

White spruce.—Although this stands shade well it has got behind and is not a leading tree, that is where it is mixed with other kinds.

American mountain ash stands shade well.

*By Mr. Christie:*

Q. Did you say that black walnut would not do well when shaded by other trees?

A. It has not done well here.

Q. I have got about fifteen in Red Maple Woods, and I think they are doing better than those out in the clearing?

A. They are not over-topped by the other trees, are they?

Q. They are right in the midst of red maple timber?

A. Is there a canopy of foliage overhead?

Q. Yes?

A. Then our experience has been different. We have found that the black walnut, providing it will grow as fast as the other trees, will hold its own. Once it gets underneath other trees, it does not. Of course, your maple woods might not be very dense.

Q. They are the ordinary woods?

A. Very often in a maple wood there are little glades or open places, and those are the places where the black walnut should do well, and if planted on an even footing with young maple, black walnut should hold its own, but planted under large trees it would not stand much chance. From our experience we should suggest to the farmers that they should plant the trees which will look after themselves best and quickest. We should say that there should be a foundation of evergreens in the plantation, which would have the effect of crowding out the branches of the deciduous tree, and the three best evergreens we have found for this purpose are the white pine, the Scotch pine, and the Norway spruce. These are all very rapid growing trees, they will hold their own well in the race with the other deciduous trees, and having dense foliage they will crowd out the side branches of the latter, and in that way make cleaner timber than if they were not there. Then among these he should plant for early use the white birch, the American elm and the tamarack or the European larch. These make very rapid growth in the first 20 years, and on account of their thin foliage they do not destroy the pines and hard maple which should also be in the plantation, and the result is they may be cut out in 20 or 25 years for fuel, if necessary, leaving the plantation for the other trees. Then he should have white ash, hard maple and red oak, and a few white oak and black walnut. All these trees, by the proper mixture of them, will grow well together and the farmer will soon have a large supply of fuel and also wood for other purposes on the farm. The trees which are to remain longest should be about 10 feet apart with the others between.

Q. Taking the Norway spruce, how would you plant it?

A. In a mixed plantation on a farm the Norway spruce would not be less than 10 feet apart, because the farmer will want his other kinds between them. Even for a single row of trees 10 to 12 feet apart is a very good distance.

Q. We have planted some and they have grown up but are dying. I think they were planted too close?

A. We have a row at the farm of Norway spruce. They are planted 10 feet apart, but my intention is to remove every other tree in a short time and have them 20 feet apart. That will mean that they will be far apart for quite a number of years. My idea is to leave them until they interlace and then cut them out.

*By Mr. Sinclair:*

Q. Will the black walnut thrive in Nova Scotia?

A. I don't think it will very well. We have found that it needs a very warm soil. It might thrive in the Annapolis valley in Nova Scotia, but here in Ottawa we