THE FOREST TREE

A PAYING INVESTMENT.

BY

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THE FOREST TREE.

The study of Forestry as a factor in the life and civilization of our country, and its effect upon the country itself, is a question that has been sadly neglected. Since time immemorial, the tree has stood in all its silent beauty and grandeur, performing a work which is a daily blessing to every home in the land. Silently, year by year, the tree has done its noble work, yet it has received scarcely a word of praise for its mission of mercy. There has been no intention to slight an inportant subject, but the American mind has been filled too full by other questions. The attention has been given to political, economic, or social topics, more exciting, but less important. In clinging to the back of our own hobby, we often lose sight of the hobbies which other people ride. The politician has the money question for a hobby. In the office, on the street, or at the home, his mind is filled by this one important subject, and his time is given to convincing his friends that the adoption by the government of a single gold standard is the only thing that will keep it from following Rome in the downward steps to oblivion. Another lobbyist will convince you that unless the rum traffic is crushed the country is ruined. It has been the tendency to let the factional rivalry absorb the interests of the people, at the expense of other questions less open to debate.

This has been the position of the forestry question. All who will look at the facts cannot help but see what the tree is doing, and give ear to the lesson it is teaching. Yet the interests have been absorbed in other fields, and without doing anything to stop their progress, the people have stood and heard the woodman's axe and the crash of the falling trees. They have seen the brush accumulate behind the work of destruction, and watched the fire, gaining a start in this

brush, then rapidly spreading in the trees and the flames leaping high in air and painting upon the clouds their picture of desolation, the fury of the fire devastating miles of forest and transforming the scene of beauty to a barren waste.

The people begin to see that by the use or the misuse of the forest-tree they have the power of making our county the home of millions of happy and prosperous people or the transient camping grounds of a few thousand cattle herders. The breath of enthusiasm which is destined to attain an enormous velocity, is beginningto form. The remedy to the existing disease has been prescribed, and the tree is being applied in doses of increasing size to the face of our country.

The sentimental value connected with the forest is one which can not be ignored. One whose eyes are at all open to Nature's beauty, can realize what life would be without these clumps of verdure, delighting the eye, and standing as an inspiration, to make the character, and life as beautiful as the life of nature which surrounds us. By studying the biographies of our greatest men, poets, scientists, and others, we find that the majority of their lives were early spent in the environment of the most beautiful in nature, as shown in her shady forests, with the birds, the brooks, and the verdure that must accompany them. There, in the early years of their lives, these men, entering into sweet communion with Nature received the inspiration that made their after lives tell for so much in the world's civilization. By observing different communities, the sentimental effect is easily seen. One dwelling stands in sharp outline against a background of seared grass. There is not a tree in view. It causes the observer to shudder as he approaches. But the shudder is turned into a chill when the place is entered, and the characters met. He finds people who are cold, austere, dissatisfied and woe-begone. Their looks, voices and actions grate upon the nerves. They are living in discord with nature, and

consequently in discord with man. Contrast this scene with that of a home. The house looks peaceful and quiet in its setting of trees, and shrubs. The birds sing gaily in the tree-tops. The children play happily by the brook in the shade of the elms and oaks, or laugh in glee as they swing beneath the trees. The father of the children meets the visitor with a smile, and greets him with an outstretched hand. Through the beautiful influence of God's tree, the spirit of the Divine is brought to the home.

The actual money value of the forest product amounts to an annual sum of 700,000,000 dollars; being 21,000,000 dollars more than the corn or 226,000,000 dollars more than the wheat product. The saw mills are busy sending out 5000 feet of valuable lumber with every pulsation of the heart. The product is seen in the raising of our houses and barns. Every six years, there are enough rail-road ties used that if placed end to end would circle the earth fifteen times at the equator. The manufacture of wood-pulp is opening up a new industry that is making vast inroads into the forest. The result of this is that the papers and books we read are literally made of wood, and even the railroads have forsaken the mine, and have turned to the forest to se - cure the material to make their car wheels. As we see the demand for wood in commerce increasing, we see the supply in nature rapidly de- creasing.

The studies of the histories of other countries show most emphat- ically what the physical effects of the forest are. Centuries ago, Egypt allowed the wholesale destruction of her forests. Following their disappearance came a change in climate. The rainfall grew less, and more irregular. The agricultural interests suffered. The Sultan recognized the cause, and had the forests restored at government expense. The subsequent history of the country showed the wisdom of the act. The words of Professor Marsh further show the effect in the old world.

He says, "The country along the Mediterranean, from Greece to Gibralter, was once the paradise of the East. It was covered with luxuriant vegetation, in such abundance that it maintained in bygone centuries a population scarcely inferior to the whole Christian world; but the forests have been cut down, causing thousands of square miles of vegetation to disappear. Where once were sparkling streams, are now sterile ravines; what was once great upland lakes, surrounded by luxuriance and verdure, are but little more than dead seas, bordered by sandhills and sun parched rocks. To-day, this once lovely country is entirely withdrawn from human use, and is reduced to a desolation almost as complete as that of the moon." In our own country, there remains but little doubt that the disastrous floods which have been occuring along the Mississippi River so often of late years, would not have occurred had the forests along its course not been removed to such a great extent.

