

100. What is the Department's estimate of the life of the native timbers: when do you think they will be exhausted for practical purposes?—I cannot answer that question offhand. As far as immediate supplies are concerned, the supplies south of the half-way line on the Main Trunk Railway are practically exhausted. Practically the whole of the timbers left in the North Island are situated north of that half-way line.

101. The Department has issued reports relating to timber?—Yes.

102. Can you tell me approximately when the timbers will be exhausted?—I cannot answer that without referring to documents.

103. You have read the annual reports of the Department?—Yes.

104. Have you observed that the necessity for transport facilities from the Kaingaroa plantation is stressed in every report?—Yes.

105. Why do you say it will take at least ten years before it is wanted?—If we do not begin insisting upon the necessity for access it will not be there when we want it, and it will be no use starting to stress the need of it when we actually want it.

106. I certainly agree that you must begin stressing the need for the Rotorua-Taupo line about ten years before its need is appreciated. How many men do you employ there?—At present there are 650, principally relief-work men.

107. *Mr. Samuel.*] And a thousand are going on immediately?—Yes.

108. *Mr. Vaile.*] In future, when milling takes place, do you think that there will be a large population there?—Undoubtedly.

109. Have you any information as to the relative number of men employed in forestry as compared with farming? How many men to the acre can be employed on forestry?—There again the evidence can be obtained from a witness who will follow me. I think the proportion is one man to 10 acres in a managed forest.

110. You have 217,000 acres, so that would mean employment for twenty-one thousand men?—I am afraid you have got me there.

111. Is this planted forest more economically worked than a native bush?—Yes.

112. You have more timber close to the mill and within reach of your hauler?—Yes.

113. And is it convenient to have logs of a uniform size?—Yes.

114. Your Department has records: can you give an indication as to the climate?—We have records of the rainfall extending over a number of years.

115. You have records on Waiotapu and Kaingaroa Plains?—Yes, and at Rotorua Nursery. The longest period is from 1899 to 1921. Do you wish that information?

116. Not necessarily. Have you the average rainfall for the year?—At Rotorua, 52.75 in.; at Waiotapu, 47.04 in. from 1904 to 1921.

117. Have you a record beyond 1921?—Yes; but I have here a table which I presume covers a long period. At Kaingaroa the rainfall was 45.60 in. It has also been taken for the last four years, and strangely enough it is 60 in.

118. There has been a wet period?—Yes, apparently.

119. Anyhow, there has been an abundant rainfall?—Yes, and admittedly it has been well distributed. The maximum and minimum temperatures at Kaingaroa are 84.75° and 22°.

120. That is ten degrees of frost?—Yes.

121. That is the maximum at Kaingaroa?—Yes. The minimum temperature for each of the years from 1914 onwards is as follows: 19°, 21°, 23°, 23°, 23°, 22°, 22°, 23°; with an average of 22°.

122. But 19° is the absolute bottom figure you have touched?—Yes, during the period from 1914 to 1921.

123. Then thirteen degrees of frost is the hardest frost you have had there?—Yes.

124. What about Waiotapu?—The average is 16.66.

125. Can you give the absolute minimum during your record?—Yes, 14° in 1907, 15° in 1914, 16° in 1917, 14° in 1918, and 12° in 1919, and 15° again in 1921.

126. Then 12° is the lowest you have touched?—Yes.

127. That is twenty degrees of frost?—Yes.

128. Are you acquainted with the climate of other civilized countries?—No.

129. You do not know the kinds of frost they have in the United States, for instance?—No, but I know that they get their frosts at certain times of the year, and not in the summer.

130. Have you ever heard of the wheat crop in Canada being ruined by frost?—Yes, but generally they do not get unseasonable frosts like we experience here.

131. When you open up your bush, do you mean to put in bitumen roads to enable you to haul out the logs?—Probably not; but we are looking some distance ahead.

132. You say "probably not"?—I should say, probably a tramway would be put in.

133. That is to say, you are sure it will be tramways?—For internal communications?

134. Yes?—No, I am not at all sure. The pumice is hard and makes an excellent road. It is probable that the timber will be extracted by tractors over the pumice roads, which we find stand a good deal of hard use.

135. You have heard of Mr. MacIntosh Ellis?—Yes.

136. What was his position?—He was Director of Forestry.

137. He was head of the Department?—Yes.

138. In giving evidence in 1921 before a Royal Commission Mr. MacIntosh Ellis said that felling is now available if we have transport facilities. By 1930—that is next year—the yield from this group of forests will be from 50 to 125 cubic feet per acre per year?—He was referring to the thinnings.

139. Do you think that the thinnings would yield that quantity?—I have not gone into that matter at all. I was called to give evidence on short notice, and was unable to secure the information I would like to have furnished to the Committee.