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Harnessing Green Technology for a Greener Planet

In the pursuit of a more environmentally conscious future, homeowners, property managers, and landscape professionals are embracing green industry standards and harnessing the potential of emerging green technology innovations.



Paving the way for a greener and more sustainable future

From smart irrigation to mulching and composting, these innovative solutions offer benefits to both residential and commercial properties.

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TIPS FROM THE TOP

by Carmine Schiavone, CEO

Corporate Environmental Responsibility at SavATree



Amid nationwide conversation around corporate environmental responsibility, I wanted to share with our valued customers that at SavATree, sustainability has been core to our mission for decades and continues to be a focus in how we run our operation. This article will outline a few ways we employ sustainable strategies to benefit the communities we serve.

The heart of our mission is improving the health of trees and green spaces. Their value as ecological and aesthetic benefactors cannot be overstated. From better air and water quality to energy conservation, noise reduction, and urban heat mitigation, trees offer advantages for our health, and local wildlife, too!

Healthy trees increase property values by making green spaces more beautiful and sustainable. In fact, the Arbor Day Foundation states that a tree adds over \$40,000 of community benefits in its

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How and why does foliage change color in the fall?

THE COLOR-CHANGING PROCESS

Trees take water from the ground and carbon dioxide from the air, combine it with sunlight, and end up with oxygen and carbohydrates. This process is called photosynthesis, from the Greek, "putting together with light," and a molecule called chlorophyll is what makes it all possible. Chlorophyll is what produces the green pigment in foliage.

As the days grow shorter and cooler, it signals to trees to start preparing for winter by shutting down their food-making processes, resulting in chlorophyll production slowing down to a stop.

Most people don't realize that the colors yellow and orange have been present in foliage all year. While the green-hued chlorophyll is dominant during the growing season, once the chlorophyll recedes, yellow and orange become visible – creating the dazzling fall colors.

As for those reds and purples, they're created from leftover carbohydrates in the foliage. When combined with cooler temperatures and bright sunlight, they turn the foliage red or purple, depending on the tree species.

CONTRIBUTING FACTORS

Environmental conditions such as drought and excessive heat also impact foliage colors. Stressed trees often experience early leaf drop, limiting their contribution to the fall color display. Keeping your trees properly fertilized and irrigated during the spring and summer will help to maximize their autumn potential.

Foliar diseases contracted during the spring and summer months can reduce or eliminate fall color displays. These diseases must be treated preventively to reduce their impact during the fall foliage season.

While the phenomena of foliage changing colors is a scientific marvel, many wonder why trees need to drop foliage at all. Leaf tissues are incredibly tender and would freeze in the winter due to their moisture content. This would cause incredible stress to the tree, so rather than expending its limited energy during the winter dormant season, the tree sheds its foliage beforehand.

As for conifer trees, they typically lose some of their older, less efficient needles every fall to make room for new growth in the spring. Needles often turn yellow or brown, which can be a sign of disease and infestation. However, if the coloration appears in the late summer/early fall, chances are it's part of the process all conifer trees experience to encourage new growth.

Additionally, the needles on conifer trees are covered with a heavy wax-like coating and have unique physical and chemical properties that help them resist freezing and emerge from the winter months intact.

Fall fertilization performed by a certified arborist can help enrich trees' root systems, enhance their overall health, and prepare them for an even more vibrant display next year.

TIPS FROM THE TOP (CONTINUED FROM COVER)

lifetime by removing about 48 pounds of carbon annually and retaining up to 100 gallons of ground water otherwise lost to runoff.

SavATree recognizes trees' crucial role in cooling and shading amid global heatwaves. According to the Arbor Day Foundation, trees have the remarkable ability to lower urban temperatures by 10°F by shading homes and releasing vapor into the air through their leaves. The International Society of Arboriculture further notes that deciduous trees "cool homes in the summer and allow the winter sun to heat homes when they lose their leaves," reducing the need for heating and cooling systems by up to 25%.

