CropHealth Advising & Research
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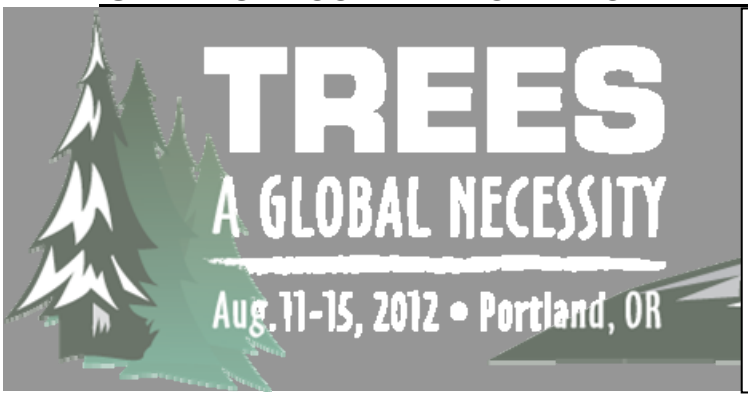
To | Date

Monday October 29, 2012

6 pages from Mario Lanthier

ISA ANNUAL CONFERENCE IN PORTLAND



This event is the annual conference and trade show of the ISA (International Society of Arboriculture). It was attended by over 2100 persons, the most ever for this conference.

Saving the trees, Saving ourselves, by Peter Raven, Missouri Botanical Garden

The keynote adress was by a leading world botanist and advocate for conservation and biodiversity. See the website http://www.missouribotanicalgarden.org/media/fact-pages/president-emeritus%E2%80%94dr.-peter-h.-raven.aspx.

The growth of the human population is exponential. There were about 1 billion persons in 1804. There are now 7 billion persons, with 1 more billion expected in the next 10 years. The population of the planet will reach 9 billion persons in 40 years.

The human species is using 50% of the photosynthesis and water availability in the world. The Global Footprint Network (http://www.footprintnetwork.org/en/index.php/GFN/) estimates we are currently using 135% of all the world produces. If the trend continues, by 2050 the use of resources will be equal to 2 ¼ planet Earth.

"Global warming is a measured phenomena caused mostly by human activity. It is not a belief. It is the conclusion of thousands of studies published in peer reviewed scientific journals. It is disappointing to see the lack of ownership by politicians."

Solutions include:

- Convert lawns to trees, as they required less inputs and provide more benefits.
- Watch trees to document the most successful in the changing climate.
- Support municipal tree preservation ordinances and tree planting activities.
- Big picture: reverse climate change by reducing the use of resources.

MUNICIPAL TREE PLANTING PROGRAMS

Tree canopy cover

Many presenters talked of "tree canopy cover". This is the extent a community is covered by greenery when looking from the sky. It is presumed that more canopy is better and a "tree canopy target" of 25% is a realistic goal for typical city zones.

Many municipalities have started ambitious tree planting programs to meet the target. It is done by planting on streets or encouraging plantings on private property.

- Toronto: estimated tree cover is 20% (http://www.toronto.ca/trees/every_tree_counts.htm)
- Ottawa: estimated tree cover was 27% in 2008, current target is to reach 30%
- Seattle: tree canopy cover is 23% (http://www.seattle.gov/trees/canopycover.htm). The goal is 30% by 2037, which requires 300,000 new trees be planted (http://www.seattle.gov/trees/).
- Los Angeles: now 21%, goal 1 million new trees (http://www.milliontreesla.org/mtabout3.htm).
- New York City: tree canopy cover is currently 25%, goal is to plant 1 million trees.

Urban Freeeway Forestry in Texas

By Ethan Beeson, Texas Department of Transportation

Department has a budget of $300 million for infrastructure of which $5 million goes to landscaping. Over 1 million trees were planted along freeways since 1998.

Trees are planted on the expectation of minimum future maintenance (the locations are hazardous to workers) and short life span (20 to 40 years before major road repairs). The bulk of the budget is spent at the time of planting, including large planting spaces and extensive use of compost (in the planting hole) and mulching.

