

Tree Services®



FALL 2020

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Taking Tree Care to New Heights

EVOLUTION OF THE TREE

Grower picks for the future

FALL FERTILIZATION

Analysis, application & amendment

A CLEAN, CONTROLLED FELL

Cuts, care, and safety from Husqvarna

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EDITOR'S LETTER



I admit I've got a thing for trees. What's not to love? They're beautiful, provide shade, and clean the air. I tend to find my greatest peace while in the woods, hiking under their canopy. Which is why I loved working with Nancy Buley of J. Frank Schmidt & Son for the "Evolution Of A Tree" article in this issue. She's dedicated her career to educating people about trees and in these pages she reveals some of the best varieties to withstand climate extremes and changing needs. This reality

was brought home when, while working together, wildfires raged through Buley's county, the center of Oregon nursery production!

But while trees are being bred for disease and weather resistance, they still need proper care. So we turned to Bartlett Tree Experts for fertilization tips from two scientists in their Research Lab. My mother worked at Bartlett when I was a child and her colleague soothed my distress over Christmas trees being cut down by explaining it makes room for younger trees.... which leads to our third article. Husqvarna discuss the proper way to fell a tree—from cut types to crucial safety precautions.

Be it planting, maintenance, or removal, tree care is an important part of our landscapes. Chad Sugg of Backseat Goodbye said, "Love the trees until their leaves fall off, then encourage them to try again next year."

Christine Menapace

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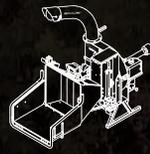
ON THE COVER



A stunning Redpointe® Maple (Acer rubrum 'FrankJr.') defines autumn splendor. Read more about it in this issue of Tree Services. (Image: J. Frank Schmidt & Son)

COVER: JESSICA TOAL,
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Evolution Of The Tree

A grower's picks for trees that handle climate extremes.

By Nancy Buley

The times are a changin', and so is the climate. Tree planting, then, must also change if urban forests are to adapt to the uncertainties of our future weather. Are you still specifying your favorite trees from years ago? Then maybe it's time to revisit your current selections with an eye toward optimum resiliency. Developing such climate-resilient trees is a top priority of the plant development program at J. Frank Schmidt & Son Co., a wholesale tree grower in Boring, OR.

As a leading developer and introducer of new and improved cultivars of shade and flowering trees, J. Frank Schmidt & Son Co. must always look to the future in our efforts to select trees that will survive and thrive in challenging, changing environments. Successes over the past 50 years of plant development have included the introduction or co-introduction of more than 100 improved tree cultivars, most of which remain in the

trade today. (The best known of these is Red Sunset® Maple, introduced in 1966 and still a top choice among red maples.)

Growing Trends—Literally

As J. Frank Schmidt prepares to celebrate 75 years in the tree business and plans for the future, our top goals for developing trees for modern landscapes include selecting varieties for heat, drought, and cold tolerance; low water requirements, low maintenance needs, and adaptability to varied soils and growing conditions. We are also always on the lookout for trees that are naturally pest and disease resistant in order to decrease, or hopefully eliminate, the need for chemical applications in the landscape.

Market trends also reveal an increasing demand for native trees that will help to support birds, pollinators, and wildlife. Yet planting natives can be challenging for landscape maintenance, as native trees

often fail to thrive in urban settings, which are often vastly different from their native habitat. As a result, we've developed and introduced a line of native tree cultivars that can still deliver predictable performance, appearance, mature size, improved disease resistance, and adaptability to urban growing conditions.

With shrinking urban green spaces, columnar and small stature trees are also increasingly in demand. We have recently introduced several slender oaks, a columnar Hackberry, tightly columnar ornamental crabapples, and a petite Zelkova. Since landscapers must often specify trees for the planting strip between sidewalk and street and beneath utility lines, we considered this growing need in our UtiliTrees™ product line of small, upright-growing trees that are a good fit for that confined space. They also work well in small space gardens, courtyards, and terraces.

