AN EXAMINATION

INTO THE

*EXPEDIENCY OF ESTABLISHING*

A

# BOARD OF AGRICULTURE

IN THE

# STATE OF NEW-YORK.

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*NEW-YORK CORRESPONDING ASSOCIATION*

FOR THE PROMOTION OF

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THE

# NEW-YORK CORRESPONDING ASSOCIATION

FOR THE PROMOTION OF

# INTERNAL IMPROVEMENTS.

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# AN EXAMINATION, &c.

AS the establishment of a BOARD OF AGRICULTURE, is recommended by the Executive to the Legislature of the state of New-York, it may not be unprofitable to take some view of the deep interests dependant upon its institution, and the salutary effects which it would produce.

Agriculture, like other leading branches of industry, embraced in the science of political economy, is daily becoming a subject of greater moment in our country. As the great fundamental source of human subsistence, as the imperishable basis of the wealth, power and grandeur of nations, as the support of commerce, manufactures, and the arts, it will now, we trust, receive the munificent and unwavering patronage that comports with the magnitude of its interests.

By some, it may be deemed ostentatious, at a period like this, and in a community so enlightened as our own, to quote the observations and opinions of illustrious writers, to confirm and fortify established truths, or truths that are embraced and sanctioned by a general belief But axioms in political economy, like those in the science of politics, which constitute the foundation of a people's freedom, may always be recalled with a salutary effect, when treating of subjects which are intimately interwoven with their correctness.

"Land, (says a distinguished writer) is the true source of national wealth, because it produces every thing that a man

desires for the supply of his wants, his enjoyments, his pleasures, and his fancies; and because it constantly reproduces a quantity superior to what has been consumed, to effect its reproduction. This excess of reproduction, this gratuitous gift of the soil, this net produce, is the surest fund that can be employed to encourage the progress of labor, to reward its success, to promote improvements, and indefinitely to increase the source of public and private wealth."*

"Of all arts (says Vattel.) Agriculture is the most useful and necessary. It is the nursing mother of the state. The cultivation of the earth, causes it to produce an infinite increase. It forms the surest resource and the most solid fund of riches and commerce, for the people who enjoy a happy climate."†

"Agriculture claims a pre-eminence above manufactures and commerce, from its security and superior usefulness. Manufactures and commerce originally owed their existence to agriculture, and the people employed in carrying them on, must constantly be fed by those who are engaged in the parent art. Agriculture may therefore be considered as of the first importance to mankind; because their temporal welfare and prosperity depend upon receiving a regular and sufficient supply of the various articles cultivated by the agriculturist. The territory possessed by any people, is the original property or capital stock from which they are supplied, not only with the necessaries, but also with the comforts of life; and in direct proportion as their territory is improved, their prosperity will be advanced."‡

"It is not the number of people, but their wealth, which constitutes their power; and that population ought to be subordinate to agriculture, so that the abundance of produce should constantly precede the increase of population."§

* Ganith's Polit. Econ. 63.
† Vattel's Laws Nat. ch. 7, p. 58.
‡ Edinburgh Encyclo. art. Agricul.
§ Sir Arthur Young's Political Arith.

"Agriculture, (says Mr. Malthus) is not only that species of industry which is chiefly requisite to the subsistence of multitudes, but it is in fact, the sole species by which multitudes can exist; and all the numerous arts and manufactures of the modern world, by which such numbers appear to be supported, have no tendency whatever to increase population, except as far as they tend to increase the quantity and facilitate the distribution of the products of Agriculture."*

These references to eminent political writers, are sufficient to show in what distinguished estimation they viewed the interests of agriculture. The Duke of Sully, whose bare name is the talisman that calls up every thing illustrious and great in the government of an empire, called "Agriculture and Pasture, the two great breasts of nature, from which nations received their nourishment." The sagacious and philosophic Hume, has paid it a splendid homage, and Vattel, whom we have quoted, dwells upon the importance of rendering agricultural pursuits honorable in a state. He alludes to China, where once in every year, the Emperor holds the plough with his own hands; and he might have mentioned Persia, where on a festival, which was annually celebrated in honor of the art, the Persian king formerly addressed the husbandmen in the following language: "I am one of you. My subsistence and that of my people, rests on the labor of your hands; the succession of the race of man depends on the plough, and without you we cannot exist. Our dependance is reciprocal—let us live as brothers, in perpetual harmony."

We are not, however, here ascribing to agriculture, all those exclusive attributes which are represented as his peculiar property by the agricultural sect of political economists; we are not entering into those conflicts of opinion, which have excreised the ingenuity and called forth the eloquent

* Malthus on Population, vol. 1, p. 275.

reasonings of the French, Italian and English economists, in discussing the position, that the labor bestowed on the soil is the only productive labor. But we may assert with assurance, that agriculture sustains the prosperity, power, and happiness of nations, on a foundation more permanent, more immoveable, more unfailing, than any other source of industry embraced in the compass of human ingenuity or human improvement. The real intrinsic strength, riches, and independence of a state, must be connected with, and depend upon, the cultivation of its soil. Here is the invincible bulwark that baffles the restraints, the edicts, and the proscriptions of a hostile world. Here is the frowning rampart, behind which a people may rest with security, and find internal peace and plenty, although the menacing cloud of destruction, from external hostility, hang upon their borders. While the history of commercial states, where they have been strictly of that character, has been marked by vicissitude, and a perpetual exposure to the restrictions, caprice and enmity of foreign powers, even during the most brilliant eras of their maritime greatness—that of nations resting their dependence on agricultural resources, has been uniform as the revolutions of the seasons, and exempt from the effects of foreign animosity as the foundation of their soil itself.

Neither are we for encouraging agriculture at the expense of commerce and manufactures. The distinctions drawn between them by many public writers, can never apply to us. In our country, these three branches of industry, wealth and power, are allied to, and sustain each other by reciprocal patronage. We are a great exporting country. Our fertile and extensive soil gives us a vast surplus produce; our manufactories, by converting the abundance of the raw materials which we possess, into articles of luxury and convenience, will enable us to withdraw our dependance on foreign supplies, and have an excess of manufactured products, that will give us an ability of competing with other manufacturing nations, in foreign markets; and commerce

will convey the surplus fruits of our industry, both in agriculture and manufactures, to the various parts of the commercial world. In fact, nature has destined, that in the United States, agriculture, commerce and manufactures, should flourish in unison, and be bound together by indissoluble ties.

In our country, speaking in a national point of view, we have as yet made but feeble and partial efforts in agricultural improvements. As a science of an elevated and profound nature, it has not received that deep thought, and persevering and extensive encouragement, which it richly merits, and will, ere long, receive. Many causes explain this deficiency in the application of our ingenuity and resources. We have a country that is fruitful, and extensive almost beyond example, possessing a widely diffused population, furnishing but a few cultivators in proportion to the magnitude of our territory. Thus a single cultivator will find his labors more abundantly rewarded than one in England, or any other part of Europe, because he bestows his industry on four times the extent of ground, and on a soil, in many cases, more rich and exuberant. Our exportations too, which have been the basis of our direct commerce, have not been of a description to lead our inquiries into the details of agricultural knowledge. Among our staple articles of exportation, have been cotton, tobacco, rice and indigo, whose cultivation has been confined to the planters of the south, and not a subject of general enquiry among the farming interests of the nation. The lumber trade of the eastern states, as well as their devotion to the fisheries, has had no connection with the perfection of this art. Our commerce has done little to advance a scientific system of experiments and investigation in this respect. Our vast exportation of flour, our exportation of grain, live stock, beef, pork, butter, cheese, &c. has, it is true, in some measure advanced our knowledge; but our entire exemption from want, and the natural fertility of our soil, has co-operated as an inducement to suffer our agricultural affairs to progress in their own natural course.

We shall show in the sequel a natural and necessary change in these important concerns. We must, also recollect, that our commerce has been of two kinds, and that one description has not been immediately connected with the cultivation and disposal of our own products—we mean the carrying trade. During the wars on the continent of Europe, it is well known, that this branch of commerce became a vast source of profit to the United States, and a source that had no dependence on the cultivation of our soil. This trade fell with the belligerent system of the warring powers. Another cause, which operates with no inconsiderable effect, is the distinction between the agricultural classes in this country and those of the first agricultural nations in Europe. In England, and in other quarters of the old continent, the soil is in the hands of great landholders, the lords of the domain, possessing immense wealth, and frequently great revenues, independent of the proceeds of their real estates, and every way able to make expensive experiments and expend large sums of money, and bring their lands to a high state of agricultural improvement. This has been the case in England and France. Necessity too, from paucity of territory and density of population, has also added some stimulus to invention. We wish not for this condition of things in our own country ; we only say, that it has only tended to elevate agricultural knowledge in many parts of Europe to the highest standard of perfection and to which we can easily attain, without feeling the pressure of an odious disparity in civil enjoyments and civil rights. In our country, professional devotion, and commercial pursuits, embrace a great proportion of our enterprizing and wealthy population. The cultivation of the soil, especially in the northern, middle and western states, is generally left to that intelligent and respectable portion of community, whose affluence gives them independence, but not the means and opportunity of devoting time and expense to the acquisition of knowledge by research and experiment, in order to extend the sphere of practical knowledge. Habits and pre-

judices fortified by time and uninterrupted competence too often shut out the light of intelligence, when it wears the aspect of novelty. And in fact, to conclude on this point, our country is still young, in national existence, and of course, not yet experienced in those great walks of improvement into which we are now entering, for a long and triumphant course. It is with nations as with individuals; time is essential to the consummation of excellence and greatness.

A new era has commenced in our agricultural history.—The present year presents us with improvements that give a satisfactory pledge of the vast acquisitions which await us. The first states, as well as the first statesmen, in our union, are now bending their efforts and their talents to a source of national power and greatness, that will repay their exertions with a rich and lasting tribute, The light of Europe is before us. The sun of science illumines our paths. The wonderful advances in chemistry, mineralogy, geology and botany, which mark the present period with lustre and glory, cannot fail of leading to investigations and experiments in the art of agriculture, that shall result in a magnificent acquisition to the age in which we live, and a benefit of the deepest moment to posterity. Such prospects demand the exultations of a great people sensible of their advantages, their interests, and their future fame.

Let us now inquire into the natural advantages of our own state for agricultural improvement.

In contemplating the physical and moral advantages of our country for agricultural greatness, the first favorable considerations which strike our view, are the nature of our free and liberal institutions, the tenor of our landed property, the cheapness and abundance of our land, the exuberance of our soil, the general salubrity and healthiness of our great agricultural sections of the country, our exemption from taxes, and the freedom of our commerce. In many respects, a flattering contrast arises as we compare our country with the various states of Europe, in relation to the great subject of

which we are treating. The feudal system of the eastern continent has left the stern impress of its features on the political institutions which have followed its dissolution. It still pervades, to a greater or less extent, the spirit of landed tenures, and bears with a depressing and discouraging weight on the cultivators of the soil. The manner of settling contracts, the duration of leases, the covenants to be inserted, the form, and every thing connected with them, is an important part of the agricultural code. To every one, it must be apparent, that a system of landed tenures, that oppresses the farming interest, and discourages the enterprize and shackles the energies of the cultivator, must be highly prejudicial in impeding the march of improvement. The taxes, too, of Europe, in the shape of tythes, exactions, &c. to sustain the profligacy of governments; the vast proportion of unproductive population who live on the labors of the inferior classes; the immense enclosures, parks, and pleasure grounds, devoted to the idle amusements of the nobility, are so many drawbacks on the general prosperity of agriculture in the old world. If these burdens, operate in favor of a high state of agricultural improvement in producing, by the coercion of necessity, the most attentive cultivation of the soil; they constitute a fact that only goes to shew, to what extent the same art may be carried under a government, and under circumstances, congenial to the happiest interests of mankind.

