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OF THE

STATE OF MAINE,

DURING ITS SESSION

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SENATE..... .....No. 3.

REPORT

OF THE

BOARD OF AGRICULTURE,

ON

AGRICULTURAL SCHOOLS,

AND

A STOCK AND EXPERIMENTAL FARM.

JANUARY 27, 1853.

AUGUSTA:
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1853.

STATE OF MAINE.

The Committee on Agriculture, to which was referred the petition of John Gilman and many others, for the establishment of a State Stock and Experimental Farm; also, an order referring to them so much of the Governor's Message as relates to Agriculture; have had the same under consideration, and ask leave to report that the whole subject be referred to the Board of Agriculture, for their consideration, and they be requested to report to the next Legislature.

E. HOLMES, *Chairman.*

IN HOUSE OF REPRESENTATIVES, April 22, 1852.

Read and accepted. Sent up for concurrence.

E. W. FLAGG, *Clerk.*

IN SENATE, April 23, 1852.

Read and concurred.

A. H. SMALL, *Secretary.*

IN BOARD OF AGRICULTURE, January 19, 1853.

On motion of Mr. Norton of Waldo: Ordered, That the subject of an Agricultural School and Stock Farm, and the several papers relating thereto, referred to this Board by the last Legislature, be referred to a special committee: and Messrs. Norton of Waldo, Fuller of East Somerset, Dane of York, Seavey of Cumberland, and Hall of North Aroostook, were appointed members of said committee.

E. F. CRANE, *President.*

E. HOLMES, *Secretary.*

REPORT.

The Legislature of 1852 assigned the subject of establishing an Agricultural School and a Stock and Pattern Farm to the consideration of the Board of Agriculture. They have deliberately considered these subjects, and would respectfully report.

We regard the study of the science of agriculture of the most essential importance to the profitable management of the farm in all its varied departments. A knowledge of agricultural chemistry enables a farmer to go on with his operations with a degree of assurance and certainty which cannot fail of giving success to whatever he undertakes. The scientific farmer knows the properties of his soil, and whether it is adapted to the growth of the seeds he wishes to put into it. If it is not, he knows exactly what ingredients are deficient, and how the wanting properties can be supplied. A want of this knowledge is one of the greatest embarrassments under which farmers have to labor in the culture of the soil. It is not unfrequently the case that they put seed into the soil that does not contain the necessary elements to produce the full developement and perfect maturity of the plants they wish

to obtain. Cases have occurred where seed has been put into soil the nature of which was totally adverse to that of the plants to be produced. The consequence was an entire failure of the crop. This mode of procedure is one of the reasons why various kinds of roots and grains degenerate and run out, and why our farmers so often get pinched and imperfect vegetables. It is just as inconsistent for a farmer to feed all his animals upon one kind of food, as it is to put every kind of seed into one kind of soil. Sheep and swine are very different in their nature, and require very different food to keep them in a thriving condition, and bring them to the greatest state of perfection they are capable of attaining; although the laws of creation are such that sheep and swine will live if kept upon the same kind of food, and if seed is placed in any kind of soil, even a gravel heap, a plant of some kind will be produced. But the object we wish to attain is to bring every kind of vegetable and animal to the greatest state of perfection to which they can be brought. It is almost universally the case that the better a crop is the more abundant it is; so that the gain by judicious and scientific cultivation, is not only in quality, but also in quantity. A general diffusion of a knowledge of this one principle in agricultural chemistry among the mass of the people, would work a mighty revolution in our present system of culture, and be productive of lasting advantages to the State.

Most of the vegetable crops we raise have been essentially improved by careful and judicious cultivation — by taking them in their original state, and growing in a soil more congenial to them, and where they would be more fully supplied with those elements of nutrition which

their natures require. I will only instance the potato and turnip, which now stand in the front rank among our esculent crops, as food for both men and animals. The former, when first found in Mexico, was a small, hard tuber, of a strong, unpleasant flavor, and unfit for any use whatever. The latter was hard, stringy and almost tasteless. It is hardly conceivable that plants so entirely wanting in the requisite qualities for food, could ever be made to fill so important and so extensive a place in the agricultural productions, not only in our own country, but in nearly every other country on the face of the globe. It demonstrates what may be done by scientific cultivation.