When specifying trees, planting for diversity should be a top priority. History tells us that diversity is key to achieving urban forest health and longevity. Chestnut blight, Dutch Elm Disease, Asian Longhorn beetle, and Emerald Ash Borer are among the diseases and insects that have wiped out billions of trees in our forests and cultivated landscapes. Landscape designers and contractors can do their part to prevent catastrophic loss of landscape trees by specifying and planting a wide variety of trees of different genus and species rather than relying on a traditional or uniform plant palette.

There are lots of options out there: Be creative by subbing a cultivar of *Gymnocladus dioica*, Espresso™ Kentucky Coffee Tree, for the widely-planted Honeylocust (*Gleditsia triacanthos*). Their arching branches, compound leaves and filtered shade are similar. Try the new *Nyssa sylvatica* cultivars (Firestarter®, Afterburner® Red Rage® and Green Gable® are examples) for fall color that rivals the brilliance of the popular and widely planted red maples. Choose Crimson Sunset® Maple over the widely planted Crimson King Maple for a similar "look" that offers improved resistance to heat, drought, and cold.

Top Tree Picks

Of course, it's always helpful and time saving to have specific recommendations. Here are a few of our top picks in various categories:

Climate resilient trees. Climate-resilient trees perform well over a wide geographical area with varied weather conditions. One path to developing new and improved cultivars is to select trees grown from seed collected in hot, arid climates. Another is to hybridize compatible species and select for the best performers. Here are some adaptable, heat and drought tolerant examples.

- ***Emerald Avenue® Hornbeam*** (*Carpinus betulus* 'JFS-KW1CB') has superior heat and drought tolerance, thanks to having originated in the southernmost range of



European Hornbeam. When other cultivars of this species look tired and heat stressed during the dog days of summer, this one maintains healthy deep green foliage. Hand-somely corrugated

leaves are strongly textured, durable, and pest and disease resistant. Foliage is but-tery yellow in autumn. Its strong trunk, dominant central leader, and sturdy branch arrangement make it well suited for use as a street and park tree. Broadly pyramidal to oval in shape, it grows to approximately 40' tall and 28' wide.

- ***Emerald Sunshine® Elm*** (*Ulmus propinqua* 'JFS-Bieberich') foliage is strongly textured, emerging with red tints and matur-



ing to deep, rich green. Resistant to Dutch Elm Disease and Phloem Necrosis, it also resists the feeding of elm leaf beetles. Originating from seed collected in a rugged, arid region of China, it was selected

as the best performer among seedlings grown out on the arid plains of western Oklahoma. A tough performer in urban settings, its mature height and spread is approximately 30' tall x 25' wide.

- ***Redpointe® Maple*** (*Acer rubrum* 'Frank Jr.') has proven so adaptable since its introduction in 2006 that it has become our best-selling tree. Quickly embraced



by our customers as "a grower's tree," its strong central leader and upright, symmetrical and balanced growth habit make it an easy-care tree in the nursery and a

low maintenance tree in the landscape. Tolerance of heat, drought and higher pH soils add to its resilient character.

- ***Crimson Sunset® Maple*** (*Acer truncatum* x *A. platanoides* 'JFS-KW2') flourishes in hot and humid climates where most purple-foliaged trees fail to thrive. Dramatic



purple leaves are drought and heat tolerant, retaining their dark, glossy color through the growing season. Foliage resists the leaf tatter and scorch damage

of late summer that typically disfigures other purple-leafed maples and deepens to rich red-bronze in autumn.

This medium size shade tree is perfectly shaped for street tree use, and compact enough for shading today's home landscapes and streetscapes. Unlike the popular and widely planted Crimson King Maple, its scorch-resistant leaves stay fresh and bright in late summer. Heat tolerance and leaf quality are gained from its Chinese parent, Shantung Maple (*Acer truncatum*). Upright and symmetrical branch habit and a strong central leader inherited from its Norway Maple parent (*Acer platanoides*) make it easy to maintain.

Native trees. Examples of improved cultivars of native species include selections of Tulip Poplar and Swamp White Oak.