In the United States, we have a government that is mild, free and happy, existing independent of direct taxation; a climate that embraces all the physical blessings which distinguish the most beneficent quarters of the world; a territory that possesses all the various soils of the globe, producing every material production that can be found in the confines of Europe, and many tropical plants that Europe cannot furnish. We are daily becoming more and more the granary of the world; and whatever superior acquisitions of knowledge are possessed in Europe, connected with the

cultivation of the soil, are coming across the ocean to our shores with the emigrants from England, France and Germany, and every other section of the continent.*

With these general remarks, let us turn to the state of New-York. But few countries of the same magnitude, present a greater variety and extent of natural resources.

New-York naturally divides herself into three sections: the first is comprehended by the soil on the seaboard, and lying east of the mountains, which, with broken ridges, extends through our state; the second may be called the mountainous district, comprising that portion of our state which is of the least value, and which divides the seaboard and the lands on the east of the ridge of mountains, from the territory of the west; the third is that vast and fertile country which rises into an elevated plain, embracing in its boundaries the shores of the St. Lawrence, the borders of Lake Ontario, and part of Lake Erie, the northern limits of Pennsylvania, and the sources of the Mohawk. The eastern division, is in general a rich and productive country, possessing a soil that is warm, dry, and prolific. Some of the counties in this section, are under a higher state of cultivation than any other portion of our state. The alluvial flats are abundantly exuberant, and bring forth an increase that places their fertility in competition with any tracts of country in Europe. As we progress to the north, the soil is not so favorable, exhibiting a difference of climate and productions. This part of our state is however capable of a high cultivation with a few exceptions, and is daily improving by the enterprize and perseverance of a hardy and valuable population. The middle or mountainous section, is of course more diversified and broken than the eastern or western, containing the greatest quantity of unproductive lands. The vallies are however rich and valuable, the more elevated parts

* Vide Speech of Le Ray de Chaumont,- and the Letters of Mr. Birkbeck.

often presenting a fine grazing country, interspersed with pure streams of water, capable of being improved to valuable mechanical purposes. The great western region, spreads before us one of the noblest countries found on the face of the globe, capable of sustaining many millions of people, worthy to improve and enrich its soil. It opens sources of wealth and greatness that are eternal as the foundations of our continent. Whether we consider the healthy temperature of the climate, the richness and luxuriance of the soil, the variety of necessary commodities and staple articles which it produces, or the rich minerals contained in its bosom, it is equally the same, a great and wonderful country.

We are not here assuming to ourselves the office of giving a dissertation on the character of the different soils of our state, and the varieties of our climate; we only speak in general terms of our natural resources. We say, that few territories of the same extent present so little waste land, and that none ever possessed all the attributes in herself, of a great agricultural country, to a fuller extent than our own great member of the confederacy.

Adopting the theory as correct, that the richness of the soil bears a proportion to the decay of luxuriant vegetation on its surface, and the abundant fertility of our state is palpably evident. It has been enriched by the growth and decay of vegetable substances for centuries, and unexhausted by the hand of improvement. Our state also abounds in those mineral treasures which are calculated to increase the fruitfulness and enhance the value of the soil. The important article of gypsum, which has for years been imported into our state in immense quantities, from the British dominions, has been discovered in the heart of our western district, in inexhaustible quantities. It is that sure fructifier of the soil, that in every part of our extended territory, excepting on the seaboard, gives life, vigor and abundance, to all the most valuable articles of consumption dependant on cultivation. Two large beds of this mineral were discovered dur-

ing the last season in the county of Onondaga, in excavating the route of the Great Western Canal, and can be afforded in any part of our state, at from three to five dollars per ton. The rich marl found in great abundance at the west, has also been proved to be of much utility in promoting the growth and abundance of vegetation.

Next to a fertile soil and a healthy climate, convenient, regular, and profitable markets for the disposal of surplus produce, naturally come under consideration. In this respect, New-York stands pre-eminent. Our unrivalled advantages for commerce and internal conveyance; the improvements now making by our state government, on a scale that eclipses all the enterprize of Europe for the last century, gives the assurance of a system of inland communication by roads and canals, unsurpassed, for grandeur and utility, by any country in the universe. The union of the Hudson and lake Champlain, by the northern canal, forms a great and never failing channel from north to south; the western canal, from the Hudson to lake Erie, forms another spacious channel from the eastern to the western extremities of our state. Taking into view, the tributary streams which empty into Lake Champlain, the Hudson, and the Mohawk; the rivers, creeks, and small lakes, which will be united to the line of the western canal; taking into view, also, the canal which can easily unite the Delaware river to the mouth of the Hudson, which the interests of two states demand; and besides all this, the numerous roads that will intersect the two great, as well as the small channels of conveyance, and we may safely challenge the face of creation, and the wide compass of human discovery, to produce a grander spectacle of all that is eminently favorable to inland trade. Here, then, will agriculture find an encouragement and an impulse of the deepest moment to its interests. Every surplus product will find a safe, cheap, and rapid conveyance to a ready market. Articles of necessary consumption, as a returning equivalent, will meet with like fa-

cilities of conveyance, from the seaboard to their appropriate destiny. Agriculture, by these encouragements, will receive a life and vigor that will depend on no incidental state of things, but a life and vigor lasting as the physical constitution of our hills and our vallies.

What limits are, hereafter, to bound our agricultural enterprize and greatness, we shall not venture to say; but let us for a moment indulge in *comparison*, the only method to ascertain the magnitude of objects. Let us cast our eyes over the state of New-York, and then take the map of England in one hand and the picture of her resources in the other, and ponder on the extent of her agricultural riches. England is a country possessing less natural advantages than our own state. Including Wales, G. Britain contains 49,000 square miles, making not far from 31,000,000 of acres. New-York contains 46,000 square miles making over 29,000,000 of acres. England has more waste lands than the state of New-York. Her mountains are sterile and barren; her bogs, heaths, and chalky lands, as well as her large tracts of loose spongy ground, are not known as characteristics in our soil. Her climate possesses few or no advantages over our own. The articles of consumption congenial to our soil, will maintain a competition with hers, and our fruit is far better. All kinds of domestic animals, to whose growth England assigns an important part of her wealth, subsist as well here as in Great Britain.* We must, also, recollect that the parks, commons, and pleasure grounds, take up a large territory in England; that her tenures are burdensome, her taxes monstrous, her exports shackled, her cultivators oppressed, and no small portion of her population composed of nobility, gentlemen, professional men, soldiers, placemen, sinecurists, spies, servants, and paupers. From the most rational calcu-

* The whole number of sheep in this state was estimated at 1,410,014, four or five years since. Neat cattle, 863,298. Horses, 527,370—aggregate, 2,850,952. The number now is much larger.—*Spafford's Gaz. p.* 51.

lations, the cultivators of the soil fall considerably short of two millions in England and Wales.* Yet, under all these circumstances, what has England done as an agricultural nation?

An eminent English writer, equally distinguished for his candor and abilities,† has estimated that the wealth which is annually created by the cultivation of the soil of Great Britain and Ireland, amounts to no less than £216,817,624. He gives Ireland two-fifths of this amount, which, when deducted from the whole estimate, leaves an annual creation of wealth from the soil of England and Wales alone, the enormous amount of £130,090,574, or $575,580,328. Here then is nearly SIX HUNDRED MILLIONS OF DOLLARS, annually wrung from the British soil, possessing inferior attributes and properties to the soil of New-York! The able book entitled "Britain Independent of Commerce," estimates the annual creation of property in England, by means of agriculture, to be £120,000,000; but the estimates of Mr. Colquhoun are obtained from more accurate sources, and more correct. Even Ireland gives an annual creation of wealth from the cultivation of her soil to the amount of $385,455,213, if we take the calculations of the above author as a data. England and Ireland together produce an annual wealth from the cultivation of the soil of the amount of $961,136,541. And yet England did little or nothing for her agriculture and rural economy until the time of Queen Elizabeth; and in fact, never brought this branch of industry to any general perfection, until the establishment of her BOARD OF AGRICULTURE.

* From the result of the population act, it appears, that of the 8,300,000 persons, which England then contained, only 1,524,000 were chiefly employed in agriculture; so that of the 12,000,000 which Great Britain, including Wales, is supposed to contain now, there cannot be imputed to be more than *one-sixth* part employed in cultivating the earth.—*Vide Britain Independent of Commerce, p.* 47.

† Colquhoun's Wealth, Power, and Resources of the British Empire.

We are not putting the present agricultural resources of the state of New-York by the side of those of Great Britain. We are only suggesting, by way of comparison, what New-York can do at a future period, and the necessity of commencing her career of improvement on a great scale, at the present moment. We must recollect, that while the population of England does not double once in 100 years, ours doubles once in 20 years. But a few years more, and we shall have as much effective force employed in the cultivation of our lands as England now has, and the fruits of our labor will not be devoured by tax-gatherers—excise officers—a profligate, idle nobility—armies—subsidies—sinecurists—placemen—servants—and paupers: but they will go to enrich a great and enterprising community. With all our pride and love of national greatness, we cannot realize the resources of our country or of our state. They unfold unseen, and astonish us, at times, with their wonderful developement. The tonnage of New-York is now far greater than was that of England at the time of her defeating the Spanish armada, when Spain was mistress of the ocean—and even greater than that of England one century ago. If a state would be great, she must elevate her thoughts to the standard of greatness, and let her efforts comport with her views and conceptions.

We shall now consider what branches of knowledge are connected with agriculture, as a science.

There is an apparent simplicity in Agricultural pursuits, which, in unreflecting minds, forbids the bold innovation of experimental improvements. Such has been the beneficence of the Creator in giving to the earth those inherent properties which sustain the human race, that we almost forget the necessity of improving those bounties to the full extent to which they are capable of being enjoyed. Thus the man of elevated reflections and deep intellectual research, naturally directs his eyes to objects which he falsely deems of greater importance to mankind; while the cultivator of the soil

deigns not to bow to the shrine of science and philosophy, that he may borrow light and knowledge to irradiate the sphere of his useful exertions. The last few years, however, have produced a great and salutary revolution in these opinions. The most abstruse sciences have been applied to the ordinary pursuits of industry, and brought home to all the conveniences of life, and their happy tendency and influence have been fully seen and acknowledged.

In making agricultural improvements, it is requisite to have an accurate knowledge of the climate of the country, and an intimate acquaintance with the effects which its changes and vicissitudes have on different kinds of soil, and different species of vegetation, and a knowledge of all the vegetable productions congenial to its nature. In considering the climate of a country, in relation to agriculture, an eminent English writer embraces the following points:—Its general character, and the means of its improvement—Its heat—The quantity of its moisture—The prevailing winds—Its position, whether maritime or inland—The regularity of the seasons—The phenomena to which it is liable—The productions best suited to it—The introduction of exotic plants and animals from other climates.* Here then it becomes necessary to know the properties of what some writers on agriculture call the aerial kingdom, and also to possess an intimate acquaintance with the vegetable kingdom.

A knowledge of the soil with all its different intrinsic virtues, is next to be considered. The writer before alluded to, has divided soil into seven kinds—sand, gravel, clay, chalk, peat, alluvial, and loam, the artificial soil created by working the other soils. It is requisite to understand the nature of all these different soils, the extent to which they are mixed or partake of each other in many cases, the sub-soils or under stratums on which they rest, and the different productions which are suitable to their nature and constitution.

* Sinclair's Code of Agriculture, page 4

The cultivation of the soil comes next in view. This includes every artificial improvement that tends to reclaim and promote the fertility and value of lands, and their conversion to that condition of texture and consistence that will most favorably advance the growth of all kinds of valuable vegetation to the exclusion of all that is detrimental or noxious. It is requisite for the cultivator to understand the nature and strength of different kinds of manures, the proper degrees or extent of their application, what kinds of agricultural products are suitable to various soils, and how their growth and abundance can be most satisfactorily produced. The management of arable and grass lands alone, omitting every thing else in the economy of agriculture, presents an immense field for experiment, ingenuity, and invention. Dr. Rees, in his valuable article on agriculture, instances the following branches as belonging to the improvement of arable and grass lands.

