

APPENDIX G TREE SPECIES FOR NEW YORK STATE

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Table G.1

Trees Suitable for Landscape and Conservation Plantings in New York

TREE SIZE:

Large Sized Trees (75'+) - Trees that exceed this height at maturity.

Medium Sized Trees (35' - 75') - Trees in this height range at maturity.

Small Sized Trees (15' - 35') - Trees relatively low at maturity.

VAR: (x) = varieties of the species are available for various uses.

FOLIAGE:

E = evergreen

c = colorful in fall

l = lustrous; shiny

D = deciduous

d = dense

u = unusual leaves

f = fine textured

SITE TOLERANCE:

cold = hardy in zones 2 and 3 (northeastern mountains)

wet = tolerant of moderately well to somewhat poorly drained soils.

dry = tolerant of sandy, gravelly, excessively drained soils.

shade = will tolerate some shady sites.

sea = trees which may tolerate seaside conditions.

city = trees that withstand usual city conditions.

PEST:

F = usually free S = susceptible

FEATURES:

Habit = general shape of open grown plants.

Bo - broad open (wide)

Co - columnar

FEATURES: (cont'd)

Ho - horizontal branching

Na - narrow

Op - open

Ov - ovoid/oblong

Pe - pendulous

Py - pyramidal

Ro - round

S - spreading

Up - upright

Wo - wide/open

BRK; (x) = bark has interesting characteristics of color, texture or form.

FLR; (x) = flowers are colorful and interesting.

f = fragrant;

s = showy;

u = unusual shape.

FRU; (x) = fruits are interesting and/or edible.

LVS; (x) = leaves have attractive color and/or unusual shape.

USES:

WIND; (x) = suitable for windbreaks and screening.

SHD; (x) = suitable as lawn shade trees.

STRT; (x) = trees often selected for street planting.

WILD; F/c = trees offering food and cover to wild-life.

F = trees providing food from fruits.

W/c = trees offering winter cover.

BARR; (x) = trees which can be used as a barrier to some traffic.

ORN; (x) = trees whose main value is ornamental.

Table G.1 (cont'd)

Trees Suitable for Landscape and Conservation Plantings in New York

A. LARGE SIZED TREES (75 ft.+)	1.DECIDUOUS SPECIES	HEIGHT	VAR	FOLIAGE	SITE TOLERANCE					FEATURES				USES									
					COLD	WET	DRY	SHADE	SEA	CITY	PEST	HABIT	BRK	FLR	FRU	LVS	WIND	SHOE	STRT	WILD	BARR	ORN	
	BEECH, EUROPEAN <i>Fagus sylvatica</i>	90'	X	D,c,d,j								Py	X									X	
	BIRCH, PAPER <i>Betula papyrifera</i>	90'		D,c	X							Py	X										X
	BIRCH, RIVER <i>Betula nigra</i>	90'		D,c		X						Py	X										
	CHERRY, BLACK <i>Prunus serotina</i>	90'	X	D,d,j	X			X				S	X	X	X					F			X
	GINKGO <i>Ginkgo biloba</i>	120'		D,c,u				X		F		Wo						X				X	X
	GUM, BLACK TUPELO <i>Nyssa sylvatica</i>	90'		D,c,d,j		X			X			Py											X
	HICKORY, PIGNUT <i>Carya glabra</i>	120'		D,c			X					Ro								F			X
	HICKORY, SHAGBARK <i>Carya ovata</i>	120'	X	D,c								Na/Up	X							F			X
	HONEYLOCUST 1 <i>Gleditsia</i> spp.	135'	X	D,c,u			X			F		Bo						X				X	X
	JAPANESE ZELKOVA <i>Zelkova serrata</i>	90'		D,c								Ro											X
	KATSURA TREE <i>Cercidiphyllum japonicum</i>	60-100'		D,c,u						F		Ro											X
	LINDEN, LITTLE-LEAF <i>Tilia cordata</i>	90'	X	D,d	X				X			Py		X	X							X	X
	LONDON PLANE TREE X <i>Platanus acerifolia</i>	100'		D								S	X										X
	MAPLE, NORWAY <i>Acer platanoides</i>	120'	X	D,c	X	X						Ro	X	X									X
	MAPLE, RED <i>Acer rubrum</i>	120'	X	D,c		X						Ov										X	X
	MAPLE, SUGAR <i>Acer saccharum</i>	90'		D,c								Ro/S								F			X
	OAK, WHITE <i>Quercus alba</i>	90'	X	D								varies										X	
	POPLAR, HYBRID 2 X <i>Populus</i>	90'	X	D,c,u	X			X				S		X									X
	POPLAR, WHITE <i>Populus alba</i>	125'	X	D,c,u		X						F										X	X
	SWEET-GUM <i>Liquidambar styraciflua</i>																						X