- ***Emerald City® Tulip Tree*** (*Liriodendron tulipifera* 'JFS-Oz') is the perfect tree for shading yellow brick roads and city streets. Glossy, emerald green foliage

turns to bright yellow in autumn. Tulip-like flowers are a springtime bonus that attract pollinators when they appear among distinctively darker green leaves. A strong central leader, predictably uniform growth habit and relatively compact form are additional attributes that distinguish it from the species and recommend it for landscape use.

- ***American Dream® Oak*** (*Quercus bicolor* 'JFS-KW12') offers an upright, broadly pyramidal form, glossy green, anthracnose and mildew resistant leaves. Beacon® Oak (*Q. bicolor* 'Bonnie and Mike') is a columnar selection discovered by Dr. Michael Dirr and brought to us for trial and introduction.

Columnar and small stature trees.

- ***Armstrong Gold® Maple*** (*Acer rubrum* 'JFS-KW78') improves greatly on its

parent, Armstrong Maple, with brighter foliage color, greater foliage density, and a compact, less leggy growth habit. Selected from an evaluation of hundreds of seedlings of



'Armstrong', its improved columnar form recommends it for narrow sites.

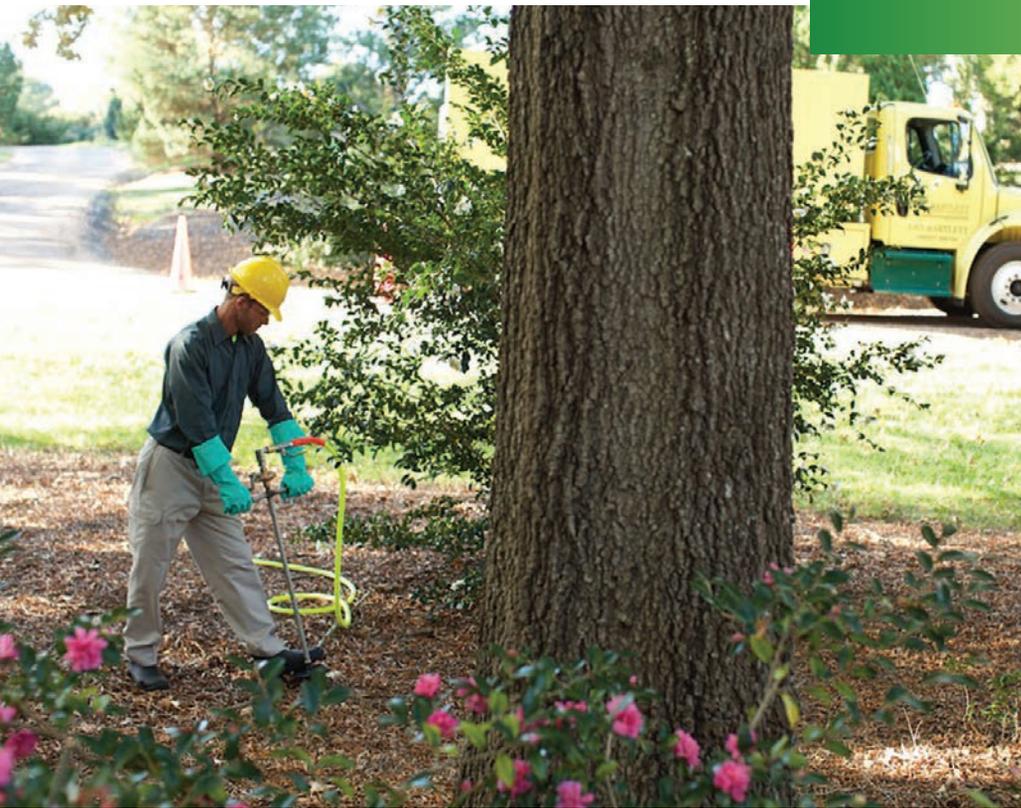
- ***Crimson Spire® Oak*** (*Quercus robur* x *Q. alba* 'Crimschmidt') endures the heat of summer with style. Widely adaptable to a broad range of soil types and climates, it tolerates heat and drought and has fresh-looking, dark green to bluish green summer foliage that is mildew resistant.



Its reddish fall color and narrow growth habit combine to make a striking picture in autumn.

