



Why might municipalities want to move their fall planting and/or Arbor Day celebrations to fall?

Five years ago, the City of Fort Worth, Texas moved its official Arbor Day celebration from the traditional 4th Friday of April to November. The date was moved both to increase public awareness of the optimal time to plant trees and to kick off our City's tree planting season.

Most people think of tree planting in spring when they are visiting nurseries and cultivating their gardens. However, in southern states like ours where the ground never freezes, the optimal time for planting a tree is in the fall. As daylight length decreases, trees begin to move sap and sugar stores to their root systems, and in warmer states like ours, the soil stays warm enough that tree roots will grow through the winter.

Budding out in spring takes a tremendous amount of carbohydrate storage, and when we plant in the spring, root development competes with foliage and shoot growth for available carbohydrates. Another stress factor is that photosynthesis in most trees stops once ambient temperatures reach 95 degrees F (35° C). Higher temperatures cause summer growth rates to slow dramatically. Here in Texas, those 95-degree days come along before the official onset of summer. This puts spring-planted trees at a disadvantage—going right into summer after being planted. By contrast, trees planted in the fall have a more established root system by their first summer after being planted and will have less heat and drought stress as a result. We have found that growth rates of spring-planted trees can be one to two years behind fall-planted trees of the same size and species.

We had some apprehension that a fall Arbor Day would not be supported by local nurseries and by the Parks and Community Services Advisory Board, which serves as Fort Worth's Tree Board. In preparation, we gathered support from the

Arbor Day Foundation and the Texas Forest Service. A list of 17 Texas cities that celebrate a fall Arbor Day was compiled and presented to the Tree Board, which agreed unanimously to move our official Arbor Day. After the vote, one Board member declared, "It's about time."

Another benefit of fall planting and fall Arbor Day: spring is usually an extremely busy time for the Fort Worth Forestry Section. Spring storm response can tie up resources for several days at a time. Earth Day, Mayfest, and other spring festivals also require Forestry Section participation and compete for both resources and public participation.

Celebrating Arbor Day in the fall has been a win/win for Fort Worth. It has increased participation, promoted awareness of the benefits of fall planting, and increased planting survival rates. Staff is no longer stressed by constantly "springing" into events—and Arbor Day simply "falls" into place.

—Melinda Adams, City Forester, Parks and Community Services, Fort Worth, Texas



A crowd gathers under the historic John Peter Smith Live Oak (*Quercus virginiana*) in November, 2010 to celebrate Fort Worth's first fall Arbor Day Ceremony. Photo by Melinda Adams

Arbor Day is celebrated the third Monday in May in Alaska. This is when planting begins in most of the state, but events begin in early May and continue into June depending on the location and conditions. It is a good time to celebrate trees because we are excited about the return of color to the landscape after the long winter and are anxious to visit the garden centers and see what plants have arrived.



Students in the Alaskan community of Tok potted up tree seedlings (above) in the spring and planted them (below) in August, when fall is already underway in the state. Photos by Patricia Joyner

However, there are challenges in the springtime that make planting later in the year attractive. May and June are generally the driest months and the time when everyone is so busy in our short growing season that there is often not time for adequate watering of newly planted trees. August and September, on the other hand, see high rainfall and the ground is warm enough



for several months of root growth. (Weather-wise, August is the beginning of fall in Alaska.) Schools have also moved summer vacation up in the year and Arbor Day falls in the last week of the school year or sometimes after school closes. With students returning in August, it would be possible to celebrate Arbor Day later.

We have planted thousands of seedlings in late summer with a very high survival rate even though we don't provide much, if any, maintenance afterward. Potting seedlings in May and planting three to four months later when they have doubled in size has been the most successful practice. Seedlings aren't appropriate everywhere, but for restoration and replacing spruce with less flammable birch in communities at risk of wildfire, seedlings have been cheap, easy, and successful.

Large trees also do well when planted in the fall but they may have to be purchased in the spring and maintained until fall. This is because trees and shrubs come almost exclusively from nurseries outside the state and arrive in the spring; there are often limited choices by the end of summer. Fall planting could be an opportunity for businesses to expand their season but it would require major changes in the shipping schedules.

Another challenge to moving Arbor Day would be changing the mindset that associates spring with planting and fall with harvesting and getting ready for winter. It would require a campaign on the benefits of fall planting. It may be that *celebrating trees* in the spring but *encouraging more planting* in the fall is the best way to increase the number of trees in Alaskan communities.

