

It has earlier on been laid down in this report as a general principle that no forest land which is suitable for farm lands, except it is required for a scenic or climatic reserve, should be permitted to remain under forest if it can be occupied and resided upon in reasonably limited areas. Since no land is more suitable for occupation than that of the white-pine swamps, when drained, their value in this regard is a strong plea in favour of the removal of the trees forthwith. The matter as to a substitute for white-pine for butter-boxes is a somewhat difficult question, but it does not seem an insuperable difficulty. The use of white-pine for butter-boxes is confined to New Zealand and Australia, whereas in other butter-producing countries, such as Canada, Siberia, and Denmark, other timbers are made use of. It is true that Canadian and Siberian butter is of a lower grade than that of New Zealand, but this is due not to the superiority of white-pine in not tainting the butter, but rather that the butter itself is of inferior quality. The above view is supported by the fact that, although both Victorian and New Zealand butter is packed in white-pine boxes, the former brings a lower price in the English market than does the latter. As for the timbers used for the conveyance of butter in Siberia, Canada, and Denmark respectively, we have no evidence as to what is used in the first-named country, but in the two latter, according to Mr. Cuddie, they are spruce (*Picea alba*) and European beech (*Fagus sylvatica*). The use of beech timber for butter-boxes is interesting, as it suggests a new application for the New Zealand beeches.

In order to approach more closely the question of a substitute for white-pine, the characteristics of a first-class timber for butter-box purposes must be considered. These are: (1.) Non-liability to impart a taste or odour to the butter. This quality is lacking to some extent in all classes of wood, especially if not seasoned. It can be overcome in some cases by first paraffining the wood and, in addition, inserting two thicknesses of parchment paper, which course is recommended by the Dairy Division of the Agricultural Department, even in the case of white-pine. (2.) The wood should be in one piece, at least for the ends of the boxes. This, so far as the sides are concerned, is not essential, and jointed boxes of white-pine are being made use of at the present time. Should dovetailing be discountenanced, then, as the oblong box at present in vogue measures $14\frac{1}{2}$ in. by $11\frac{1}{2}$ in. by $10\frac{1}{4}$ in., trees less than $1\frac{1}{2}$ ft. in mean diameter would be unsuitable. (3.) A light timber is to be preferred, so that the box should not exceed $10\frac{1}{2}$ lb. or 11 lb. in weight. In this regard every additional pound must add to the cost of carriage to the railway, and were the boxes to be much increased in weight probably the freight for sea carriage would be increased. (4.) The wood should be light in colour, so that the brand will show well and the package be attractive in appearance. White-pine fulfils the above condition, though the wood is more or less yellowish-white. (5.) The wood should be easy to nail, and should hold the nails securely. As it is essential that all butter-box wood should be thoroughly seasoned, the danger of splitting where nailed must also be taken into account. The wood of seasoned *Pinus radiata* is especially good from this standpoint.

Up to the present white-pine has answered so admirably both for the packing of butter and cheese that there has been but little trial made of substitutes. There is information alone on this head regarding poplar, *Pinus radiata*, and tawa (*Beilschmiedia tawa*). Poplar, according to Mr. Cuddie, will probably be a satisfactory substitute. Both butter and cheese have been so packed, so far as non-tainting is concerned, with good results. The timber fulfils all the other requisites of a butter-box.

Pinus radiata, according to an experiment conducted by Mr. M. Murphy, of Christchurch, some time ago, was used successfully for the packing of butter, the contents of the case being free from taint after being in the cool chamber, according to a letter he sent your Commissioners, "for the usual time occupied in transport to England" and "packed in the usual way." Tawa was largely used for the packing of butter in the earliest days of the industry, but at that time not nearly the same care was exercised as at present.