

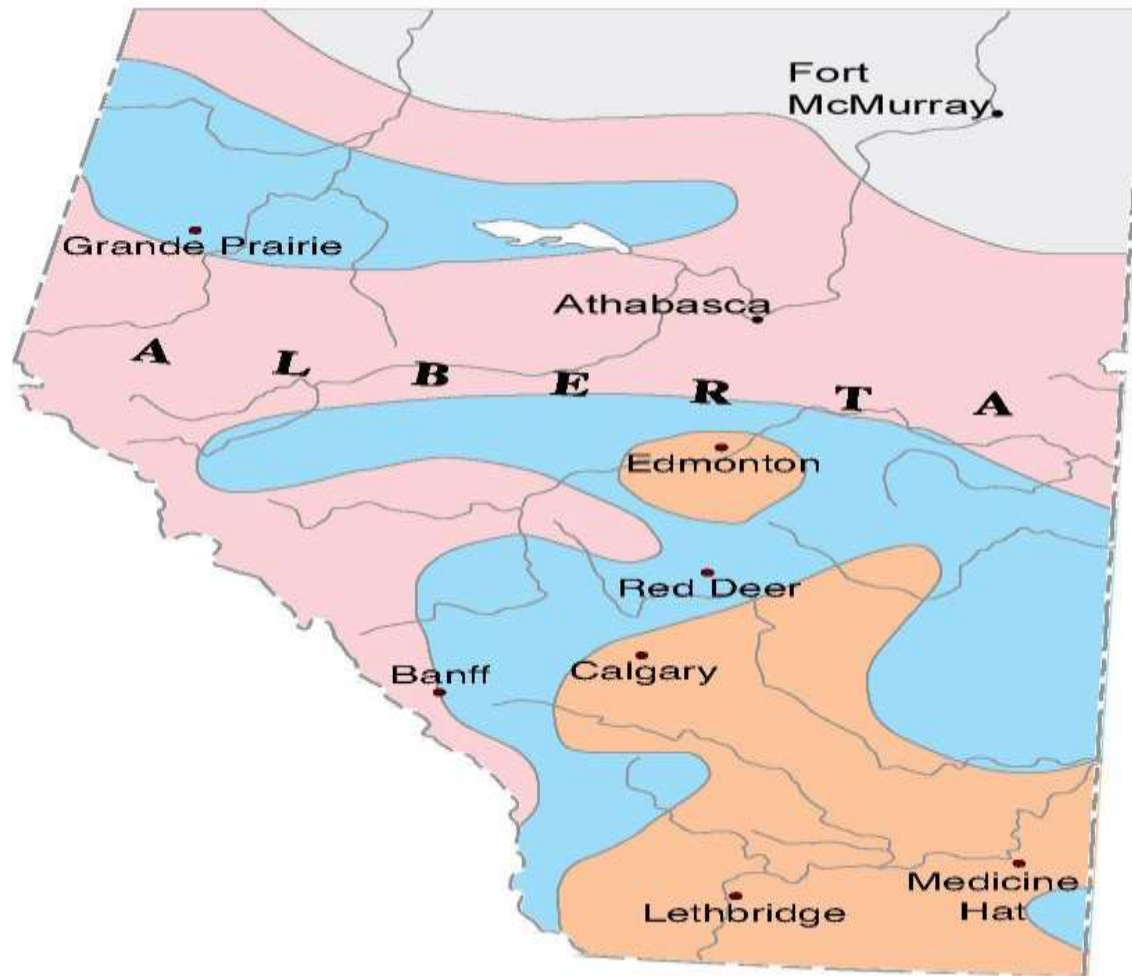
Growing Trees

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Cold Hardiness Zones in AB



Why grown own trees

- 1) the annual seedling needs for your tree or Christmas tree farm are less than the minimum quantities a commercial nursery is willing to grow;
- 2) you want specific seed sources or an uncommon species not available from province or private growers;
- 3) you wish to grow seedlings for fun, realizing the satisfaction of personally reforesting some of your land, improving wildlife habitat, having a novel school project, growing your own Christmas trees, or
- 4) just because you love the challenge of growing plant
- 5) You may try cross breeding which is more complex
- 6) Some people like crafting

