

DOUBLE OR TRIPLE SORTING OF TREE LOTS

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Double or triple sorting of tree lots is dividing them into two or three segments by height, caliper or root mass. Most of the time it is on height or caliper. These two elements are quite closely correlated, so in most cases it can be done on height alone. The nurseryman and field forester should sample-measure a lot of trees to establish a height caliper relationship. Then they should agree on a height separation so the tree lot can be sorted on the most obvious element. This will allow a small percentage of the trees below the desired caliper to go to the upper height class, but this should be accepted by the field and, if necessary, the field can compensate by planting a few more trees per acre.

Some of the advantages or purposes of extra sorting of trees are:

1. To obtain better trees for difficult areas (use smaller ones on north slopes).
2. To use overruns for transplanting (plant everything over 25 cm in height and transplant the rest).
3. To get full use out of high quality genetic tree seed (transplant all under 25 an).
4. Shortage of seed (you need every tree that can be transplanted).
5. Loss of trees in other lots, say 1-year olds (these trees can be transplanted and used as 1-1).
6. Acceleration of cutting increases the need for trees (trees can be transplanted for next year's use).

Some of the disadvantages of sorting tree lots are:

1. It takes a lot of time and training at the nursery during their very busy season.
2. It is costly.
3. There is an unknown effect on the genetic quality of seedlings. There may be an increase in quality on the large size and a decrease in quality on the small size.

Double sorting can be done at the nursery. The Wind River Nursery double sorted a lot of trees. The size of the smaller portion of the lot was (8-21-3.5-0-76) 21 an in height and 3.5 mm in caliper. (Picture 1). The size of the larger portion was (B-27-7.0-0-76) 27 an in height and 7.0 mm in caliper. (Picture 2). There really was no problem in double sorting this lot as the larger trees had considerably more secondary foliage.

The second lot of trees I double sorted. The average size for the lot was (8-24-4.3-0-76) 24 an in height and 4.3 mm in caliper. (Picture 3). This was divided in two sizes: (Picture 4).

smaller (8-20-3.1-0-76) 20 an in height and 3.1 mm in caliper larger
(8-28-5.6-0-76) 28 an in height and 5.6 mm in caliper

The first sort was again fairly easy and not too time consuming as there was a foliage difference and about equal numbers in each size.

Then I tried to separate each of the sizes again. The small size separated into two sizes as follows: (Picture 5).

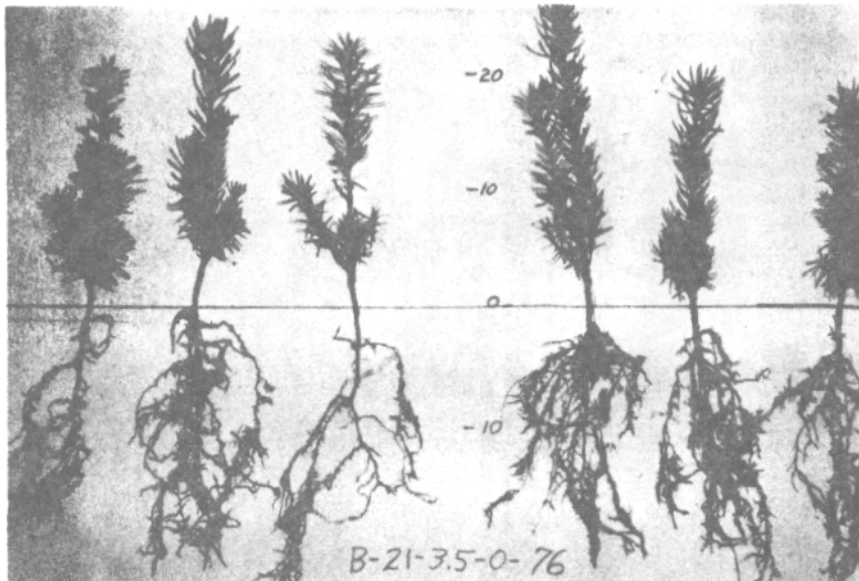
larger size (8-21-3.2-0-76) 21 an height and 3.2 mm in caliper smaller
size (8-19-3.0-0-76) 19 an in height and 3.0 mm in caliper

The larger of the sizes separated into two sizes as follows: (Picture 6).

larger size (8-29-6.2-0-76) 29 an in height and 6.2 mm in caliper smaller
size (8-26-5.9-0-76) 26 an in height and 5.9 mm in caliper

