of forestry will ensure an adequate supply for all possible future requirements and an extensive system of water storage. To accomplish this it is not necessary to keep these northern forests as locked-up capital, but to dispose of the timber as it matures, and to see that lumbering operations are so conducted as to provide for the natural regeneration of the forest growth. All that is requisite for this purpose is to protect the partially-denuded tracts from fire, and Nature will do the rest; not, perhaps, so quickly or with so commercially judicious a selection of varieties as if aided by the skill of the forester, but successfully nevertheless.

Mr. Southworth, acting on the suggestion of the Commissioner of Crown Lands, requested the Crown timber agents to report on the reproduction of pine in the burned areas, and from the reports sent in it appears that over large tracts of the forest lands young pine is springing up and growing vigorously, which only require protection to become as valuable timber as ever was cut. Alluding to the general ideas concerning the reproduction of white pine, he says:—

"A general impression exists, endorsed to some extent by scientific authority, that something like a natural law of rotation of crops prevails, in accordance with which pine, when removed, is invariably succeeded by deciduous trees. The information comprised in the reports renders it abundantly evident that this is a popular error, due to insufficient consideration of all the conditions in connection with the reproduction of forest vegetation. The fact that the clearance of pine is generally followed by a growth of other varieties is due entirely to the agency of fires and the destruction of pine seeds and the remaining parent trees. In a fire-swept region, where the ravage has been complete or nearly so, the character of the new vegetation depends upon the seeds which are first deposited upon the soil, and hence the varieties having downy or light seed-vessels, which may be borne long distances by the wind, are as a rule those which form the bulk of the second growth. Where pine has been removed, and no fire has taken place, it is invariably succeeded by its own kind, and not until the land has been twice burned over is it so exterminated as to give place to the second growth of inferior varieties. That the contrary opinion has so long prevailed is altogether due to the circumstance that lumbering operations and the influx of settlement upon pine-covered land are so generally followed by repeated fires that second growth of the less valuable deciduous trees is the usual rule.

"Practically all that needs to be done in order to maintain our timber supply in perpetuity and secure all the other advantages accruing from the presence of large forest tracts is to retain in the possession of the Crown all such timbered land as is not well adapted for agriculture, and to protect it adequately from fire. Were this done the apprehension of the exhaustion of our timber resources would no longer be even a remote possibility. Large as the demands upon our forests are, their reproductive capacity, provided the ravages of fire can be suppressed, is many times greater."

The reproductive power of spruce is much greater than that of the white pine, and the forests in Quebec, on the north of the St. Lawrence and in New Brunswick, can be cut over every fifteen or twenty years, and will furnish good sawlogs, and it is to these extensive spruce areas that much of the pulpwood required in the United States in the near future will be derived.