- ***Streetspire® Oak*** (*Quercus robur* x *Q. alba* 'JFS-KW1QX') stands tall and slender in the narrowest of streetscapes. Dark green, mildew resistant leaves turn red in autumn before falling to reveal stiffly upright branches. While similar to Crim-

(Continued on page T-9)



Left: Fertilizer is applied to a tree via soil injection.

Fall Fertilization Of Trees & Shrubs

Tips for analysis, application, & amendment.

By E. Thomas Smiley, Ph.D. and Beth Brantley, Ph.D.
Bartlett Tree Research Laboratories

Just like turf, trees and shrubs are healthiest when the soil in which they are growing has sufficient nutrients and conditions to promote root development. With cooler temperatures and seasonal rainfall, roots of woody plants tend to grow at a higher rate in the fall than in the summer. This new fine root development allows for an increase in water and nutrient uptake. Nutrients taken up in the fall months are stored and ready to relocate to the leaves next spring. For this reason, fall is an excellent time to fertilize woody plants.

With concerns about the environmental impact of excess fertilizers and the high costs of some nutrients, professional arborists are promoting the use of “prescription fertilization.” This is the process of establishing goals for fertilization, collecting samples for soil and/or foliar nutrient analysis, and applying only deficient nutrients during the fertilizer application.

Goals are based on what the client expects to achieve with the fertilizer. These include promoting growth, overcoming nutrient deficiencies, maintaining health, replacing nutrients lost to leaf raking and removal, and/or increasing disease resistance. Identifying goals provides direction on the type and amount of fertilization.

Soil & Foliar Samples

Soil samples are the most common type of analysis arborists use to determine tree and shrub nutrient needs. Soil samples are collected from the area beneath the tree or shrub crown. The depth of sampling is based on the area where fine roots are in their highest concentration—in most areas, this is the upper 6” of soil. (Tree roots found growing deeper in the soil tend to be for stability.)

In cases where a nutrient deficiency cannot be determined from visual assessment of symptoms, a foliar (leaf) sample can be analyzed to determine which nutrients are

lacking or in excess. Soil analysis and foliar analysis may have different results for the same plant, based on factors limiting availability of nutrient uptake from soil, such as pH. Soil and foliar analysis can be done by state or private diagnostic laboratories and most states have analysis available through a cooperative extension. Contact the lab before taking samples since there are forms and guidelines for collecting samples.

After soil and foliar samples are collected, they are analyzed for nutrient content. The results will direct nutrient selection and fertilizer application rates. In addition, soil samples are analyzed for soil pH. We find that nearly half of the soil samples analyzed are outside the optimal range of soil pH for the plant species tested. When pH is not optimal, the availability of some elements is limited, which can affect plant health. For example, in soils with high pH, red maple (*Acer rubrum*) often shows symptoms of manganese deficiency, while pin oak (*Quercus palustris*) will show symptoms of iron deficiency. In both cases, the nutrient may be present in the soil, but it has limited availability to the plant due to the high pH. It is very important to diagnose the conditions with analysis rather than assuming. And pests may result in similar symptoms at times.

Application Options

There are numerous ways to apply fertilizer to trees. The simplest method is the surface application of soluble nutrients. This can be effective for mobile nutrients such as nitrogen, especially for sites where there is no organic matter, such as mulch or turf, on the surface of the soil. Organic mulch will slow the movement of nutrients to the root system and will break down more quickly with additional nitrogen. This can affect the appearance of the bed and may require more frequent reapplication of mulch. On turf, additional nitrogen can affect turf uniformity and quality.

If plants are growing on slopes where runoff is likely, or if you are applying less mobile nutrients like phosphorus, soil injection of fertilizer is the preferred application method. This is done with a high volume,

high pressure water pump and a specialized soil injector. Most soil injectors are constructed to apply the fertilizer solution at a depth of 6" to 8" below the soil surface. Our research has found that when a solution is applied at this depth, the majority of fertilizer will be delivered to the area with maximum fine root concentration.

With nutrient deficient trees and shrubs, the results of soil-applied prescription fertilization can be dramatic. We often see greening of the foliage in a matter of weeks during the growing season. With fall fertilization, the results are not seen until spring, but we often see darker green, more vigorous growth at that time.

