

## **Garden Update**

**Week of March 14, 2022**

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### Tree Diversity

With Earth Day and Arbor Day coming up next month, it is a good time to talk about trees, aptly called “the lungs of the earth” for the carbon dioxide they take in and oxygen they exhale, but also for the air pollutants they mitigate. As people plan to add trees to their landscape this year, there are some important steps to ensure successful establishment and that trees planted now survive. It is estimated it takes one to two decades before costs associated with planting new trees is recouped in savings from the benefits of shade, windbreaks, and rainwater mitigation. This is a compelling reason to make sure trees have every chance to grow and survive. Too often, attempts to push tree growth results in dead trees. Some short-sighted attempts are planting large trees, fertilizing them, adding mulch volcanos, and watering too much.

What are the best management practices when it comes to planning for a new tree? Let the site be the first consideration as the presence of power lines, paved surfaces, property lines, slopes, and the size of the space dictate what tree to plant. At a minimum, trees should be planted 3-4 feet away from a paved surface to prevent expanding roots from buckling the pavement. Consideration must be given to the foundations of homes, outbuildings, and other structures to make sure roots don't cause damage and branches do not scrape siding. When determining the distance to plant from foundations, a simple rule of thumb is to divide a tree's full-grown canopy by two, and then add 2-3 feet. Make sure trees are planted well away from utilities as sudden changes to root zones, like trenching, cause tree decline.

Tree selection plays a huge role in tree diversity. Communities and regions with a wide range of trees have greater resiliency to insect pest infestations, plant pathogens, and weather changes. Worldwide, the most common trees of a region comprise 24% of a tree population. John Ball of South Dakota State University advises following a 5-20-30 rule for tree diversity—no more than 5% of an urban forest is made up of just one species; no more than 20% belong to the same genus; and no more than 30% belong to the same plant family. Planting too many trees of the same species/genus/plant family can be likened to the adage about placing all of your eggs in a single basket—too many of the same trees dominating a space increases the likelihood that an emerging problem will destroy them, leaving towns, villages, and neighborhoods lacking tree cover.

Considering the investment of time that goes in to growing a tree, it makes sense to do your homework when choosing a tree to plant. Just because one tree dominates the inventory of local garden centers doesn't mean it is the one to plant in your yard. Check what trees are planted in your neighborhood—and then plant something else. An excellent list of trees for Eastern Nebraska can be found on the Nebraska Statewide Arboretum website: <https://go.unl.edu/zvrf> .