

## FOREST CULTURE ON THE PRAIRIES.

In a thickly-wooded country it is natural that settlers should turn their chief efforts to getting rid of the timber. Only a very small portion of it can be utilized for building and fences; the rest is valuable only for the potash it will produce. This is true of the early settlements. After a while the merchantable timber, the black walnut, where it happens to grow, the pine, the oak, the bird's-eye maple, are worth marketing. At a further stage, such as that which the State of New York has now reached, almost all kinds of hardwood are valuable, not only to produce heat, but for use in manufactures. In a country where the prairies are out of all proportion to the woodlands, large quantities of an opposite kind; instead of tree destruction, which is the law of progress in forest lands, tree planting is a necessity. But there is, nevertheless, a natural reluctance to engage in it. To plant in autumn or spring a crop that will be reaped in the coming summer is what most strongly recommends itself to the farmer. To plant and reap in a few months is the sort of alternation that suits him best. To plant trees which may be years in arriving at maturity, which the planter may never live to see fit for use or the market, offers a too remote chance of compensation for the labor and patience expended, to make planting trees an alluring enterprise. And besides tree growing, which consumes a number of years, raises a question of capital. If a farmer has no capital which he can afford to invest without the hope of a return for a number of years, he cannot go into forest culture, even with a strong inclination to do so.

In such a state of things, forest culture needs special encouragement. Bounties and freedom from taxes have both been tried in the western States. In some cases a fixed sum has been paid for every tree planted; but the temptation to fraud which the premium held out sometimes proved too strong to be resisted. This plan, judged by its results, can scarcely be recommended for adoption. The freeing of timber-planted land from taxes is said to have answered better; but if frauds can be perpetrated under one form of bonus, it is difficult to see why the same evil may not happen under the other. To be sure, a tree planted in the spring might have its absence explained some months after, on the plea that it was dead. Taxes are payable every year, and they would not be likely to be remitted on land which the assessors did not find devoted to forestry. There is, therefore, a reason for preferring the remission of the tax. Whether the remission of the municipal tax, where there is no other, would prove sufficient, is a question. It is clear that though the remission of state and municipal taxes might achieve the object desired, the remission of the municipal tax only might not bring equal success.

Another question should properly precede this: Is it desirable to offer pecuniary encouragement for forest planting on the prairies, in any form? This is an economical question with a political side; and if it be determined in the affirmative, then it is plain that any mode of encouragement to be adopted should be sufficient. And if it be not answered in the affirmative, it would be a waste of time to discuss it. The experience of other countries, notably the United States, not dissimilarly circumstanced, has decided the question in the affirmative; and we think it would be safe to allow that experience to guide us a moderate distance in the direction to which it points.

It will be much if men's minds be imbued with the necessity and the desirability of tree planting in our north-west. Nor should those who could afford to do it wait for bonuses to supply the necessary stimulus to exertion. If the distant hope of bonuses caused men to wait till they could get them, that hope might prove a discouragement instead of an encouragement. Whether it will pay prairie farmers to grow patches of forest, it will assuredly pay them to grow trees for shelter for their cattle.

The effect of forests on climate remains to be considered. The presence of trees is pretty well understood to conduce to rainfall. Treeless lands are sometimes barren, but by no means always. The Rocky Mountains, by their varying configuration, regulate the rainfall in different localities on the eastern slope. They deflect the clouds in particular directions, and leave some

belts of soil barren. If the planting of forests could correct this defect, which is scarcely probable, it would be advisable to plant gradually up to the barren belts first, and then invade them, as a means of giving them the conditions of fertility.

All that anyone can hope to do at present is to attract attention to the subject of tree planting on the prairies. And this it will not be easy to do, since the average prairie farmer in our North-west has his attention so completely engrossed by matters of more immediate interest. If nurserymen would turn their attention to that quarter, something might be done. The kind of trees suitable to be grown there would have to be ascertained. As a rule, a much greater variety than is actually grown for ornamental trees could easily be secured; and though the characteristic vegetation of each region ought to be the chief concern, the attainment of the widest possible variety is undoubtedly desirable. —*Monetary Times.*

## The Value of Lumber.

The *Northwestern Lumberman* can see nothing to indicate why lumber will materially depreciate in value, no matter at what time the period may be placed. It is not reasonable to expect that the great tide of emigration will lessen, so long as this is a Republican Government, and the countries from which the immigrants come are governed by kings and queens. The foreign element will erect houses, barns and fences upon the plains that are now unsettled, and there is no reason to suppose that they will cease to do so until the western prairie States are settled as thickly as Ohio and New York. The demand for building material will increase. In cities other materials will be used largely in place of lumber, as they always have been; but on the whole wooden buildings will be the rule, instead of the exception, long after every person living on the earth to-day shall have gone where, so far as is known, there is no interest taken in buildings built by hands. The future promises no reduction in the cost of production; on the contrary, it is almost absolutely certain that the lumber cut from the logs that will be secured the coming winter will cost more than that now being sold. Provisions and grain will be higher the hauls will be longer, and everywhere stumpage is increasing in value. The boom in pine lands is, of itself, indicative that the days of cheap lumber are numbered, and no inconsiderable proportion of these lands are owned by men who, if necessary, are not only willing, but able to hold them.

Neither the demand nor the supply is an uncertain quantity. The former goes on with a stride that is increased from year to year, and the latter can be figured out with much precision. The ratio of increase of the young timber can be calculated, and the amount of standing timber adapted for commercial purposes is pretty well known. It is unlike the supply of iron and coal in this respect. The beds of the latter may run an unmeasurable distance underground, and in directions least expected, but there is no timber out of sight.

## MACHINES TO DESTROY.

To the Editor of the Scientific American.

You have in your issue of September 3 an article on "Fast Lumber Cutting in the Puget Sound." Yes, it is wonderful how we have progressed in wood cutting and wood working machinery, and we thereby cut up in ten years as much lumber as formerly would have taken one hundred years. We shall soon be in the same fix with all our timber scarcity as you described in an article lately on the black walnut. In fifty years from now, it seems, we can break up all our saw mills and wood working machinery, as there will be no timber to cut unless some one can come to our help and invent a timber growing machine. Are we not a great nation to invent machinery to destroy, so as to turn everything into cash.

G. H. TIMMERMAN.

St. Louis, Mo., September, 1881.

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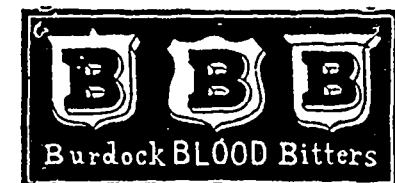
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