



2023 Shelterbelt Species Quick Facts

In 2018, Big Lakes County began offering a Shelterbelt Program to our ratepayers. Since that time, ratepayers have planted thousands of seedlings. Shelterbelts help block wind from yards and livestock pens, prevent snow drifts in the winter, and offer privacy screens. The Agricultural Service Board is proud to have brought this program to Big Lakes County residents and hopes the program continues for many years.

This year we are offering additional species with an emphasis on diversifying shelterbelts to add greater aesthetic value with more textures and colours, to add wildlife and pollinator value, to provide species that can be adapted to a wider array of site conditions (inclusive of wet areas), and to offer edible species for your enjoyment.

Please see the Agricultural Services section on the Big Lakes County webpage for more information

Tall Coniferous



HYBRID SPRUCE: The cross between white spruce and Engelmann spruce is a naturally occurring hybridization within parts of interior British Columbia and into parts of Alberta along the eastern slopes in the Grande Cache area. For landscaping purposes, they are used to benefit from the growth rate of white spruce, but to get a degree of blue colouration similar to a Colorado blue spruce (which is much slower growing).

Zone: 1a

Spread: 6m

Light: Part shade to full sun

Life span: 70 years +

Height: 20m

Moisture: Dry to normal

Growth rate: Medium

Suckering: None

In-row spacing: 3m

Between-row spacing: 5m

COLARADO SPRUCE: People are attracted to the distinctive blue-green color of this hardy evergreen. But Colorado spruce really stands out because it is tough, long lived, and adapted to a wide range of growing conditions. Colorado Spruce trees are ideally suited for use in shelterbelts, privacy screens, or as accent trees.

Zone: 2a

Spread: 6 m (20 ft)

Light: Full sun

Life Span: 80 years +

Suckering: None

Height: 27 m (90 ft)

Moisture: Dry, normal

Growth rate: Slow

Maintenance: Low

Pollution Tolerance: High

In row spacing: 3-4 m (10-12 ft)

Between row spacing: 5 m (16 ft)

Other names: blue spruce, colorado blue spruce



LODGEPOLE PINE: Lodgepole pine is well suited to western Canada's climate and growing conditions. This native pine noted for its rapid growth among evergreen. And as one of Canada's hardiest conifers, it can tolerate cold, shade, drought, and poor soil conditions.

Zone: 1a

Spread: 6 m (20 ft)

Light: Full sun

Suckering: None

Height: 30 m (98 ft)

Moisture: Dry, normal

Pollution Tolerance: Medium

Growth rate: Fast

In row spacing: 3 - 4 m (10 - 12 ft)

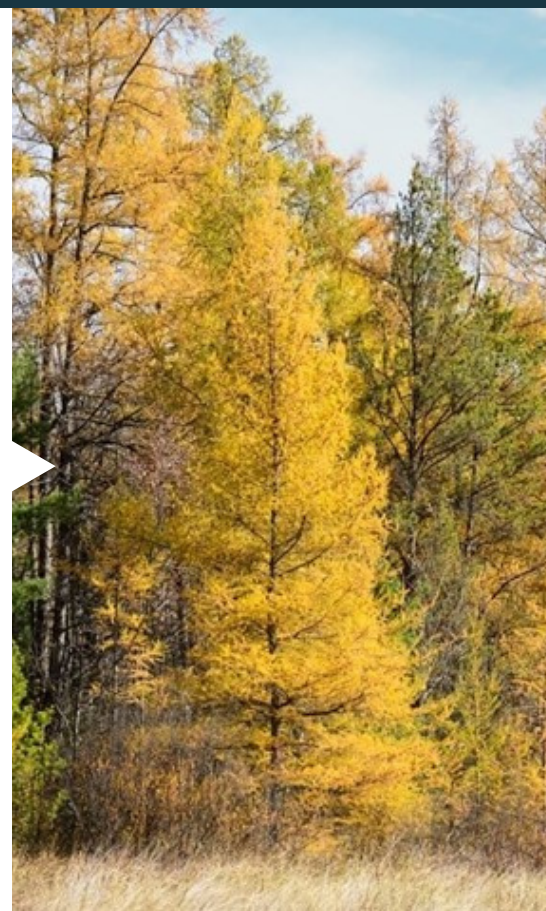
Between row spacing: 5 m (16 ft)

TAMARACK – LARIX LARICINA: Tamarack is a small to medium-sized, long-lived, native conifer tree featuring needles that turn an attractive gold before dropping in the fall.

