



THE STUMP

INFORMATION BY THE BOARD FOOT

JUNE 2010

KNOT THE HOLE NEWS

Wider is Better

In 1997, Pontiac introduced a new model of the Grand Prix with the slogan “Wider is Better”. While the car model no longer exists, the slogan lives on for tree mulch rings.

Mulch is an attempt to recreate a forest floor where tree roots grow best. It is commonly known an organic mulch of wood chips or leaves moderates soil temperatures, reduces evaporation, promotes soil aeration and increases organic matter and fertility via worm and microorganism activity, and reduces water runoff and soil erosion. On top of these biologic benefits to the tree, mulching also reduces competition from weeds and grass, makes maintenance easier, eliminates temptation to mow or trim against the tree and creates a well manicured appearance.

It is less known that large mulch rings significantly increase tree growth. A November 1989 article in the Journal of Arboriculture documents an experiment by Thomas L. Green and Gary W. Watson of the Morton Arboretum at the College of DuPage, Glen Ellyn, IL where transplanted, bare root ‘Green Mountain’ sugar maples were grown with turf up to the trunks and 8 foot diameter mulch rings. The project took place from the fall of 1981 to the fall of 1986. The trees with the mulch rings developed crowns up to twice as large as without the mulch ring. The trunk diameter with mulch rings grew nearly three times larger.

Differences in root development was even more dramatic. Tree roots under the turf was nearly non-existent in the first two inches with up to 15 times more root development under the mulch. Deeper root development differences was slightly less pronounced but still two to four times more roots at measured depths to six inches. This dramatic growth difference is attributed to the known benefits of mulch and keeping fescue grass farther away. Fescue grass has an allelopathic affect on trees slowing their growth and in some cases killing young and / or weak trees.



Mulch wide—not deep.

Size and Habit



American basswood (linden) *Tilia americana*

A large tree, American basswood has a mature height of 60 to 80 feet. It has a pyramidal shape in youth developing into an oblong, slightly rounded crown with maturity. Appropriate for medium yard, street, and park plantings. This tree has a fast growth rate, but slower on heavier, dryer soils. It prefers moist, deep soil, but adaptable to pH and other soil conditions. The large dark green leaves are heart shaped and 4 to 8 inches long and wide with yellow to brown fall color. Several cultivars exist with ‘Redmond’ the most common.



Plant illustration by Jenny M. Lyverse, from *Landscape Plants for Eastern North America*, 2nd Edition, Harrison L. Flint Author
Range map modified from USDA Forest Service *Silvics of North America* Web site - www.na.fs.fed.us/spfo/pubs/silvics_manual/Volume_2/tilia/americana.htm

Most mulch rings are smaller than those utilized in the experiment. This leaves room for much improvement in the performance of landscape trees with the use of wider mulch rings. The trees in the experiment were 2 to 2.5 inch caliper with 8 foot mulch rings. At this proportion, a 10 inch diameter tree should have a mulch ring of at least 32 feet in diameter. While this size of ring is not acceptable to many, the key is to substantially increase the size of mulch rings as large as possible to get the most benefit for the tree. A mulch ring of ten to fifteen feet in diameter is easily justified with this evidence.

John Wright Memorial Scholarship

Do you know a college bound student interested in arboriculture? If they hurry, they may apply for the John Wright Memorial Scholarship by June 15. The scholarship is worth \$2,000. Established in 2008 by the Wright Tree Service, the intent of this award is to enable undergraduate-level students to attend college without accumulating burdensome debt. Learn more and apply at: <http://www.treefund.org/scholarships.htm>.

Thousand Cankers Disease of Black Walnut

Missouri’s black walnuts are threatened. While Thousand Cankers Disease has not been found in Missouri, it is such a devastating issue we need to watch for it. Millions of dollars of annual production of walnut products and job income is at stake.

Thousand Cankers Disease is a complex between walnut twig beetle (*Pityophthorus juglandis*) and a recently described fungus in the *Geosmithia* genus. The proposed name is *Geosmithia morbida* sp. nov. The beetle attacks twigs of the tree and does little damage itself. The fungus it carries inoculates the twig and grows a small canker killing the tissue. After hundreds—thousands of attacks, the cankers join and girdle the branch. Symptoms include yellowing branches which slowly incorporates more of the tree. Full decline takes about three years after noting the first symptoms.