The inclosing and making of fences, as hedges, ditches, walls, railings, palings, gates, draining, paring and burning, watering, warping, fallowing, ploughing, manuring, sowing, harrowing, weeding, hoeing; the growing and preserving of different sorts of crops, as wheat, rye, barley, oats, beans, peas, potatoes, turnips, carrots, cabbages, hops, hemp, flax, woad, madder, &c.; and the raising of various kinds of seeds, as rape, mustard, &c.; rotation of crops, reaping, mowing, stacking, thrashing; the management of artificial and natural grasses, as clover, lucern, saintfoin, tares, vetches, &c.; the converting of arable lands to grass, meadows, pastures, hay-making; the cultivating and preserving of fruits, as apples, pears, cherries, &c.; and the preparation of fruit liquors, as cider, perry, &c.; orchards; the planting of timber-trees, woods, coppices, plantations, &c.

The management of fruit and the cultivation of fruit trees is daily becoming of more importance in this country. It is evident that many foreign fruits found in various parts of the globe, will bear transplanting into our soil, and produce their

bounties with all the vigor and abundance incident to their native regions. The cultivation of fruit trees alone presents an intricate and important science, and a science that is doubly necessary to be known in our country, considering our recent existence, the newness of our lands, the ease with which we can raise foreign fruits, our want of experience, and the vast field for improvement which is before us.

The importation of different species of grain, and, in fact, the procuring of all kinds of seeds from foreign regions to prove their favorable or unfavorable adoption in our country, is deeply important and necessary at the present stage of our agricultural history. We have not yet applied the scrutinizing touch of experiment, in this respect, to that extent which which our prosperity demands. Some regular and persevering system of correspondence with distant quarters of the globe is requisite at this period.

The rearing of live stock in agricultural countries is an object of the first consequence, and considered worthy of attainments in knowledge that can only be acquired by a long, constant, and philosophical attention. In England as well as in various other countries of Europe, the improvements in different breeds of cattle, horses, sheep, and other domestic animals, has engrossed the watchful patronage and consideration of eminent and scientific men, and demands the same, and even greater weight here, because our country, in this respect, has done but little in comparison to her means and advantages. The species of live stock best adapted to different sections of the country; the means of improving them by crossing the blood, administering nutriment, and otherwise; the food most genial to their growth and constitution; the economical expenditure of nourishment;* the different

* The amount of food consumed by live stock in England, strongly presents the magnitude of the subject. The quantity of wheat, barley, oats, rye, beans, and peas, consumed by man, in Great Britain, has been estimated at 18,750,000 quarters; by *animals*, at 11,829,000 quarters. The number of horses in Great

habits of animals, with a knowledge of their diseases and the proper application for their remedy and cure—these numerous points present us with objects of too much consequence and import to be left to the sport of time, accident, and inattention.†

The implements of husbandry, in the cultivation of the soil, strictly pertain to agricultural improvements. Proper tools in tillage diminish expense, save labor, and enable the farmer to vest a greater portion of his capital in his rural occupation. There is a great deficiency in this respect in many parts of the United States. Our implements are heavy, awkward, and unwieldy, consuming in their use an im-

Britain and Ireland is estimated at 1,800,000; horned cattle, 10,000,000; sheep and lambs, 42,000,000; all of them consuming hay, grass, straw, vetches, turnips, carrots, and grain to the amount of £103,400,000.

[*Colquhoun's Resources Brit. Emp.*

† The following extract from a London paper shews the encouragement to raising excellent cattle:

"The following extraordinary sale of stock of the improved short-horned breed, took place at the sale of Mr. Robert Colling, of Barmpton, near Darlington, who has long been celebrated as an agriculturist of the first class, and whose stock was brought to the hammer on the 29th and 30th of August:

| | | | |
|---|---|---|---|
| One 2 year old cow, | sold for | 331 | guineas. |
| One 4 year old cow, | do. | 300 | do. |
| One 5 year old cow, | do. | 370 | do. |
| One 1 year old bull calf, | do. | 270 | do. |
| One 4 year old bull, | do. | 621* | do. |

And it appears by the catalogue with printed prices affixed, that

| | | | |
|---|---|---|---|
| 34 cows | sold for | 4141 | guineas. |
| 17 heifers | do. | 1287 | do. |
| 6 bulls | do. | 1343 | do. |
| 4 bull calves | do. | 713 | do. |
| 61 head of cattle sold for, total, | | 7484 | guineas—or |

$34,912 86.

[The above cattle are of the breed of the imported bull exhibited at Brighton, Mass in October last.]

*Or $1,259 55.

mense labor of horses, oxen, and men. These are evils which our characteristic mechanical ingenuity could easily remedy, with proper attention and encouragement. The Code of Agriculture classes implements of husbandry under the following heads—1, Implements of Tillage; 2, for Drilling or Sowing Corn; 3, for Reaping Corn; 4, for Harvesting Corn; 5, for Threshing and Cleaning Corn; 6, for Mowing and Harvesting Hay; 7, for Conveyance and Transportation; 8, for Draining; 9, for Harnessing Stock; 10, for Rolling Land; 11, for Dairy; and 12, for various Miscellaneous purposes—p. 66. The inventions and improvements to be made in this department require no ordinary ingenuity and expense.

Here then is a slight view of what pertains to agriculture in this and other countries.

Roads and canals have been viewed as important features in the agricultural systems of Europe. Railways, harbours, embankments, and out-buildings, are also considered as constituent parts of the same great plan to promote the means of sustaining nations through the cultivation of the earth. Roads and canals are certainly of vast importance in bringing good markets, virtually, to the very doors of the farmer, and opening new and easy sources of diffusion to all the productions of the soil. In the state of New-York, this truth is duly estimated, and under the wise and liberal guidance of our present state government, will be fully realized: in a national point of view, we have made no great movements to this end.

On what, then, does the science of agriculture rest? Is it indeed an humble art, confined to a sphere that is depressed and contracted, and only to be improved by those who turn the glebe, scatter the seed, and reap the harvest? Does not the science of agriculture, even in the brief and partial view which we have taken of it, rest its foundation on a knowledge of natural philosophy, so far as to decide on the nature and changes of climate, a knowledge of mineralogy,

botany, geology, and chemistry, and of natural history, to the latitude that the rearing and nourishment of live stock is involved; and may we not even include the mechanical arts, in as much as they are connected with labor-saving implements of husbandry, and other external improvements? And will it be pretended by the considerate, the liberal and reflecting portion of community, that agriculture, whose successful encouragement involves branches of knowledge so deep and intricate, should be left to make its own progress to perfection, as time, accident, and ignorance shall dictate? Shall the fundamental and vital art that sustains all others, be left the deformed victim of habit, penury, and prejudice? We believe, nay, we know, that there is a proud and enterprising spirit in our community, and among our farming interest too, that brands with indelible marks of denunciation, such a supposition as this. Our agriculture must, and will receive, in the state of New-York, the solid and growing patronage of an intelligent people, and a wise and energetic government.

To say that agriculture does not need the extraneous aids which science can extend—to maintain that it wants not the light of those experiments and suggestions, which are the invaluable offspring of great men's researches and reflections, is paying a degrading tribute to the triumph of ignorance, and weaving garlands around the brows of stupidity. It is discarding common sense and extinguishing the light of truth, when such acts blast the interests of communities and states, and cast a disgraceful blot on the lustre of the age. "*Leave the farmers to themselves,*" is a common remark, and it is a remark that is characteristic of a cold heart, a penurious spirit, and a weak mind. It would as well apply to all the occupations that engross the labors of mankind, as to the art of tillage. To whom are we indebted for those philosophical improvements which are applicable to domestic purposes, and extend, to an immeasurable degree, the blessings of existence? Who invented the compass which directs the ship

through unknown seas? was it the sailor who manages the vessel? Who invented the telescope or the quadrant? was it the mechanics who manufactured them or the men who reap the benefits of the invention? Who discovered the propelling power of steam, as applied to boats for transportation? was it the mechanics who made the machinery or the men who direct the barque through the waters? Who saved the labors of millions in the manufactories of Europe, by the invention of labor-saving machinery? was it the mechanics who construct the machines or the manufacturers who are benefitted by their creation?—No; it was men whose labors and investigations were of a higher order, and who were raised up to gladden and adorn the history of ages—'twas the Newtons, the Herschels, the Priestleys, the Arkwrights, the Fultons and Franklins of the times, who elevated science to other worlds, and brought down her inspirations to bless the humblest departments of the earth which we inhabit—to pour floods of light and knowledge on the walks of industry and domestic convenience.—*Had you left the mechanics and artizans to themselves,* the measure of their usefulness would now be settled by a far different standard. It has been to such men as Dr. Fordyce, Sir Arthur Young, Dr. Anderson, the Duke of Bedford, Sir John Sinclair, and Sir Humphrey Davey, that England is in a great measure indebted for her greatness as an agricultural nation. Sir Humphrey Davey has delivered a profound and able course of lectures on Agricultural Chemistry, which he will hereafter leave as an invaluable legacy to mankind, and which has rendered him an illustrious benefactor to after generations.

We must all agree, that agriculture, in many countries in Europe, has, within the last century, been vastly improved. The moderns have far exceeded the ancients. By what means have they done it—*by leaving the farmers to themselves?* have they been left to apply the science of botany, chemistry, mineralogy, and geology to their useful labors? will any one have the hardihood to deny the beneficial appli-

cation of these branches of science to agricultural attainments? what but chemistry taught us the virtues of gypsum, the great and wonderful fructifier of our soil?

Let us inquire, then, how other nations have rapidly progressed in agricultural improvements, and by what means the state of New-York must advance this fundamental branch of industry, this true and unfailing support of her strength and grandeur.

In the investigation of any particular system of public policy in this country, in relation to a specific object, it is consistent and necessary to look at the course pursued by other nations. If their plans have been successful; the means by which they have been promoted and executed, should be the subject of inquiry and adoption, when practicability will sanction it. In France, in Italy, Germany, Sweden, Denmark, England, and other European countries, the art of tillage has been carried to a great height of perfection. This has been effected by a systematic course of measures, commenced with liberality, and prosecuted with unceasing energy and perseverance. In point of natural advantages our own state, as we have shown, is equal to any country in Europe, of the same extent, when the whole compass of our physical resources is taken into consideration. Will the means, then which have been embraced in European nations to reach this state of improvement, have the same tendency here, or have we the ability to adopt these means?

In modern Europe, Agriculture for several centuries, was doomed to struggle in darkness and neglect. Commerce and manufacture, alluring and gratifying a spirit of traffic and avarice, preferred a more palpable claim to enterprize and invention, than the cultivation of the soil. It was not, until the most distinguished classes of society perceived the high importance of giving to the occupation that maintains all others—it was not, until public writers and political economists, pointed out, by convincing and unanswerable reasons, the necessity of its preference and the ground of its connec-

tion with national wealth, power and happiness, that its destinies were a more illustrious cast and were doomed to exhibit a more successful career.