Every other department of business is to a great extent dependent on agriculture. The operations of the merchant and trader must cease if the farmers refuse to send forth their annual supply of products. The fact that three fourths of the population of this State are engaged in agricultural pursuits, will show the importance of that branch of productive industry to us as a people, in a more forcible manner than any argument this Board can use to urge it upon your consideration. The wealth of a country is mainly increased by production and manufacture. Although the greatest portion of the wealth thus created will, in the course of trade, centre in cities and large towns, in a great majority of cases affording the producer but a bare subsistence, it is nevertheless the product of the constant daily toil of the laboring man that builds the stately edifices and supplies the sumptuous boards of the rich merchants and professional men in our country. Railroads may be constructed, cities may be built, extensive plans for improvement projected; but unless there is a corresponding increase in the settlement of our country

towns, and in the agricultural and mechanical operations of our State, the railroad stock will lose its value, the extensive blocks of stores in our cities will become empty, the expectations of our shrewdest calculators will be disappointed, and our now bright prospects will fade and decay. Thus by looking deeply into this matter, we are enabled to see the vast importance of agricultural pursuits to this State, and the necessity of granting to it that encouragement which will not only enable farmers to make it as profitable as any other occupation, but so pleasant and desirable a calling that young men, after having acquired an education, will desire to engage in it, instead of crowding into other professions or other departments of business, or even emigrating to some distant part of the country, where they expect to obtain a more ample remuneration for their services. It is a fact which should not be concealed, that some parts of our State are being depopulated of a large portion of her young and enterprising men — that very portion to which our expectations are justly directed for its future prosperity and success. This spirit of emigration has been excited and is kept in constant progress — not because we have not good land in Maine — not for the want of a climate adapted to the culture of as good a variety of vegetables as any other State — not for want of rich grazing lands on which to raise stock and wool — not because this State is wanting in capabilities equal to those of any other State in the Union. No — but because the means have never been provided for developing the resources with which we are surrounded — because our State Governmeut has never held out inducements which would make this branch of productive industry equal to others, or even equivalent to

the advantage presented by a location in other parts of the country. This condition of things should admonish us that our policy is wrong, that the course we are pursuing, if followed out, will leave us with a large amount of uncultivated and unproductive territory, and empty coffers.

To remedy this evil, our farmers must be elevated; their business must be made to take a higher rank in the scale by which society is graded. It must not be looked down upon as a hardship and a drudgery, as a business fit only for the lowest orders of creation. It is impossible to elevate the condition of any class of individuals, so long as they remain ignorant of the principles on which their business is founded, and while they have to perform all their operations without any fixed rules or principles which will ensure them success. We therefore repeat that we hold it as a matter of the first importance that suitable provisions be made whereby farmers and their children can be instructed, not only in the elementary branches of the science of agriculture, but by means of which they may receive a full, complete and practical knowledge of their business, and by which the teachers of our common district schools can receive such instruction as will enable them to teach the sciences of geology, chemistry, botany, and other necessary branches of science to those that may, from time to time, come under their care.

While we would earnestly impress upon the minds of our legislators, our convictions of the importance and necessity of establishing an Agricultural School, we would, with becoming deference, submit to their wisdom and discretion to decide, whether the condition of the

State treasury will justify them in making the appropriation necessary to carry so desirable an object into effect the present year. But we do most earnestly hope that the great advantages to every portion of our State, by such an outlay, will never be lost sight of by our State government, and that it will be accomplished as soon as it is practicable.

It is a principle well established in theory, and amply demonstrated by much experience, that a man who acquires a knowledge of any science, while he is in the daily application of its principles to the useful business of life, obtains a more minute and perfect knowledge of it, and fixes it more firmly in his mind, and is able to make it more useful, than he can if he completes the whole study without making such application. This is one reason why a farm, on which experiments can be made, should be connected with an Agricultural School. Without this appendage, a School would not be complete, and could not afford an opportunity for a student to obtain a full and thorough knowledge of his business. But a farm may be made to perform a very essential use, without a school attached to it. If, therefore, in the opinion of the Legislature, the finances of the State are not in a condition to warrant them to make an adequate appropriation for both of these objects, we would present some of the reasons which carry a conviction to our minds, that it is a matter of very great importance to the welfare of the agricultural portion of the State that a Pattern and Experimental Farm should be established the present year.

The neat stock, sheep and swine in nearly every section of our State are of a very inferior quality, and need

to be improved by the introduetion of male and female breeders from the best herds in the country. No individual who has the means feels willing to incur the risk. But if a loss should occur, it would be but a trifle to the State, and the improvement in the stock would be an adequate compensation. The great variety of tools in every department of farming, presented for public patronage, is such that a man is not able to decide which is best, until he gives each kind a fair trial. A farm, such as is contemplated by your committee, where the merits of each kind of tool could be tested, and where it could be rejected or recommended, would be of very great advantage, as it might save thousands of individuals from making the same trials separately.