Image: Colorado State University

Because of the extreme danger to Missouri’s walnut trees and industry, the Missouri Department of Agriculture has enacted a quarantine of all green, untreated walnut products, live or dead, and all hardwood firewood from the nine known or suspected infected states. Learn more at: <http://mda.mo.gov/plants/pests/thousandcankers.php>

Book Review

The International Society of Arboriculture recently updated the Arborists’ Certification Study Guide. The 3rd edition is divided into 16 chapters of information covering topics needed for passing the Arborists’ Certification Exam. This update includes color graphics, detailed descriptions and discussions of topics, and lists other sources of information appropriate for study. The guide may be purchased from ISA at: <http://secure.isa-arbor.com/webstore/Arborists-Certification-Study-Guide-2010-Third-Edition-P426.aspx>.

How to Kill a Tree!

Send in the dozer first onto a site to get it ready for work.

Of course the above is incorrect. Tree roots are sensitive to changes in the soil and these changes will lead to root loss and tree decline. Driving over roots will compact the soil. Dozers also tend to knock the bark of many trees. While this is a short term efficient method of site preparation, the long term damage becomes evident several years



later in declining and dead trees. The first thing to do is carefully decide which trees to keep, protect their root zones, and keep heavy equipment restricted to specific routes and areas. This will help the trees remaining after a project a chance to survive and add to the landscape



June 4 - 5

ISA Midwestern Chapter Tree Climber Competition, Swope Park, Kansas City, MO
Information at www.mwisa.org.

June 11

Kansas Arborist Association Summer Field Day, Clinton Corp park east side of Lake , Lawrence, KS, Contact Charles Long (charlesandlindalong@fhrd.net), 785-499-6670
Registration form at www.kansasarborist.com/pdf/KAA%20Field%20Day%202010.pdf.

June 17 - 19

American Conifer Society National Meeting, Charlotte, NC, Information and Registration at www.conifersociety.org/cs2/index.php?module=News&func=display&sid=114

June 19

ISA Certified Arborist Exam, Fayetteville, AR, Registration Deadline May 27, 2010,
Register at www.isa-arbor.com/certification.aspx.

June 19

ISA Certified Arborist Exam, Oklahoma City, OK, Registration Deadline June 3, 2010,
Register at www.isa-arbor.com/certification.aspx.

June 24

Missouri Nursery and Landscape Association Field Day, Olathe, KS, Information and Registration at www.mlna.org/index.cfm?fuseaction=calendar.calDetail&event_id=28

July 23 - 28

ISA Annual Conference and Trade Show, Chicago, IL, Early Registration Deadline July 8, 2010, Conference Information and Registration at www.isa-arbor.com/conference/default.aspx

August 12

Nursery Day, Missouri Botanical Garden, St. Louis, MO, Information at www.mlna.org/index.cfm?fuseaction=calendar.calDetail/event_id/15/index.htm

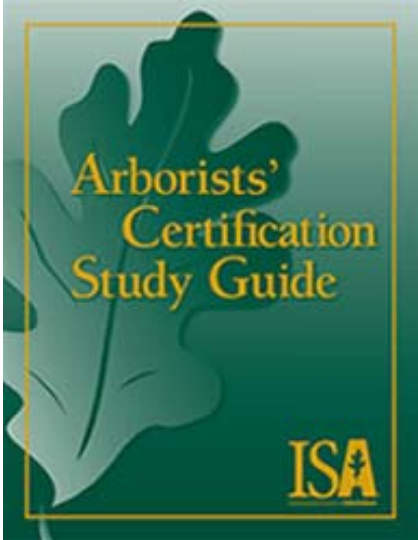
August 25

Powell Gardens Nursery Day, Kingsville, MO, Registration deadline August 18, Information at www.mlna.org/index.cfm?fuseaction=calendar.calDetail&event_id=34

September 10 - 13

American Society of Landscape Architects Annual Meeting and Expo, Washington, DC, Early Registration Deadline July 1, 2010, Conference Information and Registration at www.asla.org/2010meeting/

Take time to enjoy the environment you work in!



Joy for the sturdy trees;
Fanned by each fragrant breeze.
—Samuel Francis Smith (1808–95)

WHAT'S HAPPENING

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