milled it will be felled and burned, and in such case could be of no use to any one; whereas if it is milled and exported it will bring money into the Dominion, and give employment to a considerable number of men, and also produce revenue to the Government through royalties and railage. These are the reasons why I consider the timber ought to be allowed to be exported from mills situated like this one.

As for other mills on the Coast that are cutting white-pine, most of them get some white-pine mixed with the red-pine, and if the white had to be left in the bush and only the red taken it would never pay to again go back just for the scattered white-pine.

In most places the milled-bush land is taken up for grazing-runs, and in such case the fire is set to the tops and scrub, and consequently the white-pine that was left would also be destroyed. In many places, again, it would not pay to work the red-pine unless the white could also be taken.

By the above-mentioned facts you will notice that if the milling and exporting of white-pine is interfered with it will mean that a lot of it will be destroyed and never used for any good purpose whatever, and the income to the country from its exportation would be stopped, and hundreds would be thrown out of employment.

I am, &c.,

A. E. Hackell,

Manager for Benjamin and Mulcock.

H. D. M. Haszard, Esq., Chairman, Forestry Commission, Wellington.

No. 21.

Dear Sirs,— Tapanui, 14th March, 1913.

Re yours 10th instant: Deer of all classes do damage to the bush, eating especially the broad-leaf and all succulent plants, besides horning and rubbing young trees to their destruction. Deer and cattle injure bush and destroy young trees wholesale, and therefore should be put out on the back-blocks away from civilization as far as possible or confined to areas that are enclosed with deer-proof fences.

Fencing-timber is becoming very scarce and dear, and horned animals should be kept out of bush areas as far as possible. Fires are, however, more destructive than deer, and fire wardens are needed in New Zealand on same footing as those in America.

Yours, &c.,

The Forestry Commission, Christchurch. W. Quinn.

No. 22.

Dear Sir,— Charteris Bay, 4th April, 1913.

In regard to your inquiries about *Pinus insignis*, my plantations are, on an average, 18 ft. apart. The main average of years is thirty-four; distance apart, roughly 18 ft.; height, about 100 ft.; diameter, 2 ft. The diameter is approximate, some are nearly or quite 3 ft. I have sawn a lot of them for my own use, and have sawn the backings for neighbours for fruit-cases at a cost to them of 4½d. per 30 lb. case. This price has been payable for refuse timber.

With regard to squared timber, I have used it for all purposes—gate-posts, sheep-netting stakes, weatherboards, &c.

I will take gate-posts first: They were squared 8 by 8. Eight holes (inch) were bored horizontally 6 in. apart and 6 in. deep. The posts were laid on the ground, and these holes filled with tar. They were kept filled with tar from day to day till no more tar was absorbed. Then I turned up pegs, just fitting the inch holes, and drove the pegs home. This had the effect of squeezing the tar through to the outside of the posts. I have had these posts in the ground nine years, and apparently they are as good to-day as when put in. The tops were hand painted to keep the weather out.

The sheep stakes were stood upright in tar for two weeks. Under separate cover I am sending you samples of one that has been two years in the ground. I am not sure yet whether they do not get a bit brittle under this treatment, but I think they will last for ever. They absorb so much tar that they become nearly as heavy as hardwood. It is possible that they might make indestructible railway-sleepers if steeped in tar, provided they would carry the weight.

For either boards and scantlings they make beautiful timber if painted or tarred, but they absorb a lot of oil if paint is used. If oil is dropped on an inch board in a few hours it will be showing through on the low side of the board.

Pinus insignis is, as your Commission knows, a wood full of resin when cut down. This all dries out, but evidently the channels the resin ran out of are ducts to let tar or oil run in. As you also know, it is absolutely worthless unless treated in some form, except for timber where no weather reaches it.

In my idea it is a coming timber. It will grow quickly, almost anywhere; it is good shelter; it is a striking tree; and it lends itself to the soaking-in of preservatives more than any timber I know. It looks well in inside work when planed and oiled.

I am sorry I had to write this account in a great hurry, or I might have written more on the subject.

One other item I may mention. In 1895 I planted a totara in a specially good bit of ground; it is now 21 ft. high; it was 18 in. when planted.

Had I known that information was voluntary, when your Commission sat I would have attended at Christchurch.

Any more information that I have I shall be happy to supply if required.

Yours, &c.,

The Chairman, Forestry Commission. Orton Bradley.