An example of the economic benefit to be derived from the production of a certain type of tree is seen in South Australia, where logs from uninodal trees, from which knotless lengths exceeding seven inches in diameter and two feet in length can be cut command up to double the price of the ordinary mill log. The former are used for cutting match splint and plywood sheet both of which must be clear. In the average mature plantation there is only a small percentage of suitable uninodal trees.

In New Zealand much will be gained if the crooked, heavily branched type of *Pinus radiata* can be eliminated in favour of the straight, cylindrical type with small branches.

I am, etc.,

Kersbrook Forest, South Australia. E. Y. CUTTEN.
28th February, 1946.

References:

(1) Champion, H. G., 1945. Genetics in Forestry. *Empire Forestry Journal*, Vol. 24, No. 1.
(2) Thimann, K. V. and Delisle, A. L. 1939. The Vegetative Reproduction of Difficult Plants. *J. Arnold. Arbor.*, 20.
(3) Garner, R. J. 1944. Propagation by Cuttings and Layers. Recent work and its application. East Malling Res. Stat., England.

The Editor,
New Zealand Journal of Forestry.

Sir,

With reference to Mr. Cutten's enquiry, so far as is known there are no *P. radiata* stands of good type conserved and managed expressly for seed production in New Zealand, though such procedure would undoubtedly be desirable. For really satisfactory results it would further be necessary to have such a stand in each main tree-growing district, so that seed could be obtained from trees adapted to local conditions and environment. In the past unfortunately seed collection has often been haphazard, little or no consideration having been given to the type of the mother trees from which the seed was obtained. As misshapen and inferior trees are often prolific seed bearers, and as collection is often easier from them, it is readily understandable why the resultant stands in many cases have failed to come up to expectations. Planting stock too has in a number of instances been sent far afield, and used in districts where climatic conditions vary appreciably from those under which it was raised.

As Mr. Cutten points out, cross fertilisation between good and bad trees is inevitable in stands which contain a mixture of types. This difficulty is naturally accentuated where the small material

yielded by thinnings is unsaleable, so that the early removal of undesirables is uneconomic. In such cases selection of mother trees will not ensure only suitable progeny, but as one at least of the parents is of good type the results should be definitely better than those from indiscriminate collection. (Incidentally, there can be no absolute guarantee that the offspring will be one hundred per cent true to the type of the parent, as in the case of either inherent characteristics may be modified by accident or environment). Where re-establishment is by means of planting some help can be given, apart from careful adherence to sound technique in lifting, transport and actual planting, by a rigorous culling of nursery stock to eliminate specimens displaying obvious defects or undersirable tendencies, although development in the seedling stage is by no means an infallible guide to suitable economic characteristics in the adult.

Vegetative reproduction offers possibilities, although Richens (Forest Tree Breeding and Genetics, reviewed elsewhere in this issue) states that it has proved difficult in *Pinus* species. A certain amount of experimental work with it has been carried out in New Zealand, and it would be interesting to learn what degree of success has been achieved, and particularly how the trees so produced compared in subsequent vigour and other desirable characteristics with those originating from seed.

Yours faithfully

21 Seddon Street, Rotorua.
16th September, 1946.

OWEN JONES.

In 1929 Field struck cuttings of *P. radiata* at Tangimoana and established a plantation of about half an acre there in the following year—see *N.Z. Journal of Forestry*, Vol. 3, No. 4, 1934. These trees have shown no apparent difference in growth or habit from nearby stands originating from seed. Unfortunately they are in a very exposed position and, like their seedling neighbours, have suffered damage from saline gales.—Ed.

To the Editor,
New Zealand Journal of Forestry.

Forestry Education and Training in New Zealand.

Sir,

The appendix bearing the above title in the Annual Report of the Director of Forestry for the year ended 31st March, 1946, calls for critical examination by all those who are interested in this subject. To allow such a report to circulate without comment by those who have the interests of professional education at heart may result in all forestry training drifting into the bondage of the State for generations.

Accepting the minimum number of graduates (eight) required annually, as estimated in the above report, this provides an adequate number of students to justify the re-establishment of a School of