This cold-tolerant tree grows well in very wet conditions, as long as it is exposed to full sun. Its wood is durable and rot-resistant, making it ideal for outdoor uses such as posts, poles, and outdoor furniture. It also makes an excellent firewood.

Height: 6-20m
Spread: 6-10m
Growth rate: Medium
Zone: 2
Light: Full

Soil: Loam or sand
Drainage: Poor to moderate
Moisture: Moist to wet
Suckering: n/a
Plant status: Native



WHITE SPRUCE: White Spruce is a hardy, long-lived evergreen tree. It can grow in many soil types and moisture levels. And it can even tolerate significant amounts of shade. White spruce requires little maintenance and is well suited for use in shelterbelts, privacy screens, hedges, and as an ornamental in an urban setting.

Zone: 1a
Spread: 6 m (20 ft)
Light: Partial shade, full sun
Life Span: 70 years +
Suckering: None
Growth rate: Medium

Height: 15 m (49 ft)
Moisture: Dry, normal
Maintenance: Low
Pollution Tolerance: Medium

In row spacing: 3 m (10 ft)
Between row spacing: 5 m (16 ft)

Other names: alberta white spruce, canadian spruce, cat spruce, labrador spruce, northern spruce, pasture spruce, porsild spruce, skunk spruce, western white spruce

Tall Deciduous

AMERICAN ELM: Fast growing, tall tree with a recognizable and pleasing shape. Well suited for urban environments because of its non-invasive roots and ability to grow on harsh sites. They develop a wide, dense canopy that provides shade for many city streets around North America

Zone: 2a

Height: 30 m (98 ft)

Spread: 15 m (50 ft)

Moisture: Any

Light: Partial shade, full sun

Growth rate: Fast

Suckering: Medium

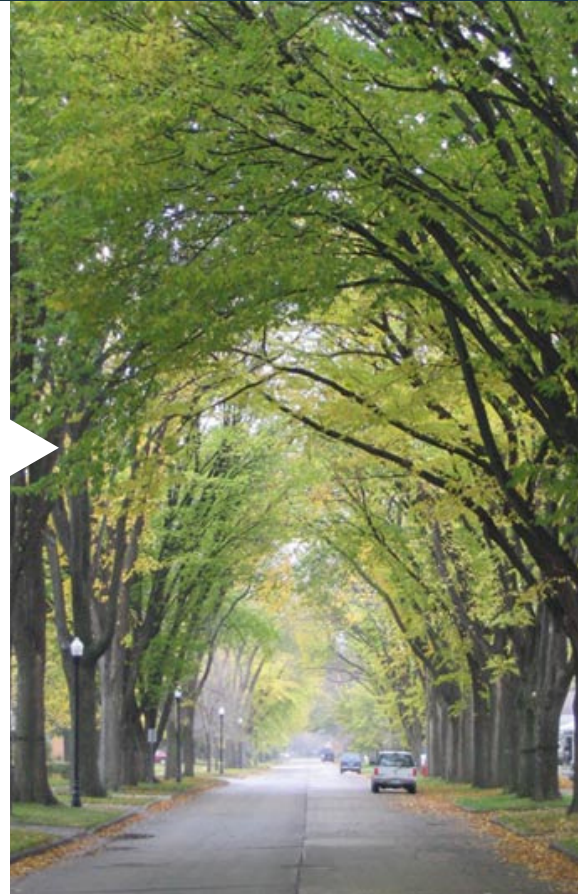
Maintenance: Medium

Pollution Tolerance: High

Fall Colour: Bright yellow

Life Span: Up to 200 years

Other names: water elm, white elm



HYBRID POPLAR: Hybrid poplar is one of the hardiest and fastest growing trees that can be used in a shelterbelt. This hybrid variety is low branching with a large spread. The large spread reduces the total number of trees needed to cover an area and, when used as a windward species, the low branching acts to traps snow drifts. The high suckering rate can be of benefit to reduce initial planting density as this species will actively spread.