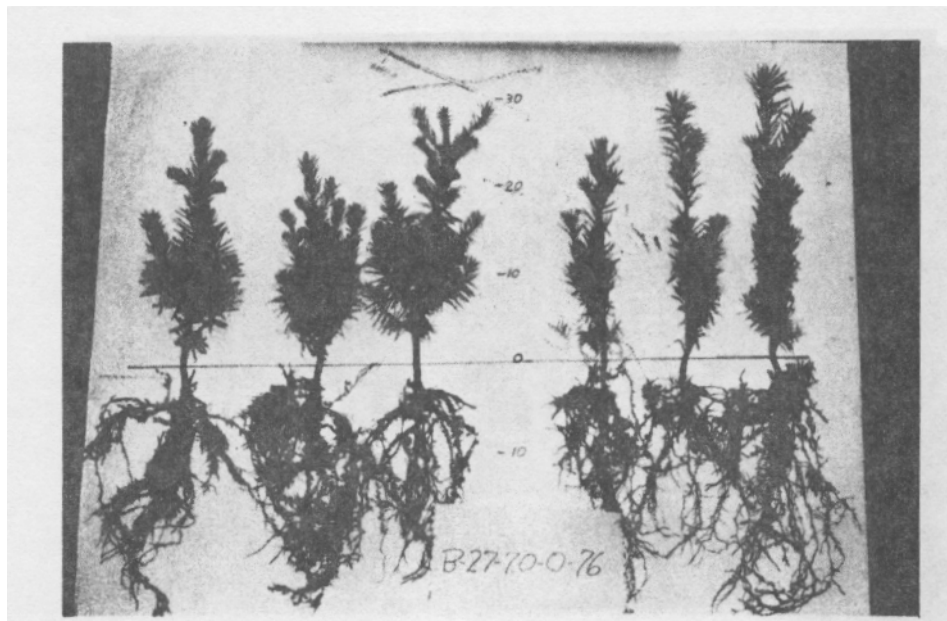
In summary, the first sort or one split can usually be done with a minimal amount of time and with a real gain in field survival or saving of stock. However, there did not appear to be any gain in quality nor would there be any appreciable gain in field survival by the triple sort.

We are using double sorting of tree lots as an interim solution to over dense beds at the nursery and short seed supplies. We do not intend to use this procedure as general policy and we feel the possible decrease in some genetic quality on the small size to be offset at least to some degree in getting the areas restocked sooner without additional cost and site preparation.



Picture 1:

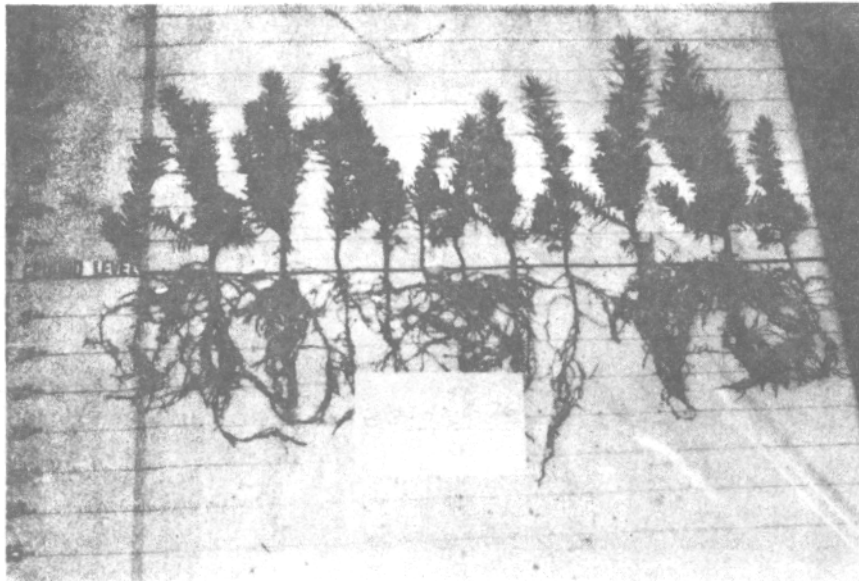
Wind River Double Sort: Smaller size (B-21-3.5-0-76) was 21 an in height and 3.5 mm in caliper.



