

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
- Covers damaged/
Couverture endommagée
- Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée
- Cover title missing/
Le titre de couverture manque
- Coloured maps/
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur
- Bound with other material/
Relié avec d'autres documents
- 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
- 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.
- Additional comments:/
Commentaires supplémentaires:

- Coloured pages/
Pages de couleur
- Pages damaged/
Pages endommagées
- Pages restored and/or laminated/
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached/
Pages détachées
- Showthrough/
Transparence
- Quality of print varies/
Qualité inégale de l'impression
- Continuous pagination/
Pagination continue
- Includes index(es)/
Comprend un (des) index
- 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

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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

Catibow feeds, even in summer, upon Lichens (paper mosses) in a great measure, treading down and never tasting the Convolvulus and grasses which are eagerly eaten by Cows. The cow will, when hungry, eat Lichens, but the Horse will not, yet he will eat the large Swamp Fern (*Osmunda Cinnamomea*), which the cow will not. The Moose will not grow lean in winter, if he can find the thicket of young Moosewood, (*Acer Pennsylvanicum*) which he will browse upon, eating twigs an inch in diameter. In summer he feeds not at all upon herbs that grow on the ground, living upon the barks of trees and shrubs. The great length of his legs enables him to beat down with his breast young trees of a considerable size; and his enormous lips are well formed for stripping off their leaves. The Bear, like the Hog, eats every kind of grain and nuts, flesh, fish, fruit, insects and roots of various kinds; and it is well that he sleeps in winter, when cattle must have fed him had he been awake. The Fox is eager for fruit, flesh, and fish, but does not eat grain or roots. The squirrel lives on seeds and nuts where he can find them in abundance, but in colder regions makes didactic havoc of the young birds, and feeds greedily upon eggs. Did all animals live upon exactly the same kinds of food, the strong would drive the weak in a time of scarcity; and did all vegetables require the same kind of food, many weak plants of slow growth would cease to exist. There are two causes which prevent most of the crops which we cultivate from continuing to thrive for a long time on the same ground. Insects collect about many plants in such numbers that they materially injure the crop by the second or third year. The roots of Red Clover are always injured in this way, by the white worm, resembling that which attacks the roots of peas. The Swedish Turnip and Cabbage attract the small bug that causes the clubfoot, and most or all of the vegetables we cultivate are more or less injured in their roots by similar vermin, which are often so small that we can hardly see them. A naked fallow, when the ground is so frequently stirred that no vegetables are allowed to grow upon it, must destroy a great part of these animals as well as the seeds of weeds, and it is undoubtedly the benefit derived from the destruction of these animals that the introduction of this expensive process is to be ascribed, for it certainly impoverishes a shallow soil more than any crop whatever. Another cause of the failure of crops continued for a long time on the same ground, is, that there are few soils that contain inexhaustible quantities of all the constituents of a vegetable, and of those substances which are necessary for preparing its food. Thus if an old pasture be broken up and well manured, it will in a favourable season, give a large crop of potatoes of the best quality; but if the same crop should be raised on this land for seven years in succession; it will be found to fail somewhat in quantity, and much in quality, although it should be constantly well manured; but should it now be sowed with grass, it will give a better crop than it would have done had it been sowed when first broke up. A rotation of crops prevents, in a considerable degree, the loss arising from these sources, and has probably been practised for time immemorial in those countries that were highly cultivated. We learn from Virgil, that it was well known to the Romans; but by rotations of crops we find we cannot wholly prevent the depredations of insects and worms; their eggs will remain in a dormant state for years without losing their vitality, and it is necessary that cultivated land should occasionally be laid down to pasture and permitted to rest for some years. Chemistry has pointed out a considerable part of the elements of the food of plants, and we may so far safely trust to it. It is certain that neither animal nor vegetable possesses the power of creating any portion of them; they must be furnished to them. If therefore we find that the soil

lacks, an ingredient which is necessary to the crop we sow, we should add that to it in the form of manure, but Chemists and Physiologists give us, together with facts that are demonstrated, great many hypotheses, founded upon reasoning which might be trusted to, if all the data upon which it is founded were certain; but there is still much that is unknown upon these subjects; the principle of life performs its chemical operations in a peculiar way of its own. Seashore plants which are exposed to salt water contain a large proportion of the soda, and but a little of the acid of the salt. The Evergreen Fumitory contains a very large proportion of Potash, and is constantly (in summer) emitting the acid of nitro, in a gaseous state from its roots. It would then perhaps be possible for plants that needed nitrogen to take it from the common air, of which it forms the greatest part, if no animals were within their reach. Among the unknown things that we believe may be discovered by Chemistry we will mention the difference between the dark mould formed from decayed vegetable which grew on the richest soils, and peat earth formed from the productions of the most barren. These will be both called Humus, but they differ as much as day and night. When Chemistry can discover in what the difference consists, we may be able to form a good manure from peat.—Again, we observe that generally vegetables are said to be decomposed by putrefaction without paying any attention to the operations of the Fungi which prepare the dead vegetables for putrefaction, and do the greater part of the work. All dead vegetables, in situations exposed to the weather, are attacked by the Fungi, under whose operation the greater part disappears. When a quantity of stable manure mixed with straw is thrown into a heap, it soon grows hot, and when this heat has continued for a week, if it is opened, a substance with a peculiar smell of the Mushroom will be found branching through it in every direction, and forming no inconsiderable part of the whole heap. The straw in contact with this substance is brown, brittle, and appears to have lost two thirds its weight: a small black watery mushroom often springs from it. In general, leaves and herbaceous plants are attacked by the soft mushrooms, and wood by the harder touchwoods; the bark of large trees at the same time being consumed by the leopards or leather like Fungi, and the twigs by the gelatinous Tremella. We have seen a large spruce spar left in the woods after it became dry rotted, it had lost more than half its original weight upon splitting it open it was found to be full of fissures both transverse and longitudinal, dividing it into smaller pieces, than would have been produced by burning it to coal. Every fissure was occupied by a layer of fungus resembling white glove leather; this fungus apparently forming not less than a fourth of the whole mass. In this state some of these trees continue many years before putrefaction really commences, the fungus still remaining in a living state, as is proved by the touchwoods of a large size that we had never put out one before. There is another species which is remarkable for holding a great quantity of water, which quickly reduces a tree to a state resembling a heap of wet half rotten bark soon followed by complete decomposition. In warm wet weather when wood, and also the fungus which partly decomposed it, is in a putrefying state, they frequently show phosphoric light. We are inclined to believe that the Fungi are formed from vegetable materials by animalcules akin to those which form corals from carbonate of lime. [We are aware that this is a heretical doctrine, but it is a lapse to which we have found ourselves exposed in more than one instance, from believing the evidence of our own senses.] Unlike most vegetables the Fungi