Most nutrient deficiencies can be corrected with prescription fertilization. However, some micronutrients, such as iron and manganese, are more effectively treated using a different approach. In these cases, it may be appropriate to inject the nutrient directly into the xylem of a tree to provide immediate benefit. This type of treatment can very quickly change the appearance of the treated trees during the growing season. However, if these treatments are delayed until fall, a higher rate of the micronutrient can be applied. Higher rates applied in the summer may result in foliar damage, but there is typically no damage when applications are made in the fall and the treatment can last up to three years.

Invigorating Soil

Correcting nutrient deficiencies of tree and shrubs is an important component of maintaining plant health. However, there are other soil conditions that can affect

plant health. These include soil compaction, lack of soil organic matter, and poor drainage. One excellent treatment for these conditions is the process called Root Invigoration™. It is used to reduce soil compaction, increase soil organic matter and in some cases, improve drainage under established trees without damaging the root system.

This process starts with an evaluation of the site in regard to several factors—such as tree species, current health status, soil moisture, presence of fine roots, fill soil, turf, and understory plantings—to determine if the treatment is appropriate and likely to be successful. Next, the turf in the treatment area is removed and the area is irrigated to bring the soil moisture level to field capacity. Then the area is tilled using high pressure (compressed) air. The air breaks up the compacted soil but does not significantly damage tree roots.

Once the soil is tilled, different types of materials can be applied to the soil surface to correct any problems detected in the soil analysis. These materials include composted organic matter, biochar, fertilizer, pH treatments, and biologicals such as mycorrhizae. Materials are then incorporated into the soil using high pressure air. To complete the treatment, organic mulch is applied to the soil surface and the treatment area is again irrigated to make sure the roots do not dry out.

Tree roots can respond rapidly to the improved soil conditions and that response is reflected in foliar color and twig growth the next spring. If the soil is not re-compacted, the results can even be seen for many years. The addition of mulch on top of the root-invigorated area is very important to help prevent recompaction. Mulch will also aid with: retention of soil moisture; reduction of soil temperature during summer months; and insulation and warmth during winter months. Additionally, the breakdown of mulch over time



Compressed air is used to loosen compacted soil without significant root damage.

contributes essential organic matter and nutrients to the soil.

So just like turf, there are many challenges for growing high quality trees and shrubs. Lack of nutrients and other soil conditions are just a few of those challenges that can be managed with proper knowledge and practices. ■



Dr. Smiley and Dr. Brantley are scientists in the Bartlett Tree Research Laboratory in Charlotte, NC. Dr. Smiley is a Senior Arboricultural Researcher with Bartlett and an adjunct professor at Clemson University. Active in the arboriculture industry, he has co-authored many of the ISA's Best Management Practices and the CTLA's Guide for Plant Appraisal 10th edition. His research has led to improved methods of: increasing sidewalk longevity near trees; protecting trees from lightning damage; improving tree root growth; and reducing tree risk.



Dr. Brantley is the Northeast Technical Support Specialist at Bartlett, and provides assistance to arborists with field diagnostics, plant health care, and tree risk assessment. She taught forestry and related topics at Penn State Mont Alto for more than 20 years before starting with Bartlett in 2019. Her research interests include bacterial leaf scorch, beech leaf disease, and wood decay.

Bartlett Tree Experts was founded in 1907 by Francis A. Bartlett and is a leading scientific tree and shrub care company with over 100 offices worldwide. The Bartlett Tree Research Laboratories is the research wing of Bartlett Tree Experts. The Lab houses a state-of-the-art plant diagnostic clinic and provides vital technical support to Bartlett arborists and field staff. For more information visit Bartlett.com.

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Collection of a soil sample for analysis.

A Clean, Controlled Fell

Husqvarna's experts offer tips on cuts, care, and safety.

Contributed by Husqvarna

Cutting down a tree, also known as felling a tree, requires planning, skill, and a healthy amount of respect for your tools and the tree. Depending on the surroundings, environment, and size of the tree, it can be a potentially dangerous job that is best left to trained arborists. However, if the tree is a manageable size, a well-prepared person with the right tools can fell a tree safely and efficiently.