There are a great many kinds of seeds and plants, recommended for cultivation, which are of doubtful utility. Instead of each farmer in the State making an experiment with them, they could be tried upon the Pattern Farm, as in the case of tools, and decided upon as they may deserve.

The same reasons would apply to fruit and fruit trees. Trials could be made with various kinds which are not now raised in this State, which might result favorably, and prove to be a valuable acquisition to our present fruit crops.

It is a fact that farmers are frequently disappointed in the result in applying manure to their crops. Experiments might be made in manufacturing and applying chemical manures, which would be much cheaper than those now in common use, and much more efficient in their operation.

The raising of seeds is another branch which should

be extensively pursued on the Experimental Farm. A large portion of the seeds now kept for sale at the stores are of poor quality, and disappoint the purchaser.

These facts, we presume, are sufficient to present the advantages which such a farm would offer to farmers; and we subjoin a plan for putting the same into operation.

DAVID NORTON,
WARREN FULLER,
NATHAN DANE,
MARCIAN SEAVEY,
WINSLOW HALL. } *Committee.*

IN BOARD OF AGRICULTURE, Jan. 27, 1853.

Read and accepted, and ordered to be communicated to the Legislative Committee on Agriculture, to be by them laid before the Legislature.

E. F. CRANE, *President.*

E. HOLMES, *Secretary.*

PLAN OF A STOCK AND PATTERN FARM.

A Farm to be purchased by the State, containing, as far as practicable, the different varieties of soil, and so located as to be conveniently accessible from the different parts of the State. Also, such animals as may be necessary to perform the labor upon the same.

A suitable person to be appointed to superintend the same, whose duty it shall be to procure, from time to time, and keep upon the farm, the most improved breeds of Neat Stock, Sheep and Swine; all of which should be kept for breeders. And after it shall be asertained what breed or crossings are best adapted to the feed and climate of Maine, those, and those only, should be recommended to the farmers of this State. As a means of introducing them into the different parts of the State, the progeny, after retaining what shall be necessary for the use of the Farm, should be annually distributed, according to such ratio as a Committee composed of a delegate from each Society may from time to time agree upon, among the different Agricultural Societies in the State, and be under the control of their respective Trustees; the Societies paying a reasonable price — not such as they might bring in market, but such as will defray the expense of rearing the same.

The Superintendent also to procure the reputed best varieties of Fruit Trees, Grains, Vegetables, and Seeds, suitable to the soil and climate of this State, and to cultivate the same, in order that it may be ascertained what varieties are preferable, and to distribute from their products to the local Societies, in the same manner as is provided in relation to the breed of animals.

He shall likewise procure the most approved kinds of Agricultural Implements, and make experiments with the same, so far as he may be able, that it may be known which are the most economical and advantageous; and also to try such experiments with crops upon the different soils, as he may have opportunity. And he shall keep a daily journal of his observations and transactions, and make a quar-

terly report of the same to the Secretary of the Board of Agriculture, and also make a summary annual report.

In order to carry this plan into effect, there should be an appropriation by the Legislature, of eight thousand dollars, to be invested according to the schedule of estimates herewith annexed; the whole to be under the direction of the Board of Agriculture.

ESTIMATE OF AMOUNT OF MONIES REQUIRED TO PURCHASE AND ESTABLISH A STATE STOCK AND EXPERIMENTAL FARM.

300 acres of Land, worth say,		$4,000
1 yoke of Oxen,	$100	
2 work Horses,	200	
1 Bull, 3 Cows, Durham,		
1 " 3 " Hereford,	1000	
1 " 3 " Devon,		
1 " 3 " Ayrshire,		
1 Buck, 10 Ewes, Cotswold,		
1 " 10 " Merino,	150	
1 " 10 " South Down,		
1 Boar, 2 Sows, Suffolk,		
1 " 2 " Mackay,	50	1,500
1 " 2 " Middlesex,		
Grains, Grass Seeds, and other products		100
Tools, Implements, Diary apparatus, &c.		200
Wages of Superintendent,	$600	
Journeyman,	250	
Female labor,	100	950
Subsistence for first year,		300
Contingent expenses in locating, incidentals, and reserve fund to meet casualties,		1450
		$8500

STATE OF MAINE.

IN SENATE, February 5, 1853.

ORDERED, That the Secretary of the Senate procure the printing of 1000 copies of the Report of the Board of Agriculture, with the accompanying estimates, for the use of the Legislature.

LOUIS O. COWAN, *Secretary.*