by remarkably in the quantity of potash they hold. The ashes of a touchwood from the yellow Birch are mostly carbonate of ash; those of one of apparently the same species from the west contain very little. Before the decomposition of vegetables, as performed in the laboratory of nature, can be well examined, the agency of the Fungi must be taken into consideration; and they are the only agents, many insects assist them, of which we feed upon the Fungi. We have Tables of the quantity of Nitrogen contained in various kinds of grasses and other food. These would be very useful were they founded on certain data. We think they are not. They should be formed by farmers rather than Chemists. The trial should be made, not in a laboratory, but in the stomachs of the animals. Sir Humphrey Davy ascertained Timothy grass most valuable when nearly ripe; it would probably be found so for horses, but much better for cows before they are mowed. According to Leibig a large proportion of our bread is wholly useless, for he thinks that starch gum and sugar will not form muscular fibre, or any part of an animal except fat. The starch, according to his theory, should have become a feeble race of bread with fat, for Potatoes being chiefly starch, should have yielded very little muscular fibre. Many millions besides the Irish live mostly upon potatoes, yet grow to the ordinary size, and are as strong as their fathers were. The African Negro, while collecting gum for five or six weeks, lives upon it, and gains flesh; he is then in constant exercise, his muscles certainly are supported with what they lose by constant wear. Not to dwell longer on this strange theory, we would simply ask, Has any farmer ever found an article of food by which an animal can be fattened without at the same time supporting his strength? We desire to see we may not be misunderstood as wishing to discourage the application of Chemistry to Agriculture. Far from it. Much useful has been discovered, and much more we confidently expect will be. But we do wish that in publishing these discoveries in a popular form, such language may be used, that the uninitiated may be able to distinguish between demonstrated facts, and theories formed by reasoning from, perhaps, insufficient data. The Royal Highland Agricultural Society have caused some useful experiments to be tried upon feeding, and many experiments have been made by others to ascertain the value of different kinds of food for farming stock, some of which furnish useful information, but far the greater part have not been conducted in such a manner as to prove anything. But the person who can afford the time to attend to an experiment of this kind will certainly confer an obligation upon his brother farmers by publishing it, for it is supported by a great number of experiments that we can get a correct idea of the relative value of different kinds of food. We would strongly recommend experiments to ascertain the proper season for cutting hay, as we believe that it is generally cut too late. Several years ago, farmers on Connecticut River were accustomed to cut a part of their wheat before it was fully ripe, in order to get a loaf of superior quality for their pastry, but it was supposed that there must be a loss in the quantity. It appears now, from Mr. Nam's experiments, that the unripe wheat gives not only the best but the most flour; the last process of ripening being only an increase of bran at the expense of the flour. By reasoning, a theory was formed, that boiled oats must be more nutritive to a horse than raw; but the experiments directed by the Royal Highland Society, have proved that the reverse is the fact. Thus a theory was founded upon insufficient data; the powers of the stomach of the horse were not known. Experience is the only foundation for a correct theory. Much labour is expended in

cooking potatoes for swine. An experiment tried in the States seems to prove that they are better in a raw state. This experiment ought to be repeated by several persons, for if this result is confirmed, it will effect a great saving with those who have been used to cook their potatoes.

The experiments that lead to useful discoveries, are often unprofitable to those that make them, but we have all received much useful information from those who preceded us, and it will cancel a part of our debt, if we make an addition to the stock of human knowledge, however small it may be, for millions are composed of units. Knowledge is the most valuable inheritance we can leave to our descendants.

MANURES.

These may be ranged in two classes, one, comprehending the dung of horses and cattle, rotted grass sod, and decayed vegetable tables of every kind that grow on rich land, may be applied to the land in any quantity without injuring the soil, although, if it is possible to ruin a crop by over manuring; the other comprising lime, sea plants, and many saline substances, to which we may add, shells and fish, if applied in too large quantities, or too frequently, will injure the soil, and in some cases this injury is not recovered from for a number of years.