—Patricia Joyner, Alaska Community Forestry Program

Celebrating Trees: The Morton Arboretum, Lisle, Illinois. As much as we all want to celebrate trees, there are factors that can hold down participation in Arbor Day events in Illinois on the last Friday of April. Spring weather does not always cooperate; a cold, rainy day may not be a fun time for a public tree planting. Municipal arborists are especially busy with other tasks at this time of year. Teachers are swamped with year-end activities. The net effect is that Arbor Day may be a tough holiday to commit to on a grand scale. However, this does not mean that tree planting and awareness needs to be shortchanged!

Even though celebrating Arbor Day is a requirement if your municipality is a Tree City USA, it can be difficult for many communities to hold these festivities. Spring in Illinois may be a great time for planting certain tree varieties, but not all. As our foresters and nursery operators know, there are many trees that prefer being planted in the fall. Why not, then, celebrate trees and



The Morton Arboretum's Tree Tag Kits can be used with schoolchildren at any time of the year, and the lesson plans provided with each kit have been adapted to meet schools' Core Curriculum standards. Photo Courtesy The Morton Arboretum

plant trees in both spring and fall? Why not promote the value of trees whenever it makes most sense where you are?

Tree planting days are just one way to encourage public appreciation of trees. Groups also can enjoy programs such as the Tree Tag Kits made available by The Morton Arboretum. These kits guide schoolchildren and other groups through the process of identifying a tree and determining the dollar value of the many environmental and other benefits it provides. The results are recorded on a tag that can be hung proudly on the tree. The kits have been used by municipalities, schools, environmental groups and homeowners associations. The lesson plans provided with each kit have been adapted to meet schools' Core Curriculum standards. And this activity can be done at any time of year.

Another great way to celebrate trees, educate and engage citizens, and plant trees in the fall is National NeighborWoods® Month, a program of the Alliance for Community Trees (ACTrees). This is an annual celebration of trees in our communities in its tenth year. Tens of thousands of volunteers take action to make their communities greener and healthier by planting trees, helping to turn their neighborhoods into vibrant, livable NeighborWoods®.

There are opportunities all year round to celebrate trees and share the many benefits that we get from them. If we follow the adage of "right tree, right place, right care," it may mean planting trees in spring or fall. Include volunteers to share the experience and adapt your tree planting programs to the needs of your community—and everyone wins.

—Beth Corrigan, Community Trees Program Coordinator, The Morton Arboretum, Lisle, Illinois

Fall is a great time to plant trees in the Pacific Northwest. With our "Mediterranean" climate, summers in Washington State are arid and rainfall minimal. Despite the reputation as a rainy city, average rainfall in a typical Seattle summer, for example, is just 2.3 inches (5.8 cm), an insufficient amount to establish newly planted trees without supplemental water. Since trees favor root growth during dormancy, it makes sense to give them a head start by planting when there is abundant soil moisture. For us, this means planting in the autumn and winter months, until soil freezes.

Last year, Governor Inslee proclaimed October as "Urban and Community Forestry Month." We hope this becomes a Washington State tradition that promotes fall planting. During the fall months, October in particular, our program promotes tree planning; selection, planting, care, and maintenance. Daily tweets with links to pertinent online resources and numerous blog articles are posted. Program staff and the Washington Community Forestry Council support many Washington communities during fall Arbor Day celebrations through award presentations and by posting events to our monthly Tree Link newsletter.

—Linden Lampman, Urban & Community Forestry Program Manager, Washington State Department of Natural Resources

Fall is an ideal time for celebrating Arbor Day and planting trees in Southern California. The City of Oceanside, California acknowledges that in fall the days are shorter, nights are cooler, and the sun is at a lower angle—all of which reduces water stress on newly planted trees. In fall, the rate of photosynthesis decreases, requiring less water. (However, we do need to be mindful of the hot, dry Santa Ana winds during autumn and winter and be prepared to apply additional irrigation if needed.)

Normally the soil is still warm during fall, allowing the root system to develop before the onset of the following summer. If we are fortunate, winter may bring supplemental water for our trees in the form of rainfall. Fall planting allows us to utilize our natural rainfall, save on water costs, and conserve water from the tap.

Our moderate temperature in fall is a great time to work outdoors with citizen volunteers and with students, who are just beginning the new school year. Our City enjoys partnering with local community colleges specializing in horticulture to create food forests on campus and celebrate Arbor Day together in September.

Smart gardeners can take advantage of planting deciduous fruit trees in autumn. Wise landscapers are able to see the brilliant fall color options on trees that are available during this season. To eager homeowners ready

to plant trees in the fall, we demonstrate proper tree planting techniques and hand out educational material to help them have success.

