



KAHNKE BROTHERS TREE FARM

10603 Boone Road
P.O. Box 206
Plato, MN 55370
P: (320)238-2572 F: (320) 238-2574
www.kahnkefarm.com conniek@kahnkefarm.com

GOT DEAD TREES?

On the evening of June 22nd, my boss and I had an opportunity to examine the dead and damaged trees in your neighborhood. Tom Linn and Roger von Holtz took us on an extensive tour and we were able to see the unhappy trees and the trends that contributed to their dissatisfaction. Many of the situations that we observed are avoidable. Here are some guidelines for success in growing beautiful shade trees.

- ***MULCH!** Always mulch the soil above the rootballs of your trees. Mulch performs several functions. As most folks know, mulch helps keep soil moisture consistent. Wind and sun often dry out the top few inches of soil, while lower areas stay damp. Mulch evens out the equation. During the winter time, mulch helps insulate the trees' roots. Just like it does with moisture, mulch helps keep the soil temperature more stable. One of the most subtle functions that mulch performs protecting trees from mechanical injuries. My boss, Jeff Kahnke, and I saw multiple instances of trees being terminally injured by weed whips and mowers. While it may not seem like rapidly spinning plastic threads could cause any harm to such stable entities as trees; they slice through their immature bark like butter. Such injuries provide entrance points for insects and diseases. When injured at their bases, trees often rot from the inside out. Damp grass and mulch harbor spores that rapidly invade exposed, vascular tissues. Furthermore, weed whips and mowers can completely girdle trees over time. Injuries that fully encircle the trunks will strangle and kill the trees. They lose the ability to convey moisture and nutrients to their branches. It's really quite sad, and can be easily avoided.*
- *Another phenomenon that we observed was the relationship between edged trees and poor performance. While there were exceptions to this rule, many edged trees were quite unhappy. The reason for this, is that raised edging can create a dam that holds water in. Properly installed edging should be no more than an inch above the grade. While it is important to thoroughly saturate each tree's root zone whenever you water; it is equally important for that water to move freely through the soil. Soil should be given time to dry a bit before trees are re-watered. Edging dams up the water, preventing its even distribution. Water is trapped and concentrated in a contained area. During damp weather (like we are having right now) the roots never have a chance to breathe. Wherever there is standing water, there is usually an absence of oxygen and a presence of anaerobic bacteria. This leads to rot. Once a root system begins to rot, the tree can look like it is very thirsty. This is because the roots can no longer perform their duty of transporting water.*



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- *The differences between rock and wood mulch are also of significance. Rock does not necessarily perform the same functions as cypress and cedar. Minerals are very thermo-conductive. They heat up a great deal during the summer and cool down dramatically in the winter. In contrast, wood products help keep the soil temperature even. Rock mulch is very heavy to move and manipulate. This weight also has a compacting effect on the soil. Compacted soils are harder to saturate, as water has a tendency to roll off and soak into softer areas. Few would argue that rock is also much less absorbent. Of course, there are semi-permeable rocks; but the river rock that is frequently used in landscaping doesn't hold much moisture. Wood, on the other hand, stores water like squirrels store nuts. Over the years, the debate about whether rock can actually harm plants remains active in horticultural circles. Many say that it has no effect. However, what I have seen with my own two eyes convinces me otherwise.*
- *Another, extremely detrimental thing that we saw when we were inspecting the trees was improper wrapping. There are a couple of reasons why it is a good idea to wrap trees DURING THE WINTER. White-colored tree wraps are believed to aid in the prevention of sunscald. Sunscald occurs on sunny winter days when the bark of basking trees is heated well above the ambient temperature. When the sun moves or clouds appear, this bark cools very rapidly. Much like plunging a red hot glass into ice cold water, the trees' tissues shatter; leaving gaping wounds² on their trunks. As a general rule, wraps should be put in place in November and be removed in March. These wraps should be loose-fitting or be made of breathable materials. Leaving them on during the warmer months can trap moisture against the trees' trunks, leading to mold and rot issues. When wraps are not removed and/or repositioned, the trees' trunks may actually grow around them. This can lead to complete girdling of the tree. Wraps cut into the vascular tissue of the tree, blocking the flow of vital water and nutrients to all portions of the tree above the binding. Never use duct tape or any other kind of tape on your trees. Just like roots and leaves, trunks need to breathe. For rodent protection, white, PVC wraps work best. Once again, these guards should fit loosely. They come in 3" and 4" sizes and are reusable from year to year, until they no longer fit the trees. We carry 3' tall, 3" wraps at the farm. For more serious critter issues, a tube made of 1/4" hardware cloth is the only answer. This tube should be buried a couple of inches below the soil line.*
- *Recently, studies have shown that late-season fertilization can also lead to sunscalding and frost cracking. Trees begin the process of going dormant in mid-July and should never be fertilized after this period. Inadvertently, when people diligently fertilize their lawns with a three or four-step program, they are also fertilizing their trees. Therefore, many trees are being fertilized in August. The reason this causes a problem, is that the new growth that develops does not*



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have time to harden off properly. Tree growth naturally slows down as temperatures get colder. As this occurs, trees go through a series of processes that prepare them for dormancy and facilitate re-growth in spring. When trees are stimulated to grow late in the year, these crucial processes are interrupted. Juicy, new growth does not develop its protective coating and withers easily with minimal exposure. You wouldn't carry a naked baby out in a snow storm would you? Of course not! Your skin can take a bit of a wind chill then and again. The baby's hasn't hardened off yet. On trees, damage from late season fertilization shows up the following spring; when their branch tips are dead and their trunks are cracked. Jeff and I saw quite a few trees with tip die-back. We also saw multiple trees with cracked trunks.

- Lastly, I will mention salt. De-icing salts are toxic to many trees. When you salt your sidewalks and driveways, that salt leaches into surrounding soils in the spring when things begin to thaw. Piling shoveled snow around said trees can aggravate the situation. Similarly, roads that are salted and then plowed leave a nice bank of salty snow right over the root zones of boulevard trees. Sugar maples, red maples and hackberries are especially sensitive to salt. Pin oak are too. Jeff and I saw some very unhappy trees of these species as we toured your development. I would have to think that salt was an issue. There are plant-friendly salt substitutes out there. They are generally more expensive. However, they can make a big difference in the health of your lawn and landscape. Another option is to use just sand, but that can get pretty messy. Living in Minnesota can be a challenge, no matter how you slice it!*

I hope this information is helpful to you. These are tips that Jeff has learned during his 43 years as C.E.O. of Kahnke Brothers, Inc. Much of my background comes from my nine years at Kahnke Brothers. As an avid gardener, I have a lot of hands-on experience with the plants that we grow and sell at Kahnke Brothers Tree Farm. Certified as a Professional by the Minnesota Nursery and Landscape Association and as a Landscape Specialist by MnDOT, I like to think that I know what I am talking about. Every other week, I also write a column for "The Glencoe Enterprise" called "The Hort Report". My passion is helping people get the results that they desire out of their landscapes. At Kahnke Brothers, we strive to be a reliable resource for our customers. Your success is our success– plain and simple. Many of our staff members are professionally trained in horticultural fields. The rest of our employees learn on the job every day through the work that they do. Everybody here is proud of their work and our company. That mentality is what sets us apart from our competition. To learn more about our company and get more great tips and information, go to www.kahnkefarm.com. Feel free to contact me anytime with your questions and comments.

Connie Kratzke

(612) 501-5767