At the peace of Aix-la-Chapelle in the year 1748, we find that the different European governments, embracing in the scope of their policy, the most distinguished men of their times, commenced a liberal and high-minded system of encouragement to all the arts of husbandry. In Italy, a country whose brilliant acquisitions in the arts and sciences, have given her a celebrity that no political degradation can destroy, men of science and fame commenced their laudable exertions, and imparted to agriculture, all the assistance which learning, study and experiment could extend. In the Neapolitan dominions, Tuscany, Sardinia and Ferrare, and at other places, books on this subject were written, translated and diffused, and men of eminent acquirements sent abroad to collect information. Princes and subjects were alike seized with a kind of enthusiasm, and rapid progress was made in every species of rural economy. The universities of Denmark, Sweden and Germany, at the same period, instituted extensive and luminous courses of agricultural lectures, and disseminated light and improvement to the peasantry and cultivators in every quarter of the different countries. The courts of Denmark, Sweden and Germany took a peculiar interest in every exertion of this description. In Switzerland learned associations were formed, consisting of the first men in the different Cantons, who made beneficial experiments, and opened an extensive correspondence with the various states of Europe. We ought not here to forget the two journals printed at Leipsic and Hanover, one called the Journal d'Agriculture, and the other the Recueils d'Hanovre, which did much to inform the north of Europe and enlarge the sphere of this useful science. The great and immortal Linnæus, devoted a great portion of his time to improvements in this department of useful labor, and more particularly in relation to food for live stock, and drew round him a congre-

gation of learned disciples, who ardently disseminated his enlightened doctrines. In France, Lewis XV. like a wise prince, superintended, in person, the encouragement of agriculture, by attending experiments, distributing favors and rewards for acts of proficiency, and by rendering it the favorite pursuit of the French people. Extensive societies were established at Tours and Rouen, the academies of Lyons and Bordeaux instituted prize questions, and the university at Amiens shed light and truth on many important subjects. Philosophical tracts and literary publications have also done much in France for the successful cultivation of her fertile lands. The Annals of Agriculture, the Edinburgh Encyclopedia and Dr. Rees Cyclopedia afford a particular account of these improvements.

England has done more than any other state in Europe for the encouragement of agriculture, and her successful exertions have been comparitively speaking, of recent date. Some efforts were indeed made under the reign of Queen Elizabeth, during the protectorship of Cromwell, and under the government of the Stewarts; but they were scattered, feeble and partial movements. It was not until the middle of the eighteenth century that we can fix the era of her vast improvements. Since that period, the writings of Young, Marshall, Anderson, Bakewell, Fordyce, Nesmeith, Sutcliffe, and others, have had a powerful and salutary tendency. But it is to the British Board of Agriculture that England is indebted, to an incalculable, extent, for her present superiority and greatness in this branch of political economy. This board, which was established by the bold and patriotic exertions of Sir John Sinclair, a man whose name should be honored by every cultivator of the soil and the friends of agriculture in every country, has produced effects as lasting as the power of England, and of more consequence to mankind than all her brilliant military exploits. This institution, which holds out a proud and illustrious example to every civilized nation on the globe, has been the heart and cen-

tre of the British agricultural system. It has collected and diffused knowledge as the seat of human existence receives and sends forth the currents of life. Its improvements have been fundamental and radical, and their benefits foil the grasp of calculation. It is the foundation of a splendid superstructure in agricultural science and industry, that will stand a glorious column to commemorate the march of civilization. This board gathers knowledge from all parts of the world, procures specimens of every valuable production in distant climates, procures all domestic animals worthy of encouragement, obtains a knowledge af all new discoveries and inventions, fosters salutary experiments, brings new principles into operation, rewards all distinguished improvements, and lastly, extends the fruit of its researches and acquisitions to every cottage and tenant in the British dominions. Let these facts be duly weighed.

Two inquiries may here be made—1st. Does the present condition of agriculture, in the state of New-York, demand the encouragement of government, and such encouragement as foreign nations have extended? 2d. Have we the ability and resources to give this patronage?

1st. What, let us enquire, have we done for the science of agriculture? What public countenance, what indications of a protecting and fostering policy, has it received at the hands of our state government? The direct answer to those questions may be found in the Report of the joint committee in the New-York legislature on that part of governor Clinton's inaugural speech, which recommends the establishment of an agricultural board. Speaking of agriculture, the report observes :—" Although its investigation is full of useful instruction, and, pregnant in results of vital importance to the present and future generations, and opens a wide field for the contemplation of philosophy, agricultural science and patriotism ; and although we are persuaded, that there is no country on earth, whose inhabitants are better informed —better fed, and who have a higher sense of respect, and all

those manly sentiments which dignify human nature: *yet it is painful to add, that we are this moment in a state of absolute ignorance in the first principles of the first of sciences, as connected with chemistry. We are, also unacquainted with the fundamental grounds of those great modern improvements in agriculture, as it is now practised in England and other countries of Europe.*"* This was the language of the New-York legislature one year ago; it was the voice of our most distinguished men, gathered together from all parts of the state, speaking in the capacity of their high political functions, and speaking too, from facts that sustained their assertions. We have made no great general exertion towards a radical change in this fundamental branch of industry. Cities and villages have clustered in the great western section of our state; a population noble in views, rich in spirit, and liberal in action, have erected monuments of improvement in every section of their country. They sustain, to a proper extent, our plans of internal trade; taste exhibits her decorations amid the comforts and luxuries of life; and science has been welcomed to temples worthy of her residence; but it has been left for the few last months to show the substantial support of all these blessings, receiving the appropriate devotions of public spirit. The farmers who are located on the borders of our two great rivers, possessing the advantages of a fertile soil, enjoying ease, plenty and independence, and cherishing notions of husbandry, which, in many cases, were brought from Europe at a period when agriculture was in a far different state from what it is now, in the same quarter of the world, have not struck out new ranges of improvement. To this remark, there are, however, honorable exceptions. That portion of our community which occupy the seaboard, have been interested, with a partial reservation, in commercial pursuits, and as we should consistently expect, under past circumstances, have

* Vide Mr. Livingston's Report in New-York senate, February 2, 1818. Journals, p. 118.

not produced any eminent acquisitions in the science of which we are treating. It is not to be denied, that in the state of New-York, there are men and cultivators of farms, who confer much respectability upon the pursuits of husbandry ; but we mean to attach general features to our remarks, and we do say that New-York, in agricultural attainments, is far behind some of her sister states. She is behind Massachusetts, who deserves lasting credit for her high minded exertions in this respect ; she is behind Connecticut—she is behind Pennsylvania, and, on some accounts, behind Virginia.* New-York, second to none of her associates in the confederacy, has grossly slighted the mighty means placed in her hands for great purposes, and disgracefully slumbered over her neglected resources. She has not slept like the young lion in his covert, when weakness dictates quietude and timidity ; but she has slept like the lion, when his eye kindles in conscious majesty, and his limbs have waxed strong for dominion. Had the leading and powerful men of our state combined their efforts with the farming interest, ten years ago, to raise the condition of agriculture ; had systems been formed to encourage bold and original efforts and to spread the blessings of intelligence ; had great minds led the way and corresponding exertions followed ; we should now have stood the admiration of the American people, the admiration of other nations, and the proud and cheering example worthy of universal imitation. What has not been done, only shows what must be done. It now becomes us to lay the foundation of an agricultural wealth and greatness that is to remain for ages. Let the basis be firm, deep and broad, that the columns of the noble fabric may triumphantly frown on the depredations of time, and the revolutions that move in her fearful train.

* Timothy Pickering in Massachusetts, and James Madison in Virginia, have both delivered agricultural addresses during the last season. The age of the Roman Sages has revived.

Our next inquiry is, have we the means and ability of establishing and supporting a Board of Agriculture in the state of New-York? From the shores of the ocean to the shores of the lakes, from the borders of the Hudson to the sources of the Allegany and Susquehanna, the deep-toned response is, YES! It is ananswer that bursts from a thousand hills, and echoes through a thousand vallies. It is an irresistible expression that springs from the convictions of a great people. It vanquishes every doubt, and silences thefaint and scattered murmurings of prejudice.

States and empires move with an impulse whose strength and effieiency bears a proportion to the magnitude of the inciting objects. When a nation once enters the broad road to greatness, under auspices which favor a long and successful career, she moves on in the plenitude of her power and energy, until she reaches and accomplishes every end and design worthy of her high and trancendant destinies. These remarks apply to our condition, and in turning our efforts to one branch of wealth and industry, we are not to forget another which sustains it. In opening vast channels of internal commerce, we are not to forget that agriculture is the basis of trade—that its encouragement is the first duty of a commonwealth.

A new era dawns upon the history of our agriculture. The past year has been fruitful in the inception of great plans to foster its interests. We can now number about twenty agricultural societies, established in the various counties, many of which have gone into operation with the most happy and promising consequences.* To give these societies the full effect which is to be derived from such associations, it is requisite that there should be some rallying point, around which

* There are agricultural societies in the following counties, either formed or forming :—Suffolk, Westchester, Orange, Dutchess, Columbia, Jefferson, Oneida, Otsego, Cayuga, Albany, Genesee, Cortlandt, Chenango, Herkimer, Saratoga, and Queens. In some counties there are several societies.

they may operate, and which shall give them a uniformity of character and action. It is not to be expected that county societies, supported by individual effort and liberality, can produce those wonderful effects in an agricultural community which have flowed from the National Board of Great Britain, and which are attended with expense and protracted exertion. Their resources are too limited for this purpose, neither do they co-operate sufficiently with each other. These are, in their nature and constitution, calculated for subordinate combinations, that will produce excellent results as constituent parts of a great and well organized system. What then is wanting but a BOARD OF AGRICULTURE, established and patronized by the liberality of the New-York state government? This is requisite, as will soon be shown, to give vigor and consistency to our present county societies, and induce the other counties to form similar associations. Each county would have a claim on the labors and expenditures of the Board, and of course be induced to enjoy this privilege by taking the necessary steps. The expenditures of such a Board, and the resources of the state to support them, next fall under our view.

The Report on Agriculture, made at the last session of the New-York Legislature, embraced the following outlines—the Board was to be established at the seat of the state government, consisting of one member from each great district of the state, the governor, who was to be president *ex-officio*, a professor of agriculture and chemistry, and a superintendant general of agriculture. Wherever county societies were formed, each society was to receive a proportion of the public fund attached to the Board, the dividends to the counties to be distributed as premiums and prizes for exhibitions of excellence in all branches attached to agriculture. To sustain this great institution, or to use the words of the report itself, "to establish and support this splendid fabric, fraught with consequences of incalculable benefit," an annual appropriation of thirty thousand dollars was re-

commended by the joint committee of the house and senate? Whether the organization and disposition of power, suggested by the report, was expedient or inexpedient, is not the subject of investigation in this examination; neither do we care so much under what form, how, or by whom, the power is exercised, if the legislature will give power, and suffer it to be exercised with effect. There is too much simplicity in this exercise of their authority to create any anxious forebodings. The magnitude of the fund is the subject of our consideration, and that thirty thousand dollars is none too much, appears strikingly evident. This sum the state can set apart out of its surplus funds. We ask not for taxation—we only ask for an humble portion of the excess of revenue beyond our state expenditures.

It becomes every state and every government to act right and to act with consistency. New-York has, for years past, pursued a noble and liberal course of policy in relation to public improvements. When we look at what we have done, when we look at what we ought to do, and at our capacity to do it, hesitation appears degrading and reproachful. Look back and see the magnitude of our appropriations for useful purposes beyond the ordinary sphere of legislation. We have appropriated a school fund for the diffusion of elementary education, whose monies invested in stock, the value of land and other property attached to it, amount to $6,675,429. We have appropriated $60,000 for the promotion of medical science; we have given $74,268 75 for the encouragement of botany; for the support of colleges we have paid $750,000, and for academies $100,000. Here we find an appropriation of more than seven millions and a half, within the last few years, for the encouragement of education and science. For military expenses we have appropriated nearly three hundred thousand dollars, and for the support of criminal jurisprudence $976,157 47, making between nine and ten millions in the whole, for these purposes. In this partial view of our liberality, we say nothing of the appropriations for more

than sixteen hundred miles of turnpike roads, opened by the state government, in conjunction with individuals and corporations, and of the thirty-five or forty bridges, which, for the most part, have been erected during the last ten years, in the same manner. It is with pride and satisfaction that we recall to our minds all these facts, so honorable to the character of the state.

During the last war with England, New-York did not shrink from sustaining the falling credit of the nation at the darkest perils of the crisis through which we gloriously passed, and from providing for a debt falling but little short of two millions of dollars at the conclusion of this contest. These facts show that we have resources, and resources too, in every respect, ample to meet the expenditures for our internal improvements.