In the effort to further reduce our carbon footprint, we've shifted to smaller truck engines for fuel-efficiency, cutting greenhouse gas emissions. We also offer eco-friendly plant health care programs that boost soil health and aid vital pollinators like bees and butterflies.

SavATree offers tree preservation solutions to municipalities such as mapping canopy change over time, which provides insights on how trees are succeeding in the landscape, health optimization, and tree planting strategies to support urban resilience.

For example, SavATree completed an evaluation of trees along the High Line Canal, an astonishing 71-mile-long park that weaves through the Denver metropolitan area. We strove to attain balance between water infrastructure improvements and preservation of the green oasis that the High Line Canal offers the Denver community.

We are continuing our work with ever more communities around the country as we know that maximizing tree canopy substantially improves air quality, removes particulate matter, and makes our communities better places to live.

At SavATree, sustainability is more than just a goal – it is core to who we are as a company. We will continue to seek ways to propel our organization to the forefront of corporate environmental responsibility in the green industry, and I look forward to sharing updates on our progress.

Sincerely,



Carmine

The Link Between Soil Fertility and a Thriving Landscape

To achieve lush gardens and flourishing lawns, the top priority lies at the very bottom: the soil.

Soil fertility serves as the backbone of any successful landscape. It is the soil's ability to provide the essential nutrients that promote robust plant growth and overall health.

Having the ideal pH level in your soil helps plants and lawns better absorb nutrients while keeping unwanted weeds at bay. Additionally, ideal pH levels increase the population of beneficial microbes while loosening the ground for proper water penetration and airflow to the root system.

The soil's pH level is often a result of geographic location and environmental conditions. Areas with heavy rainfall and poor drainage are likely to have acidic soil, while soils in drier climates tend to be alkaline.

The pH level in the soil is measured on a scale of 0 to 14 – extreme acidity at the low end of the scale and extreme alkalinity at the top. The proper balance for optimal



growth is usually somewhere between 6.0 and 7.5.

Soil pH levels near neutral – around 7.0 – allow the most mineral nutrients to be available to trees, shrubs, and lawns. Soils that are too acidic often lead to poor plant growth caused by aluminum or manganese toxicity or a deficiency in calcium, magnesium, phosphorus, or molybdenum. Soils that are too alkaline often lead to poor plant growth due to deficiencies in iron, manganese, zinc, boron, or copper.

Boosting soil fertility in the fall season sets the stage for strong root growth in trees and plants in the spring.

The first step is to have an expert arborist perform a soil analysis. Soil testing will help identify the most effective fertilization applications and soil amendments for the unique conditions of the landscape.

- **ArborKelp®** is SavATree's organic sea kelp-based biostimulant that promotes healthy root growth, improves soil structure, and augments soil microbial activity essential for nutrient absorption.
- **Organic Soil Enhancer** is a treatment that incorporates carbon-rich liquid organic matter designed to rebuild the organic profile of your soil. Resulting benefits include enhancing soil texture and drainage while fostering the growth of beneficial soil microorganisms.
- **Mycorrhizae** are essential fungi that form symbiotic relationships with plant roots to increase nutrient and water availability, increase disease resistance to soil-borne pathogens, and protect vulnerable root tips during drought.

To have the soil on your property tested, contact your local SavATree branch today.

Your landscape professional will then provide a full report of your soil's pH levels and what steps (if any) are necessary to help improve the overall soil makeup.

Harnessing Green Technology

CONTINUED FROM COVER

Smart irrigation systems adjust watering schedules based on weather conditions and soil moisture levels, which ensures that plants receive the optimal amount of water, preventing overwatering and waste.

Rainwater harvesting involves collecting rainwater from rooftops and storing it for later use in irrigation. You can capture rainwater by installing rain barrels or larger cisterns, reducing the reliance on potable water for landscape irrigation.

Soil moisture sensors enable more efficient irrigation practices by providing real-time data on soil moisture levels. The sensors help to avoid overwatering or underwatering and promote water conservation by ensuring plants receive the right amount of water at the right time.