Kelp and Rockweed appear to change, when decaying, mostly into a gaseous or vapoury state, leaving very little visible remainder. While decaying, this vapour is a powerful manure; but it cannot be confined by a covering of earth. We have in the Spring, made a heap with about twenty loads of Rockweed and the same quantity of soil from a pasture. At the end of three weeks, when it had become hot, it was turned; for the purpose of cutting the sod finer, and used for potatoes, producing a crop equal in quantity to what would have been produced from stable manure, but of inferior quality. We have also, in the fall, made a similar heap, with 100 loads of Rockweed and 100 loads of Sod, it heated and did not freeze in winter. When turned, in the Spring, the Rockweed had disappeared and the sod had become quite rotten; it had the strong smell of seamud, (Sulphurated Hydrogen,) and appeared to the eye like good manure, but the fertilizing vapour had evaporated. Twenty loads of fresh cut Rockweed, used as soon as it began to decay, produced more than the whole heap.

Flesh and Fish are, while decaying, powerful manures, but if allowed to decay mixed with earth, the most valuable part is dissipated. We have read indeed, of twenty loads of manure from a dead horse, but never were able to learn the art of fixing the volatile effluvia from decaying animal substances. A pound of fresh will, it is believed, produce as good a hill of potatoes as a shovel-full of dung. When the first settlers of New England planted their first crop of Indian Corn, they were directed by an Indian to make a Weir for catching Shad, and to put a Shad in each hill of Corn. We recollect, that in years long bygone, it was customary with boys who were hoeing Corn, if they killed a black snake, an adder, to coil it round a hill of Corn and cover it with earth; the leaves of the corn in a short time acquired a very dark green color, grew very rapidly, and generally produced a very large crop. The adjoining hills. Fish Gibs in a heap of manure, lose most of their value. They should be put into the ground with the straw, or applied while growing, if possible, but if not covered up, they should be prevented as much as possible from decaying, by mixing with peat earth, placed where the sun will not shine upon it. Manures of this kind should be used alternately with stable manure and compost. Land has been often injured for some years by

n too frequent, or too plentiful application of seaweeds, fish, lime, and night soil.

ADDRESS DELIVERED TO THE WESTERN CORN WALLIS AGRICULTURAL SOCIETY.

To prove the importance of husbandry, it is scarcely necessary to observe, that after the earth was formed and vegetable creation completed, it was particularly stated that there was "not a man to till the ground,"—and that when man was made, he was placed by his Creator in the garden of Eden, and that it was his business to "dress it, and to keep it,"—and in referring to Ancient Nations we find they ascribed divine honours to those to whom they conceived themselves indebted for the invention or discovery of different branches of the art. The Kings of ancient Persia, once every month, laid aside the pomps and grandeur of state, and relinquished the luxurious banquet, to partake of the simple fare of the husbandman, affording a striking expression of the high estimation in which it was held by that people; and in modern times, a practice somewhat similar prevailed among the Chinese; the monarch annually, in the commencement of Spring, puts his own hand to the plough, and offers a solemn sacrifice to secure a favourable season and an abundant crop; and we find that the inhabitants of this Empire have acquired such skill in the business of agriculture, and have tilled their soil in such a manner as to cause it to produce food sufficient for 288 months for each square mile, and over and above this abundant quantity of food forced from the soil by good husbandry. "From the commencement of the present century, to the year 1830, the Tea sold by the East India Company amounted to nine hundred millions of lbs. weight, and the revenue paid to the British Exchequer, on this tea, amounted to £104,356,898 Sterling; and this extraordinary branch of trade in an innutritious, aromatic leaf, grown on the mountains of a distant continent, employing about £400,000,000 English capital, and yielding £300,000,000 annually to the English Treasury, is said still to be capable of great extension.*"

Now, as the riches and prosperity of every country depends on the increase of exportation and the decrease of importation, will it not be wisdom in us to make every laudable exertion to cause our fields to increase their yield, and to this end is it not well to contribute our energy to a well conducted Agricultural Society, each individual member engaging in the pursuit of Agricultural knowledge, and agreeing to make a common sock of his acquisitions, by reporting, at a meeting of the Society, any useful discovery made in the science, by experiment or otherwise. But to us not in grasping for the few pounds of Legislative grant, forget that silver and gold, yea that which is much better, food for man and beast is distributed around our dwellings, and that within eight inches of the surface of our fields; for this let us dig and manifest a spirit of independence and enterprise.

The husbandman has, indeed, in this our Agricultural country, above all others, a right to Legislative aid, but let this be given in the defence of his rights, rather than in a grant of money; for the husbandman, with the blessings of Providence, and the security of his rights, should be an independant man—he has a fund to draw from which the mechanic and many others have not—but ever remember that Industry is the Treasurer of this fund, and in all cases he must be applied to, or its coffers will remain closed.

I am well aware that a strong prejudice still exists against scientific, or what some have been pleased to call Book farming; but if the time has not yet arrived, it is not far distant, when this will

give way, for when the success of the scientific farmer, comes to be contrasted with that of one who has patched and re-patched the stone end of the bag, in which his great grandfather carried a stone to balance the bushel of wheat, the difference in favour of the former will bear down all preconceived opinion and prejudice in favour of the old practice.

There is a similarity between animal and vegetable life. We know something of the circulation of the blood or sap of plants, but as the Anatomist tells us of the functions of the animal, so the Botanist tells us of the functions of the vegetable kingdom, their respiration, sleep, &c., and as it is not generally observed, will here make a few observations on the natural heat of plants.