What is now asked at the board of the treasury? Not a disbursement to be confined to any particular class of men as it regards the benefits to be produced; not a gratuity whose enjoyment is to be limited to any one professional pursuit; but we ask some decent expression of bounty, some moderate encouragement towards that branch of industry from which all others receive their life, their nourishment, and their vigor. We ask the guardians of our public welfare, to extend the basis of our wealth and power as a state, by a public exercise of that authority with which they are clothed by the people. Commerce, manufactures, and the arts, have drawn their vital nutriment from agriculture. She has enabled our ships to spread their canvass and plough the ocean; she has fed the artizan, and given him the materials of his occupation; she has erected temples for the arts and sciences, and opened her treasures to give them pecuniary aid; she has covered the borders of our waters with splendid cities, towns, and villages; she has sustained our treasury, and sent armies into the field to fight the battles of our country, and reap the laurels of victory and renown—and through all this, while fifty years have rolled away with

a prosperity unknown in the history of any ancient or modern people beyond the bosom of our own republic, she has never raised her voice but as a BENEFACTRESS! She now speaks in an hour of unclouded prosperity. She demands not that other professions and other pursuits should contribute to her benefit; but she asks their permission to retain a humble portion of her own munificent contributions to the resources of our treasury, for her own improvement, that she may do still more for others. It is time that the cultivators of the soil should be heard. While Law and Physic, while Commerce and Manufactures have filled so large a space in the public eye, we have too far forgotten the Farmers in our legislative bounty, the brave and hardy yeomanry, who in peace and in war, in prosperity and in misfortune, have borne the state upon their shoulders, and opened their breasts to her defence and their purses to her credit. Is agriculture of less consequence than other subjects of legislation? From this branch of industry shall the New-York legislature turn with a cold heart, a penurious spirit, and a contemptuous eye? Shall the agricultural portion of our great community be turned away from the halls of public deliberation with scorn and derision? We choose legislators and rulers to protect and watch over our public interests—and there is too much wisdom, too much patriotism, and too much liberality in the executive and in the legislature, to treat the encouragement of agriculture in any other manner than its vast importance deserves. Look at our state, whose commerce throws an annual tribute from ten to twelve millions of dollars into our national treasury; a state whose revenue is half a million annually; a state which has paid more than ten millions of dollars for extra expenses within the last few years; a state too, whose commercial emporium can even raise from two to three hundred thousand dollars yearly for internal improvement—look at these facts, consider that eighteen years have passed away without a direct tax by the state government, and then look at this call for the encouragement of agricul-

ture—this thirty thousand dollars, this sum that is even less than the sixteenth part of our income! Was the state of New-York poor and exhausted, this demand for a trifling patronage would not be asked; but we have had the assurance of Governor CLINTON,* that after all the expenses of government should be defrayed on the most liberal scale, and our taxes reduced *one half*, that there would then remain, $300,000 to be appropriated to purposes of public improvement. What prefers a stronger claim to patronage than Agriculture? Let an enlightened and reflecting legislature answer!

But to conclude on this point, where argument is not requisite—we merely ask, whether we solicit an annual appropriation, as a perpetual drain upon our treasury, without a returning equivalent? Every dollar judiciously expended by an Agricultural Board would yield an abundant return in the immediate rise of our real estate. Our products would increase, their nature and qualities be vastly changed, our labor become far more productive, our live stock be improved beyond calculation, and a spirit of emulation and enterprize awakened throughout our state, whose efforts and example would be felt to the limits of the American Union, whose fruits would reach, through the medium of our wide-spread commerce, the boundaries of the globe.

Admitting that a Board of Agriculture is established in this state; that the Legislature, with a becoming spirit and magnanimity, digest a plan and organize a society, the principles of whose constitution are fraught with wisdom and discretion; that selfishness and personal ambition are crushed with scorn and indignation, party animosity lost in a glow of enthusiasm and unanimity to serve the people, and a stand taken to promote the agricultural interests of the state of New-York, that deserves the most unqualified praise and respect throughout the American community—under these

* See his Inaugural Address, and also his last Speech to the Legislature.

circumstances, let us glance at the probable duties of such a board and the effects which must be produced by their discharge.

A complete knowledge of the Agricultural resources of the state would naturally follow. The temperature and variations of our climate, with its effects on the productions of the earth, the various characteristics of our soil, and the products best adapted to its different kinds, would occupy an early notice. But little attention has yet been paid, by any systematic efforts, to the different departments of our natural history. It is time that our mineralogical kingdom was explored and its treasures opened to the world; it is time that our geology was examined with minute attention and ample maps made of new and old discoveries; and our vegetable and animal kingdoms present a wide theatre for curiosity and investigation. These branches of natural history will hereafter exhibit a more intimate alliance with agriculture than we may now imagine. It would be politic for the board to open an extensive cabinet for the deposit and preservation of the specimens and examples of mineralogy, geology and botany, which time and industry should bring together. Such a cabinet* would not only afford an extensive and satisfactory knowledge of the natural history of our state, but would in all probability, greatly advance the natural science of the nation, by becoming the repository of similar specimens from every section of the United States, in exchange for many which the board could distribute. Under the directions of this institution, we could not only ascertain the qualities of our soil, but the amount of our annual productions, the extent of our home consumption, the yearly increase of our population, and the improvements of domestic industry in general could easily be combined in the scope of their efforts. Governor Clinton in his late speech has very judiciously suggested that this Board should be empowered to make a statistical

* See Dr. Mitchill's letter, which follows.

survey of the state and extend their attention to the various subjects here noticed.

As the application of science to the pursuits of agriculture has engrossed the attention and patronage of the most distinguished modern economists, and the most distinguished agricultural nations in Europe, the Board of Agriculture in this state will perceive the importance of creating a professorship of agriculture, and the necessity of having regular and extensive courses of lectures on agricultural chemistry. Speaking of agricultural professorship, Mr. Sinclair observes —"It is not many years ago, since, at the expense of a private individual, (the late Sir William Pulteny) a professorship was established at Edinburgh, for reading lectures on the art of agriculture. The utility of such an institution is so evident, that it ought to be extended to all the other universities. The attention of young men, by such establishments, would be directed early to this most useful of all the branches of knowledge. If they inherit landed property, agriculture is the topic to which their views should be particularly directed; and as there is scarcely any profession, which will preclude them from spending some part of their time in the country, if after having accumulated a fortune, they become proprietors of land, their having early acquired such knowledge, would be a source of much gratification and advantage." But such a course of lectures would not be confined to the rising generation; their benefits would immediately reach the farming interests and cultivators of the soil, who now sow and reap the harvest. The light disseminated would be extended to all parts of the state through appropriate channels. Connected with such lectures, we might expect the adoption of an ample system of scientific experiments, to ascertain the specific qualities and composition of our various soils and subsoils, the nature and richness of our minerals, the fructifying qualities of our natural manures and the artificial composts which might be called to our aid to enrich and fertilize the earth.

The utility of experimental farms has been well tested in Germany and in other quarters of Europe. It cannot be expected that the cultivators of our soil can afford to set apart a certain portion of their lands for purposes of experiment, at the hazard of loosing the amount of the ground rent, their labour, their time, and the money expended in the attempt; and yet experiment has proved, and ever will prove, the soul of useful science. Should the Board of Agriculture have small experimental farms, or certain pieces of land appropriated to the growing of this or that particular kind of produce, marking the distinctions between different kinds of soil, and the manner and practice of cultivation best adapted to general utility, leave these farms open to public observation, have the course and various operations of the experiments, published to the community at large—introduce on these farms seeds, plants, fruits, and all kinds of valuable vegetables from foreign countries likely to flourish and prove of value and importance—not a solitary doubt can exist of our realizing the most solid and vital advantages from this course of policy. It has been by such expedients that other nations have done so much for great subsistence from small and limited means.

The introduction of useful agricultural productions from foreign climates, conducive to our comfort and wealth, will claim the attention of this Board. Various species of grain could, doubtless, be found that would prove congenial to our soil, yield a more abundant harvest from the same quantity of land, and still possess an increased intrinsic value.* Our soil will be found to yield many valuable productions now strangers to our granaries and our tables, when the proper test is applied. It is not for individuals to do this. Experience, labor, expense, perseverence and much disappoint-

* Gurdon S. Mumford, esq. of this city, about two years since, accidently met with a small quantity of a peculiar kind of wheat on board a vessel from the Mediterranean, which has proved to be an invaluable acquisition to the country

ment must attend the efforts to increase these blessings. In the article of fruit in particular, our lands would prove susceptible of great change and improvement.

Under the auspices of this institution, we might consistently expect great improvements in the construction of all important implements of husbandry. Inventions in labor-saving machinery have been much attended to within the few last years; but the study of acute and enterprising men has been more particularly turned to labor-saving machines in our manufactories. The same economy could, to no inconsiderable extent, be applied to the cultivation of the earth and the farmer partially relieved, in many instances, from that tedious and formidable application of physical force and exertion which now attends his occupation. But it requires a liberal and permanent patronage to great mechanical projectors under the attention of some enlightened public power, to effect this end.

Another duty which would naturally fall to the provision of a Board of Agriculture, would be the judicious distribution of premiums and rewards to individuals and the county societies, as suitable acknowledgments of merit and excellence. The most abundant crops from a given portion of soil, produced at a specified expense, as well as extraordinary success in the raising of useful domestic animals, would be entitled to something more than verbal indications of approbation. Whatever should be found of great and stable utility in the agricultural department would deserve the pecuniary attention of the board, so far as to render it an object of pride and competition.*

In other respects, besides the excitement of our pride and emulation with respect to the raising of live stock, we may expect improvements from the Board with regard to the most judicious method of managing domestic animals in the apportionment of their food, the most proper and whol-

* See Judge Hertell's letter which will follow on this subject.

some food to be distributed, the diseases incident to them, their nature and remedy, and the improvement of our present species, by the introduction of animals from foreign countries. The introduction of the merino sheep, and the importation of some peculiar breeds of cattle, especially into the state of Massachusetts, affords a convincing lesson on this head. Veterinary knowledge is becoming a branch of economy of the first appreciation in Great Britain, and deserves much more consideration than it receives, in our own country. While great attention has been paid to cattle and sheep, the noble horse has been too often grossly neglected. Should the Board of Agriculture have lectures occasionally delivered and published on this branch of knowledge, the effect would be highly conducive to our interest. It has been asserted that every pound sterling so expended in England has produced a thousand pounds profit.

The recommendation of all such wholsome and salutary laws and regulations as would favorably affect the interests of agriculture, may naturally be expected to fall within the sphere of duty appertaining to the operations of the society. Possessing every requisite information, the Board would constitute a source of intelligence to which the legislature could appeal with confidence and success. The depressed reputation of our flour in foreign markets, the great staple article of our soil, proves the palpable necessity of some guardian eye to watch over our agricultural concerns. It does not belong to a chamber of commerce, but to a board of agriculture to correct the evil; it must be remedied at the source.

Roads, canals, bridges, harbors and depots, are of primary consequence to the interests of an agricultural community. The great improvements to internal trade which are now opening by the state government, will form the bulwark of an internal intercourse not equalled in the boundaries of any nation; but there must be many minor water channels, many new roads and other internal conveniences, that must

be left to some efficient organ of public power, to point out and recommend to future patronage. What power could more properly do it than the Board of Agriculture?

In the first report of the agricultural board, we might expect a full exposition of all those pernicious errors and customs, that are prejudicial to the most favorable and productive cultivation of our soil. The removal of obstacles would of itself prove a vast facility to our rapid advancement in rural economy. Communities too often progress to improvement under a load of error, sanctioned by the customs of succeeding years and generations, without being sensible of the fetters that shackle their energies. This remark, in a peculiar manner, comes home to the arts of husbandry. As the board of agriculture would have the means of commanding a view of the whole ground at a single glance, much might be expected from their clear and comprehensive perception.

