SPRUCE, ARBORVITAE STILL SUFFERING FROM EFFECTS OF DROUGHT

Are you still seeing spruce trees turning brown and dying, or maybe it’s an arborvitae? The effects of drought can be seen long after a drought is over, but we are no means out of the drought. Nearly the entire month of January was dry in the northeast region of the state. We finally received some rain and a little snow the last week of the month and into February. When it comes to trees, homeowners think they have deep root systems, and that is not true for all trees, in fact a lot of them have shallow root systems. So, when we go into a drought, if a shallow rooted tree or shrub does not receive moisture, roots start to die off. In an extreme drought with consistent high temperatures near 100°, it doesn’t take long for a tree or shrub to succumb to the drought and heat. Arborvitae and Japanese Yews have really suffered from drought stress with many of them dying last summer and fall. Spruce trees are continuing to show symptoms and die. Even some White Pines did not make it. The really wet years between 2009-2011 were hard on some species of trees. When the ground around the tree is saturated, water fills the air spaces around the roots, causing root suffocation and the roots die. Some trees were already stressed from this situation when the drought hit last summer. They went from one extreme to the other. Once an evergreen tree or shrub turns brown, it cannot be reversed and the tree or shrub should be removed.

During a time of drought, trees and shrubs like arborvitae, spruce and Japanese Yews, in addition to many others, need supplemental water. This doesn’t mean you need to water these every day or even every other day. I watered the arborvitae in front of my house once every 7-10 days (about 3-4 times a month) and gave them a slow, deep watering. They made it through the drought just fine and are showing no symptoms of browning or stress. My water bill only increased about $10-15 during each of the summer months. This was better than letting the plants die and then spending maybe $100 or more to replace them, plus the time and labor to install them.

Many evergreens all over Missouri and probably the Midwest have died because of the drought. Just driving around your town you will see dead spruce trees and other plants that will have to be taken out and replaced. This year, if we continue to have a drought, and June, July and August are really hot and dry, and you have to make a choice on what to water, forget the annuals, water the most valuable plants in your landscape-your trees and shrubs!
HOW TREES AND FORESTS BENEFIT YOU

Trees Work For Your Wallet
Shade from two large trees on the west side of a house and one on the east side can save up to 30% of a typical residence's annual air conditioning costs.
Neighborhoods with well-shaded streets can be up to 10°F cooler than neighborhoods without street trees.
Trees properly placed around buildings as windbreaks can save up to 25% on winter heating costs.
For every 10% increase in forest cover in a watershed, costs to clean drinking water decreases by approximately 20%.
The presence of street trees in a neighborhood increase the sale prices of houses by an average of $8,870.

Trees Work For Your Health
Views of nature assist at the workplace. Employees with views of nature report 15% fewer illnesses and feel more enthusiastic and less frustrated than those without a view outside.
Hospital patients recovering from surgery who had a view of a grove of trees through their windows required fewer pain relievers and left the hospital a day sooner than similar patients who had a view of a brick wall.
Those who commute along tree lined roads remain calmer (lower pulse and blood pressure) and drive less aggressively than those who drive along less treed roads.
Park users report urban forests and parks offer a place for reflective thought, resting the mind and creative thinking even better than their homes.
Tree-lined streets are more walkable, encouraging more active lifestyles which decreases obesity and improves heart health.
Trees reduce noise. 100 foot plantings of tall trees can reduce loudness by 50 percent.

Trees Work For Your Family
ADD symptoms in children are relieved after spending time in a treed area. Kids are better able to concentrate, complete tasks, and follow directions after playing in natural settings.
A 10% increase in trees in a neighborhood reduces crime by 12%.
Parents who lived in areas with trees and greenery report committing fewer aggressive acts against their family.
Girls with a home view of trees and greenery score higher on tests of concentration and self discipline.
College students with more natural views from their dorm windows score higher on tests.
Tree along streets promote physical activity in children and increase longevity of the elderly.
Contact with nature helps children to develop imagination and creativity, intellectual development and social relationships.
People who take a walk in nature concentrate better afterwards than those who practice relaxation techniques indoors.
One of the most effective means of protecting children from ultraviolet radiation is to plant shade trees where they play.

Trees Work For Your Community
Trees contribute positively to downtown shopping areas. People are willing to spend 12% more for goods and services in downtowns with trees. They'll also spend more time shopping and come back more frequently.
Using the police department's crime reports to study crime rates around areas with trees and lawns as compared to more barren landscaping, research has found that green areas have a staggering half as many crimes as areas with no trees or grass. People also report feeling safer in communities surrounded with trees.
People tend to be more familiar and socialize more with neighbors in neighborhoods with trees. People also tend to feel more satisfied where they live if their homes are surrounded by trees.
People in housing surrounded by trees report that their life issues feel less difficult, they procrastinate less, and have higher attention spans.

Trees Work For Our Environment
100 mature trees intercept about 100,000 gallons of rainfall per year, reducing runoff and providing cleaner water.
The net cooling effect of a young, healthy tree is equivalent to 10 room-size air conditioners operating 20 hours a day.
Modest increases of 10% canopy cover in the New York City Area were shown to reduce peak ozone levels by 37% of the amount by which the area exceeded its air quality standard. Similar results were found in Los Angeles and along the East Coast from Baltimore to Boston.

