

Table 13-2 Tolerance of American Forest Trees

Eastern conifers	
Very tolerant:	Intolerant:
Eastern hemlock	Eastern red cedar
Balsam fir	Red pine
Atlantic white cedar	Pitch pine
	Shortleaf pine
Tolerant:	Loblolly pine
Red spruce	Virginia pine
Black spruce	
White spruce	Very intolerant:
Northern white cedar	Tamarack
	Jack pine
Intermediate:	Longleaf pine
Eastern white pine	
Slash pine	
Bald cypress	
Eastern hardwoods	
Very tolerant:	Intermediate:
Eastern hop-hornbeam	Yellow birch
American hornbeam	Sweet birch
American beech	American chestnut
American holly	White oak
Sugar maple	Red oak
Flowering dogwood	Black oak
	American elm
Tolerant:	Rock elm
Red maple	Hackberry
Silver maple	Magnolias*
Box elder*	White ash
Basswood	Green ash
Tupelos	Black ash
Persimmon*	
Buckeyes	Very intolerant:
	Willows (as a class)
Intolerant:	Quaking aspen
Black walnut	Bigtooth aspen
Butternut	Cottonwoods
Pecan	Grey birch
Hickories	Black locust
Paper birch	Osage orange
Yellow poplar	
Sassafras*	
Sycamore*	
Black cherry	
Honey locust	
Kentucky coffee tree	
Catalpas	

**Table 13-2 Tolerance of American Forest Trees**  
(Continued)

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**Western conifers**

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<b>Very tolerant:</b> Western hemlock Alpine fir Western red cedar Pacific yew California torreya	<b>Intolerant:</b> Limber pine Piñon pines* Ponderosa pine Jeffrey pine Lodgepole pine Coulter pine Knobcone pine Bishop pine Big-cone spruce Noble fir Junipers
<b>Tolerant:</b> Sitka spruce Engelmann spruce Mountain hemlock Pacific silver fir Grand fir White fir Redwood Incense-cedar Port Oxford white cedar Alaska yellow cedar*	<b>Very intolerant:</b> Whitebark pine Foxtail pine Bristlecone pine Digger pine Western larch Alpine larch
<b>Intermediate:</b> Western white pine Sugar pine Monterey pine Blue spruce Douglas-fir Red fir*	

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**Western hardwoods**

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<b>Very tolerant:</b> Vine maple	<b>Intermediate:</b> Red alder* Golden chinquapin* Oregon ash California white oak* Oregon white oak*
<b>Tolerant:</b> Tan oak Canyon live oak Big-leaf maple Madrone* California laurel*	<b>Very intolerant:</b> Quaking aspen Cottonwoods

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\*Cases of great uncertainty.

Source: Daniel, Helms, and Baker. 1979. Principles of Silviculture, 2nd edition. McGraw-Hill. New York, NY