

laws governing the forests of the French Alps were repealed and clearing for grazing purposes began. Erosion of the soil followed, and in a short time 800,000 acres of farm land were ruined by silt and debris and the population of 18 departments were reduced to poverty. Between 1845 and 1901 the population was reduced by 50,000. In 1856 enormous floods caused great loss of life and damage amounting to close on £8,000,000. In 1860 reforestation measures were begun, but failed; but in 1882 a colossal scheme for restoring the native forest cover at the headwaters of the flooding rivers was evolved in order that the mountain torrents might be curbed. Up to 1900 66 million francs had been expended, with satisfactory results, and it was then estimated that the work would be completed by 1945 with a further expenditure of 115 million francs. At the present time almost all the torrents have been brought under control, and the erosion is now no longer a menace. French engineers after many experiments have come to the conclusion that forest cover is the best way of controlling erosion and that the existence of forested headwaters is the only effective way of controlling river flow.

New Zealanders should bear in mind what happened in France when the forest protecting the headwaters of many of their important rivers was destroyed. A few trees wantonly destroyed cost millions of francs and years of time to replace, and it was necessary for the well-being and safety of the people of France to have them replaced.

In the higher levels of New Zealand forests prevent the freezing of the ground (a very potent erosive force where the soil becomes

exposed) and delays the melting of snow. These two effects of the forest in preventing erosion at high levels and floods lower down are very important, though rarely mentioned.

It is very essential therefore that all high country clothed in natural native vegetation should promptly be declared inviolate reservations.

And now that summer is here, the bush fire is also here. Let people be careful not to start fires which might spread to forest or other vegetative covering of the soil.

Fire, by destroying forest cover, causes excessive water run-off and spells destruction to all forms of wildlife. It kills trees and thus destroys the protective canopy. Those trees it does not kill it damages, and insect pests complete the ruin. It burns the undergrowth, the invaluable litter on the forest floor, and destroys the underlying humus. When the covering is burnt off the soil is exposed and unprotected, so that it soon dries out, its structure and life are destroyed, and it seriously erodes when rain falls or the wind blows. Water is no longer absorbed, but runs off rapidly, an agent of destruction. Silt-laden streams contain little or no aquatic life, the silt is deposited where it is not required, the bed of the stream is raised when the velocity of the water is lowered, floods are caused, etc., etc. One small fire might cause untold damage if allowed to spread.

New Zealanders, don't let your forests burn, keep them growing! They protect the soil, from which we derive our nourishment, and which is our country's and our Empire's first line of defence.

A RESULT
OF FOREST
DESTRUCTION
IN NEW ZEALAND

