

Hardy Trees and Guild Plants for Northeastern Arizona

The following species were selected to withstand the extreme conditions of our area: drought, wind, temperatures, and highly alkaline soils. They are hardy plants but still need water, healthy soil biology (innoculants), carbon-based mulch, protection and care. Please consider the specific desires, soils, and microclimate of your property when making selections. Species designated "invasive" by the USDA (one of our sponsors) have been removed from this list.

If you know of any additional trees or shrubs that do particularly well in this area but are not on this list, please contact Jennifer Brownson at: jbrownson@mail.npc.edu

Common Name	Scientific Name	Main Yield(s)	Notes	~10 yr/ Height	~10 yr/Width	Avg. H	Avg. W	Zone
Canopy								
Black Locust	<i>Robinia pseudoacacia</i>	N-Fixer, lumber in >10 years, nectary, JT	Produces nice light shade for other trees/plants below	20-30'	15-20'	80'	45'	4-9
Black Walnut*	<i>Juglans nigra</i>	Nuts in 7-10 years, lumber in ~20 years, syrup	*Certain trees/plants won't grow well next to	30'	12'	100'	100'	4-7
Buartnut	<i>Juglans xhixbyi</i> (hybrid butternut x heartnut)	Nuts in 7 – 10 years		10'	10'	75'	75'	3-7
Elm (Chinese)	<i>Ulmus parvifolia</i>	Windbreak, shade	grows quickly	20'	15'	50'	40'	3-9
English Walnut (Carpathian)*	<i>Juglans regia</i>	Nuts in 7-10 years, lumber		24'	24'	100'	100'	5-7
Mulberry	<i>Morus alba, M. rubra, M. nigra</i>	Fruit after 5 years, good chicken forage, JT	Does well here	20'	16'	50'	40'	3-9
Shagbark Hickory*	<i>Carya ovata</i>	Nuts at around 40 years		10'	6'	85'	50'	4-7
Maple 'Autumn Blaze'	<i>Acer freemanii</i> - drought tolerant and hardy	shade, beauty	love water, but will survive drought by slowing	15'	5'	100'	75'	3-7
Oak	<i>Quercus</i> (<i>grisea, gambel, bur (macrocarpa), buckley, gravesei, pungens pungens, Fusiformis (live Oak)</i>)	Acorns after 30 years, lumber, JT		12'	12'	100'	100'	4-8
Silver Linden	<i>Tilia tomentosa</i>	Blossoms for pollinators, edible leaves when young				50'	40'	4-7
Willow - Navajo (needs water source)	<i>Salix matsudana</i>	Shade	Will not tolerate dry conditions when young			30'	25'	5-9
Evergreens								
Arizona Cypress	<i>Cupressus arizonica</i>							6-9
Korean Stone Pine	<i>Pinus koraiensis</i>	Pine nuts after 15 years, pine pollen, JS		12'	6'	100'	50'	3-7
Pine - Pinyon, Austrian Black, Italian Stone, Ponderosa	<i>Pinus edulis, P. nigra, P. pinea, P. ponderosa</i>	Pinyon: pine nuts						6 min
Junipers (Utah, One Seed, Alligator)	<i>Juniperus osteosperma, J. monosperma, J. deppeana</i>					30'	20'	6 min
Spruce - White	<i>Picea Glauca</i>							
Midstory								
Apple	<i>Malus spp.</i>	Fruit, many varieties, stagger to extend harvest (early, mid and late), nectary, JS				10'-35'	10'-35'	4-9
Cherry	<i>Prunus spp.</i>	Fruit, there are generally two varieties, "sweet" and "tart" or "pie" cherries, JS				15'-30'	15'-35'	5-9
Chokecherry	<i>Prunus virginiana</i>	Fruit, nector, windbreak				25'	25'	
Cornelian Cherry	<i>Cornus mas</i>	Fruit, not a true cherry, related to dogwood, JT				20'	20'	4-8
Crabapple	<i>Malus spp. (M. baccata 'Siberian' tallest, cold hardy, but thirstier)</i>	Fruit, keep one or more in the orchard to increase pollination of apples, nectary, JS; Select varieties that like alkaline soil (some don't)				15'-35'	10'-20'	3-8
Hazelnut (not great in extreme alkaline soil)	<i>Corylus americana or hybrids only, NOT C. avellana</i>	Nuts in 3 years from nursery stock, many varieties, produces in shade, JT				15'	15'	3-7
Honey Locust (available thornless)	<i>Gleditsia triacanthos</i>	N fixer, shade, edible leaves and seeds	Good choice in veg gardens for shade			40'	40"	3-9
Jujube	<i>Ziziphus jujuba</i>	V hardy, likes hot sun, date-like fruit				30'	25'	5-10
Mimosa	<i>Albizia julibrissin</i>	N fixer, flowers						
Mulberry (nigra tend to be smaller)	<i>Morus nigra, M. alba, M. rubra</i>	Fruit, nectary, hardy, easy to grow						
Netleaf Hackberry	<i>Celtis reticulata</i>	Very long life 100-200 yrs, fruit, seeds, v hardy				30'	30'	4-10
Paw Paw	<i>Asimina triloba</i>	Fruit, needs gene diversity to fruit = plant multiple varieties, grows well in shade, JT				35'	35'	5-7
Peach	<i>Prunus persica</i>	Fruit, nectary, JS				15'	12'	4-8
Pear	<i>Pyrus spp.</i>	Fruit, nectary, likes full sun, JS				15'-40'	10'-25'	4-9
Plum	<i>Prunus spp.</i>	Fruit, usually hardy, many varieties, nectary, JS				15'-20'	10'-20'	4-9
Sea Buckthorn	<i>Hippophae rhamnoides</i>	Edible, medicinal, thorny, N-fixer				20'	8'	3-7
Serviceberry	<i>Amelanchier alnifolia (alder-leafed) or A. utahensis</i>	Fruit, nectary, often called the "blueberry tree", JT, utahensis is shrub-like				12'	12'	2-8
Shrub Layer								