Mulching helps conserve soil moisture by reducing evaporation, which reduces the watering needs of your plants and suppresses weed growth. Additionally, organic mulches enrich the soil with valuable nutrients and improve overall soil and plant health.

Composting is a great way to enrich soil with added nutrients and organic matter. Recycling organic materials like kitchen scraps and yard waste will help improve soil structure naturally and promote healthy plant growth.

Drought-resistant landscaping involves using native and drought-tolerant plants that require minimal watering. This approach is especially valuable in regions prone to frequent droughts, and offers several benefits, such as water conservation, stronger resistance for plants during dry conditions, less maintenance, and reduced water runoff.

Renewable energy advancements such as wind and solar panels provide clean and sustainable sources of electricity, reducing greenhouse gas emissions, and air pollution.

Organic fertilizers and pest control solutions that are derived from natural sources provide environmentally sensible options for plant care. Organic fertilizers nourish the soil and promote long-term fertility, while organic pest control methods target pests without harming beneficial organisms and minimize environmental impact.

Green technology is revolutionizing landscape care, empowering homeowners and property managers to create beautiful, thriving outdoor spaces while embracing environmentally sensible practices.

Sustainable solutions are becoming more accessible than ever before. You can have a picturesque landscape that enhances the property's aesthetic appeal and also supports a healthier planet.

For expert guidance on smart and sustainable landscape care, SavATree stands ready to provide recommendations tailored to your specific needs. We can help your outdoor spaces flourish while contributing to a greener, more sustainable future.



The Secret to Thriving Trees and Lush Landscapes: MULCHING

There are a wide variety of mulch materials, each with its unique set of characteristics and advantages. The choice of mulch depends on factors such as the specific landscape needs, aesthetic preferences, availability, and local climate. Beyond aesthetic appeal, mulching offers numerous benefits that contribute to a flourishing outdoor environment.

Retain Moisture and Prevent Drought Stress

Mulch acts as a natural moisture reservoir for trees and shrubs. By covering the soil's surface, it helps retain water, reducing the frequency of irrigation needed. During dry spells or droughts, the mulch layer slows water evaporation, providing more consistent moisture to plant roots.

Regulate Soil Temperature

Proper soil temperature is critical for plant health. Extreme temperatures can harm roots and impede nutrient absorption. Mulching plays a vital role in regulating soil temperature by acting as a protective barrier.

Control Weeds and Reduce Competition

Weeds compete with trees and shrubs for essential nutrients, water, and sunlight. Mulching suppresses weed growth by depriving them of the sunlight they need to germinate. As a result, desirable plants have less competition for the available resources required for optimal growth and vitality.

Other important benefits of mulching include:

- Enhances soil health and fertility by enriching the soil with valuable nutrients
- Prevents soil erosion by acting as a protective layer against heavy rain and strong winds
- Encourages root development by creating a loose and porous environment, allowing roots to penetrate deeper into the soil and access more water and nutrients

Mulch Types

ORGANIC MULCH

Wood Chips: Chipped tree branches that decompose slowly, enriching the soil with nutrients over time.

Bark Mulch: Made from tree bark; durable, and available in many sizes and colors.

Pine Straw: Pine needles commonly used for acidic-loving plants like azaleas and rhododendrons.

Cocoa Hulls: Dark-colored mulch with a pleasant chocolate aroma. Caution is needed as it can be harmful to pets if ingested.

INORGANIC MULCH

Gravel and Stone: Non-organic mulches ideal for weed suppression and used in low-water areas.

Rubber Mulch: Made from recycled rubber, long-lasting but does not improve soil health.

LIVING MULCH

Groundcover Plants: Low-growing plants that act as living mulch, covering the soil and suppressing weed growth.

STRAW AND HAY

Straw: Used in vegetable gardens to retain moisture and prevent soil erosion.

Hay: Can be used as mulch but may contain weed seeds, leading to unintended weed growth.

COMPOST

Can be used as mulch or mixed with other types to enhance soil fertility and overall plant health.



