

## Forest wealth of Canada.

The science of forestry offers both prevention and cure in forest control and reforestation. Reforestation, or restoring land to a tree-growing condition, is expensive and comparatively slow, so that its general adoption upon a large scale in this country is perhaps doubtful. Forest control we can and must institute at once.

The replanting of forests as practised on the barren and valueless mountains of France was fully described in Professor Fernow's paper, and is interesting, as it is quite possible that some modifications of it may yet prove profitable wherever the price of land will warrant tree culture. These mountains being absolutely denuded of all soil, are washed by every rain, the debris covering the farm lands below. The first step is to check the too rapid flow of storm water, by building little dams of wickerwork on the slopes to catch the water, and compel it to flow slowly in a series of pools and tiny waterfalls. In these slack waters, or catch basins, the drift sand gather and forms little plateaus of soil that in a very short time will sustain a growth of small hardy trees. The roots bind and hold the new soil, and in a comparatively short time the barren hillsides are green with infant forests. Where the slopes are steep, and the damage has been great, masonry dams are used, and soil is carried up and put behind the dams to give a foothold to the young trees. Such prepared hillsides at once begin to act as water-holders, restraining floods, and preventing droughts; in fact, restoring forest conditions. Whether this work will pay here is simply a question of the cost of labour, and the value of the land, the water and the lumber crop. It pays some return at once, by preventing further destruction of good land, and by saving the water and controlling the streams. In New Jersey, where water is money, it would undoubtedly be profitable to reforest many square miles of now valueless mountain sides. There can be no question that in time it will repay to reforest barren mountain sides that are in reasonable reach of large cities, because of the value of the water restrained and restored by forest growth. Ultimately, the lumber crop would be added to the water crop.

Concerning the control of forest lands, Professor Fernow's paper was most impressive. We must do it, or some day meet a lumber and water famine, and see our valley farm lands ruined, and our rivers obstructed, and our cities water-starved. Forest control means simply intelligent supervision over the cutting of trees. The farmer and forest land owner claims he has a right to do as he pleases with his own. Such right implies no injury to others. In the case of forest lands, the right to cut down the trees conflicts with the rights of the entire community, and the rights of posterity—and posterity has moral rights, if not legal rights. Fortunately, forest control is not the mere suggestion of science. Forest control is a science itself. Just as in France the science of reforestation is carried on as a function of government, so in Germany forest control is a proper and profitable branch of the general government. Trained foresters, the police of the woods, patrol all forest lands, protect the trees from fire, decide what trees shall be cut each year, and how and when every single tree shall be felled. Poor and undesirable species are culled out, and valuable commercial varieties saved and protected till of merchantable size. Bare hillsides and all cheap or comparatively valueless agricultural lands, are replanted and made to yield a timber crop where no other crop will grow. In this country, State control of forests must come, and come soon; and the public forester must soon stay the hand of the farmer and lumberman. The question is one of vital importance, involving many diverging and apparently conflicting interests. The highest skill and the widest knowledge must be brought by our State legislators to bear on this question of our forests. Forest preservation does not mean shutting up the woods to useless decay and overgrowth. Intelligent forestry means simply control; preservation and protection first, and then the proper and business-like cutting of this, the greatest crop that the soil has ever yielded. As we now stand idle, while the forest fires bring on us a loss of millions every year, and while the unintelligent wood-chopper is permitted to do as he will with what is not truly his own, we are justly charged with being "a barbarous people." "Woodman, spare that tree," was once a sentiment. It is now a command of scientific duty.

Closely allied to the paper by Professor Fernow, were a number of short papers read before the American Forestry Association, that held its sessions during the week of the American Association meetings. The eighteen papers submitted had all, with