An agricultural library would be an object worthy of attention, consisting of a collection of the most celebrated works on the subject before us, which could be found in this country and in Europe, embracing not only leading productions, but also reports, tracts, essays, periodical works, and philosophical disquisitions. A collection of such works, as they appear in the different quarters of our own country, at the present auspicious era, would embody a mass of information highly useful to the state.

The Board of Agriculture would not fail of giving a combined effect to the exertions of our present agricultural societies in the different counties, and those which will, no doubt, soon be formed. When our forty-nine counties shall have formed their full number of associations, and unite their efforts under the protecting aid and patronage of this great legislative organ, clothed with ample powers to raise up and direct the slumbering energies of the state, may we not confidently look for consequences whose prospective contemplation is sufficient to gladden our vision and give new life and

animation to our exertions? Let not the unreflecting suppose for a moment, that the Board of Agriculture would pretend to dictate to the county associations, or interfere with their measures and proceedings. The county societies will proceed in their own course, and their improvements be blended with the improvements of the Board. Neither is the Board to interfere with the farming interest. It will place light and knowledge under the eyes, and in the pathway of the cultivator to his fields, his gardens, and his orchards; if he rejects this light, and cleaves to habits prejudicial to the welfare of himself and his children, he can do so, without incurring criminal prosecution or contravening penal statutes.

There are many highly respectable men, who imagine that the county societies can do all that is necessary to be done for tillage. Will they indeed go to the expense and labor of discharging the great duties which we have enumerated? Can they afford to encourage the science of agriculture, and trace out the connexion between the laws of nature and the economy of national and individual existence? Will they correspond with foreign nations, institute philosophical experiments, public lectures, extensive surveys, scientific researches and investigations, import domestic animals, and execute all the duties incumbent on a public board? Reason intuitively rejects the supposition.

And, lastly, let us not forget the collection and diffusion of knowledge which must follow the establishment of this great state institution, whose operations, will, in no small degree, partake of a national cast. The advancement of all human knowledge is progressive, more especially where it materially depends on a mass of corroborating facts and the long repetition of experiment. We have before adverted to the depressed condition of agriculture in this state and in the United States. A wide and fertile field is open and unexplored, to any state, to any combination of men, or any delegation of public authority that stands forth and leads the

way; it would be the duty of our institution to publish to the world the results of all our improvements. In the first place, the light imparted by their labours would spread over our own state, over the union at large, and even go beyond the limits of our nation; on the other hand, the organ of the Board would open a correspondence with every agricultural association in our state, with every one in the United States —with every distinguished man—and every literary and scientific seminary or society, possessing relative information. The advantages of such an intercourse would be reciprocal. By this means, the agricultural resources of the nation would, in a great measure, be developed; and we should go further than this: a correspondence of moment and interest would be opened with all quarters of the world. Throughout Europe, learned universities, philosophical associations, agricultural institutions, learned men, economists, philosophers and statesmen, would pour a flood of knowledge into the new world, and the state of New-York form the great medium of its diffusion. It would be an honor, left to our own state, to reciprocate these favours. Our contiguity to the ocean—our commerce to the four quarters of the globe would enable us to do it with ease and celerity. This would render the reports of our board luminous and interesting to the general welfare of mankind and tributary to the improvements of the era in which we exist. Our country is daily exciting more interest among the learned of Europe, and in many places in South America, science would send forth her luminaries and give us light, was there a kindred star with whose radiance their beams could mingle and expand.*

The effects of an agricultural Board scarcely need to be numbered here. They would be found in the general melioration of our soil, the increased value of our real estate, and the consequent increase of wealth, population, and pow-

* See Dr. Mitchill's letter which will follow; and, also, the last No. of the Edinburgh Review.

er. The cultivation of the earth would be rendered more fashionable—the learned professions less crowded, and a favorable bias given to the minds and inclinations of the rising generation. It would increase our exports—lessen our imports—strengthen our independence, and enlarge the number of our domestic comforts. It would bring out the resources of the state—give us a knowledge of the various branches of our natural history—advance the arts and sciences—bring neglected talents into notice from among the cultivators of the soil, and give a more salutary effect and influence to the county associations. The race of our domestic animals would be improved, and new and valuable productions introduced among us. Its establishment would present a grand and leading pattern to the other states of the union, and like the great western canal, be admired and followed. And, lastly, it would stand a proud column, to sustain the noble political fabric, beneath whose dome millions and tens of millions are hereafter to grow up, flourish, and be happy.

Under all considerations—under the commanding dictates which impel to action and liberality, can the representative organ of the people, entrusted with the exercise of their rights and the control of their resources for purposes of general utility, refrain from extending a protecting patronage to our agricultural prosperity? The members of our legislature are not called upon to draw a line of political distinction which shall cast the state into the arms of political warfare; they are not called upon to decide on a measure in which the sensations of party or sectional feuds can have any participation; but they are called upon by the loud solicitations of public interest and general good, to found a great and noble institution whose manifold effects will not only gladden and enrich the state and even the nation in their own time, but under the guidance of wisdom and discretion, remain an evidence of legislative greatness, when the epoch in which they live, shall have long been blended with the ages which have rolled on before us. A Board of Agricul-

ture, established on a proper basis, stands high and inaccessible to any passion but a genuine and independent love of country.

It has been left for the state of New-York to arouse the nation to the promotion of internal improvements. It has been left for the state of New-York to bury party distinctions, in the commencement and prosecution of the greatest work of the age—a work, which displays more grandeur of conception and more greatness in execution, than all the public improvements of the different nations of Europe for the last hundred years. And let it be left for the state of New-York to establish a BOARD OF AGRICULTURE, as the first institution of the kind in our country, and thus present another great and illustrious example worthy the imitation of the American states.



[The following letters were addressed to the Corresponding Secretary of the Association for Internal Improvements, a few days since, and are added here as a valuable acquisition. Many useful suggestions will be found in these letters, not particularly enforced or advanced in the foregoing pages.]

## HON. SAMUEL L. MITCHILL'S LETTER.

*New-York, Jan. 10, 1819.*

To Charles G. Haines, Esq.

Dear Sir—Your note of the 6th instant relates to a subject of great importance to the internal improvement of our country, the establishment of a board of agriculture, or, as it might be more properly termed, a board of rural economy.

The governor in his two addresses to the legislature has employed arguments and urged considerations which are conclusive and unanswerable in favor of the measure. In the

enlarged and patriotic view which he has taken of the subject, he has shown that the time is now arrived for founding an institution whose effect, if successful, will be to enhance the value of land, and to encrease the glory of the state.

The meditated establishment is both the indication and the offspring of advanced society. There is but little call or use for it, until man shall have progressed far in civilization. I have no doubt that our social condition is mature for the experiment. It is an important branch of the sovereignty.

Yet, if I was governed by individual or selfish considerations, I scarcely ought to wish success to the undertaking. I should fear that my own importance would be lessened and my province invaded. The board might interfere with my functions and with those of my friends and associates, and deprive us of a part of the consideration we have gained, and continue to enjoy. I will specify my meaning by a few examples. The sovereign power ought to provide for the security of trade ; yet ships destined from foreign places to New-York, had often been run ashore near the Light House at Sandy Hook, when there was no distress of weather, and under mysterious and inexplicable circumstances. Underwriters were obliged to pay for property lost and damaged though this could not compensate for the sufferings by pain and death. It was supposed there must be an error in the estimated height of the adjacent Neversink Hills. Though the port had been frequented by navigators for two centuries and more, their altitude above the oceanic level, had never been ascertained. It was conjectured to be about six hundred feet. Being then a director of an insurance company, I determined to go myself and find their altitude. A company of learned and intelligent friends honored me with their assistance. We found the summit of these famous piles to be considerably less than three hundred feet. The reason immediately appeared why mariners, deceived in the altitude, had been deceived in their supposed distance ; and in full confidence that they were safe in the offing, found to their astonishment,

their vessels thumping on the bottom. Since the publication of this discovery, the line of distinction and the decoy to shipwreck, are removed. This beneficial work ought to have been performed by a board of internal improvement, in whose archives the experiments and calculations should have been deposited.

The sovereign's knowledge ought to extend to all the vegetable productions of the soil. Whether they are lowly as mosses or exalted as pines, it is his business to know them, or to know where to find them. He should direct them to be preserved in herbariums, registered in catalogues, and described in books. Whatever the Almighty has planted in his dominions, is a worthy object of his regard. By the industry and skill of the Lyceum, the plants growing within fifty miles of New-York city, have been carefully gathered and botanically examined. A scientific list of them is almost ready for the reading world. This honorable labor ought to have been executed by the board in whose museum the specimens and their specific marks should be kept for the information of all curious enquirers. But it will be theirs to continue and complete the undertaking.

The mind of the sovereign ought to contain intelligence of the constitution and quality of the soil in his dominions. From the rock that has resisted from the beginning the assaults of time, down to the dust that is blown about by the blast, every thing has its importance; all are parts of the estate granted to him by his Creator; and if that care is bestowed upon property which its importance demands from a wise and dignified government, measures will be adopted for preparing here a set of tables like those in Mexico, where all minerals are systematically arranged with the places in which they are found. My own exertions, aided by the kind and generous spirit of my fellow-citizens, has enabled me to collect a valuable cabinet of mineralogy and geology, which is rapidly increasing. The day is approaching when the geognostic character of an estate will be deemed a mat-

ter of consequence to the purchaser, as well as the geometrical boundaries and the integrity of title. He will not be satisfied until he knows on which of the great geological formations of the globe his plantation is situated, and whether slate, granite, sand-rock, limestone, clay, iron ore, gypsum, marle, coal, black mould, sand, or any other mineral articles, predominate in his fields.

Here would be great scope for the proposed board, if the business had not already been in a great degree accomplished. They may, nevertheless, begin anew, and collect a sample of every important mineral and fossil from mountain, plain, and mine, and place it in their museum. This will be a commencement at the right end. This will be working to the purpose. The political economist, the practical farmer, and the inquisitive traveller may alike see in a few hours every rare and valuable production of the state, whether earthy, metallic, saline, inflammable, or organic, and of the adjacent regions. The sovereign ought to possess a good idea of the configuration of his dominions. I, therefore, cannot omit the mention of another subject of internal improvement, that lies just finished before me. It is a profile of the country, from the margin of the ocean, at Long Branch in New-Jersey, on a line nearly north, exhibiting the hills of Monmouth county and Staten Island, the Promontory of Hoboken, the Pallisado rocks, along the right bank of the Hudson, the Highland chain, and the country extending towards the base of the Catskill mountains, with their respective heights and distances, and their geological constitution and character. This beautiful and instructive piece of physical geography is the result of individual efforts, long, and at length successfully applied. The performance lies in my port folio, as a document to illustrate my public course of natural history in the university; but it is a model worthy of the imitation and inspection of scientific men. Such surveys and delineations of select sections of the country would be distinguished both by utility and splendor. I shall

enumerate no more of the domestic functions of such a board. Their number would fill an epistle of greater length than I have an inclination to write. I must, however, notice the relation of such a society to foreign places and persons, and the honorable and excellent tendency of agricultural communications with foreign parts. The illustrations are derived from my personal condition in life, and the occurrences are of a recent date. Certain ingenious and enterprising friends pitched upon me as the organ of communication with the mighty Czar of the north. The President of the United States and the Russian Minister sanctioned my request to send a plough to Alexander, by the public ship which carried our minister plenipotentiary to St. Petersburgh. Two of Wood's Freeborn utensils were forwarded, by the way of Boston, in the frigate Guerriere—one for the emperor's cabinet, and one for his field. The former, I believe, surpassed in symmetry and elegance every thing heretofore constructed in the form of a plough. Judge of it when you are informed, that the mould board of this imperial offering was polished like a mirror. This act would have dignified a board of agriculture.