In the past, our City has planted evergreen flowering trees such as our non-native "City Tree," gold medallion tree (*Cassia leptophylla*), in spring in time to admire the beautiful showy yellow flowers through July and August. However, fall is a good time of the year to plant native trees (both deciduous and evergreen) in Southern California, especially if winter rainfall follows. Our City often plants our native "City Tree," coast live oak (*Quercus agrifolia*), in fall as a celebration of Arbor Day.

—Delia Juncal, Landscape Development Coordinator, City of Oceanside, California

Ithaca's Experience

In Ithaca, New York most of the annual street tree planting is now done now in the fall. Community volunteers plant about 100 bare root trees—caliper always less than 2 inches (5 cm)—each autumn. Only evergreens and larger caliper trees are planted in the spring, and they are planted B&B.

This strategy has come about after years of controlled research and anecdotal evidence. Dr. Nina Bassuk has found that trees that are easy to transplant bare root are easy to do so in spring or fall, although fall transplanted trees often get off to a better start the following spring. Another reason for fall transplanting of bare root trees is that they are totally dormant at that time. By contrast, trees such as American hophornbeam (*Ostrya virginiana*), Japanese tree lilac (*Syringa reticulata*), and crabapples (*Malus* spp.) break bud early in spring—often before they are shipped from the nursery—and are thus highly susceptible to drought stress if transplanted in spring.

Dr. Bassuk says, "Some trees are not easy to plant bare root, while others do fine. We still don't know exactly why this is, but we continue to do research on this question. Through many years of experience we have a list of those easy and more difficult to transplant: www.hort.cornell.edu/uhi/outreach/pdfs/bareroot.pdf. It is important to choose bare-root-compatible trees if you use the bare root method. Also, you must allow for the relatively short window of time you have to get them in the ground. Good aftercare with regular watering and mulch is also recommended in the first year or two."

The spirit of Arbor Day was literally born and commemorated as an official state holiday on J. Sterling Morton's birthday on April 22, 1885 out of a need for trees to shelter and shade the barren Nebraska plains and homesteads.

Long before i-Tree applications could quantify the many environmental and social benefits that trees provide, J. Sterling Morton recognized the importance of educating and encouraging Nebraskan "townspeople" to plant more trees. This awakening, which in a few short years spread to all states, gave birth to urban forestry and established Arbor Day as an official national holiday celebrated on the last Friday in April.

Many states and communities, in their zeal to host their own Arbor Day celebrations, simply followed Nebraska's and subsequently the nation's April holiday designation without any real thought for the optimal horticultural timing for tree planting in their respective regions. Norfolk, Virginia, where I served as the City's first City Forester from 1988-2005, adopted the state's designated Arbor Day (second Friday of April) for the City's celebration; that is, until the year 2000.

Tradition undoubtedly accounts for spring Arbor Day celebrations in many southern states and communities that would be better served, from a horticultural perspective, with a fall celebration. Another contributing factor is likely the time of year when bare root seedlings needed to support community tree distributions are available from commercial and state forest seedling nurseries. Typically the species available from seedling nurseries are grown for reforestation or wildlife management purposes and may not be desirable or well suited to urban conditions. That was our experience in Norfolk.

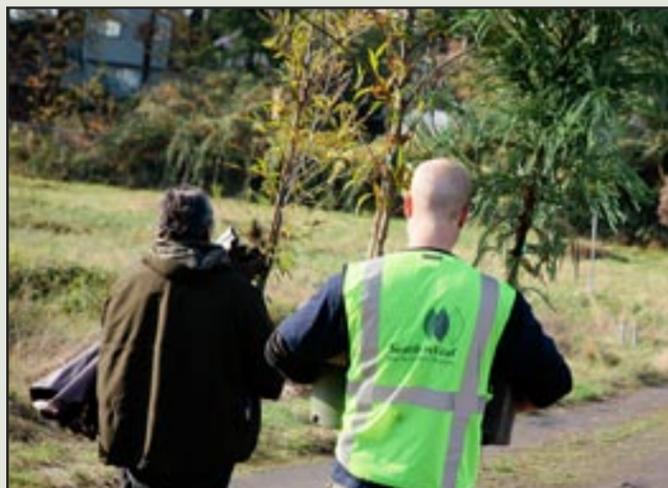
Norfolk's dual interest in promoting the use of underutilized urban tolerant ornamental and shade trees and realigning the City's Arbor Day celebration with the best season for tree planting in southeast Virginia was satisfied when an alternative source of seedlings was identified. In 1999, the City was awarded a \$3,500 Urban and Community Forestry grant from the Virginia Department of Forestry to purchase a seedling container growing system (Ray Leach Cone-tainers) to enable the City to produce urban-tolerant Arbor Day seedlings from seed at the City's nursery.

