

Spacing Recommendations

Spacing recommendations between trees and shrubs, as well as between shelterbelt rows, varies according to the planting type.

It takes longer for trees to form an effective wind barrier at wider spacing. This can be overcome by staggering the trees in adjacent rows. The delay in effectiveness will be more than offset by the increased growth and vigour of the trees that have adequate space to grow. Well spaced trees live longer, retain their lower limbs better and produce more foliage.

Spacing recommendations between shelterbelt rows

Spacing between rows	Minimum distance	
	Between adjacent deciduous rows	5.0 m
Between adjacent deciduous and coniferous rows	6.0 m	(20 ft.)
Between adjacent coniferous rows	5.0 m	(16 ft.)

Spacing recommendations between trees and shrubs

Species	Mature Height (ft.)	Life Span [1]	Moisture Requirements [2]	Growth Rate [3]	Salt Tolerance [4]	Potential Spread by Seed or Suckers [5]	Planting Distance (ft.) [6]	# Trees per km(per mile)
---------	---------------------	---------------	---------------------------	-----------------	--------------------	---	-----------------------------	--------------------------

[1] Life Span: S = Short (30 years), M = Medium (30 to 50 years), L = Long (>50 years) Moisture Needs: L = Low (<300 mm/year), M = Medium (300 to 400 mm/year), H = High (>400 mm/year)

[2] Moisture Requirements: Low = <300 mm, Medium = 300-400 mm, High = >400 mm.

[3] Growth Rate: S = Slow (<0.25 m/year), M = Moderate (0.25 to 0.5 m/year), F = Fast (0.5 to 1.0 m/year), VF = Very Fast (>1.0 m/year)

[4] Salt Tolerance, L = Low, M = Medium, H = High

Species	Mature Height (ft.)	Life Span [1]	Moisture Requirements [2]	Growth Rate [3]	Salt Tolerance [4]	Potential Spread by Seed or Suckers [5]	Planting Distance (ft.) [6]	# Trees per km(per mile)
---------	---------------------	---------------	---------------------------	-----------------	--------------------	---	-----------------------------	--------------------------

[5] Potential Spread by Seed or Suckers: L = Low, M = Medium, H = High

[6] Recommended minimum planting distance for farmyard shelterbelts

Shrubs

Caragana	5 (16)	L	L	M	M	H	0.3 (1)	3333 (5280)
Choke Cherry	7 (23)	M	M	M	L-M	M	1 (3)	1000 (1760)
Hawthorn	4 (13)	M	L	M	L	M	1 (3)	1000 (1760)
Hedge Rose	2 (6.5)	M	L - M	F	L - M	M - H	1 (3)	1000 (1760)
Red Elder	3 (10)	M	H	F	L	M	1 (3)	1000 (1760)
Red-osier Dogwood	2.5 (8)	M	M - H	M	L - M	M	1 (3)	1000 (1760)
Sea Buckthorn	5 (16)	M	L	M	H	H	1 (3)	1000 (1760)

Species	Mature Height (ft.)	Life Span [1]	Moisture Requirements [2]	Growth Rate [3]	Salt Tolerance [4]	Potential Spread by Seed or Suckers [5]	Planting Distance (ft.) [6]	# Trees per km(per mile)
Silver Buffaloberry	4.5 (15)	M	L	M	H	H	1 (3)	1000 (1760)
Snowberry	1.5 (5)	M	L	M	M	H	1 (3)	1000 (1760)
Villosa Lilac	4 (13)	L	M	M	M	M	1 (3)	1000 (1760)
Deciduous Trees								
Bur Oak	20 (65)	L	L	S - M	L	L	2.5 (8)	400 (660)
Cottonwood	20 (65)	L	H	F	L	L	2.5 (8)	400 (660)
Green Ash	15 (50)	L	M	M	M	L	2.5 (8)	400 (660)
Hybrid Poplar	25 (80)	M	H	VF	L	L	2.5 (8)	400 (660)
Manitoba Maple	14 (45)	M	M	M	M	M	2.5 (8)	400 (660)

Species	Mature Height m (ft.)	Life Span [1]	Moisture Requirements [2]	Growth Rate [3]	Salt Tolerance [4]	Potential Spread by Seed or Suckers [5]	Planting Distance m (ft.) [6]	# Trees per km(per mile)
Pincherry	7.5 (25)	M	M	F	L	M	1 (3)	1000 (1760)
Siberian Crabapple	6 (20)	M	M	M	L - M	L	2 (6.5)	500 (812)
Trembling Aspen	15 (50)	M	M - H	M	L	H	2 (6.5)	500 (812)
Willow, Acute	15 (50)	M	H	F	L	L	2.5 (8)	400 (660)
Willow, Peachleaf	10 (35)	M	L - M	F	L	L	2.5 (8)	400 (660)
Willow, Silverleaf	15 (50)	M	H	F	L	L	2.5 (8)	400 (660)
Coniferous Trees								
Scots Pine	18 (60)	L	M	M	L	L	3.5 (12)	285 (440)
Siberian Larch	18 (60)	L	H	M	L	L	2.5 (8)	400 (660)

Species	Mature Height (ft.)	Life Span [1]	Moisture Requirements [2]	Growth Rate [3]	Salt Tolerance [4]	Potential Spread by Seed or Suckers [5]	Planting Distance (ft.) [6]	# Trees per km(per mile)
Spruce, Colorado	18 (60)	L	M	S - M	L - M	L	3.5 (12)	285 (440)
Spruce, White	18 (60)	L	H	S	L	L	3.5 (12)	285 (440)