From the Botanical Garden of Antwerp, in the kingdom of the Netherlands, have arrived seeds of the most useful plants for the kitchen garden, in extensive variety and excellent preservation. Distribution has been made of parcels of this precious consignment to several of my agricultural friends. Many articles remain in my possession for future distribution. A board ought to have possessed such a box of articles. They might, thereby, have been sent to all parts of the commonwealth. But as it is, the particular friends and visitants of an individual, share the seeds thus cast upon our lands.

A few weeks ago, the messenger who brought my dispatches from Peru, delivered in addition to the fleeces of the American camels, and the silver ores of Pesco, a collection of garden seeds, among which were varieties of the bean di-

riet from Lima. There being no board of agriculture, I sent them to the association in Queens county for culture. The board of *Georgophilists* in Tuscany, courts a communication of sentiments, and a reciprocity of intercourse, upon the cultivation of the earth and upon husbandry generally. It is a proud event, that Florence, the emporium of taste and the mistress of the arts, extends the hand of invitation and fellowship to New-York. There ought to be a society to reply to such a communication as I received; but in the absence of such a public body, I perform the service, and enjoy the pleasure alone.

It deserves to be known to our state and nation, that the actual government of France is incessantly on the watch to procure specimens of the natural productions of North America, to furnish and enrich the Royal Museums of Paris. The enterprising and diligent minister, in concert with the Academy of Sciences, and in furtherance of the views of his government, is, by his agents, perpetually employed in exploring our country, and in transmitting across the ocean the articles he procures; if I am not much mistaken, the metropolis of France will soon possess a better collection of Fredish productions, than any place in the United States. Why can there not be a similar house of science at home? A just regard for ourselves, would certainly lead us to acquire a better knowledge of the country we inhabit than is possessed by any other people. My communications with men of the highest intelligence, have long since satisfied me of the zeal with which quadrupeds, birds, organic remains, and every thing is procured and exported.

After these disclosures, a very few out of a great many, I frankly confess to you, after all, that I am willing to transfer my share in the transactions to a public institution, as soon as the Board which you and his excellency contemplate, shall be constituted. At Albany, the seat and centre of useful works and important operations, a great thoroughfare from east, west, north, and south, might be the office for the receipt and distribution of all manner of useful intelligence,

concerning land and its improvement, concerning labor and its reward, concerning produce and its consumption, concerning the introduction of new plants and animals, of new modes of culture and employ, and finally concerning a beneficial intercourse with all agricultural societies within the state, and similar institutions beyond its limits.

The difficulties which present themselves to me, in organizing an institution surpassing for such a people as we are, every thing done by Octavius the august, Leo the Tenth, Louis the Fourteenth, arise from the following sources:

1. The danger of making it a political machine, to provide places for that class of expectants who demand rewards for alleged sacrifices and services. Should this be the case, it is easy to foresee, that the great objects will be frustrated.

2. The danger of rendering it abortive from frequent changes of men who administer its affairs. The love of change and rotation, which has ruined the discipline of our state prison, and the character of our flour, will if indulged, be equally pernicious to a Board of Agriculture. Qualified and capable members should not be capriciously removed. Curators and secretaries, ought invariably to hold their offices during good behaviour.

3. The danger of impairing its usefulness, through envy and jealousy among its members. This however will not probably be greater than in other cases where several persons are associated to do public business. Should feelings of such kind exist, a sense of duty, and even of interest, may overcome them.

4. The danger of its failing through the apprehension of great funds to endow the society in the first instance, and of large appropriations to support it afterward. My own opinion is, that it will be endowed at once; with the Governor of the state for a visiter, to examine how far the trust is observed or violated.

5. The danger of miscarriage, from the indifference or laziness of the members. There will be so much employ-

ment for a long time to come, that there can be no pretence for languor or inaction. I should suppose the daily arrival of letters, messengers, natural specimens, models of tools and utensils, books, plans, drawings, and the numberless other matters which will be brought to such a place, would give them abundant employment. The very answering of queries, the analyzing of articles, the explanation of models, the attendance upon citizens who call to see the museum, and the preparation of abstracts for general information, are serious employments, and require great industry. The branch at the city of New-York, will perform a large proportion of the labor, at least of that part which depends upon navigation coastwise, and to foreign countries.

6. The danger arising from an opposition to the plan, by the farmers themselves. It seems hitherto to have been suspected that the establishment of a Board of Agriculture was an admission that farmers did not understand their own affairs, and were not to be permitted to manage them in their own way. This is totally a mistaken idea. There is no intention to control farmers in the direction of their concerns. But it is meditated to afford them every species of information which the Board can collect, relative to new and improved modes of tillage, new varieties of grain, new utensils and implements, with the most complete intelligence which can be procured about land, labor, produce, statistics, botany, mineralogy, soils, manures, and the associated subjects. In short, the Board is expected to perform services highly important to the public interest and honor, which are not provided for by colleges or schools of any kind, or in any other way. And I think their magnitude, number, and nature eminently worthy of investigation by a society for internal improvement, countenanced by the legislature,

I have the pleasure to assure you of my high esteem and regard.

SAML. L. MITCHILL.

## JUDGE HERTELL'S LETTER.

To Charles G. Haines, Esq, Corresponding Secretary of the New-York Association for the Promotion of Internal Improvement.

Sir—In a conversation I recently had with a friend on the subject of Agriculture, he expressed an opinion that some ideas which I suggested might be worth a public communication, and requested me for that purpose to note them in writing. This I shall attempt—and although it may be thought, from the subject of my remarks, that they ought to be addressed immediately to the Agricultural Societies, I have concluded that their direction to an "*Association for the Promotion of Internal Improvement*" would not be exceptionable. Though that "association has particularly for its object the acquisition and diffusion of all useful intelligence connected with the inland trade and navigation of the country," yet it is entitled an "*Association for the Promotion of Internal Improvements*," and it would savor strongly of incongruity with such a title should it withold its endeavors to *promote the improvement of Agriculture*. It is from the *earth* the wealth of nations flows. To *improve* the *means, encourage* and *direct* the *industry* by which that wealth is drawn forth and realized, falls strictly within the terms "*promotion of internal improvements*," and is intimately, it not inseparably, connected with the professed objects of your association. Indeed, how more efficiently could the interests of inland trade and navigation be subserved, than (by promoting the improvement of agriculture) to *increase the articles of trade and transportation?* And how more effectually could your association promote the interests of agriculture, than by uniting their influence with that of other bodies of their fellow-citizens, to induce the government *to put its hand to the plough*. That the establishment of a *Board of Agriculture* would be productive of salutary results, the experience of other nations bears conclusive tes-

timony. That the Legislature will on this subject be found to be the faithful representatives of the feelings and wishes of their constituents, we are hardly permitted to doubt. It would be next to a libel on their wisdom and patriotism, to suppose that while they extend a fostering hand to commerce, manufactures and various departments of the arts and sciences, they should refuse to encourage and protect agriculture; the original source from which these, or the aliment on which they subsist, are derived. After having extended legislative protection to the interest of a number of minor bodies of their constituents, it would argue a great want of consideration to neglect the particular interests of far the largest portion of the great mass of the community.

My view of the nature and objects of the association, whose organ you are, leads me to the conclusion, that not only the interests of agriculture and inland trade and navigation, but also the *promotion* of the *improvement* and *melioration* generally of the condition of mankind, will, as it ought, be found among the objects of its solicitude and attention —and that any measures which may tend to the attainment of these ends will meet its cordial approbation and receive its active support.

Permit me in the first place, though it is not very important, to remark, that the word *agriculture* is derived from the Latin word *agricultura*, which is compounded of the two Latin words *ager*, or its genitive *agri*, a field, land, ground, and the word *cultura*, culture, tillage. Hence, the English word *agriculture*, which signifies the cultivation or tillage of *land*; you will probably smile and say, every one knew this before. True, but then every body don't act or talk as if it was known to them. My authority for this remark is this, that from all I have seen published of the proceedings of agricultural societies, and from most private conversations I hear, on (what is called) the subject of agriculture, the attention is directed more to the improvement of the breed of cattle and the manufacturing of cloth, &c. than the *cultiva-*

*tion of land.* Making cloth is *manufacturing*, and the raising of cattle and improving the breed is no more *agriculture* than the raising of poultry is such. These are useful and necessary branches of rural economy. They are among the beneficial results of *agriculture*, and ought to be encouraged and improved with it—but they should not constitute the main or leading object of societies established to acquire and diffuse a knowledge of agricultural science.

The *science of agriculture is a knowledge of the means of tilling land*, and the *perfection of that science is the knowledge of the means of raising, on a given quantity of land, the greatest quantity and the best quality of any particular kind of food or other produce for animal subsistence or comfort, at the least expense, in time, labor and money.* This definition necessarily implies a knowledge of the constituent parts of the soil intended for tillage—the nature and quality of the seed intended to be sown, together with the mode best adapted to its cultivation. How else can a farmer ascertain whether or not the land is congenial to the nature of the seed intended to be sown? How else can he tell wherein the deficiency consists, or how to supply the defect? It will not be denied that a lamentable lack of information on these subjects is too prevalent among our husbandmen. To remedy which it ought to be among the first objects of agricultural institutions to acquire and disseminate a knowledge of these primary principles of agricultural science. The best means of doing this may not promptly occur. Among others which may be adopted for that purpose, it would be well that the constitution and laws of the societies should provide for the delivery by some intelligent member, or other competent character, annually or oftener, of a discourse embracing these and other matters connected with the subject. Or, perhaps, it may be thought better to award a premium to the author of the best and most useful essay on the subject of agriculture, or any branch of rural economy connected with it. The premium ought to be such as to elicit respecta-

ble, if not first rate talents. The funds of the societies, probably, could not be more beneficially appropriated.

The principle on which the premiums have been awarded by some, if not all the societies, now in being, is very objectionable, inasmuch as it does not offer an equal chance to the competitors. If I am correctly advised, he who produces the best article of the description for which a premium is offered, is entitled to the premium, *without any regard being had to the time, labor, or expense attending its production or improvement.* Hence, if a wealthy farmer shall, at great expense, produce the best article for which a premium is offered, he obtains the premium. Now, certainly, the interest of no branch of rural economy can be subserved by such a procedure. The farmer whose prudence may be greater or whose pecuniary ability less, stands not an equal chance with such a competitor. Would it not be more beneficial, as well as more just, that an account of the *time, labor, and expense* of making this piece of cloth, or rearing or improving that animal, should first be ascertained, and the premium awarded to him whose *mode of procedure shall be deemed most beneficial to the interests of the farmer* and consequently *most worthy of adoption?* Of what possible use is it to the community, that an animal is reared or improved—or an article manufactured at an expense which could not be refunded by the proceeds of the sale of the article itself, with the addition of the premium into the bargain? The candidate for the premium is a wealthy man, able and willing to make a sacrifice for the gratification of his pride and ambition: but his example ought not to be followed by the great body of farmers, because it is unprofitable and if pursued would be ruinous. Such a candidate should not receive a premium—to award it to him would be wrong, inasmuch as his example tends to the injury rather than the interest of rural economy.

The same reasoning applies to, and the same principle ought to govern the distribution of premiums for agricultu-

ral improvements; and these should be given to him *who shall, with the least labor and expense, raise on a given quantity of land, the greatest quantity and the best quality of any description of food, or other produce for animal subsistence or comfort*; for which a premium may be offered. In this case, particular regard being had, not only to the *quantity* and *quality* produced, but also to the *labor* and *expense* of *cultivation, the premium should be given to him, the value of whose crop should be greatest and best in proportion to the labor and expense, and whose mode of culture,* (which should also be a subject of inquiry) *should be deemed best because most profitable, and of course most worthy of general adoption.* Hence the farmer who should set apart a small piece of ground and till it at an expense which would make his manner of culture not worth imitation, would stand no chance of obtaining a premium—and for this plain reason, he has done nothing which tends to promote the interest and improvement of agriculture.