Table G.1 (cont'd)
Trees Suitable for Landscape and Conservation Plantings in New York

A. LARGE SIZED TREES (75 ft.+)	2. EVERGREEN SPECIES	SITE TOLERANCE					FEATURES			USES	
		HEIGHT	VAR FOLIAGE	COLD WET	DRY SHADE	SEA CITY PEST	HABIT BRK	FLR FRU LVS	WIND SHDE STRT	WILD BARR ORN	
	CEDAR, EASTERN RED <i>Juniperus virginiana</i>	90'	X E,d	X	X	F	Py X	X	X	WC	
	FIR, DOUGLAS <i>Pseudotsuga menziesii</i>	300'	X E,d				Py	X	X	WC X	
	FIR, WHITE <i>Abies concolor</i>	120'	X E,c				Py	X	X	WC	
	HEMLOCK, CANADA <i>Tsuga canadensis</i>	90'	X E,d	X			Py		X	WC X	
	LARCH, EUROPEAN <i>Larix decidua</i>	100'	X D,c	X			Py	X		X	
	PINE, AUSTRIAN <i>Pinus nigra</i>	90'	X E		X		Py		X	WC X	
	PINE, EASTERN WHITE <i>Pinus strobus</i>	100-150'	X E	X			Ro/Py		X	WC X	
	PINE, JAPANESE BLACK <i>Pinus thunbergii</i>	90'	E		X		S			WC X	
	SPRUCE, COLORADO <i>Picea pungens</i>	100'	X E,c,d	X	X	S	Py	X	X	WC X	
	SPRUCE, NORWAY <i>Picea abies</i>	150'	X E,d	X			Py	X	X	WC	
	SPRUCE, SERBIAN <i>Picea omorika</i>	90'	E,c,d				Py	X	X	WC X	
	SPRUCE, WHITE <i>Picea glauca</i>	90'	X E	X			Py	X	X	WC X	

¹ Thornless, seedless cultivars recommended

² Select male, non-root suckering, disease resistant cultivars

Note: It is not recommended to combine Colorado Blue Spruce or any other spruce with Douglas Fir in the same landscape design. Douglas Fir is an alternate host for the Cooley Spruce Gall Aphid.

Table G.1 (cont'd)

