

What Will We Be Pruning in 2050? – Some Woody Plants Most Likely to Survive and Thrive in the Land of Sky Blue Waters



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I'll be honest. Predicting what trees and shrubs will be landscape staples in 32 years is easy for me since there's no way I'll be around then to take a scolding for being wrong. Having said that, we should be planting landscapes that our grandchildren (or grandchildren of others) will be benefiting from in 2050 if they choose to live in Minnesota or close by.

Trees planted in the summer of 2018 will be reaching productive maturity in 2050; full canopies that shade lawns and streets if they were planted correctly and maintained regularly over the years. That tipping point for the length of time it takes a newly planted trees to get to the beginning of its productive maturity is around 30-40 years, depending on how quickly it grows. Take a look at the boulevard trees in your home town. On average, they are about 35 years old, so you get an idea of their value as a green asset at that age.

Most people now acknowledge that the changes environmental scientists were predicting back in the 1970's and 1980's were right. Minnesota's hottest years on record have largely been in the past 20 years. It's also windier and the dry spells between rainfalls are getting to be more common and longer. And these climatic trends are only going to continue. It's time to face it: Minnesota needs to accept some new members of the greenspace community.

For the purpose of responding to the pressures on the parts of Minnesota where most people live, the trees and shrubs in this review will focus on southeast Minnesota. Perhaps in another volume, the entire eastern portion of Minnesota will be discussed. For those trees and shrubs noted as "natives," that term will mean that they are native to the Midwest, or in some cases native to prairies.

Big Trees and Big Shade

The most important trees will be those that can provide some protection from winds and intense sun. These trees will need to survive extremes in temperatures, but especially the heat of the summers. They will also need to tolerate random acts of rainfall. When rain comes, it will come in buckets, followed by extended periods of seasonal drought. For those trees, Minnesota should look to the prairies.

Blackjack Oak (*Quercus marilandica*) is purported to be cold hardy to Zone 3, but I would count on Zone 4. It's a slow-grower, so plant one or two this spring. It's very tolerant of different soils, adapting well to dry sandy and clay soils. It grows up to 50 feet tall.

Chinkapin Oak, also **Chinquapin Oak** (*Quercus muehlenbergii*) will be one of the oaks Minnesota will be depending upon for shade. Native to the dry, limestone bluffs and outcroppings of the Midwest, it's not only drought tolerant, but alkaline soil tolerant. A reliable 50 foot tall and broad tree, reliably cold hardy to Zone 4. Start them now as small whips or saplings from 2-4 feet tall now for an ecologically functional tree by 2040.

Mongolian Oak (*Quercus mongolica*) is a scale-down version of bur oak with a similar form but only reaching about 40 feet (at most) in height. Drought tolerant and cold hardy to zone 3. **Native to eastern Asia.**

Shingle Oak (*Quercus imbricaria*), is one of the easiest oaks to transplant and one of the most site-tolerant oaks we can grow in the upper Midwest. It tolerates a wide range of soils from wet to dry and acidic to pretty alkaline. Cold hardy to zone 4, red autumn foliage, and an ultimate height of around 40-ish feet. Its willow-like leaves can be deceiving but it is definitely an oak.

Sugar Maple (*Acer saccharum*) varieties 'Unity' and 'Inferno.' Both are cold hardy to Zone 3, and both have the reputation of being less likely to suffer from bark frost cankers and frost cracks. Still looks like sugar maples in the autumn, still are not meant to be planted as parking lot trees, but in wide boulevards where no deicing salts are used, parks and lawns, are good choices over the species.

Kentucky Coffeetree (*Gymnocladus dioica*) variety 'True North,' is a recent University of Minnesota release. It's a male form, so you won't have the advantage of the beautiful seed pods that are only found on the females, but it's still a tough prairie tree that will become even more important in our landscapes as the climate continues to change. Cold hardy to Zone 3, most reliably to Zone 4, 'True North' grows up to 70 feet tall yet narrower than the species, which makes it a better boulevard tree.

Amur Corktree (*Phellodendron amurense*) variety 'Eye Stopper.' This new male variety available now holds promise for a future member of Minnesota's boulevard, park and lawn palette of plants. A little smaller than some of the other large trees, rarely getting more than 40-ish feet tall with close to the same spread, it's a male so there's no worry about the fruits/seeds allowing the plant to become invasive. Very tolerant of harsh, polluted urban areas, heat and drought. A good candidate to help moderate urban heat islands. **Native to China and Japan.**

River Birch (*Betula nigra*) variety 'Northern Tribute.' A river birch for a changing, hotter, drier Midwest climate? Can that be true? According to North Dakota State University, which released the variety, it's a tree with all of the good features of river birch (aka, copper birch): up to 35-40 feet tall, cold hardy to Zone 3, beautiful exfoliating bark. But here's the really good news: it tolerates (reasonably) alkaline soils, dry and compacted soils and still has the best resistance to bronze birch borer of all the birches.