During the Chemical changes that take place in plants, it cannot be doubted that heat is evolved or abstracted; and it is extremely probable that plants as well as animals, have the power of regulating, although in a lower degree, the excess of temperature to which they are exposed. The snow which falls on the leaves and stems of living plants melts sooner than on dead matter of the same kind,—an obvious proof that the temperature is higher, but the heat of vegetables is sometimes so much superior to that of the atmosphere as to be indicated by the thermometer. A remarkable fact is stated by Sanobier with regard to the increase of temperature of the white-veined variety of the arum maculatum in a certain period of its growth, when the flower was for 24 hours very hot; it was perceptible from 3 or 4 o'clock in the afternoon till 11 or 12 at night, and when the temperature of the air was 14 or 15 degrees of Reaumur's thermometer, the heat of the plant, when it was highest, was 7 degrees above it. This curious fact, as is justly observed by H. Smith, is well worthy attention, and may perhaps be observed in other plants.

Though this subject of vegetable heat may be considered a minute to demand our particular investigation, the food of plants requires one of particular importance and demands particular attention; and with a full knowledge of the food of plants require, and an economical use of this food, it would be unreasonable for a man to complain of a naturally fertile soil coming barren, as for him to complain of his cows starving if he had plenty of good hay in his barn.

To avail ourselves of the advantage of food for vegetables which we are surrounded on every hand, it is necessary that we should take into consideration the indestructibility of the parts of every organized body, animal or vegetable, and that, though the substance, animal or vegetable, be decomposed, all its parts, however minute, and however divided or subdivided, still remain essentially the same, and remaining the same, are fully calculated (if those parts come together again in their proper proportions) to form an animal or vegetable of the same kind as in its first organization. This being the case, let us particularly improve on this important point—and when the parts of any animal or vegetable substance are passing off under the action of fermentation, combustion, or the like, let us make use of means to retain them so to store them up, as that they may again be used as food for plants, and by this means, those parts may again become organized and form a useful vegetable; and to this end we should, as far as possible, preserve our manure heaps from becoming bleached, for as the food of plants is chiefly in a liquid or gaseous form, much of this food is carried off and goes to waste, by the action of rains, the rays of the sun, and the action of the atmosphere; as Agricola justly observes, "a skilful agriculturist would not think of allowing a violent fermentation to be going on in dung hill, unmixed with earth or other matter, to fix and

* See Mechanic & Farmer, No. 38, Vol. 5.

the gaseous element, than the distiller would suffer his apparatus to be set to work without surmounting his still with the worm, to cool and condense the rarified spirit which ascends in evaporation.

Correspondent of the American Agriculturist.

A MARYLAND FARM.

But to the main subject of my letter, instead of a homily on false principles and habits. In a brief journey to the seat of Government, last June, when arrived at Baltimore, I made a diversion from my route, to visit a gentleman located near the Ohio railroad, about thirty miles west of the city, and to view his fine estate, and see his herd of beautiful Devon cattle, for the care of which he has long been celebrated. I found him on his farm of some seventeen or eighteen hundred acres of fine rolling land, a garden amidst a poorly cultivated yet pleasant country, years ago worn down by hard cropping of corn, wheat, and tobacco, but of good natural soil and capabilities. Here, retired upon his estate, with a plain yet beautifully-situated dwelling and outbuildings, and all the necessary appliances for a gentleman of wealth, education, and leisure, he has for many years lived and improved his estate, until it has become one of the most valuable in the country; and from a condition which, when he first began its cultivation, was sterile, barren, and almost worthless. I spent a day in rambling with him over his fine domain, and never have I been more pleased and instructed. As this is a full and successful illustration of what may be done in most all our Atlantic states, in the improvement of worn-down soils, I trust I shall be excused for giving it somewhat in detail. When the proprietor first located on his farm it was entirely unproductive; yielding no crops, giving no manures, and possessing no resources of fertility, other than the muck of swamps, occasionally interspersed among the woods and waste lands of the estate. After thoroughly examining the soil, which was found to be of various kinds, but chiefly a loose friable earth, based on a clay bottom, with occasional tracts of stiff clay on the surface, he purchased a limestone quarry a dozen miles distance on the railroad, erected two large kilns at the depot near his estate, and went vigorously to work in getting out the stone, roading it to his kilns, and burning it. This material, delivered on the farm, cost him an average twenty cents a bushel. The bushes and straggling woods were made into fuel, the fields were squared out and put into shape, and the quick lime applied at once upon the land, in quantities of from fifty to two hundred bushels to the acre, no matter at what season of the year. When the lime was ready it was applied, by dropping it in heaps of five or six bushels each, and, as sufficiently slacked by the weather, carefully spread on the soil. A great part of the land was so sterile that it had no soil upon it, and was sadly disfigured with gulleys made by the washing of the rains. In such fields as had a tolerable sod of grass, a light dressing of barn or stable manure was obtained and applied with the lime, which being ploughed became at once productive; but where no manure was placed in aid of the lime, it was left untouched to dissolve with the rains and snow, and incorporate as it might with the soil. Under this latter process the soil became gradually grassed over, and in two to four years, a fine coat of native blue grass (*poa pratensis*), and white clover (*trifolium repens*), affording beautiful succulent pasture, covered the ground. When this grass coating is accomplished, the land is in proper condition for cropping, and, with a thorough ploughing, yields abundantly of all the grains and grasses grown in this climate. Where there is no vegetable matter in the soil for the lime to act upon, I conceive the lime must have drawn most of the fertilizing matter from the air, condensing the ammonia therein contained, which is brought to it by the snows and rains. Of course all that thus procured, is so much added to one's wealth by a very moderate outlay. It also seems to predispose the materials of the soil to form those associations and tendencies, which enable it to produce vegetation when in no condition to do so before.