Zone: 2a

Height: 18 m (82 ft)

Spread: 8 m (25 ft)

Moisture: Any

Light: Full

Suckering: High

Fuzz/Fluff: No, but can occur depending on exact hybrid variety provided

Life Span: Medium

Growth rate: Very fast

In row spacing: 2.4 m (8 ft)

Between row spacing: 5 m (16 ft)

GOLDEN WILLOW: Golden willow is commonly used for windbreaks, shelterbelts, and ornamental planting. In addition to looking great, Golden willow attracts a variety of birds and mammals with its twigs and buds. All willows are important to native pollinators each spring as they have higher amounts of pollen and nectar early each growing season when other food sources are scarce.

Note: do not plant near buildings or buried services.

Zone: 2a

Spread: 15m

Light: full sun

Life span: medium

Suckering: medium

Fuzz/fluff: yes

Height: 15m

Moisture: normal to wet

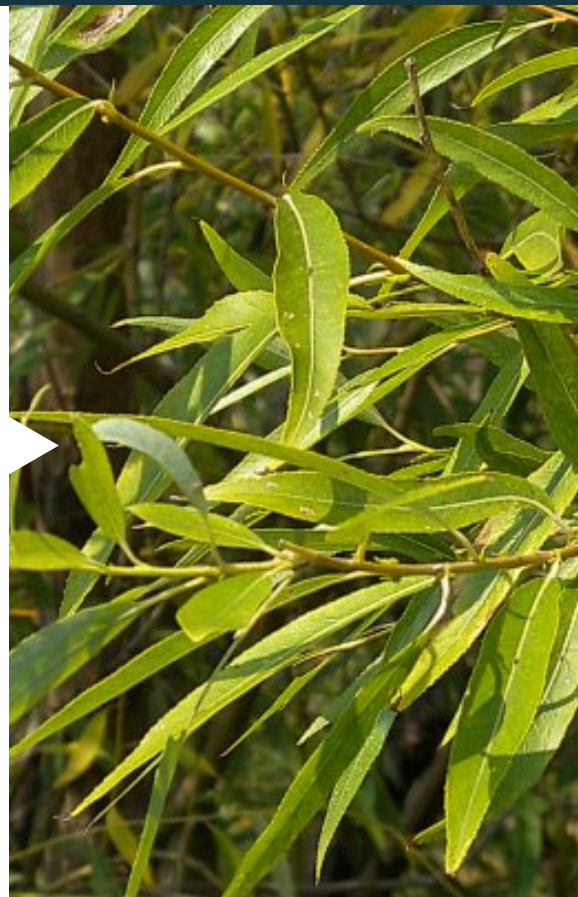
Growth rate: fast

Fall colour: golden yellow

Features: new growth is bright yellow and give nice fall/winter appeal

In-row spacing: 2-4 m

Between-row spacing: 5m



MANITOBA MAPLE: Manitoba Maple is a fast-growing tree with great fall color. These trees are typically grown as feature or shade trees on larger properties and acreages. Manitoba maple is cold hardy and tolerant of a wide range of soil moisture conditions. Manitoba maple is rare in that it can tolerate both flooding and droughts and is also moderately salt tolerant. Manitoba maple does not sucker but it can nevertheless spread quickly by seed into large, thick groves that persist for decades as the species is long lived as well as fast growing.

Note: considered toxic to horses

Zone: 2a

Spread: 12m

Light: any

In-row spacing: 2-3m

Between-row spacing: 5m

Height: 15m

Moisture: any

Growth rate: fast

Suckering: medium

Tall Shrub

LILAC: Common Purple Lilac is a popular lilac. This large shrub provides excellent privacy or wind protection in an attractive package. Lilac flowers are pleasantly fragrant and add a beautiful lavender colour to your property. Common Purple Lilac is cold hardy, easy to grow, and can tolerate most soil types. Some people alternate villosa and common purple lilacs to create the impression that the hedge is in flower for almost a full month with the common purple flowering about 2 weeks sooner than the Villosa Lilac.

Zone: 2a

Spread: 3 m (10 ft)

Light: Full sun

Life Span: Medium

Flowers: Purple clusters

Suckering: Low

Height: 5 m (16 ft)

Moisture: Dry, normal

Growth rate: Medium

Maintenance: Low

Pollution Tolerance: High

Fall colour: Yellow

In row spacing: 0.9 m (3 ft)

Between row spacing: 5 m (16 ft)



GREEN ALDER: Green alder is a cold hardy, native shrub. It is known for its smooth grey bark and attractive shiny green leaves. Green alder is often planted on infertile sites so it can fix nitrogen from the air and improve the soil quality. Because of this, it is commonly used in reclamation.