(Continued on page 3)
MICROGREENS PACK BIG NUTRITIONAL PUNCH

There has been a lot of talk lately about microgreens. In December, a program on microgreens was presented at a Nutrition Educator's workshop and the Missouri Livestock Symposium in Kirksville. I (Jennifer), had the opportunity to attend the workshop and have been growing and eating them since. They can be put on sandwiches, in casseroles and salads, in scrambled eggs, and in many other dishes. Microgreens are easy to grow and I encourage you to start some.

The tiny versions of edible greens are four to six times higher in nutrient value than their mature counterparts, according to new research presented at the recent Missouri Livestock Symposium in Kirksville. Microgreens are becoming popular at upscale restaurants because of their texture, colors and intense flavors, but it turns out they add more to meals than just visual appeal and palate-pleasing taste.

"Microgreens are super-nutritious," said Zhenlei Xiao, a Ph.D. student at the University of Maryland. Xiao is part of a team of University of Maryland and USDA researchers who looked at levels of vitamins and carotenoid phytochemicals such as beta-carotene and lutein in 25 varieties of microgreens. They found that leaves from almost all of the microgreens had more nutrients than the mature leaves of the same plant.

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GARDENING TIPS FOR MARCH

VEGETABLES ALL MONTH:
• Fertilize the garden as the soil is prepared for planting. Unless directed otherwise by a soil test, 1-2 pounds of 12-12-12 or an equivalent fertilizer per 100 square feet is usually sufficient.
• Cultivate weeds and remove old, dead stalks of last years’ growth from the asparagus bed before new spears emerge. Asparagus and rhubarb roots should be planted as soon as the ground can be worked.
• Plant peas, lettuce, radishes, mustard greens, turnips, Irish potatoes, spinach, and onions (seeds and sets) outdoors. Plant beets, carrots, parsley, and parsnip seeds outdoors. Set out broccoli, cabbage, Brussels sprouts, Chinese cabbage, and cauliflower transplants into the garden.
• Start seeds of tomatoes, peppers, and eggplants indoors.

ORNAMENTALS:
• To control Iris borer, clean up and destroy old foliage before new growth begins.
• Fertilize bulbs with a “bulb booster” formulation.
• Loosen winter mulches from perennials cautiously. Apply a balanced fertilizer such as 6-12-12 to perennial beds when new growth appears.
• Dormant mail order plants should be unraveled immediately. Keep roots from drying out. Trees, shrubs, and perennials may be planted as soon as they become available at local nurseries.
• Seeds of hardy annuals such as larkspur, bachelor’s buttons, Shirley and California poppies should be direct sown in the garden now.
• Heavy pruning of trees should be complete before growth occurs. Trees should not be pruned while the new leaves are growing.
• Summer and fall blooming perennials should be divided in spring.
• Seeds of hardy annuals such as larkspur, bachelor’s buttons, Shirley and California poppies should be direct sown in the garden now.
• Heavy pruning of trees should be complete before growth occurs. Trees should not be pruned while the new leaves are growing.
• Summer and fall blooming perennials should be divided in spring.
• Ornamental grasses should be cut to the ground as new growth begins.
• Gradually start to pull back mulch from rose bushes.

FRUITS:
• Gradually remove mulch from strawberries as the weather warms.
• Continue pruning grapes. Bleeding causes no injury to the vines.
• Continue pruning apple trees. Burn or destroy prunings to minimize insect or disease occurrence.
• Apply dormant oil sprays now. Choose a dry day when freezing temperatures are not expected.
• Spray peach trees with a fungicide for the control of peach leaf curl.
• Peaches and nectarines should be pruned just before they bloom.

LAWN AND TURF:
• Mow lawns low to remove old growth before new growth begins.
• Apply controls for wild garlic. It will take several years of annual applications for complete control.
• Apply broadleaf herbicides now for control of cool-season perennial and annual weeds. These must not be applied to areas that will be seeded soon.
• Thin spots and bare patches in the lawn can be over-seeded now.

Source: Missouri Botanical Garden

UPCOMING EVENTS

March 1: Blueberry School, Lost Branch Blueberry Farm, Kirksville. Call 660-665-9866 for information or go to http://extension.missouri.edu/adair.
March 19-June 11: Master Gardener training, Hannibal. Cost is $150 with $50 refundable upon completion of initial 30 volunteer service hours. For info. contact the Marion County Extension Center at 573-769-2177.
March 27: Lewis County Lady Landowner workshop, 10:00-3:30, Methodist Church, Monticello. Topics: SWCD, NRCS and Extension updates; caring for plants during a drought; growing & eating microgreens; the truth about preservatives, organic, and public nutrition; and farm estate planning. To register call the Lewis County Extension Center at 573-767-5273. No cost to attend.
May 17: Adair County Lady Landowner Workshop, Kirksville. More details in the April issue. RSVP to Adair County SWCD at 660-665-3274.
September 20-22, 2013: MO State Master Gardener Conference, Springfield, MO.
December 6 & 7: MO Livestock Symposium, Kirksville.