Autumn Olive	<i>Eleagnus umbellata</i>	Fruit, nectary, windbreak			15'	12'	3-
Blackberry	<i>Rubus occidentalis</i>	Fruit, nectary, JS			4'	12'+	3-7
California buckthorn	<i>Frangula californica</i>	Edible berries for wildlife					
Current	<i>Ribes sativum</i>	Fruit, flowers are a butterfly favorite, JT			5'	5'	5-9
Elderberry	<i>Sambucus nigra</i>	Fruit, useful and tasty flowers, bird attractant, JT			12'	12'	3-10
Fig (needs protection in winter)	<i>Ficus carica</i>	fruit, grow as a shrub	good with high alkalinity, needs winter protection				
Goji	<i>Lyceum barbarum</i>	Edible berries, edible shoots, very nutritious and productive, grows quickly, JT			7'	5'	3-10
Gooseberry	<i>Ribes uva-crispa</i>	Fruit, produces in shade, JT			5'	5'	4-8
Goumi	<i>Eleagnus multiflora</i>	N fixer, berries, produces in partial shade, JT			8'	6'	4-9
Lilac	<i>Kolkwitzia amabilis</i>	very hardy, will spread by suckers					
Mock Orange (small leaf or lewisii hardiest)	<i>Philadelphus microphyllus or lewisii 'Cheyenne' hardy to zone 3</i>	Fragrant flowers, pollinator plant, like some shade					varies
Mountain Mohogony	<i>Cercocarpus ledifolius</i>	N fixer					
New Mexico Locust	<i>Robinia neomexicana</i>	N Fixer					
New Mexican Privot	<i>Forestiera neomexicana</i>	females produce berries for birds	low maintenance, low water needs		6'-8'	6'	
Raspberry	<i>Rubus idaeus</i>	Fruit, tea from the leaves, nectary, JT			6'	6'	3-9
Siberian Pea Shrub	<i>Caragana arborescens</i>	N-fixer, nectary, good chicken forage, JT			12'	9'	2-7
Willow - Black	<i>Salix purpurea 'bleu' - deer resistant and drought tolerant</i>	Basketry, medicinal, nectary, root stimulant "willow tea", can plant in dams/swales, JT			---	---	---
Herbaceous layer		(assume juglone susceptibility unless noted otherwise)					
Anise Hyssop	<i>Agastache foeniculum</i>	Medicinal, edible, tea, nectary			5'	3'+	4-9
Arugula	<i>Eruca vesicaria</i>	Edible leaves			1'	1'	3-11
Asparagus	<i>Asparagus officinalis</i>	Edible shoots			5'	3'	3-8
Chamomile	<i>Chamaemelum nobile</i>	Tea from the flowers (medicinal), aromatic pest confuser			1'	1'	4-8
Chives	<i>Allium schoenoprasum</i>	Edible bulbs, aromatic pest confuser, JT			18"	15"	2-10
Comfrey	<i>Symphytum uplandicum</i>	Medicinal, mulch, insectary, dynamic accumulator, attracts hummingbirds			4'	3'	3-9
Dill	<i>Anethum graveolens</i>	Edible leaves and seeds, insectary			3'	3'	3-11
False Indigo	<i>Baptisia australis</i>	N-fixer			4'	5'	4-8
Fennel	<i>Foeniculum vulgare</i>	Edible bulb, stalk, leaves, seeds, insectary			5'	3'	3-10
Garlic	<i>Allium sativum</i>	Edible bulbs, flowers and scapes, aromatic pest confuser, JT			1'	2"	7-10
Jerusalem Artichokes	<i>Helianthus tuberosum</i>	Edible tubers, harvest in late Fall through Winter, JT			12'	4'	4-9
Kale	<i>Brassica oleracea</i>	Edible leaves, biennial			3'	2'	7-9
Lemon Balm	<i>Melissa officinalis</i>	Tea from leaves, mosquito repellent, aromatic pest confuser, JT			2'	1'+	4-8
Lettuce	<i>Lactuca sativa</i>	Edible leaves			3	1	5-9
Lovage	<i>Levisticum officinale</i>	Edible, medicinal, aromatic pest confuser, nectary, no data for juglone sensitivity			6'	5'	5-9
Mint	<i>Mentha spp.</i>	Edible leaves, aromatic pest confuser, tea from leaves, JT			2'	3'+	3-7
Onion/Nodding Onion	<i>Allium cepa/cernuum</i>	Edible bulbs, leaves and flowers, <i>cernuum</i> spreads readily, hardy, both are JT			2'	4"	4-8
Parsley	<i>Petroselinum crispum</i>	Edible leaves, stems, roots and seeds, insectary, dynamic accumulator			2'	1'	3-9
Rhubarb	<i>Rheum rhabarbarum</i>	Edible stems (the leaves are poisonous)			3'	3'	3-7
Salad Burnet	<i>Sanguisorba minor</i>	Edible leaves, does well in poor soil			2'	1'	4-8
Sorrel	<i>Rumex scutatus</i>	Edible leaves			2'	2'	5-9
Spinach	<i>Spinacea oleracea</i>	Edible leaves			1'	1'	4-8
Stinging Nettle	<i>Urtica dioica</i>	Edible, medicinal, tea, dynamic accumulator, mulch, many uses! JT			4'	3'	4-9
Wild Lupine	<i>Lupinus perennis</i>	N fixer, edible and nutritious seed pods, nectary			4'	3'	3-9
Yarrow	<i>Achillea millefolium</i>	Edible, medicinal, insectary, dynamic accumulator, JT			3'	2'	4-9