Height: 2-5m

Spread: 2-5m

Growth rate: Fast

Zone: 1a

Light: Part shade to full sun

Soil: Clay or loam

Drainage: Poor to moderate

Moisture: Moist to wet

Suckering: High

Plant status: Native, nitrogen fixing

Medium Shrub

RED OSIER DOGWOOD: Red Osier Dogwood is a medium-sized native shrub that features deep red stems and twigs year-round, with creamy white flowers in the spring, white berries (very bitter) later in the summer into autumn, and rich red autumn colour. It provides a very good pollen and nectar source, its fruit is favoured by birds, and it is an important winter browse for moose. This shrub will also add a nice pop of color to your yard in the autumn.

Red Osier Dogwood is highly adaptable to many growing sites and is an excellent soil stabilizer and a nitrogen fixer. It is fast growing and becomes drought tolerant once well established and is a great understory addition to a shelterbelt or for riparian buffers.

Height: 2.7m

Spread: 1.8m

Growth rate: Fast

Zone: 2a

Light: Shade to full sun

Soil: Clay, loam or sand

Drainage: Moderate to well

Moisture: Normal to moist

Suckering: Medium

Plant status: Native, ornamental



BRACTED HONEYSUCKLE: Bracted honeysuckle is a shade loving shrub that is distinguishable from other honeysuckles by its square stem and pointed leaves. Native to most of North America, this honeysuckle is found along swamps, rivers, riparian zones and moist wooded areas. If you have an erosion control project in mind, consider Bracted Honeysuckle. Bracted honeysuckle has yellow flowers in late May to early July that give way to glossy black berries (inedible) surrounded by the namesake rich red bract (modified leaf that looks like a flower petal). Bracted honeysuckle also offers a wonderful red autumn hue as the leaves change colour.

Height: 1-2m

Spread: 1-2m

Growth rate: Medium

Zone: 4

Light: Part shade

Soil: Clay, loam or sand

Drainage: Poor to moderate

Moisture: Moist to wet

Suckering: Medium

Plant status: Native, ornamental/reclamation

CANADA BUFFALOBERRY: Canadian buffaloberry is a native shrub found throughout North America. This hardy, medium-sized shrub will tolerate poor soil conditions as it is a nitrogen fixer. It produces attractive, edible-though very bitter-red fruit which improves in flavour after a frost and can make nice jelly. It also produces goofy little yellow flowers which are some of the first to bloom in the spring providing important early-season resources to pollinators.

Height: 1-3m
Spread: 1-2m
Growth rate: Medium
Zone: 1a
Light: Shade to full sun

Soil: Clay, loam or sand
Drainage: Moderate
Moisture: Dry to moist
Suckering: Medium
Plant status: Native, edible, nitrogen fixing



Fruit-bearing Shrubs



WESTERN CHOKECHERRY: Western Chokecherry is a tall shrub or small tree commonly used for farmstead and field windbreaks. It's stature and suckering ability make it a great addition to a shelterbelt edge with the added benefit of high production of floral and food resources for human and wildlife use.

It produces white flowers in the spring and edible dark purple fruit that matures between September and October. Its cherries are great for making jams, jellies or wine, but are not very palatable for raw eating.

Height: up to 7m
Spread: up to 5m
Growth rate: Fast
Zone: 2a
Light: Full sun

Soil: Clay, loam or sand
Drainage: Moderate
Moisture: Dry to moist
Suckering: Low
Plant status: Native, edible

HASKAP: Haskaps have a taste that is a cross between raspberry and blueberry. The berries can be used for eating fresh, baking, jams and jellies, freezing. Haskaps are high in vitamins, fibre, and anti-oxidants. Haskaps benefit from cross-pollination to increase yield. Bundles will include two different varieties: Boreal Beauty and Boreal Blizzard. Both varieties are late pollinating and produce very large robust berries ready in late-July to mid-August (suited to mechanical harvesting).

Height: 2.4m

Spread: 1.5m

Growth rate: Medium

Life span: Medium

Zone: 2a

Light: Part shade to full sun

Moisture: Any

Maintenance: Low

Suckering: n/a

Plant status: Introduced edible



BLUEBERRY: Common Blueberry isn't as large, pretty, or high yielding as other varieties. But Common Blueberry is the only blueberry that will survive in plant hardiness zones 1A to 2B. So if you happen to live in one of these zones, this is the variety for you.