Trees Suitable for Landscape and Conservation Plantings in New York

B. MEDIUM SIZED TREES (35'-75')	1. DECIDUOUS SPECIES	HEIGHT	VAR FOLIAGE	SITE TOLERANCE					FEATURES					USES		
				COLD	WET	DRY	SHADE	SEA CITY	PEST	HABIT	BRK	FLR	FRU	LVS	WIND SHDE	STRT WILD BARR ORN
	ALDER, EUROPEAN <i>Alnus glutinosa</i>	75'	D	X	X					Ov					X	
	ALDERS <i>Alnus spp.</i>	60'-75'	X D,d	X	X				S	Ro		X			X	
	BIRCH, SWEET <i>Betula lenta</i>	75'	D,c	X						Py	X		X			X
	CHERRY, EUROPEAN BIRD <i>Prunus padus</i>	45'	X D,u	X						Op		X,f	X		F	
	CHERRY, PIN 1 <i>Prunus pennsylvanica</i>	36'	D,c,f	X		X	X			Op	X	X	X	X	F	X
	CHERRY, SARGENT <i>Prunus sargentii</i>	75'	X D,c,d							Up	X	X		X	X	X
	CHESTNUT, CHINESE <i>Castanea mollissima</i>	60'	D,c,d,l							Ro			X		F	
	CHOKECHERRY, AMUR <i>Prunus maackii</i>	45'	D,d	X						Ro	X	X			F	X
	CRAB APPLE, SIBERIAN <i>Malus baccata</i>	50'	X D,d	X					S	Na		X,f	X		F	X
	CRIMEAN LINDEN X <i>Tilia euchlora</i>	60'	X D,d,l							Pe		X,f		X	X	
	DOGWOOD, FLOWERING <i>Cornus florida</i>	40'	X D,c,d,l						F	Ho	X	X,u	X	X		X
	ELM, SIBERIAN <i>Ulmus pumila</i>	75'	X D,f			X				Ro/Op/F				X		
	HAWTHORN, COCKSPUR <i>Crataegus crus-galli</i>	36'	X D,d,l			X				S	Ro/S	X	X	X	F	X
	HOLLY, AMERICAN <i>Ilex opaca</i>	45'	X E,d,u					X		F	Py		X	X	WC	X
	HORNBEAM, AMERICAN <i>Carpinus caroliniana</i>	36'	X D,c,d		X					F	Ro	X	X	X	F	
	HORNBEAM, EUROPEAN <i>Carpinus betulus</i>	60'	X D,d								Py			X		X
	HORNBEAM, HOP <i>Ostrya virginiana</i>	60'	D,d						F	Py		X	X		F	X

Table G.1 (cont'd)
Trees Suitable for Landscape and Conservation Plantings in New York

3. MEDIUM SIZED TREES (35'-75')		SITE TOLERANCE										FEATURES					USES					
1. DECIDUOUS SPECIES		HEIGHT	VAR	FOLIAGE	COLD	WET	DRY	SHADE	SEA	CITY	PEST	HABIT	BRK	FLR	FRU	LVS	WIND	SHOE	STRT	WILD	BARR	ORN
JAPANESE PAGODA TREE <i>Sophora japonica</i>		75'	X	D			X				F	Ro	X	X				X	X			X
MAPLE, STRIPED <i>Acer pensylvanicum</i>		36'	X	D,u	X			X				Op	X			X						X
MOUNTAIN-ASH, EUROPEAN <i>Sorbus aucuparia</i>		45'	X	D							S	S		X	X	X				F		X
MOUNTAIN-ASH, KOREAN <i>Sorbus alnifolia</i>		60'	X	D,d								Py/Ro	X	X	X	X						X
MULBERRY, WHITE <i>Morus alba</i>		45'	X	D,d,u			X					Ro		X	X	X				F		
OAK, RED <i>Quercus borealis</i>		75'		D,d,l	X					X		Ro		X	X	X		X	X	F		
OAK, SWAMP WHITE <i>Quercus bicolor</i>		60'		D,d	X	X						Na/Ro				X		X		F		
OAK, WILLOW <i>Quercus phellos</i>		50'		D,l								Ro						X				X
POPLAR, SIMON <i>Populus simonii</i>		50'	X	D,d	X							Na						X				X
REDBUD, EASTERN <i>Cercis canadensis</i>		36'	X	D,c,u								Wo		X		X						X
SASSAFRAS <i>Sassafras albidum</i>		60'		D,u								So	X		X	X						X
SERVICEBERRY <i>Amelanchier</i> spp.		25'-60'		D,c					X	X	S	S	X	X	X	X				F		X
SORREL TREE <i>Oxydendrum arboreum</i>		75'		D,c,d,l								Py		X	X	X						X
WILLOW, THURLOW WEEPING <i>X Salix elegantissima</i>		40'		D,l		X						Pe										X
WILLOW, WHITE <i>Salix alba</i>		75'	X	D	X	X						Up				Colored winter twigs						X
YELLOW-WOOD, AMERICAN <i>Cladrastis lutea</i>		50'	X	D,c,d	X							Ro	X	X		X						X

