

Valuable Tests to Prove Forest's Effect on Streams

Experience has proved that the forest works efficaciously against many dangers resulting from the elements let loose, such as avalanches, falls of stones, erosion, earthslides, inundations. These are facts admitted and indisputable, but how and in what measure does the forest exercise this moderating action upon the destructive power of water? How can it lessen the destruction from inundations?

It is in order to attempt an answer to this leading question that the Swiss Federal Station of Forest Research in 1900 installed an observing station in the basin from which two streams of the Bernese Emmental are fed. These streams, tributaries of the Hornbach, are located in the territory of the commune of Sumiswald-Wasen, on the northwest slope of the Napf. The geological formation is fissured pudding-stone which decomposes readily. One of the basins, with an extent of 140 acres, is completely wooded. The other with an area of 175 acres has only a small average of wooded district, about 30%. The forest is composed of spruce and of alder bushes. The measurement of the precipitation, rain and snow, takes place regularly throughout the year. In each of the basins there have been installed three rain gauge stations at different altitudes. At the junction of the two streams with the Hornbach certain apparatus registers automatically every five minutes day and night the volume of the water flowing.

The Research Station is going to publish very soon the results thus obtained from these valuable observations. In the meantime if we refer to the provisional statements of the Research Station the two following points seem to have been definitely established:

1. In case of storms accompanied with heavy rains the maximum out-flow in the wooded valley is from 30 to 50% less than that from the other valley, and there is another beneficial circumstance from the action of the forest, that this maximum flow is produced later in the wooded basin than in the other.

2. In the long periods of drought (the summers of 1904, 1906, 1908 and 1911) the wooded district gave without interruption a flow of water while in the denuded valley the stream dried up and all the springs ceased although at a normal time they have an abundant flow.

These observations seem thus to have demonstrated irrefutably the moderative action of the forest upon the regulation of the stream flow which some have denied.

Warning on Licenses

The Department of Colonization, Mines and Fisheries of the Quebec Government has favorably considered the suggestion of the Canadian Forestry Association that warnings

against fire be printed on the fishing and hunting licenses in future. A letter to the Secretary from Mr. E. M. Dechene, Deputy Minister of Lands and Forests, states that such action has been decided on.