Zone: 1a

Spread: 0.5 m (1.5 ft)

Light: Partial shade, full sun

Suckering: None

Height: 0.5 m (1.5 ft)

Moisture: Dry, normal

Growth rate: Medium

Pollution Tolerance: Low

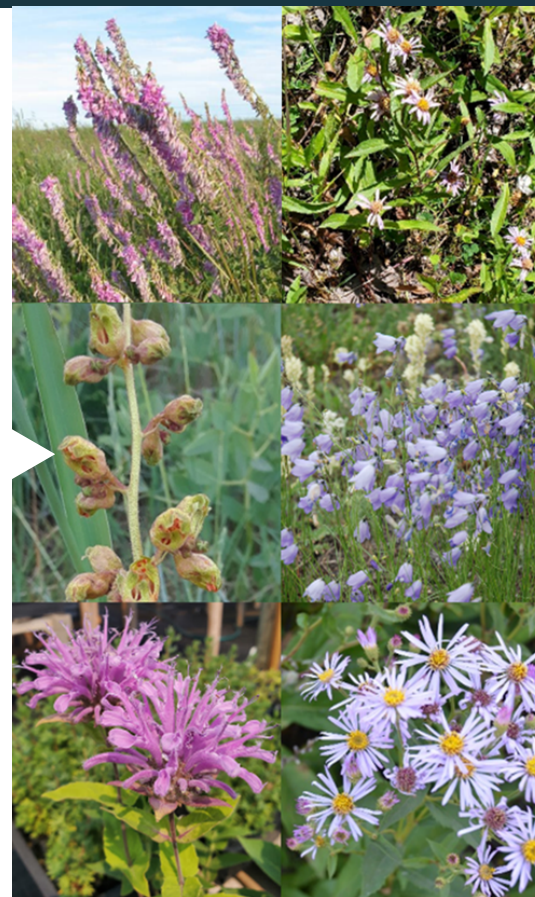
Other names: canadian blueberry, sourtop blueberry, velvetleaf blueberry, velvetleaf huckleberry

Note: Blueberries require very specific soil conditions. They need well-drained soil with a pH between 4.5 and 5.0.

Native Pollinators

PART SHADE WILDFLOWER SEED PACKS: This wildflower seed mix is sourced from ALCLA Native Seeds. They wild source their seeds from locations in central Alberta. The majority of species in this mix will naturally occur in our region, the exception is beebalm which is more of a prairie and parkland species, but which can occur sporadically in the Peace. Each packet includes: showy aster, arctic aster, alpine hedysarum, Richardson's alumroot (native source species for ornamental coralbells), harebell, and beebalm.

Each packet contains a minimum of 100 seeds that can be planted in and around other species you are adding to your planting or in a stand-alone wildflower bed or meadow.



SHOWY ASTER: This plant will live up to its name and attract your attention with its size, larger leaves and bright showy blooms. Showy Asters would make a great addition to a larger flowerbed or naturalized planting by attracting attention in big spaces. Asters are a favorite of Bees and Butterflies.

Height: 0.3-1m

Bloom period: July to October

Growth habit: Medium to aggressive

Spreads via: Rhizome and seed

Light: Part shade to full sun

Moisture: Dry to moist

Plant status: Native, sourced in Peace Region

GOLDENROD: These golden yellow flowers can make a big impact on the horizon in the summer. Fall foliage is bright red adding color to the autumn landscape. This plant needs room to grow and can be aggressive; use this to your advantage by planting in hard to grow areas or large planting sites that need filling up. Bees adore Goldenrod.

Height: 0.3-1.2m

Bloom period: July to October

Growth habit: Very aggressive

Spreads via: Rhizome and seed

Light: Part shade to full sun

Moisture: Well-drained

Plant status: Native, sourced in Peace Region



PAINTBRUSH: Paintbrushes are eye-catching. Their beautiful blooms are red, pink, orange, yellow, white, or a combinations of these colors. This wildflower is partially parasitic and needs to be planted with other established plants. Hummingbirds love Paintbrushes.

Height: 0.2-0.8m

Bloom period: June to August

Growth habit: Slow to moderate

Spreads via: Seed

Light: Part shade to full sun

Moisture: Moist to well-drained

Plant status: Native, sourced in Peace Region

Feature: Semi-parasitic, plant into established area