

18. Two miles would mean a planting-area of nearly 10,000 acres?—Yes; that was the object in placing the Kaingaroa camp where we did, so that we could work quite a large number of areas from there and keep the work going a long time from the same camp.

19. Do you consider it is more economical to have one central nursery for each Island, or to have nurseries in the localities where plantations are likely to be established?—One nursery would not do for the whole of the North Island, but I would not favour having a nursery for every plantation or every little district you are going to plant.

20. Do you say that because of there not being sufficient planting-ground at Whakarewarewa, or on account of the difficulty of distribution?—On account of the latter. It would be rather costly to send trees from Rotorua to be planted in the Wellington Province, whereas it might prove inexpensive to send trees from Rotorua for planting anywhere between there and Auckland City.

21. In the event of any plantations being started on the Karioi Plains would it be easier to bring the trees from Rotorua than to establish a nursery on the plains?—It is largely a question of the railage and other carriage from Rotorua. I feel quite certain trees would succeed there, they grow so rapidly. It is far better to confine your nursery operations to big nurseries rather than small ones, because there is the cost of planting which would run the expense up to a very high figure.

22. Have you made any experiments in sowing seed *in situ*—pines or gums?—Yes. Some years ago we tried several species of *Eucalyptus*, but the results were not encouraging. Last year I made a sowing of Douglas fir and *Pinus radiata* seed, and also some eucalypti, on the Kaingaroa Plains, but still we had no success. Very few seeds germinated, and those that did died out. The experiment was tried on a piece of land that was ploughed up for a fire-break, but it was a dry season. I intend to try again on some fern country where the young seedlings would get some protection, and I think they will do better.

23. Have you had any experience of planting on the north of Auckland gum lands?—Yes.

24. Would you recommend that an experiment of sowing *in situ* should be tried there?—It ought to be tried everywhere where we are carrying on forestry operations. If it were a success it would certainly reduce the cost of planting.

25. Have you made any experiments in connection with fire-belts by planting fire-resisting trees?—No.

26. If the poplar were planted on the outside of the plantation for the width of a few chains for fire-resisting purposes, would it be of great assistance in preventing the spread of fire?—I think so. Of course, there is always the danger of the poplar leaves carrying a ground fire; but a belt of poplar between big areas of inflammable trees like pines would be of great assistance in stopping a fire.

27. You know the native fuchsia-tree: would it be possible to grow that tree in connection with a poplar belt?—I think so.

28. Would a side bank help to keep a fire from spreading?—A side bank or ditch or rough-ploughed furrow will stop a ground fire. With a belt of poplars it would be a good idea to have a cleared piece of ground on each side of them; then they would be far more effective.

29. Then a comparatively narrow fire-belt under those circumstances would probably be sufficient?—Yes.

30. What size do you estimate the larch would be at fifteen years of age?—The figures in the Forestry Report for 1909 are not mine, although my name appears there. They were made up at the time Mr. Matthews took ill and left for Auckland, and I had to send them into the Head Office.

31. You would not then be prepared to endorse the figures in that return?—No.

32. *Mr. Lethbridge.* What is the best plan to adopt to try and prevent danger from fire in the nurseries and plantations?—Our present system ought to do. I think you all saw it.

33. *The Chairman.* Do you think the fire-breaks are wide enough?—I think there is sufficient ground taken up by them, because the spread of the fire depends very largely on the direction of the wind. Of course, you cannot always get fire-breaks running in a direction that is the most desirable. We try to do so, and if the prevailing wind is north-east and south-west we arrange the breaks to run north and south, and east and west; so that the plantation would be protected accordingly. That is one point that could be considered—the direction in which the fire-breaks are running. On the Kaingaroa Plains we have made the fire-breaks to run from north to south and from east to west. With regard to the upkeep of the fire-breaks, the boundaries of the plantations do not show much land unoccupied or even not brought into cultivation, as the boundary fire-breaks will always have to be kept ploughed and cultivated.

34. And the land along the public roads will have to be kept ploughed and cleared?—Yes.

35. Is not that the most dangerous place?—The most dangerous places are where fires can start on private land and spread to ours. The utilization of deciduous trees is also a good idea. Then there is the watching of plantations. In a dry season you will have to appoint a man simply to patrol the boundary and keep a lookout for fires. Then I would recommend keeping a number of workmen living on the place, who would be handy in case of necessity.

36. In case of a fire I suppose you have some difficulty in getting the men necessary to put it out?—We have had that experience, and it should not be the case. You want means of suppressing a fire expeditiously; also means of conveying water to the men engaged in fire-fighting, both for pouring on the fire and also for drinking.

37. Does the Government allow you to offer double wages at the time of a fire?—I did pay double wages, and the Department did not disapprove of my action.

38. Have you asked the Department to provide means for carrying water or for getting men to a fire?—I have not done so so far, but I have made certain recommendations in that respect this year. If we provide places along the Waitapu Road, and at Whakarewarewa and along the Wairoa Road, where we can get water handy, we could carry on our work to greater advantage,