricultural Society.

FIRST EXHIBITION,

To take place in Pictou, on Tuesday, the 18th day of October next,

To the owner of the best Bull, not over 5 years old, nor under 2, will be awarded.....£1 0 0
To the owner of the best Bull, calved since 1st Jan. 1841, and not less than 1 year old.....1 0 0
To the owner of the best Cow, in milk.....1 0 0
To the owner of the second best do. do.....0 15 0
To the owner of the best Ram, not less than 2 years old.....1 0 0
To the owner of the second best do.....0 15 0
To the owner of the best Ewe.....0 15 0
To the owner of the second best do.....0 10 0
To the owner of the best Ram Lamb.....0 15 0
To the owner of the best Ewe Lamb.....0 10 0
To the owner of the best Boar.....1 0 0
To the owner of the second best do.....0 15 0
To the owner of the best Sow.....1 0 0
To the owner of the second best do.....0 15 0
To the owner of the best tub of Butter, not less than 50 lb.....1 0 0
To the owner of the second best do. do.....0 15 0
To the owner of the best Cheese, not less than 15 lb.....0 10 0
To the owner of the second best do. do.....0 7 6
To the owner of the best barrel of Apples.....0 10 0
To the owner of the best 2 dozen of Cabbages.....0 10 0
To the owner of the best half acre of Turnips.....1 0 0

The Turnips will be examined on the fields by persons appointed; all the other articles to be exhibited in Pictou early on the day above mentioned. The examination by the authorised Committee to commence at 2 o'clock, p. m., and the prizes to be paid to successful competitors immediately after the decision.

SECOND EXHIBITION,

To take place at the next Annual Meeting of the Society, on the third Wednesday of January, 1843.

To the owner of the best 5 bushels of Wheat, the Society to take it at 10s. 3/4 bushel.....£1 0 0
To the owner of the second best do., the Society to take it at 10s. 3/4 bushel.....0 15 0
To the owner of the best 5 bushels of Oats.....0 15 0
To the owner of the best 5 bushels of Barley.....0 15 0
To the owner of the best 2 bushels of Timothy Seed.....0 15 0
To the owner of the best barrel of Flour.....1 0 0
To the owner of the second best do.....0 15 0

PRIZE ESSAY.

The sum of Two Pounds Ten Shillings will be awarded for the best Essay on the "Ox-eye Daisy,"—showing its nature, properties and the most effectual method of extirpating them and preventing their spread. The Essay to be founded on experience or observation, and not on simple reference to books or other sources, and to be enclosed under seal to the Secretary, on or before the first day of October next.

The Agricultural productions presented for competition, must have been raised in the County of Pictou—the Stock excepted, and all competitors, excepting for the essay, will be required to enrol their names as Members of the Society, on or before the first day of August next—if not previously Members of the Society.

Due notice of the place of exhibition will be given. Suitable arrangements will be made for the reception of Stock, &c.

By order of the Committee,

JNO. STILES, Secretary.

Pictou, 15th February, 1842.

"THE COLONIAL FARMER,"

TITUS SMITH, EDITOR; R. NUGENT, PROPRIETOR,

Is published monthly at the Novascotian Office. Terms—single copy, 5s. 3/4 annum, six copies for \$5, twelve copies for \$10 and twenty-five copies for £5—in all cases in advance.

Every description of Plain and Ornamental Printing executed with neatness and despatch at the "Novascotian Office."