In ranging over the estate, we examined particularly the land, on fields limed years ago, and in the fullness of their production, those yet white with its recent application, and just looking green with the fresh verdure of the young grass. One field contained fifty acres of the most beautiful wheat I ever saw, promising to yield forty bushels to the acre. Another, of seventy acres, was newly planted in Indian corn, and had a fine chocolate-colored soil; which had produced its sixty and seventy bushels per acre. The oat fields looked rank and fresh, and the grass lots for hay

were, many of them, thus early, lodging with the over-growth of their burdens. Such timothy and clover, and such orchard-grass meadows, are rare in that region. In short, by the application of lime in this manner, or without the aid of stable manures, all the cultivated lands were teeming with abundance. Hundreds of acres thus limed for years, now in beautiful pastures, had been untouched by the plough, and were grazed by herds of cattle, sheep, and horses, rioting in its luxuriance. Eleven hundred acres had thus been limed, and new fields were waiting for this fertilizing stimulant, still in the process of application. I saw large tracts of land so sterile that no vegetation grew upon it, not even grass or weeds, separated only by a fence from those bearing the richest herbage. One had been limed—the other not.

I had never seen a specimen of agricultural improvement which had pleased or interested me more than this; and when, in addition to this teeming abundance, all the appliances of rural luxury and independence, buildings, orchards, groves, and delightful scenery, were added, the picture was full to admiration. Yet all this beauty, fertility, and abundance, was created by the simple application of scientific principles, with the aid of moneyed capital, to this body of otherwise inert and lifeless soil. The proprietor told me that his neighbors had jeered, ridiculed, and blamed him for thus squandering, as they termed it, his money on such worthless experiments; but the result has equalled his warmest anticipations, and he has now the solid pleasure of locking at an estate, which, when he took possession of it, was absolutely worthless in its income, and not saleable at five dollars the acre, now worth eighty or a hundred. In addition to this improvement of the soil, ten or a dozen miles of durable and substantial post-and rail fences of chestnut and cedar have been built, separating the farm into large and convenient fields, with commodious lanes and entrances leading from the mansion-house and farm buildings. Ample hay and grain barns are erected in many of the enclosures, for securing the crops and feeding the stock; and altogether this may be termed a pattern farm of the highest order.

The question may naturally enough here be asked, how should this remarkable improvement occur in this country, and by one who was not bred a practical farmer? The answer is a simple and easy one: by the application of right principles to agricultural improvement. This gentleman possessed education, enlarged and intelligent views of agricultural improvement, had travelled extensively abroad, and profited by his foreign observations; and after returning to his native state, instead of slothfully sitting down in idleness and inglorious ease, at once applied himself to the improvement of his property, and in giving an example to his fellow-citizens of incalculable value. And yet millions of acres, in that fine region, now yielding little or no income, might, by a very moderate outlay of capital, be made equally productive. But more of this hereafter.

DEVON CATTLE.

By far the best and most perfect breed of Devons I ever saw kept on his estate. The originals of these fine animals were imported about the year 1819, as a present from the late Earl of Leicester, then Mr. Coke, of Holkham, England, to Messrs. Patterson and Caton, two distinguished gentlemen of Baltimore. Not being practical agriculturists, these choice animals met with indifferent treatment in their breeding, and for many years were neglected among the stock of their farms. But falling some years ago into the hands of their present proprietor, who readily saw their value for the locality and soil of his estate, he imported from Mr. Bloomfield (a principal tenant of Lord Leicester, and indeed the real breeder of the fine Devon stock, for which his Norfolk estate has become so celebrated) a most valuable bull, by which his stock was in a few years brought up to a standard, excelled probably by few herds of Devon cattle in England, and certainly by none in this country. A year and a half ago he made another importation of a two-year-old bull, certainly the most perfect of his kind, in symmetry and good points, that I ever saw. To a size abundantly large for all purposes of Devon stock, he united a fineness of touch, a delicacy of limb, and a vigor of constitution, such as I had not before imagined could belong to this ancient family of stock. In truth such a Devon I never saw! His color deep mahogany, with a beautiful rich yellow ring round the eye, and the elegant slender white horn! All my prejudices against the Devons as "pretty little cattle enough," were dissipated; and I at once acknowledged their value for the lighter soils of our country. In the pasture with this young bull were eighteen or twenty

thorough-bred cows, large and beautiful: all a deep mahogany color, and hardly to be distinguished from each other, so much in shape were they alike. Their udders were large, with fine silky handling and gentle taper teats: and indicating by appearance good milking qualities. This their proprietor assured me they possessed in fully an equal degree to the common cows of our country, and probably superior. In another field were a score or two of thrifty young steers and heifers, the produce of the cows, and near by a home lot with a number of calves of the present year.

I need hardly say, after thus expressing my admiration, that, before I left, I purchased three or four select young animals of this valuable herd, which, with those I before possessed, will I trust, in a few years, give me a herd of Devons equal to any other to be found. For general cattle purposes I advocate the Short-horns. They are, all in all, the finest cattle. But there is a very general and, in my opinion, obstinate prejudice in our country, particularly among the northern people and their descendants, for red cattle, especially red oxen; and your true New England men, when they work oxen together, would as soon be seen driving a mule and a goat together, as a pair of ran or spotted cattle. No—red is the color, and red they will have, and red they shall have, if I can aid them to it; and no other breed gives it in such deep, rich, unalloyed luxury as the Devons. This breed has sufficient size for working cattle, and in beauty of form is perfect.

Here, too I discovered several specimens of beautiful South Down Sheep, from the select imported flock of Mr. Hetch, of Otsego. Some fine blood mares and colts, to which has been added one of my thorough-bred mares of the Barefoot stock, now in foal to Bellfounder. Even the barn door fowls of the place were of choice and selected stock, being a cross of the large Bucks county fowl of Pennsylvania and the game breed; and they now rejoice in the acquisition of some nice young Dorkings.