Growing from Coniferous Seeds -Steps

- Obtaining seed – seed collection
- Seed germination
- Preparing seedbed
- Sowing

Collection of coniferous seed

- Mid August to mid September
- Collect ripe cones – not green one
- Bend needs back and twist cone
- Use various hooks
- Dry cones to open them up
- Take seeds out once cones open
- Store or seed them



Seed production

- Every different species produce cones in different cycle-heave crops
- White spruce every 4-7 years
- Black spruce every 3 years
- Tamarack every 3-6 years
- Pine every year
- Fir 2-4 years
- Mature Colorado(blue) spruce produce 79,500-132,500 seeds per bushel of cones
- Buy seeds from tree nursery – eg. Smoky Lake tree nursery

Seed germination

- Dormancy can be overcome by sowing trees right in fall after collection. Seeds have natural ability to survive cold winter
- Dormancy is protective mechanism from being destroyed
- Each species has variable time of dormancy
- Some species like white spruce, aspen and chokecherry require cold period or stratification

Seedbed

- Well drained and sandy-loam soil –it is like vegetable garden
- Beds might be raised
- Seedbed must be shaded during hot, dry weather
- Seedbed must be protected from birds, rodents and other animals
- Too wet also can attract some fungus that can kill entire seedbed –fungus are the most active in first 6 inches of soil

Sowing

- Broadcast or in rows
- Shallow tranches 2 cm wide and 15 cm apart
- 150 seeds per meter
- Keep moist until germination

Growing white spruce from seeds

- Collect cones in mid-August and beginning of September – store cones in paper bag for 1-2 months until cones open and seeds fall in back
- Collect seed and put in ziploc and store in freezer
- In April soak them with water until they are saturated for 24 hours
- Put seeds on paper towel and in ziploc and refrigerator – NOT freezer for six weeks
- After put seeds in shallow dish with very little water on bottom and watch them to germinate for 5-20 days
- Use tweezers and put germinated seeds in 2 gallon pots and water them twice a week and put them in sunny spots



Other source of cheap seedlings

- Along road allowances there are plenty of young spruce, pine and tamarack seedlings -you need to dig up them
- Your mature shelterbelt trees produce seed – only thing you need to disturb the soils nearby and you will get seedlings
- Forest companies always has surpluses and if you call in advance to pick up
- Local tree nurseries – large or small

Growing deciduous trees from seeds

- Same steps as previous but few differences
- In collection of fleshy fruits seeds such as chokecherry or Saskatoon you handpick it and extract seeds by mashing fruit to pulp
- Caragana or lilac will open from pods by thinly spread on warm bench or ventilated room
- Deciduous trees are sown at 90 seeds per metre

Growing trees from cuttings

- Some species are relatively easy to grow from cuttings – eg poplar and willow while other almost impossible – eg tamarack
- Poplar and willow cuttings should be collected from healthy trees in when they are dormant and before buds comes out
- Cuttings should have at least 4-5 buds in 15-25 cm long cuttings



Rooting of cuttings

- Time of year when cuttings are taken
- Age of stock – cutting from younger stock may root better than from older
- Physical condition of stock – succulent grown cuttings may NOT root well . Shoot with too much fertilizer may not root well
- Trees or cuttings of diseases, insect and other damaged tree are not recommended
- Tree rooting medium - sand, perlite, peat, or mixtures of any of the three are most common. Very fine gravel sometimes is used
- Hormones – are commonly used

Summary of growing own trees

- Educate yourself about growing own trees
- Learn when trees produce seeds
- Establish proper seedbed
- Weed control as well as other issues such as mice, voles or wildlife
- Take small steps