¹ Spreads rapidly by root suckers

² Spreads rapidly by root suckers, do not plant near Pine Barrens ecosystems

Table G.1 (cont'd)

Trees Suitable for Landscape and Conservation Plantings in New York

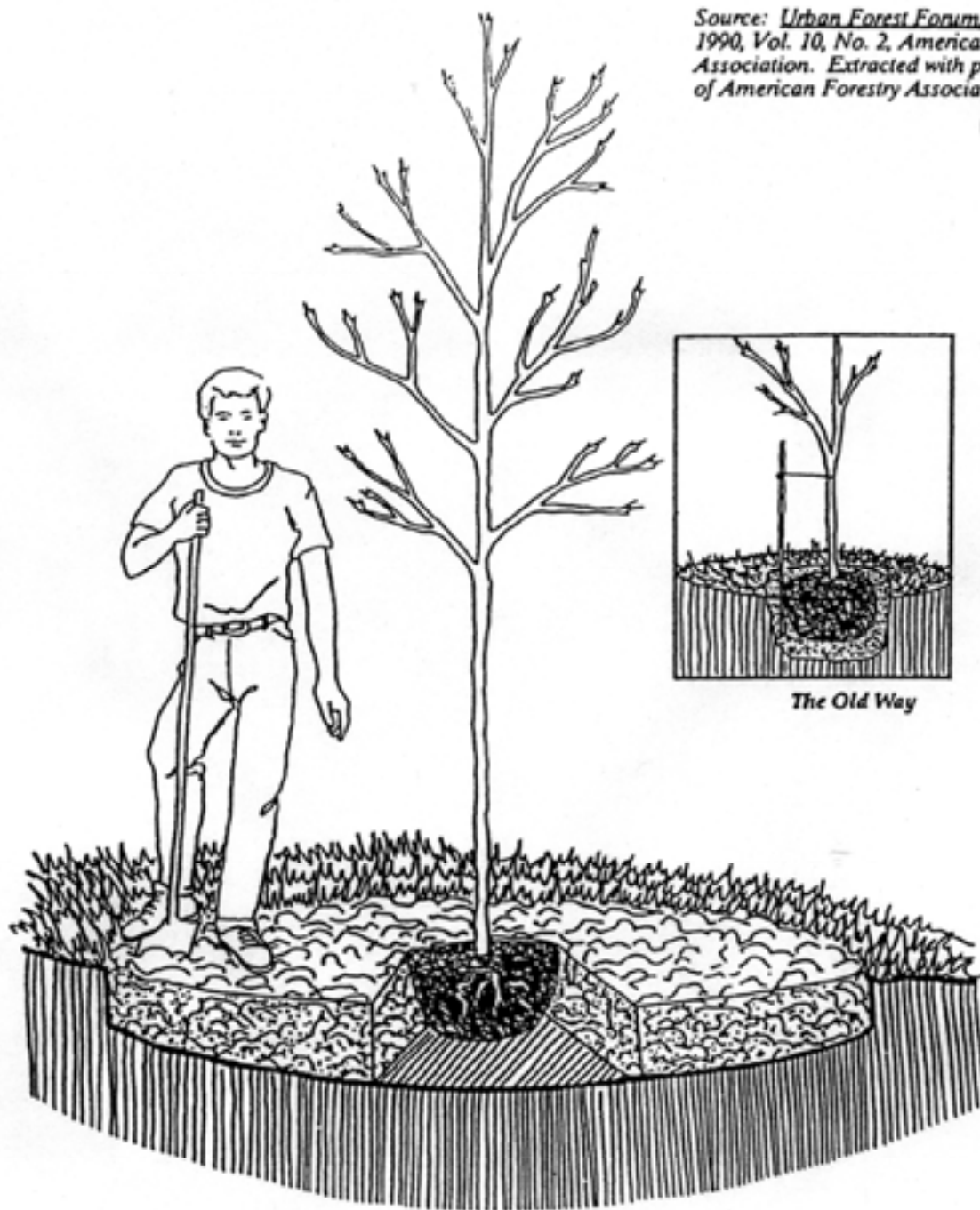
B. MEDIUM SIZED TREES (35'-75')	2. EVERGREEN SPECIES	HEIGHT	VAR	FOLIAGE	SITE TOLERANCE					FEATURES				USES							
					COLD	WET	DRY	SHADE	SEA	CITY	PEST	HABIT	BRK	FLR	FRU	LVS	WIND	SHOE	STRT	WILD	BARR
	ARBORVITAE, AMERICAN <i>Thuja occidentalis</i>	60'	X	E,u	X	X	X	X	X			Co					X		WC		X
	FIR, KOREAN <i>Abies koreana</i>	50'		E,d								Py				X	X		WC		X
	FIR, VEITCH <i>Abies veitchii</i>	75'		E,c	X							Py				X	X		WC		
	HEMLOCK, CAROLINA <i>Tsuga caroliniana</i>	75'		E,d						X		Py/Pe					X	X	WC		X
	PINE, JACK <i>Pinus banksiana</i>	75'		E	X		X					Bo							WC		
	PINE, PITCH <i>Pinus rigida</i>	75'		E			X					Op							WC		
	PINE, RED <i>Pinus resinosa</i>	75'		E	X		X		X			Py					X		WC		
	PINE, SCOTCH <i>Pinus sylvestris</i>	75'	X	E	X				X			Op/Py	X				X		WC		
	PINE, SWISS STONE <i>Pinus cembra</i>	75'		E,d	X							PyS							WC		X
	SPRUCE, BLACK	50'		E,d	X	X		X				Co					X		WC		
	SPRUCE, BLACK HILLS	75'		E,d	X		X				F	Co					X		WC		