But I weary your patience. To say that I was charmed, delighted, and exceedingly instructed, by my visit to this luxurious retreat, and much indebted to the refined hospitality of my esteemed host, would be barely common place. A proper delicacy forbids my saying more, and I would hardly have gone so much into detail, but for the rare and profitable example of highly improved agriculture here represented.

L. F. ALLEN.

Black Rock, 1843.

From the New England Farmer.
THE TIMES.

That a singular condition of things is existing in the United States at the present time, is obvious to every one at all acquainted with the affairs of the country. With general health unexampled; with peace uninterrupted; with granaries overflowing; the cry of hard times comes up from every part of our broad country, mingling with complaints, murmurs, and execrations, varied as the causes supposed to produce (the evils under which we are suffering). The manufacturer has stopped his spindles, because his sales would hardly procure the oil required by his machinery. The merchant has laid up his ships, because there was no demand for exports, and imports could not be sold. The farmer has stopped his plough, because his granaries are already full, and because his products have fallen so low that the prices will not pay the cost of production. There are thousands of respectable farmers in our country, whose crops the last year were good, that find themselves on the wrong side of the balance sheet, after taxes, and war and tear are deducted. These are facts, and they are serious ones.

But while there is a difference as to some of the causes that have operated so unfavorably, there are others respecting which it would seem there can be little room for discussion. Such a cause in our view, is the general state of indebtedness, in which the individual, the States, and the government are found. There is no need of quarrelling about the cause of this indebtedness now, though we believe there is a fearful responsibility resting on those through whose management this state of things exists. The debt

exists, the farmer owes, professional men owe, states are bankrupt, and the general government has not escaped the shame or crime of a debt. "Brethren," said a preacher one day in our hearing, when discoursing on that knottiest of metaphysical subjects, the introduction of sin into the universe—"Brethren, there is no use in spending our time in conjectures as to the manner in which sin came into the universe; it is here, and it is our business to go to work in earnest, and get it out as soon as possible." So with our debts; they are contracted, they are here, and wrangling about them is of no use; the only way is to go to work with steady nerves and strong hands and wipe them out as soon as we can, and then look out for the future.

The great cause of the distress now existing in our country, is to be found in our indebtedness. This is the millstone that hangs on the neck of honest industry, the incubus that chills the life blood and stifles the breath of enterprise. Prices are low, and they must be low in a healthy state of things, while the world remains in its present condition. The millions of Europe have converted their swords into plow shares, and instead of slaughtering one another, are employed in sowing and reaping. As producers multiply, prices must decline, industry will be turned into new channels, and as these are occupied the same results will ensue, the prices of labour will fall, and all things will gradually find their true level. All will see that this would be well enough, were it not for the fact that too many of us owe. And the debts too were contracted in times when the products of the soil were at least 25 per cent higher than they now are. Here is the true secret of the existing distress, the cause of the hard times of which we complain. We must grow two bushels of wheat, or fatten two pigs or shear two sheep, where it was expected one would be sufficient, for though we might live, and live well, on the products of our farms at present prices, it requires double the labour to pay our debts it formerly did, or would at the time they were contracted.

But it is said by some, there is no necessity of hard times, simply because farm products have declined in prices; and there is a necessary connection between low prices in grain, and general distress in a country. This might be true, were it not for our indebtedness; but now the effect is as sure to follow the cause, as night is to succeed day. If the merchant, or the mechanic, expects the farmer to purchase as much of them as formerly, he must be mistaken. Nothing short of the grossest infatuation could induce him to continue his purchases, while his means are lessened one half. No, the old coat must be neatly brushed and mended; the number of dresses must be reduced to suit the times; the order for the new carriage is countermanded; and the sofas and chairs about which there had been some talk, it is mutually agreed to forget. Thus when the farmer is forced to retrench, the sufferer is felt in every quarter, for he is the great producer, and the great purchaser of the country.

Trade is stagnant because the supply exceeds the demand; prices have fallen to the specie standard; and when by patient and persevering industry the producers of wealth have paid their debts and the debts of the States, which must ultimately come from their earnings, times in which less distress will be felt, may be expected. And the times will improve exactly in proportion to this point of freedom from indebtedness is approached. There is not the least use or necessity for the farmers being disheartened. The times may demand prudence and economy: they certainly require energy and industry. The circle of prices do not yet respond; but when once this point is reached, and matters are tending to that point, the man who is free from debt, will encounter

no trouble whatever. It is said that bought wit is the best, if not bought too dear. A terrible price this country has paid for the lessons in political economy we have received within a few years past. It remains to be seen, by the use which we make of them, whether the price is too great.—*Alb Cult.*

From the British American Cultivator.

TO THE EDITOR OF THE BRITISH AMERICAN CULTIVATOR.

Sir,—I transmit you a copy of a Petition to the two Houses of Legislature, which was unanimously adopted at the Annual meeting of this township, and as a fitting illustration of the evils of which it complains, I will mention a case of recent occurrence.