In the year 2000, the Norfolk City nursery produced a total of 5,000 seedlings of six species: blue Atlas cedar (*Cedrus atlantica*), kousa dogwood (*Cornus kousa*), eastern redbud (*Cercis canadensis*), goldenrain tree (*Koelreuteria paniculata*), Japanese styrax (*Styrax japonica*), and black gum (*Nyssa sylvatica*). Norfolk Master Gardener volunteers distributed the 12 to 18 inch (30 to 46 cm) seedlings in October 2000 at strategic locations including the Norfolk Zoological Park, Norfolk Botanical Gardens, and The Home Depot. The container grown

trees were superior to the bare root dormant trees distributed in prior years in that they were still in full leaf at the time of distribution and included a soil plug which simplified planting and dramatically increased seedling survivability in the home landscape.

The popularity of that first fall tree distribution and availability of superior urban species paved the way for Norfolk's annual Arbor Day Family Festival to be moved from April to October beginning in 2001, and thereafter. Norfolk's decision to celebrate Arbor Day in the fall when every community in the state was observing Arbor Day in April was bold. Concerns about media and community confusion, state and local resistance, and potential resident complaints never materialized. Norfolk's autumn Arbor Day celebrations and urban tree distributions remain a popular community event forged in the true spirit of J. Sterling Morton's vision for sustainable, well treed communities.

—David Sivyver, Forestry Services Manager, City of Milwaukee, Wisconsin



Seattle reLeaf's Trees for Neighborhoods project, which plants 1,000 trees in residential yards and along streets, takes place in October and November. Photo Courtesy Seattle reLeaf

Seattle, Washington has a reputation for non-stop rain, but those of us who live here know that is not true. In fact, most of our rain falls between October and March. Chicago, Dallas, and Miami all get more annual rainfall on average than Seattle does. Summers here are very dry and sunny with temperatures in the mid-70s and only rare precipitation. While that makes for a perfect summer for humans, it is quite hard on spring-planted trees working to overcome transplant shock. Trees planted in October and November, before the moderate risk of frozen ground and snow that sometimes comes with our winters, stand the best chance of surviving their first summer.

That's why Washington State's official Arbor Day on the second Wednesday in April doesn't work well for us.

Instead, the City of Seattle has moved to celebrating Arbor Day in mid-October. The City of Seattle created the Seattle reLeaf program as an outreach and engagement avenue for the public around urban forestry issues, especially in residential areas. Highlighting the importance of fall planting has become a cornerstone of what Seattle reLeaf does. Seattle reLeaf's Trees for Neighborhoods project, which plants 1,000 trees in residential yards and along streets, takes place in October and November with all of our trees planted by Thanksgiving. While many residents still feel the urge to plant in spring when they see new leaves emerging and trees on sale at the nursery, Trees for Neighborhoods, a fall Arbor Day celebration, and Seattle reLeaf's other outreach efforts are beginning to shift the planting culture in Seattle to a healthier pattern for our trees.

—Jana Dilley, Seattle reLeaf Program Manager, City of Seattle

It takes many hands to make quick work of planting trees in Nebraska. After all, it's tough to be a tree in our state, what with drought, floods, and storms. For four years, the ReTree Nebraska program has educated Nebraskans on the benefits of planting trees and encouraged people to plant for future generations. ReTree Nebraska Week, the last full week in September, is a great time to celebrate the beauty and value of trees, and to plant many more. ReTree Nebraska makes mini-grants available to tree advocates statewide, especially for fall planting.

The mini-grants are funded by the Nebraska Environmental Trust, a beneficiary of the Nebraska Lottery. The Trust assists tree advocates in promoting tree planting in their communities via the media, demonstrations, and a common statewide message. More than 60 communities have taken part in the mini-grant program.

The trees that are provided are small caliper with high-quality root systems and are easily transported and planted without the need for heavy equipment. Planting smaller nursery stock also requires less water for establishment. The grants promote large-maturing shade tree species, including oaks (*Quercus* spp.), Kentucky coffeetree (*Gymnocladus dioica*), elms (*Ulmus* spp.), hackberry (*Celtis occidentalis*), catalpa (*Catalpa speciosa*), and American sycamore (*Platanus occidentalis*).

ReTree Week's growing success is due to the dedicated tree advocacy network in Nebraska: 240 ReTree ambassadors, 105 Tree City USA tree boards, 90 Nebraska Statewide Arboretum curators, and countless enthusiastic community staff and volunteers. With this growing network of community advocates, the future of Nebraska's community forests looks bright.

— Jessica Kelling, ReTree Nebraska Coordinator, Nebraska Forest Service