

REPRODUCTION OF COMMERCIAL SPECIES 11

TABLE II

NUMBER OF YOUNG TREES PER ACRE, ACCORDING TO AGE BY DECADES, BASED UPON
11 ACRES OF SAMPLE STRIPS

Age, by decades	Hemlock	Douglas fir	Cedar	Total trees
Less than 10 years.....	44,900	5,000	4,990	54,890
10 to 20 years.....	7,770	400	170	8,340
20 to 30 years.....	6,170	180	100	6,450
30 to 40 years.....	3,900	100	160	4,160

PERCENTAGE OF YOUNG TREES PER ACRE, ACCORDING TO DECADES, AS ABOVE

Age, by decades	Hemlock, Per cent	Douglas fir, Per cent	Cedar, Per cent
Less than 10 years.....	82	9	9.0
10 to 20 years.....	93	5	2.0
20 to 30 years.....	95	3	1.4
30 to 40 years.....	94	2	4.0

As in the case of the fir, some of the young stands were much more dense than is indicated by the averages, as given in the table above. For example, a small plot in a four-year-old stand disclosed seedlings at the rate of 2,800,000 to the acre. By comparing this table (Table II) with that of the fir (Table I), one will see that there are many more hemlock trees per acre than there were fir trees for the corresponding ages, with the exception of the first age class. In other words, the death rate of the hemlock is not so great as that of the fir, since 82 per cent of the hemlock had died in the second decade, 86 in the third, and 90 per cent in the fourth decade. Whereas, in the case of the fir, less than one in a hundred of the original seedlings was represented in the stands at the end of 39 years; in case of the hemlock ten times as many were represented, that is 10 out of a hundred. The same thing is indicated in the percentage table, where it will be seen the relative proportion of hemlock in the stands does not decrease materially as the trees grow older. All this shows again that the hemlock can endure more crowding and shading than the fir, for it is evident that there would be more shade on an acre containing 4,160 than 790 trees of the same age.

Cedars are Short-lived

As shown in the tables on the preceding pages, cedar is a common associate of both fir and hemlock. On the average the greatest extent of this association is about one-eighth of the stand, but it sometimes ran as high as one-