The encouragement of rural industry by rewarding distinguished instances of it with a premium, is well worthy of attention; and should, if possible, be carried into execution. And although the means to effect this purpose, unattended with difficulties may not readily occur, the object should not be relinquished as unattainable without some energetic attempts to accomplish it.

I have often wondered, that while the agricultural societies have evinced such a laudable zeal for the improvement of the breed of cattle, they should in no instance, or at least none that has fallen under my observation, manifest the least solicitude for the *improvement of the race of Farmers.* Here is a wide uncultivated field for the exercise of philanthropy—and it is to be regretted that it has so long remained unoccupied. I have no difficulty in believing, that a large and respectable body of yeomanry will concur with me in the position, that for the last twenty or thirty years, great numbers of their brethren have degenerated more

than the cattle to their fields. The principal cause of this is the *intemperate use of intoxicating liquors*. A reference to the score of village taverns, and the inspection of the book of the country grog-shop, usually disguised with the title of *merchant-store*, will dissipate every doubt which may arise of the truth of the above statement. It is at the bar-room of the former, and the tap-room of the latter, we may learn, why so many almost penniless farms are encumbered with bushes, briers, and debts—and why so many discreet, industrious, spirit broken women are obliged single handed to drive and drudge in poverty and wretchedness, to alleviate the miseries of a numerous family of half naked children whose minds are as rude and uncultivated as the hedge-rows of the half tilled farm on which they suffer. It is next to folly to attempt to improve agriculture and the breed of cattle without a simultaneous effort to correct the extended and extending evil, which wherever it exists even the hope of any improvement is forbidden. To endeavor to repress it should be one of the objects of Agricultural Institutions; an object not to be abandoned, while sobriety and industry are ranked among the virtues, or the practice of morality deemed essential to human felicity.

I have no expectation that these societies alone can eradicate the evil under consideration—but their influence properly directed and sedulously exerted, may operate to check its progress, and hence in some measure lessen it; at least the attempt ought to be made, and with that view the societies ought, in every stage of their proceedings, to manifest a marked contempt for that degrading vice. Among other means which may be pursued for the attainment of the end proposed, it would be proper that the constitution and laws of the respective societies should exclude intemperate characters from becoming members, and provide for their expulsion should they become so after being admitted. In furtherance of the object in view, the meetings of the societies, should not be held at taverns; and the annual exhibitions

or shows should be located as far from the vicinity of a tavern or grog-shop as circumstances will admit. Tents, booths marquees, and refreshments, for the accommodation and convenience of the company, might be provided: but intoxicating liquors of every description peremptorily interdicted. Peace officers should be employed to prevent the violation of this and other salutary regulations, and particularly to remove from the show ground every person who should appear on it in a state of inebriety.

It would be highly meritorious for the societies to use their influence to explode the baneful practice of giving ardent liquors to laborers. Should this be effected at the expense of additional wages upon the condition that the laborer should forego the use of such drink while in the service of his employer, the arrangement would be mutually beneficial:* and it would tend to facilitate its accomplishment. If to him who may obtain a premium, an additional gratuity should be awarded, provided it should appear, that in the management of his farm he has excluded the use of spirituous liquors. I the last season witnessed on a farm the use of spruce beer (brewed in the family) as a substitute for ardent spirits, and that too without consulting the laborers on the subject, who notwithstanding they were accustomed to the use of the latter, appeared not only reconciled to, but pleased with the change. Although the unrestrained use of the beer was permitted, the advantage in several respects was so manifest, that the employer felt no interest and took no trouble to ascertain whether or not the first cost of the beer was greater or less than that of the rum. The little reflection bestowed on the subject, led to a belief that the difference of expense,

* The employers of every description of laborers in the city as well as country, would promote their own interest, and aid the cause of morality by making such a condition a part of every contract for services which are intended to continue for a length of time. The proprietors of new buildings would not be among the number of those least benefitted by such a measure.

if any, was very trifling. It would reflect much credit on the societies should they endeavor to discover and recommend for general use the best substitute for ardent spirits, as a field and table beverage.

After adopting these or other measures having the like tendency, the continuation of the practice of going from the show ground to taverns, and eating sumptuous dinners and drinking a profusion of liquors, *in honor of the occasion*, would exhibit something more than the mere *air* of inconsistency. Were the effects of this practice as innocent as the motive which induces it, it would not be objectionable; but that is not the case; it leads many to the tavern who perhaps otherwise would not go. It offers the opportunity, and with it, the inducement to indulge too freely; and *the occasion* is often plead and admitted as an apology for breaking the guard to moderation. Besides, its influence as an example of extravagance is not harmless; some worthy farmers, who may feel themselves neither able nor willing to meet the extra expense of such entertainments will possibly be induced to absent themselves from the annual exhibitions, lest by being present and not partaking of the feast, their prudence might be mistaken for meanness, and their frugality for niggardness. For these reasons I would hope that the societies in future would either omit these feasts, or exclude inebriating drink from the rural repast. A part of the expense thus saved, could be applied towards purchasing an Agricultural Library for the use of the societies, or appropriated to defray the expense in publishing occasionally some learned and useful tract on the subject of Agriculture, or other branch of rural economy.

A growing disposition is manifested among many of our farmers, to adopt the fashionable follies which too much prevail in our large commercial cities. The habits of extravagance to which this gives rise, are not among the least of the causes which lead to the impoverishment of many. It is this which occasions them, rather than to deviate a step from

the line of fashion, to substitute foreign clothing for that of their own domestic manufacture—and this not only at extra cost, but frequently at the expense of ruinous debts. The societies should endeavor to correct this error. Indeed if I mistake not, some of them do require their members to be clad, particularly at their meetings, in American fabrics. The example should be followed by all the societies; and it would tend to advance the object, if each candidate for a premium should receive some honorable testimony of the approbation of the society, if he shall be clothed in cloth *manufactured in his own family.* It would operate as a powerful auxiliary, could the ladies be influenced to form societies for the encouragement and improvement of those branches which appertain more immediately to the female department of domestic and rural economy. What a proud spectacle for the eye of the patriot—what a prolific source of felicitation to the soul of the philanthropist—to behold their fair country women emulating each other in useful occupations. Richly arrayed in the improved fabrics of their own hands, and subsisting on the wholesome fruits of their own industry! It could not then be said of them, as lamentably it may of too many of our city belles, that "they toil not, neither do they spin, yet Solomon in all his glory was not arrayed like one of these,"—who are maintained in idleness and extravagance by the labors of others.

But I must stop—I have already occupied more ground than I intended, and perhaps have talked too much. If, however, it has happened that I have started a solitary idea worth pursuing, and which had not before occurred to you. I shall count the time well spent, which has been appropriated to this communication.

With much and due respect,
I have the honor to be, sir,
yours, &c.
THOS. HERTELL.

*New-York, January 4, 1819.*

## MR. EDDY'S LETTER.

### To Mr. Charles G. Haines.

Respected Friend,

The establishment of Agricultural Societies throughout this state, on the plan recommended by the Governor, in his speech to the legislature, appears to me to be fraught with much wisdom, and cannot fail of producing the most happy effects. It is well known, that the Societies already formed have produced great good, by stimulating emulation, and diffusing information amongst our farmers, and there can be no doubt, but that as they are encreased, they will further produce extensive and innumerable blessings.

A Board of Agriculture should be intent on the institution of lectureships on the various branches of rural economy; scientific and experienced agriculturists should have the management of "PATTERN FARMS," in different parts of the state, where lectures might be illustrated by an intelligent, *practical* farmer, and where the student might be engaged with his head and his hands; and thus be fairly initiated into the theory and *practice* of whatever relates to rural and domestic economy. The Board might also render important services to the state and country, by offering handsome premiums for discoveries of useful or valuable minerals; the premium to be proportioned according to the value and probable quantity of the mineral. This would tend greatly to develope our resources, and to elicit a spirit of useful enterprize. This plan has been productive of important and valuable results in Germany.

Amongst the many important objects, that might demand the attention of Agricultural Societies, it appears to me that there are none which more deserve their attention, than to discourage the use of ardent spirits. Every reflecting person must acknowledge and deplore the many evils produced by this slow and certain poison. It inculcates habits of insubordination, instigates to crime, depraves morals, enervates and weakens both body and mind, and produces idleness, want, and misery. These considerations induce me to believe that Agricultural Societies cannot render more extensive benefits tot he farming interest in the state, than to use their best endeavors to discourage the use of strong spirits amongst laborers and others, that may be employed in their service.

and particularly in harvest time. In several counties in Pennsylvania, as well as in some parts of this state, the farmers do not use any spirits in getting in their harvest. The common practice is, to take into the field about 11 o'clock, some bread and cheese, pye, &c. and drink milk and water, cider, or small beer. Associations are formed in many towns, solely for the purpose of discouraging the use of spiritous liquors, and the first resolution passed is, *that every member of such association will himself abstain entirely from the use of it.* Let then our Agricultural Societies pass similar resolutions, remembering that example is more useful in promoting good morals than precept. Let them also offer handsome premiums to every farmer who will get in his harvest without giving out spirituous liquors; and a larger premium to every farmer who shall have got in his harvest without using strong drink, and who has prohibited the use of it, except as medicine, in his family for one year. Of what use to the farmer are large crops of grain, or the raising of fine cattle, unless sober habits are preserved, and the vile practice of drinking spirituous liquors avoided? Agriculture, with INDUSTRY, is the certain road to prosperity; whereas idleness, want, and misery, are the natural consequences of the use of strong drink. Its extensive and alarming introduction into families, has already proved a blot upon our national character, and an injury to the American name in foreign countries.*

Another plan has occurred to me, which, in my opinion, might be highly useful to our farmers. Let a fund be established in each county, which might be called the "FARMERS' SAVING FUND."—The directors to receive as small

* The following statements are extracted from Seybert's Statistical Annals, founded on official documents. See page 460 to 464:

1st July 1791, to 30th September, 1792, there were in the United 2630 stills, which made from foreign and domestic articles 5,171,584 gallons of spirits.

In 1796, the annual consumption was computed by the secretary of the treasury to be 10,000,000 gallons.

In 1810, the number of stills were 14,191 and 22,977,167 galls. from fruit & grain.
2,827,625 from molasses.

25,804,792 galls. valued at 15,558,040 dls.

After deducting the quantity of foreign spirits exported from what was imported, there remained, 7,833,093

Total, 33,677,042 gallons.

Computed to be about 4 1-4 gallons for each person.

In 1815, there was computed to be 15,000 stills in the United States, which employed a capital of 15,000,000 dollars.

a sum as five dollars, and, at their discretion, purchase public stock, and the depositors to receive an interest of five per cent, to be paid them half yearly; the fund to be open for receiving deposits once in two weeks; the money deposited to be drawn out (when the fund is open) at the pleasure of the depositor; but no interest should be allowed on any sum, unless the same shall have been deposited for six months. *Notes should not be issued, and no discounts made under any pretence whatever.* The directors might be annually appointed by such depositors, who had standing to their credit ——— dls. for ——— months within the year, and the directors should serve gratuitously; all surplus profits of the fund to be divided among all such depositors who should have ——— dls. to their credit for one year.

I cannot now further enlarge, and what has already been said may be considered merely as hints; yet I cannot refrain from adding, that amongst other important advantages that may be produced by the establishment of an Agricultural Board, and the establishment of Agricultural Societies in every county of the state, that they will serve to diffuse in the minds of our young men a taste for the pursuits of husbandry, and teach them the folly of leaving the calm and tranquil scenes of rustic life, for the bustle and great uncertainties of cities and professional pursuits.

It will ever remain true, 'that *cities* rise in splendour and wealth, and moulder into desolation and ruin, as 'agriculture flourishes or declines; and the *country* is either 'a wilderness, a barren and trackless waste, or populous, 'smiling, and plenteous, in proportion to the prosperity and 'success of its husbandry.'

I am with much esteem,
Thy assured friend,
THOMAS EDDY.

*New-York, 1st mo. 15th.* 1819.