When planning to fell any tree, some basic elements should always be followed:

- **Be Well-Equipped** – If you haven't already done so, get adequate training for chainsaw usage. Make sure your saw is in optimal working order, with fuel, bar oil and a sharp chain, properly adjusted. Invest in personal protective equipment (PPE), including helmet, ear and eye protection, gloves, proper boots, and chainsaw-resistant chaps. Always wear PPE when operating a chainsaw.
- **Assess The Tree** – Understand the height and diameter of the tree as well as the lean, which may require different cutting techniques (more below). Understand the dynamics of tree-felling, especially what could go wrong.
- **Examine Your Surroundings** – It's important to look all around, considering obstacles the tree could contact during the fall, the wind conditions during the job, as well as the slope of the ground you are working from. You need to plan where the tree will fall and plan your own safe escape route.
- **A Good Start** – A chainsaw is best started on the ground, with the chain brake engaged. Making the right cuts from the start will result in a good, clean hinge and a job that goes according to plan.
- **Removing the Tree** – Felling may be the most dynamic and invigorating part of the job, but the work to remove the debris requires its own skills and presents different challenges.



Even a felled tree is still a hazard. Care must be used in relieving the pressure of the branches resting on the ground.

Once on-site with ready equipment, walk around the tree and, as said, assess the lean and determine where you want it to fall. It's important to observe from multiple angles. Trees that appear to be perfectly straight from one angle may, in fact, have pronounced leans. A leaning tree acts differently from a straight tree as you cut and as it falls.

It's your job to make cuts that manage the hinge-point you're creating, so it supports the tree until you're ready for it to fall. A tall tree carries a lot of weight high off the ground. If your hinge is too weak and allows the tree to begin to lean before you're ready, pressure can build above the hinge and the trunk can snap resulting in a dangerous and uncontrolled event. It's critical your hinge maintains its integrity and bears the weight of the tree until you make the final cut.

Once you determine where the tree will fall, plan an escape route so you can get a safe distance away. Stay far away from the stump since during the fall, the tree may "kick back" violently at the stump. Clean up the escape route as needed before felling to ensure the area is free of debris and hazards.

Making The Cut

There are several types of cuts you can make depending on the tree. The first cut to make is the notch cut on the face of the tree on the side where it will fall. There are three basic notch cuts:

- A "Standard" 45° cut, with the bottom level.
- A "Humboldt," which is an upside-down standard notch. In this case, the wedge created will slide out and the remaining stump will be angled. This notch is often used to harvest hardwoods for milling lumber.
- An "Open Face" which is an approximately 70° angle standard cut that is about 80% across the face of the tree. When this notch is made, imagine the tree "closing" the notch completely when it falls. Skilled arborists in need of felling accuracy and efficiency often use this notch.

Next, a bore cut is made about a 1.5' behind the bottom of the notch. This cut sets up the hinge. It's important the bore cut does not break the hinge by cutting through to the notch at any point. When making a bore cut, keep in mind the dynamics of the saw. Begin a bore cut by contacting the tree at the lower

tip of the chain. Using the top of the chain will cause the saw to kick back toward you. We call the bar top the “no-go-zone.”

You can bore completely through the tree. When through, set the chain brake and remove the saw from the cut. Pull the saw out of the bore while the chain is stopped to prevent cutting through the hinge, which could create a dangerously unstable tree.

Next, re-insert the saw and cut toward the backside. Cut about 80% through, leaving a section of “holding wood” to keep the tree stable. It’s advisable to insert a wedge into the backside cut as soon as possible to prevent the tree from leaning away from the hinge and potentially binding the saw.

Now the tree is ready to fall. Re-examine the surroundings, the fall zone, and escape route. Make the final cut through the holding wood on the tree back. Once the back cut is made and the tree begins to fall, move away.

Occasionally, after making the final cut, wedges may also be required to help the fall. This is common with trees leaning opposite the desired felling direction. If the tree doesn’t begin to fall after the back cut, strike the wedge already in position with the axe butt until the tree kerf (the groove created by cutting) begins to open. Watch the kerf closely and evacuate as it opens.