American elm (*Ulmus americana*) variety ‘Jefferson.’ This American elm variety has an advantage over many of the other good Dutch elm disease-resistant American elm varieties: it’s built well. This is an elm that will perform like an elm yet won’t be one of those that require an excessive amount of maintenance. It’s probably only reliably cold hardy to southern MN now since it’s rated as Zone 5, but the times are a changing and it hold promise for being a valuable elm for the southern third of the state.

Norway spruce (*Picea abies*) variety ‘Royal Splendor.’ Another North Dakota State University plant introduction, it’s cold hardy to Zone 3, grows up to about 45-50 feet tall, is an excellent prairie evergreen tree, and is a more narrow, more upright, more pyramidal variety than the species. Not a tree for the boulevards but an excellent option to consider for parks and lawns and it has some pretty good resistance to needlecast disease. **Native to Europe.**

A Nod to a Few Smaller Plants

What would the landscapes of 2050 be like without some diversity of sizes, too? Consider these tough smaller trees and some shrubs.

Turkish Filbert (*Corylus colurna*) has long been a valued, drought and heat tolerant tree in the upper Midwest. It’s reliably cold hardy to Zone 4, strongly pyramidal in shape, doesn’t suffer as much from Japanese beetle defoliations as the native hazelnut (aka filbert) does, and is a strong and slow grower. This tree should continue to prove its value as a moderately-sized (up to 30-ish feet) tree for tough sites such as boulevards and abandoned landscapes. It does need some conscientious watering when first planted until it’s established, but then it can tolerate some pretty climate-harsh conditions. **Native to Europe and Asia.**

Mount St. Helens Plum (*Prunus cerasifera*), a sport from a Newport plum. This smaller tree has the attractive deep purple foliage of Newport, but is hardier and should perform better in open landscapes that prove to be harsher as the years pass. About 20 feet tall, cold hardy to Zone 4. **Native to Europe and Asia.**

Ohio Buckeye (*Aesculus glabra*) ‘Early Glow.’ All the good stuff about an Ohio Buckeye tree (medium size, outstanding tolerance to deicing salt) is wrapped up in a variety with excellent resistance to leaf blotch, powdery mildew, and leaf scorch, and it has a sharp red autumn foliage. Cold hardy to at least Zone 4, grows up to about 30 feet squared.

Amur maackia (*Maackia amurensis*) ‘Summertime,’ a UMN release that’s cold hardy to zone 4, is a smaller tree (around 20 feet), and has excellent tolerance to harsh climates. Its only weakness is deicing salt, so don’t use it in an area where salt is pushed or washed into the soil where the tree is growing. Like Ginkgo, it has no serious disease or insect pest problems. **Native to Russia, eastern Asia.**

Chokecherry (*Prunus virginiana*) ‘Sucker Punch.’ This deep purple-leaved variety avoids the problems that other *Prunus* species have posed with excessive suckering. It’s site tolerant, cold hardy to Zone 3, and offers a color contrast in the landscape that only purple can bring. Still gets black knot.

Common Juniper (*Juniperus communis*) ‘Pencil Point,’ is a narrow, upright model of common juniper that keeps a blue-green foliage and carries the credentials of our prairie juniper: tolerance to heat and drought.

Yes, I know

I didn’t mention every single tree or shrub that may be valuable additions 30 years from now, but this was never meant to be an exhaustive list, more a list of plants that exemplify the credentials that trees and shrubs of the future will need if they are to not just survive, but thrive. I also know that not every plant listed is native to North America (they are unless otherwise noted). They’re still good and have not been shown to be invasive or aggressive like riverbank grape or boxelders. Give them a try; I’m not forcing them on you.

Also, no graphics accompany this list, mostly because of the internet and ease of accessing many, many photos of the plants if the descriptions pique your interest. I tend to favor a few web sites such as the Morton Arboretum, the Missouri Botanical Garden, J.Frank Schmidt nursery, UMN Horticulture Department, Iowa State University Extension, University of Nebraska Extension, to name a few.

Finally, there’s a good chance that you’ll need to do some digging around nurseries and catalogs to find many of these plants...but it will be worth it. As time progresses, these plants will become more common, but for now, you may need to be satisfied with buying small (less than 4-5 feet tall) plants and nursing them along to maturity.