Flowering Ground Covers						
Dutch White Clover	<i>Trifolium repens</i>	N fixing, long blooming season, used as green mulch/living mulch in garden, JT	6"	6"+	4-9	
Nasturtium	<i>Tropaeolum majus</i>	Annual, edible flowers and leaves, pest confuser (aphids)	1'	11'	8-11	
Strawberry	<i>Fragaria spp.</i>	Fruit, flowers	8"	3'+	4-8	
Vines						
Grape	<i>Vitis vinifera</i>	Fruit, edible leaves, JT with wild rootstock	50'		6-9	
Groundnut	<i>Apios americana</i>	N fixing, edible tubers (similar to potato), nectary	18'		3-9	
Hardy Kiwi	<i>Actinidia arguta</i>	Fruit, nectary	25'		6-9	
Hops	<i>Humulus lupulus</i>	Medicinal, tea, edible shoots	20'		5-7	
Passionflower	<i>Passiflora incarnata</i>	Fruit, tea from flowers and leaves, immaculate flowers!	25'		5-9	
Scarlet Runner or Pole Bean (as an annual)	<i>Phaseolus coccineus</i>	N-fixer, edible beans, nectary, JT	10'		9-11	
Fungal Layer						
King Stropharia Mushrooms	<i>Stropharia rugosoannulata</i>	(Plants that complete their life cycle before the trees leaf out in the spring) Edible, breaks down wood & straw	3-6"		4-10	

* - Alleopathic = secretes a substance from the plant that is toxic to other plants, here referring to juglone. Sources – Edible Forest Gardens Vol. 2, <http://pfaf.org>
 JT = Juglone tolerant. Plant shows little to no response to juglone exposure. JS = Juglone susceptible. Not recommended to plant this within ~50' from trunk of alleopathic tree.

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