



Planting Tips

Take the time to plan your planting activities – tree storage, transportation, stock handling, etc. Planning is an important aspect that many landowners overlook. It is important to realize that from the time seedlings are lifted from the nursery bed to the time they are planted they are subjected to considerable stress. Advance planning and proper tree care are essential to the survival and growth of the trees.

In addition to the following tips on seedling storage and handling, it is recommended that you obtain copies of the extension notes listed at the end of this section for more detailed planting information.

Storage and handling tips

- ✓ Unload your vehicle and place seedlings in appropriate storage as soon as possible. Storage areas must provide shade, cool temperatures, good air circulation and protection from drying winds. Trees are stored best at 5°C.
- ✓ Seedlings are fragile – they should be treated with care. Do not toss, drop or stuff them into small spaces.
- ✓ Bare root seedlings should be planted the same day that they are removed from cold storage if the temperature is over 15° C (or they should be returned to cold storage).
- ✓ Reseal opened bags containing bare root trees to stop the roots from drying out.
- ✓ To minimize root damage when separating seedlings, cut the string or elastic holding the bundles together. Do not rip the bundles apart!
- ✓ Minimize pruning of the roots – only prune long roots that may be difficult to plant. (In most cases, the nursery staff will already have done this pruning as part of their quality control efforts).
- ✓ Bare root trees may be dipped in water briefly to moisten them before planting. Soaking for more than a few minutes can drown them.

Planting tips

- ✓ Choose the best location to plant your seedlings. Planting holes should be free of organic debris (leaves and grasses) and rocks. Also, do not plant in areas that are routinely inundated with water.
- ✓ Roots should be laid out in a natural position in the planting hole. Seedlings should be planted deep enough to accommodate the root system – up to the tree's root collar. Do not leave any exposed roots.

- ✓ Seedlings should be planted upright at less than a ten-degree angle. Gently tamp around the seedling to remove any air pockets inside the planting hole. Take your time when planting. Planting quality directly influences seedling survival and growth.

Determining Tree Spacing

Tree spacing will affect the form and development of the tree in later years. Wider spacing will lead to the development of larger branching and large crown development (favourable for maple syrup production). On the other hand, closer spacing will more quickly capture the site and shade out competition from other plants, maximize your planting site and will induce natural pruning (traits advantageous to conifer sawlog and pulpwood production). Most plantations will require a number of thinnings to ensure that the trees have enough light to continue growing vigorously. Closely spaced trees will require thinning before the trees are large enough to sell, adding to your management costs (refer to Table #1). Your long-term objectives (e.g., timber production, Christmas trees or an orchard for maple syrup production) and the tree species being planted will help to determine the proper spacing.

As part of the planning process, you will need to find out how many trees can be accommodated on the planting site. The following formula will assist you in calculating the number of trees required for your planting project.

$$\text{Planting area (ha)} \times \frac{10,000}{\text{row spacing (metres)} \times \text{tree spacing (metres)}} = \text{trees / ha}$$

For quick reference, the table below provides several traditional spacing regimes and the number of trees required to plant a given area (per acre or hectare).

Remember, spacing is one of the factors that will influence your planting costs. Planting a smaller area at the prescribed density is recommended (based on your objectives and the species being planted). You do not want to find out at a later date that your planting project did not meet your needs and expectations because you altered your objectives.

| Table #1: Number of Trees Planted | | | |
|--|-----------------------|---------------------|--------------------|
| Pre-commercial thinning required | Spacing (feet) | No. of trees | |
| | | Per acre | Per hectare |
| No | 12 x 12 | 302 | 746 |
| No | 10 x 10 | 436 | 1,076 |
| No | 9 x 9 | 538 | 1,329 |
| Maybe | 8 x 8 ¹ | 681 | 1,682 |
| Yes | 7 x 7 | 886 | 2,189 |
| Yes | 6 x 8 | 908 | 2,244 |
| Yes | 6 x 6 | 1,210 | 2,989 |
| ¹ Commonly used spacing in conifer plantings. | | | |

Need more information?

For comprehensive advice about choosing the right tree for your planting site, refer to the guide *A Landowner's Guide to Putting Down Roots – Choosing the Right Tree*. This guide is available on-line at the Web site <www.ontariowoodlot.com>.

Additional information about tree planting is available in a series of extension notes from the LandOwner Resource Centre. This information is available on-line at <www.lrconline.com> or copies of the extension notes can be obtained by calling the LRC at (613) 692-2390.

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