But the question may be asked, "How are these effects produced?" The explanation is comparatively simple. It has not been thoroly demonstrated as yet, that the forest actually increases the annual rainfall, as some claim it does; but its use as a rainfall-regulator is clearly apparent. Rain, falling upon a tract of open land, dashes down upon the surface so as to compact the soil. The rain has hardly commenced before little rivulets are seen, starting to seek a lower level. As the rain continues, these rivulets grow into large streams; they gain force, and begin to carry particles of soil with them, often in the course of a few minutes digging large ravines. As the water pours into the streams, the streams rise, often overflowing their banks, and causing wide spread devastation. In a few hours after, the rain has ceased; the water has all been carried away, and the streams are again flowing at their normal rate; the ground is as hard and dry as it was before the rain, and the myriad rays of the sun are beating out

the life and vegetation, instead of increasing the verdure as it might, had man not robbed it of the forest tree, the means whereby its work is done. Had this treeless tract been interspersed with forest belts, we would have found different conditions. The ground in the forest is more porous than ordinary soil. The roots form conducting channels to lead the water into the ground. The net-work of roots and leaves stop the streams of water from forming and carrying the soil with them. The leaves stop the descent of the rain and prevent packing of the soil. The result is that the greater part of the rain is absorbed by the ground. The destructive floods are prevented, and the water is fed out slowly through springs and by evaporation. The same effect is procured for the snow. In the shade of the forest, the snow melts much slower, and the water is again absorbed.

But the story ends not there. The effect upon temperature has yet to be considered. The sunshine falling upon the forest is more thoroughly absorbed than when falling upon open ground. The great amount of foliage gives a much greater absorbing surface. The porous soil has a greater absorbive tendency, and the moist air takes its part as a heat absorbant. Since the heat is slowly absorbed, they do not become so hot in summer as the open ground, where the burning quality of the sun has been experienced by all. Since they radiate heat slowly, they do not become excessively cold in winter. In this part of the country, where the strong, hot winds cause so much damage, the forest is again a blessing as a wind-break. It is somewhat surprising to see how far a strip of trees will shelter a growing crop or orchard from these damaging winds. This quality makes the tree a necessary adjunct to successful fruit-growing.

We have spoken of the beneficial influence of the trees, and of the evils that are being brought upon the country by their wholesale destruction. According to the best statistics obtainable, we are al-

ready at the door of a lumber famine. Three fourths of the original supply has been removed, and at the present rate of cutting, the last forest tree will fall within the next fifty years. To prevent this timber famine and the climatic evils which come as the forest goes,it is necessary to begin planting trees at once to meet the need.

But the question arises, "Are the individuals to plant trees, to an extensive degree, from purely philanthropic motives, working for the good of mankind and sacrifising their personal interests?" The answer comes emphatically and clearly defined " No". The tree-planter not only performs an act which is a blessing to society and to the country, but he also lines his own pockets with silver for his reward. The trouble arising is that the returns are not immediate. The number of years which the planter must wait to secure his pay, debars the average farmer, who requires each year's crop for his support, from turning his energies extensively in this line. But to the man who has some money to invest and is looking for the best investment, the forest stands as an open door, inviting him to enter.

For illustration, we will take a tract of 200 acres, the product of which is to be used for the owner in his old age or for his heirs. He plants one-half to the ordinary crops,- corn and wheat- and the other half he plants with forest trees. From the farm land, $750 annual profit would be a large estimate. This invested at interest would amount to approximately $42,750 at the end of thirty years. Suppose the other 100 acres is planted ~~is planted~~ to catalpa trees. He gives the contract to a tree planter for $10000. He mortgages his farm. By computing interest at 6%, his indebtedness in fifteen years would be $24000. His 100 acres contained 270,000 trees, of which 200,000 were a success in growth. At the end of 10 years, 50,000 trees may be cut, each tree being good for four or five fence posts at 10¢ a tree. This cutting would value $5000. At the end of fifteen years, 50,000 more

may be removed. At careful estimation, their value would be no less than $20,000. The owner now has $25,000 with which to pay off his mortgage. By estimating the price very low, and then making deductions it can be clearly proven that the actual income would be as much as given. Allow for the cutting of 25,000 trees each five years till the plantation is exhausted. Those cut at the end of 20 years would net $25,000. At the end of 25 years the cutting would net $50,000. The 50,000 trees left standing at the end of 30 years would be worth $150,000. Add up the sums and we find that from the 100 acres of forest, the owner has a net income of $226,000 as standing against the $42,750 netted from the grain. The estimates also being made favoring the grain. In the calculations, the trees were estimated much lower than their actual value.