Table G.1 (cont'd)
Trees Suitable for Landscape and Conservation Plantings in New York

C. SMALL SIZED TREES (15'-35')	SITE TOLERANCE													FEATURES				USES			
	HEIGHT	VAR	FOLIAGE	COLD	WET	DRY	SHADE	SEA	CITY	PEST	HABIT	BRK	FLR	FRU	LVS	WIND	SHOE	STRT	WILD	BARR	ORN
BIRCH, GRAY <i>Betula populifolia</i>	30'		D		X		X			S	several stems				X						X
BLACKHAW <i>Viburnum prunifolium</i>	30'		D,c,1		X								X	X	X		X		F		X
CHERRY, CORNELIAN <i>Cornus mas</i>	24'	X	D,1							F	Ro		X	X	X				F		
CHERRY, SOUR <i>Prunus cerasus</i>	30'	X	D		X						Ro		X	X					F		X
CORK TREE, AMUR <i>Phellodendron amurense</i>	30'		D		X						Wo	X		X	X						
CRABAPPLES <i>Malus spp</i>	15'-30'		D		X					S	Ro		X,s	X				X	F		X
DOGWOOD, JAPANESE <i>Cornus kousa</i>	20'	X	D,d,1								Ho		X,s	X	X						X
HAWTHORNS <i>Crataegus spp</i>	15'-30	X	D,d		X		X			S	Rothomy		X	X	X		X		F		X
LABURNUM SCOTCH <i>Laburnum alpinum</i>	30'	X	D								U		X,u				X				
LILAC, JAPANESE TREE <i>Syringa amurensis japonica</i>	30'		D,coarse									X	X,u				X				X
MAPLE, AMUR <i>Acer ginnala</i>	20'	X	D,c,d		X			X			Up/Ro		X,f	X	X		X				X
MAPLE, MOUNTAIN <i>Acer spicatum</i>	25'		D,coarse		X			X			Ov			X	X						X
MOUNTAIN-ASH, SHOWY <i>Sorbus decora</i>	30'	X	D		X					S	shrubby		X	X							X
NANNYBERRY <i>Viburnum lentago</i>	30'		D,c,1		X			X			dense/shrubby		X	X	X		X		F		X
RHODODENDRON, ROSEBAY <i>Rhododendron maximum</i>	12'-36'	X	E		X			X			Ro		X								X
RUSSIAN OLIVE <i>Elaeagnus angustifolia</i>																					
SEA-BUCKTHORN, COMMON <i>Hippophae rhamnoides</i>	30'				X				X		Ro/o		X	X	X						X

Figure G.1 New Tree Planting Procedure

Source: *Urban Forest Forum*, April/May 1990, Vol. 10, No. 2, American Forestry Association. Extracted with permission of American Forestry Association.



