



# Caring for Heat-Stressed Trees

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## How Do Trees Become Heat Stressed?

As temperatures reach over 100 degrees at the height of Texas summers, property owners must pay special attention to their trees. Prolonged heat, intense sunlight, and drought conditions are all factors that contribute to heat stress in trees. When temperatures above 90 degrees are sustained for extended periods, tree growth slows, and some plants begin to show signs of heat stress. They become weak and more susceptible to dehydration, leading to the deterioration and decline of your commercial landscape. Apart from the heat, trees also suffer from drought, lack of adequate water, and poor soil drainage.

## What Causes Heat Stress in Trees?

All plants rely on a consistent water supply to stay healthy and cool. Water is absorbed through the tree's root system and travels through the plant until it reaches the leaves. Water is released from the leaves as vapor through a process called transpiration. During prolonged heat, transpiration increases, resulting in greater water demand. Extreme air, soil temperatures, and a lack of available soil moisture slow down the chemical activity needed to supply nutrition for the tree. Signs of drought stress are leaves wilting, scorching, or turning yellow.

## Are Your Trees Showing Signs of Heat Stress?

Property managers must stay vigilant and identify signs of heat stress in trees to preserve their commercial landscape. Some of these symptoms are characteristic of certain diseases, but if your trees show these signs during the summer months, it could be due to the heat and/or drought.

- Leaf drop
- Drooping branches
- Yellowing leaves
- Wilting leaves
- Sap oozing from the trunk
- Peeling or cracking bark
- Leaf scorch
- Does not produce healthy, new growth

## Treating Heat-Stressed Trees

If you notice evidence of heat stress on your trees, it's vital to take immediate action to prevent irreparable damage. Here are some steps you can take to help your trees and commercial landscape recover from heat stress.

## Water Deeply and Regularly

The most important thing property managers can do to help trees recover from heat stress is to water them regularly and properly. Water requirements will vary throughout the year, but it is especially critical during the summer and when trees show signs of heat stress. You should give your trees enough water so they have a reservoir to pull from during peak temperatures. For large trees, water out to the drip line, which extends to the edge of the canopy. Watering from the trunk to the dripline will ensure the tree's entire root system receives adequate water to grow and expand its root system.

## Apply Mulch

Mulch keeps tree roots cool and moisturized by promoting moisture retention and regulating the soil temperature around the tree. Applying a layer of mulch around the base of your tree will help protect it from the heat and help add essential nutrients back into the soil.

## Shade Protection

While sunlight is essential for all plants to thrive, prolonged intense exposure can lead to heat stress. You can provide shade for your trees by using shade cloth or wrapping the trunk in burlap, which helps the tree stay cool and prevents further damage from the heat.

## MitoGrow Rooting Hormone

Using quick-release fertilizers to encourage rapid new growth for an already stressed-out tree isn't ideal, but soil conditioning and stimulating root growth can help restore your tree's health and overall well-being in cases of severe heat stress. MitoGrow revitalizes root development by slowly encouraging root hair growth, enhancing cell division, and promoting plant health over extended periods. The physiological benefits of MitoGrow are particularly significant for plants and trees currently under heat stress and severe drought. Always consult a professional tree care expert when deciding when to treat your trees.

## Be Proactive About Heat Stress

Preparing your trees' defense against heat stress is just as important as treating it. Taking these precautions will help your trees resist environmental stressors and promote your landscape's overall health and vitality.

## Soil Conditioning

Soil conditioning improves soil structure for better moisture retention, aeration, and nutrient availability. The best time for soil conditioning is during spring before summer reaches its peak. Trees soak up nutrients in the soil through their root system. Ensuring they have a healthy and resilient root system before summer is the key to supporting your tree's health before it's too late. TreeNewal uses a unique soil health blend that acts as a natural plant growth stimulator to boost your tree's ability to absorb nutrients and develop a deeper, more robust root system, bark, and canopy. This blend will help prepare your trees' defense for environmental stressors like extreme temperatures and drought.

## Using Biochar to Enhance Soil

Biochar is an all-natural soil enhancement product that encourages healthy, living soils to improve nutrient availability for trees and landscapes. Biochar's structure enhances soil porosity and increases its water-retaining ability, which helps trees resist drought conditions.

## Tree Trimming and Pruning

Some trees can be sensitive to pruning if they are experiencing heat stress. If done improperly, pruning can cause further damage and sunburn by exposing more of the tree to sunlight. Always leave tree trimming and pruning to an ISA Certified arborist to maximize the benefits and prevent further harm to your trees.