



Care and planting of your summer coniferous seedlings

Storage of seedlings until planting

The container seedlings you have purchased should be planted as soon as possible after you receive them. They were recently harvested from the greenhouse in a physiologically dormant state. **They have set bud and will not grow in length any more this summer. For the rest of the summer their roots will become established so the seedlings will be ready to flush out next spring.**

If you can't immediately plant the seedlings, place them in a cool, outdoor location away from direct sunlight. Leave the box open and keep the 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. If you have several bundles, you can use a watering wand on a hose to apply water directly to the trees without taking them out of the box. Apply enough water to soak down to the roots. You will notice that moist seedlings are heavier than dry seedlings and you can use this as a gauge for watering. **Do not apply fertilizer as these seedlings have set bud for the year.** Fertilizer may cause them to break bud and resume growth which will not be hardy for the winter.

Site preparation

Weeds 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 230 cm x 230 cm between trees. If you are establishing a shelterbelt, space seedlings about 10-12 feet (3-3.5 m) apart within the row.

Seedlings should be planted vertically and deep enough to completely cover the plug with soil. Do not plant deeper than the top of the soil plugs. 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. If possible, water seedlings in the fall to increase their winter hardiness.

Overwintering the seedlings

Dry winters with little snow cover reduce the likelihood of seedling survival. As much as possible, we use seed from Alberta, but even seedlings from local seed sources will suffer under dry conditions. Snow provides a natural insulation for plants and when snow cover is light, you're likely to see more desiccation injury.

Most desiccation occurs in the spring when air temperatures near the ground on sunny days can rise 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 to conditions that do not affect older seedlings.

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.

Some species such as white spruce require some protection in the early years so they are best planted under a canopy of larger trees.