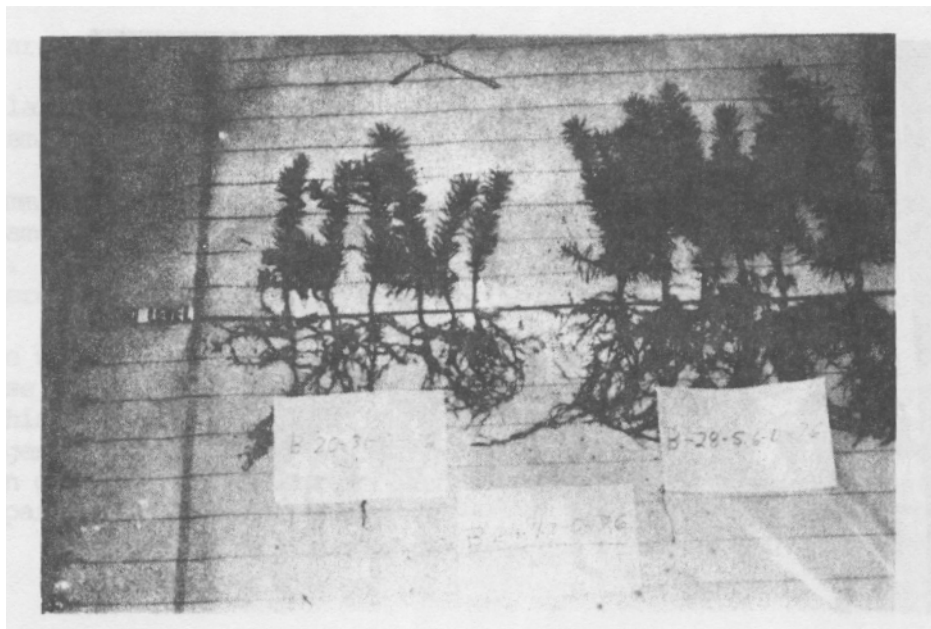
Picture 2:

Wind River Double Sort: Larger size (B-27-7.0-0-76) was 27 an in height and 7.0 mm in caliper.

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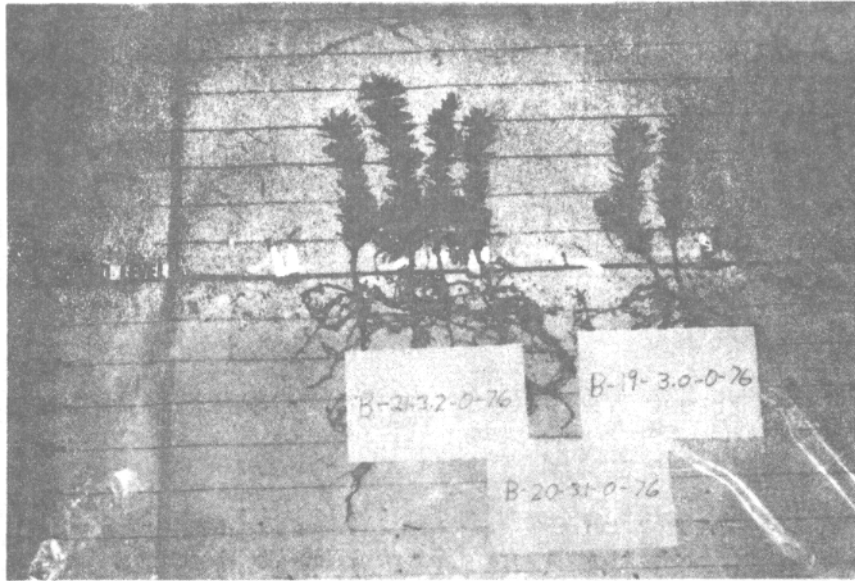


Picture 3:
Nickolson Double Sort: Average size for the second lot (B-24-4.3-0-76) was 24 an in height and 4.3 nm in caliper.



Picture 4:
Nickolson Double Sort: Smaller size (B-20-3.1-0-76) (left side) was 20 an in height and 3.1 m in caliper. Larger size (B-28-5.6-0-76) was 28 cm in height and 5.6 mm in caliper.

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Picture 5:
Nickolson Triple Sort: Lot 3-20-3.1-0-76 (left side of Pic. 4) was sorted again. Larger size (Br21-3.2-0-76) was 21 an in height and 3.2 mm in caliper. Smaller size (B-19-3.0-0-76) was 19 an in height and 3.0 mm in caliper.



Picture 6:
Nickolson Triple Sort: Lot B-28-56-0-76 (right side of Pic. 4) was sorted again. Larger size (8-29-6.2-0-76) was 29 an in height and 6.2 nm in caliper. Smaller size (B-26-5.9-0-76) was 26 an in height and 5.9 nm in caliper.