The week before last, a large drove of oxen, containing, at least, seventy head, were brought over from Ohio and driven to London. The owner endeavoured to get rid of them along the road, offering them at \$10 a head; as he said he was afraid when he arrived in London he should be obliged to sell at a loss. Not, however, meeting with customers, owing to the poverty of the country, he proceeded to London and disposed of them. On his return he met with one of the persons to whom he had previously offered his choice of the drove at the above mentioned price, and a conversation took place; in which the drover stated that he had done better than he had expected, for that he had obtained \$21 a head for the lot: and all he had paid for them was \$5 11 each. "And," said he, shaking his valise "I have got the price of them here, in specie, for which I can buy as many more as I choose, and at any price I have a mind to offer; and I shall be back here with another drove in a few weeks." Being asked if the expense of driving did not eat up the profit, he said, "No, for he fed them principally on oats which, on the other side of the lines, only cost him six cents a bushel!"

I will not repeat some other prices at which he stated various articles could be purchased in the States for specie, as they are so incredibly low that the very mention of them might subject me to the imputation of making a case. But, I will simply ask our legislators, millers, and carriers, upon what principle of fairness or policy are the people (i. e. the farmers) of this country to be made to follow sufferers with the victims of that over driven and fictitious system of speculation, alias, go-a-headativeness, his miserable effects of which the Americans are now enduring.

It is to be hoped that by a constitutional combination of moral energy and firmness the farmers will force upon the Legislature, the prompt and grave consideration of a subject in which, it must be apparent, the vital interest of the country is involved.

I will not at present trespass further on your valuable space, but the subject is not taken up, as I wish it may, by another annual, I will shortly again address you, or through you my brother-farmers, on this important topic.

I remain, Sir,
Your obedient servant,
F. JONES.

Carradoc, 14th February, 1843.

AGRICULTURAL STATISTICS

From an examination of the Marshall's returns at the last United States Census, it appears—That the State of Ohio raised more wheat than any other State in the Union—exceeding Pennsylvania about 8,000,000 bushels: and Pennsylvania exceeds New York about 2,000,000 bushels; Virginia, about 1,500,000 less than New York. New York, however, exceeds Pennsylvania in Rye, about 3,000,000 bushels—Indian Corn, 2,800,000 bushels—Oats more than 2,000,000 bushels—Buckwheat, 300,000 bushels—

Barley, 2,200,000 bushels—Potatoes, 21,000,000 bushels—Wool, 1,000,000 lbs.—Hay, nearly 2,000,000 tons—Sugar, over 8,000,000 pounds, and products of the dairy, upwards of \$3,000,000. The State of Tennessee raised 42,600,000 bushels of Corn, exceeding any other State in the Union, North Carolina, 34,500,000—Virginia, 34,000,000—Illinois, 28,000,000—Michigan, 22,000,000—Alabama, 18,000,000.

Of neat Cattle, New York possesses 2,642,433; Pennsylvania 1,146,418; Ohio, 1,098,313. Of Sheep, New York has 5,381,225; Pennsylvania, 3,396,431; Ohio, 1,963,937; Vermont, 1,303,420; Virginia, 1,280,736.

In the products of the Orchard, New York and Vermont have nearly double the amount of any other State—the former being to the amount of \$1,737,357; the latter \$1,109,287.

There are many other items which we intend to give hereafter. The resources of our country are abundant. If our citizens will only economize—purchase no more foreign articles than are absolutely necessary for their wants—the time will soon arrive, when the pressure which is so heavily felt, will pass away. We must return to a system of economy in every department of life. Frugality and industry are absolutely necessary to the prosperity of this country. We must learn to live more within ourselves, if we would be prepared for exigencies, such as we now witness.—*Central New York Farmer.*

MILKING.

Cows that are milked quick and stripped clean will give more milk than if they were managed by moderate milkers. The reason is, that whatever milk is left in the udder dries up, and a cow will shrink in her milk permanently in proportion to the quantity that is allowed to dry up. If half dries up, she will soon be reduced to half her natural flow of milk; just as she will dry totally up if her milking is totally neglected.

When a milker approaches the cow, the animal is said to "give down" her milk. From that moment it should be withdrawn as rapidly as possible; the longer it, or any of it remains in the udder, the more of it begins to dry up, even during the operation of the milker. Very much depends upon rapidity and fidelity in the milker, in order to boast truly of having an excellent cow for milk. We have known cows that, in certain hands, gave enormous quantities of milk, and as soon as they were sold to a villager, who trusted to his hired girls to do the milking, they began to shrink, and soon the cows lost their reputation, and the men of whom they were purchased were denounced as liars, cheats, and every thing else that is bad. The secret of this fault-finding might be traced to the girl, who either was very slow in milking, or who had not patience enough to strip the cow very clean.

If a cow was not managed aright when she had her first calf, it will be almost impossible to make her great for milk as long as she lives. The first experiment with her is a final habit. No heifer, after calving, should be trusted to inexperienced, unkind, or unfaithful hands. She should be treated gently, fed well, and milked regularly—at just such hours—and milked quickly and as long as half a dozen drops can be forced from the udder.—She should too, be milked as nearly as possible up to the time of her having the next calf. By such attention, she will be likely to prove a valuable animal—one that will give much milk, hold out long, and be manageable every way by her attendants.

Learners should be taught the art of milking on cows that are being dried out. And one of their first lessons should be to clasp the teat very near its extremity. This will hurt the cow least, and be worked easiest to the milker. They should also bear the left

arm moderately against the leg of the cow. She cannot then kick, or if she attempts it, by raising her foot, the milker will be ready to ward off and protect herself and pail from any sad consequences. Thus guarded, let them make as brisk work of milking as possible—treating the cow gently, and withdrawing all the milk faithfully, and there will be a chance for the security of two good things—a good milker and a good cow.—*Boston Cultivator.*

WHAT A DOLLAR WILL PURCHASE IN ILLINOIS.—A subscriber at Little Woods, says:—"I have at last succeeded in apprehending an Eastern Bill preambulating our third currency state. With us, the enclosed is equivalent to three bushels of wheat, eight bushels of corn, or twelve of oats—or 1 cwt. of beef or pork, a yearling steer, or a hecatomb of hogs. Will it pay for one year's subscription to the Cultivator, for mauger my resolutions of economy and retrenchment, I find I cannot do without it." Another correspondent in Illinois, says:—"Blessed as we are with a rich soil, we cannot make money by farming, at present prices—wheat 31 to 35 cents—corn 8 to 9 cents—pork \$1.00 to \$1.60 per 100 lbs. and no money even at these low prices."

