

In Sweden the Genetic Department of the Forest Research Institute and the Swedish Forest Tree Breeding Association are working on forest tree breeding. Practically all the forest owners and associations of forest owners in the country are attached to this Association. Besides its experimental activities, the Association provides services by collaborating in the establishment and management of seed orchards. The Collaborating Committee on Forest Tree Breeding and Genetics deals with the control of plus trees, for the planning of all seed-orchards, and the framing of regulations for progeny-tests. Moreover, this committee provides a forum for collaboration between all the bodies in Sweden that are occupied with forest tree breeding in its many different forms.

Then we have some specific recommendations with regard to tree breeding in part VII. Are there any questions with respect to part V, forest tree improvement?

The CHAIRMAN: Do you get a much faster growth with improved seed?

Mr. MACDONALD: Yes. You can improve the rate of growth in two ways; by straight increase in the amount of fibre put on, and you can also increase it by the form of tree. I am having some correspondence now with a group of foresters on red pine. I argue that red pine plantations, when they get up to be the height of this ceiling, should be pruned off half way to take off those lower branches which grow very quickly. I say that this is producing a rapid taper in the tree. Some foresters say it is a genetic quality, and that they have known plantations in which they get the straight form without pruning. You get more wood out of that type of tree. So, there are two ways in which you can increase the rate of growth.

The CHAIRMAN: And it is more free of disease?

Mr. MACDONALD: They would breed for disease-free types as well.

The CHAIRMAN: Just the same as you do with grain?

Mr. MACDONALD: Yes. Sweden, Denmark and Norway have been at this now for 30 years. It is surprising how few trees you need to produce all the seed you need. You can have small areas set aside for these selected trees which will produce all the seed that is needed.

Somebody was talking about Christmas trees this morning. There are Scotch pines that produce a much better Christmas tree form than others, and they seem to be just finding this out. Provincial forest nurseries have been selling Scotch pine for 30 or 40 years not only for Christmas tree planting but for planting on sub-marginal land. At the best, Scotch pine if it grows up into a mature tree, is only good for pulpwood and it is poor grade pulp because of the shape and crookedness of it. They claim that they can develop a wood which can be straight but they have not done it. This is a good example where we could start to improve on one species.

The CHAIRMAN: Have any of the provinces got a forestry department where they experiment with various types of soils in relation to the trees which can be grown on those soils?

Mr. MACDONALD: The experimental station at Petawawa have some laid out for experimentation in relation to soil types and the species which can be grown on them.

The CHAIRMAN: They have not put up a mill?

Mr. MACDONALD: They have not. It would be good if they could, but they have these experimental plots since 1932 at Petawawa and the provincial governments have experimented.

The CHAIRMAN: This one at Petawawa is an experiment.

Mr. MACDONALD: Yes, it is an old forestry station.