The new method of tree planting will result in better survival and growth than the old method. Grass competition and soil compaction are two of the most common factors in poor performance. The New Method: Prepare a planting area five times the diameter of the root ball or container. Use a rototiller and/or spades to loosen and mix the soil to a depth of about 12 inches. Organic matter (well decomposed) can be added. Dig a hole in the center to set the tree, so that the root ball will rest on solid ground. Backfill around the root area, pressing the soil but not packing it. Mulch the entire prepared area with 2 to 4 inches of bark, wood chips, decomposed sawdust, or leaves. Reference the article for a full explanation.

Table G.2

Susceptibility of Tree Species to Compaction¹

Resistant:

Box elder.....	<i>Acer negundo</i>	Willows.....	<i>Salix spp.</i>
Green ash.....	<i>Fraxinus pennsylvanica</i>	Honey locust.....	<i>Gleditsia triacanthos</i>
Red elm.....	<i>Ulmus rubra</i>	Eastern cottonwood.....	<i>Populus deltoides</i>
Hawthornes.....	<i>Crataegus spp.</i>	Swamp white oak.....	<i>Quercus bicolor</i>
Bur oak.....	<i>Quercus macrocarpa</i>	Hophornbeam.....	<i>Ostrya virginiana</i>
Northern white cedar....	<i>Thuja occidentalis</i>		

Intermediate:

Red maple.....	<i>Acer rubrum</i>	Sweetgum.....	<i>Liquidambar styraciflua</i>
Silver maple.....	<i>Acer saccharinum</i>	Norway maple.....	<i>Acer platanoides</i>
Hackberry.....	<i>Celtis occidentalis</i>	Shagbark hickory.....	<i>Carya ovata</i>
Black gum.....	<i>Nyssa sylvatica</i>	London plane.....	<i>Platanus x hybrida</i>
Red oak.....	<i>Quercus rubra</i>	Pin oak.....	<i>Quercus palustris</i>
Basswood.....	<i>Tilia americana</i>		

Susceptible:

Sugar maple.....	<i>Acer saccharum</i>	Austrian Pine.....	<i>Pinus nigra</i>
White pine.....	<i>Pinus strobus</i>	White ash.....	<i>Fraxinus americana</i>
Blue spruce.....	<i>Picea pungens</i>	Paper birch.....	<i>Betula papyrifera</i>
White oak.....	<i>Quercus alba</i>	Mountain ash.....	<i>Sorbus aucuparia</i>
Red pine.....	<i>Pinus resinosa</i>	Japanese maple.....	<i>Acer palmatum</i>

¹ If a tree species does not appear on the list, insufficient information is available to rate it for this purpose.

Table G.3

Size and Weight of Earth Ball Required to Transplant Wild Stock

Caliper ¹ (Inches)	Shade Trees (Maple, Ash, Oak, Birch, etc.)		Small Trees & Shrubs (Crabapple, Thornapple, Viburnum, Dogwood, etc.)		
	Minimum Diameter Ball (Inches)	Weight of Ball (lbs.)	Up to 6 ft. Height — 6 ft. and Caliper ¹	Minimum Diameter Ball (Inches)	Weight of Ball (lbs.)
1/2	14	88	2	12	55
3/4	16	130	3	14	88
1	18	186	4	16	130
1-1/4	20	227	5	18	186
1-1/2	22	302	3/4	18	186
1-3/4	24	390	1	20	227
2	28	621	1-1/2	22	302
3	32	836	1-3/4	24	390
3-1/2	38	1,400	2	28	621
4	42	1,887	2-1/2	32	836
			3	38	1,400

¹Caliper is a diameter measurement of trees at a height of 6 inches above the ground.
(American Standards for Nursery Stock)