



Care and planting of your spring coniferous seedlings

Storage of seedlings until planting

The container seedlings you have purchased should be planted within 10 days after thawing. They were harvested from styrofoam plug trays in the greenhouse last fall and placed in freezer storage until now. If they are still frozen, place them in a cool, outdoor location away from direct sunlight. Seedlings should thaw quickly, within a day or two. If there are several boxes to be thawed, make sure there's adequate air flow between the boxes by placing them on pallets and spacing them.

Leave the box open, unwrap the plastic liner and keep seedlings in the box. Never allow the plugs to dry out! If you need to water the seedlings prior to planting, simply place the bundle in a pan or bucket of water for 20-30 minutes, or simply water the seedlings in the box. You will notice that moist seedlings are heavier than dry seedlings and you can use this as a gauge for watering.

Site preparation

Weeds and grasses pose a large threat to young seedlings for the first three or four years after planting. Taking the time to prepare the site will be worth the effort in the long term. You can use mechanical methods or herbicides, or a combination of the two.

Planting in heavy grass is also stressful for the seedlings. Grass can rob the seedlings of moisture, nutrients and sunlight. Keep competitive vegetation away from seedlings for the first few years after planting.

Planting

If you are planting seedlings for reforestation, a density of 700-800 seedlings/acre (1750-2000 seedlings/ha) is commonly used. This translates to an approximate spacing of 2.3 cm x 2.3 cm (8 ft x 8 ft) between trees. If you are establishing a shelterbelt, space seedlings about 10-12 feet (3-3.5 m) apart within the row. It's a good idea to have some extra seedlings in a holding bed to replace the few that might be lost in the first few years.

Seedlings should be planted vertically and deep enough to completely cover the plug with soil. Do not plant deeper than the top of the plug. **The hole for the seedling does not need to be wide but it must be deep enough.** After placing the seedling in the hole, fill in the hole with soil. Gently tamp the soil around the seedling with your foot to remove excess air. If water is available, irrigate the seedlings after planting. Supplemental irrigation will improve growth, increase the chance of survival and overwintering success.

Fertilizer applied to young seedlings should be applied in low concentration with a 1-1-1 NPK balance and not later than the end of July. Seedlings naturally set bud by mid-August and fertilizer applied late in the season might interrupt bud set.

Overwintering the seedlings

Dry winters with little snow cover are harsh conditions for young seedlings. Snow provides a natural insulation for plants but when snow cover is light, you're likely to see more desiccation injury the following spring.

Most desiccation occurs in the spring when air temperatures near the ground on sunny days increases but the roots remain frozen in the ground. This repeated warm/cold cycle over several days will desiccate foliage and buds close to the ground. Young seedlings will show damage and mortality in conditions that would not affect older trees.

Any protection you can provide to reduce the exposure of seedlings to solar radiation and wind in the absence of snow cover will be worth the effort (snow fence, adjacent shelterbelt). Avoid planting conifer seedlings in locations with a southern exposure and exposure to prevailing winds. If possible, cover the seedlings in a thick layer of snow so that they're completely covered.

Some species such as white spruce require some protection in the early years so they are best planted under a canopy of larger trees. Pines can grow on open sites with sandy well-drained soils.