Limb & Buck

Once the tree falls, it’s time to “limb and buck” for removal. A tree resting its branches on the ground is still a hazard. Use care in relieving the pressure on branches to prevent the saw from binding and to ensure the tree doesn’t roll uncontrollably. Keep the work zone clean as you remove branches to reduce trip hazards.

Felling a tree is a physical exercise. When fatigue sets in, accidents are more likely. So be aware of fatigue, stay hydrated, and be prepared to come back fresh and rested the next day. ■

Visit Husqvarna.com for more chainsaw and tree felling information and instruction. A number of videos and content are available. Husqvarna dealers are a great resource to assist with proper equipment use, or to recommend a tree professional if required.

Do you have a comment? Share your thoughts in the online version at TreeServicesMagazine.com. Or send an e-mail to the Editor at acosgrove@groupc.com.

Evolution Of The Tree

(Continued from page T-5)

son Spire™, it does not hold its brown foliage through the winter. Wide crotch angles and short upsweeping branches create a storm-resistant structure. Both are excellent choices for street tree plantings and narrow sites, growing to approximately 45’ tall x 15’ wide.

- **City Sprite® Zelkova** (Zelkova serrata ‘JFS-KW1’) has a compact growth habit that distinguishes this striking city tree. Short internodes contribute to its com-



compact, dense, and semi-dwarf form, resulting is the perfect little tree for tight urban spaces. Oval to vase-shaped, it grows to a height of approximately 24’ tall x

18’ wide. Fine textured foliage is brighter green in summer than the leaves of typical Zelkova, and turns yellow in autumn.

Low maintenance and low-to-no chemical input. Choose well-grown trees with inherent good structure to minimize pruning and/or future problems. Choose trees that are naturally pest and disease resistant such as our flowering crabapples which boast excellent disease resistance developed during a 40-year breeding and selection program:

- **Royal Raindrops® Crabapple** (Malus ‘JFS-KW5’) offers better resistance to foliage disease than other purple-foliaged crabapples. Magenta-pink flowers of spring are followed by unique, deeply cut leaves, and in fall by tiny, long-lasting purple fruits.

- **Sparkling Sprite® Crabapple** (Malus ‘JFS-KW207’) forms a perfect, formal



topiary head without pruning! Its naturally rounded, dense canopy brings a formal appearance to the landscape. Deep pink buds open to a profuse display

of pink-rimmed white flowers that serve as magnets for honeybees and other pollinators. Exceptionally clean, green, disease-resistant foliage is complemented by tiny golden fruits that last into the winter months and provide food for hungry birds.

- **Pink Flair® Cherry** (Prunus sargentii ‘JFS-KW-58’) has exceptionally clean, deep green foliage with built-in insect and disease resistance. Hardy through Zone 3b, its late bud break prevents freeze damage to tender flower buds. Successful plantings in Spartanburg, SC, and Fargo, ND, prove its adaptability to a wide swath of climate zones.



In the past, project managers, homeowners, and landscape designers have typically only considered beauty, or shade, or curb appeal when it comes to tree selection. Yet today, clients—whether residential or commercial—are on the lookout for trees that are easy care, have low water needs, possess improved pest and disease resistance, and will adapt to climate change and variable growing conditions.

Landscapeers can contribute to a more resilient, adaptable urban forest by thinking beyond beauty and aesthetics. Visit local nurseries and ask, “What’s new?” Keep tabs on new tree introductions and give them a try. By learning the many benefits of trees and familiarizing yourself with new tree introductions, you can guide your customers in choosing the optimum trees for now and the future. ■

Buley is director of communications for J. Frank Schmidt & Son Co., wholesale tree growers of Boring, OR, where she has been “talking trees” for 26 years. Named a Lifetime Honorary member of the American Society of Landscape Architects in 2004, she is also a member of GardenComm and various nursery and arboricultural organizations. Buley earned a BA in Technical Journalism and Horticulture from Oregon State University and is a graduate of the Municipal Forestry Institute (MFI). A longtime member of the board of directors of Friends of Trees, Buley lives and gardens in Boring, beneath an ever-widening canopy of shade.

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