7.—Forest Depletion and Increment.

Fire Losses.—No accurate summing up of damage due to forest fires has ever been made for Canada, but it is quite certain that more than half of our original forest wealth has been destroyed by fire and that more timber has been so destroyed in recent years than has fallen to the axe.

The historic Miramichi fire, in 1825, burned along the valley of the Miramichi river in New Brunswick, and on a belt 80 miles long and 25 miles wide almost every living thing was killed. One hundred and sixty people perished, a thousand head of stock were killed, and a number of towns, including Newcastle, Chatham and Douglastown were destroyed. The damage to the forest was not even estimated. Damage to other property was placed at $300,000.

During more recent times, a series of disastrous fires swept over Northern Ontario. A number of isolated fires around the mining camp of Porcupine culminated on July 11, 1911, in a conflagration which resulted in the loss of 72 lives and property damage estimated at $3,000,000. In 1916, fires in the same general region were responsible for the lives of at least 224 people, the exact number never having been determined. During 1922, a third fire, covering in part the areas burned over by the previous fires, destroyed the town of Haileybury and other centres and caused 40 deaths. In 1908, a fire originating in the forest around Fernie, British Columbia, destroyed that city, caused 25 deaths, rendered 6,000 people homeless and damaged property to the estimated extent of $5,000,000. These are a few of the outstanding historical disasters. Every year thousands of acres are covered by fires of less individual importance but which in the aggregate are rapidly depleting our forest resources. During the last five years 723,250 acres of merchantable timber have been burned over annually. At the low estimate of 5,000 feet board measure per acre, the amount of timber destroyed annually would be 3,616,250,000 feet board measure. In addition there were over 800,000 acres of young growth and 500,000 acres of cut-over land burned over, on which the increment of perhaps 30 years, on the average, was destroyed.

Speaking generally, there are two annual periods in Canada when the forest fire hazard is highest; in the spring, after the disappearance of the snow, when the forest floor is dry and the green underbrush has not yet developed and again in the fall when the green growth is dead and the ground is covered with dry leaves. Statistics collected by the different government administrations and the Quebec Protective Associations show that over 95 p.c. of the fires of known origin are due to human carelessness and therefore preventable. Campers, settlers and railways are responsible for most of the fires whose origin is determined. Other causes, including lumbering operations and incendiarism, account for smaller proportions, and only a few are attributed to lightning.

Losses through Insects and Fungi.—During the last ten years the spruce budworm has caused tremendous damage to the spruce and balsam fir forests in eastern Canada. In Quebec, it is estimated that 100 million cords of pulpwood have been destroyed by this insect, and in New Brunswick the loss is placed at 15 million cords. Even though the active stage of the infestation is practically over, large amounts of timber continue to die every year as a result of previous defoliation. Other insects, though not as destructive as this one, entail a heavy drain on the forest. Though the attacks of fungi are more insidious, the loss caused by the various forms of rot and other fungous diseases is probably not less than that caused by insects under normal conditions. The butt rot in balsam fir is especially prevalent, and the value of the hardwoods also is greatly decreased on account of rot.