LANDSCAPE CALENDAR

September

- Plant new evergreen trees and shrubs
- Treat trees and shrubs for late season insect and mite pests
- Arrange a storm damage prevention audit
- Continue to water trees and shrubs suffering from summer stress

October

- Plant spring-blooming flower bulbs
- Nourish trees and shrubs with a deep root fertilization
- Mulch beds of broadleaved evergreens
- Water evergreens deeply to hydrate before soils freeze

November

- Prune, cable, and brace trees to help reduce the risk of storm damage
- Prune back perennials
- Protect susceptible evergreen plants from winter injury with antidesiccant
- Review and confirm your plant health care program for the coming year

December / January / February

- Prune evergreen branches for indoor winter decoration
- Take advantage of frozen ground to prune accessible trees
- Prune fruit trees to enhance fruit production
- Perform maintenance pruning of shade trees and ornamentals
- Perform woodlot management
- Apply a follow-up antidesiccant if needed
- Schedule inspection of your tree cables and lightning protection systems
- Take down dead or hazardous trees

Mulching is a powerful tool in ensuring the vitality of any landscape.

To schedule a complimentary consultation, visit savatree.com or contact the office nearest you.



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The threat to ash trees is continuing to spread.

Now more than ever, prevention and early detection are key to controlling emerald ash borer infestations in ash trees.

The emerald ash borer (EAB) was first discovered in the U.S. in the summer of 2002 in southeast Michigan. EAB has since killed tens of millions of trees in the United States and has established itself in 36 states so far.

Tree damage from EAB progresses swiftly. Early treatment is critical.

Without timely treatment, the tree usually dies within two to four years of initial infestation.

When a tree is severely infested with emerald ash borer, treatment may be ineffective. That's why we highly recommend utilizing preventive methods if you live in an at-risk area. SavATree can provide annual treatments to protect your beautiful ash trees against this highly destructive pest.

Once EAB is present, 100% of ash trees are at risk unless properly treated.

Contact a local arborist today to discuss the best course of action against EAB.

Detection: Emerald ash borer is difficult to detect in low-level infestations. Working with a certified arborist to identify and inspect ash trees for early warning signs is recommended.

Signs of an EAB infestation:

- Excessive sprouting from base of tree
- Thinning crown
- Canopy dieback
- Increased woodpecker activity (they like to feed on beetle larvae)
- Tiny D-shaped holes in the bark
- Bark splitting
- "Ash Blonding" as woodpeckers remove the outer bark in their search for larvae



In the adult stage, this invasive wood-boring beetle is $\frac{3}{8}$ " – $\frac{1}{2}$ " long, has a flattened back and dark metallic green wings. EAB infests and kills native North American ash species (*Fraxinus* sp.), including green, white, black, and blue ash.

SavATree Suggests Winterizing Trees and Shrubs with Antidesiccants

When cold temperatures arrive and the ground freezes, broadleaved evergreen plants struggle to obtain the moisture they need from the soil.

Antidesiccants can protect plants throughout the winter by helping to reduce water loss.

These compounds lock in moisture by creating a thin polymer barrier over the leaf stomata (the leaf's pores). It not only reduces water loss, but it also contains a special sunscreen to minimize browning of foliage. Antidesiccants are especially beneficial when roots are unable to take up sufficient water due to a lack of available ground moisture.

Being proactive is the key to maintaining a beautiful, flourishing landscape. If you take care of your trees and shrubs in the winter, you will be rewarded in the spring!

Contact SavATree today to learn more.



Contact us for a complimentary consultation via the link below or call

1-800-341-8733



savatree.com

SavATree has local offices throughout the country.

For a complete list of locations visit savatree.com

Our services include:

- Artistic & maintenance pruning
- Custom blend fertilization
- Insect, mite & disease treatments
- Tree removals
- Cabling and bracing
- Soil analysis

Consulting services:

- Tree protection & preservation
- Canopy management
- Tree inventory / Risk assessment
- Tree & landscape appraisal