PRICES IN INDIANA.—A letter from a correspondent in Daviess county, says:—"Pork is selling here at from \$1.00 to \$2.00 per 100 lbs.—wheat 37½ cents per bushel—corn 12½ cents, and other produce at similar rates."

PRICES IN MISSOURI.—Our agent at Hannibal says:—"Wheat is only 25 cents cash per bushel—corn, 12½ cents—pork, \$1.50 per 100 lbs., and stock cheaper."

CHOLIC IN HORSES.—I was lately told by a gentleman of Prince George County, that a tea-cup full of the spirits of turpentine would give instant relief to horses laboring under this disorder. He added that on one occasion all the oxen of two of his carts were hoven—that is, as you know, suddenly swollen by the generation of gas in the stomach, from eating green food. The overseer expected all would die, when our informant ordered a tea-cup full of the spirits of turpentine, dissolved in oil, to be given to each. The relief was in every case instantaneous and effectual, almost before he could have thought there was time to swallow. Such facts should always be communicated for wide diffusion and preservation in agricultural journals.

THE AMERICAN AGRICULTURIST.

Published monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is one cent in the State, or within 100 miles of its publication, and one and a half cents, if over 100 miles, without the State.

Advertisements will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

Remit through Postmasters, as the law allows.

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this office.

Vol. 1 of *The American Agriculturist*, with table of contents complete, for sale at \$1; handsomely bound in cloth, \$1 25 each. It is a neat and tasteful book, and makes a handsome premium for distribution with Agricultural Societies, to which, when several copies are ordered, a liberal discount will be made.

To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster.

Communications for publication to be directed to the Editor, 205 Broadway, New York.

This cheap paper contains some very good figures of extra fine Stock.—*ED. COL. FAR.*

Blaikie's Portable Threshing Machine

Worked with two, three, or four horses at pleasure.

THE SUBSCRIBER begs to intimate to the Agricultural community throughout Nova Scotia, and the adjoining Colonies, that he is prepared to receive orders for making *Threshing Machines*, either portable or stationary. He believes that he is justified in stating that his machines are equal in speed, if superior to any now in use in the Colonies, or in the United States. With two horses, his machine will thresh 25 bushels of wheat per hour, and a fourth more for every additional horse, when the price is in fair working condition. With two horses it will thresh bushels of oats per hour, and a fourth more for every additional horse. The horses move in a circle of 25 feet in diameter at rate of 2½ to 3 miles per hour, and can work during the fall without fatigue. The portable machines can be removed from one barn to another with ease, are easily erected and put in operation, and are rarely subject to get out of order. From the price at which they are made, and the rapid sale they have since received, wherever they have been tried, he has reason to believe that they only require to be known to come into extensive use.

Letters addressed (post paid or free) to the manufacturer, or the editor of the *Mechanic & Farmer*, will receive every attention.

THOMAS BLAIKIE

Green Hill, West River, February 1.

CERTIFICATES.

This is to certify that in December, 1841, I purchased one of Mr. Thomas Blaikie's *Stationary Threshing Machines*, and since that time by the great saving of time and labour resulting from the use of it, it has amply repaid me for the use of it. I therefore confidently recommend these machines to every farmer who may require such an article; and will venture to assure a person that if they purchase one they will never have reason to regret it, as an unprofitable investment of capital.

GEORGE McDONALD

West River, January, 1843.

Having worked for some time with one of Mr. Blaikie's *Threshing Machines*, with moving horse power, would recommend it as a superior article, and are certain, that no farmer could make a better investment than to supply himself with a machine of this kind.

SAMUEL FRASER,
JOHN FRASER.

New Glasgow, January 3, 1843.

I have had Messrs. Fraser's *Threshing Machine*, made by Thomas Blaikie, threshing for me two or three days, and found it to surpass my expectations. It does the work well, and threshes clean; and I would recommend it as a very superior article, both as regards saving of labour and grain.

B. L. KIRKPATRICK

New Glasgow, January 3, 1843.

Having witnessed the *Threshing Apparatus*, made by Mr. Thomas Blaikie, in full operation, I give it as my decided opinion that it far exceeds, in usefulness, and saving of labour, any other of a similar nature which has come under my observation, and that it is preferable to any other kind used in the Province.

JAMES CARMICHAEL

New Glasgow, January 3, 1843

"THE COLONIAL FARMER,"

TITUS SMITH, EDITOR; R. NUGENT, PROPRIETOR.

Is published semi-monthly at the Novascotian Office, Halifax.

TERMS—One copy, 5s., Six copies, 25s., Twelve copies, 45s. Twenty-five copies, 100s per annum—in all cases in advance.

With *Agriculture's Works*, as follows.

One copy of each:..... £0 10
Six copies of the *Colonial Farmer*, and one copy of *Agriculture's Works*..... 1 11
Twelve copies of ditto, with two copies of ditto..... 3 1
Twenty-five copies of ditto, with three copies of ditto.... 5 11

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