RECOGNIZING TREES OF SIGNIFICANCE

by William Fountain, University of Kentucky (http://www.uky.edu/Ag/Horticulture/fountain.html)

- Champion tree: largest of a species in a geographical area. There are 751 Champion trees in the USA (see http://www.americanforests.org/our-programs/bigtree/).
- Heritage tree: large or old trees. Can be Veteran trees (mature and full canopy, no obvious decline) or Ancient trees (over-mature, in decline, canopy has retrenched).
- Spemen tree: unique form and characteristic, often in a collection or botanical garden.
- Historic tree: old and associated with something or somebody important.
- Memorial tree: in memory of a person or event, usually has maintenance needs.
- Landmark tree: a prominent feature in the community, often near a public building.
- Location tree: a large tree on a boulevard or major road.
- Collection tree: a group of trees of uneven age, often fruit trees with economic value.
- Protected tree: has environmental value, for example in a riparian area.

STORMWATER MANAGEMENT

New York City Green Infrastructure Plan

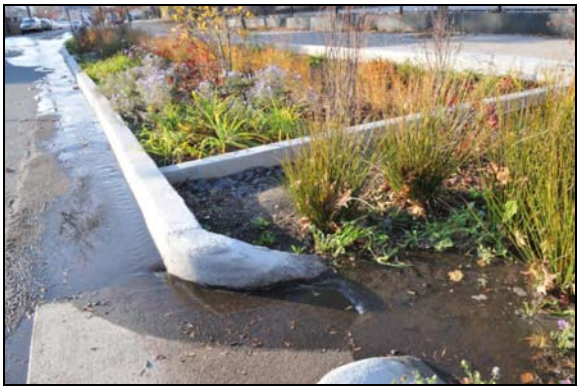
By Jeremy Barrick, Deputy Chief of Forestry, New York City

New York City has earmarked $1.5 billion for the coming 15 years to plant trees. The money is offset by a reduction in construction of hard structures. Trees contribute to the capture of stormwater, thus less need to build pipes and treatment plants.

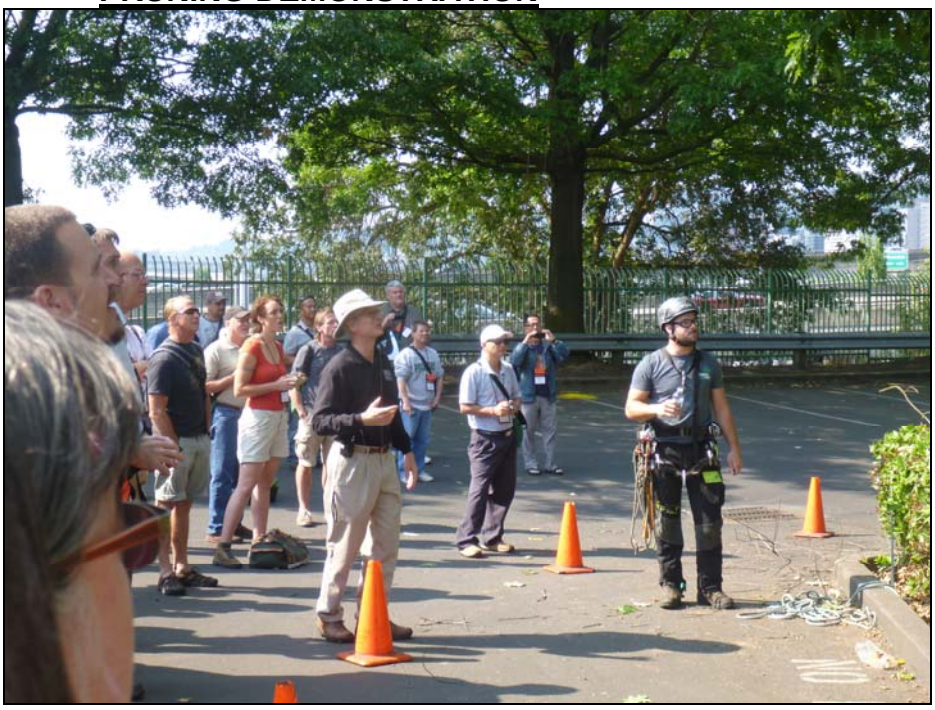
The City releases 30 billion gallons of water during a significant rain event. The goal is to reduce runoff by 10% with greenroofs, street tree planting, bioswale planted areas and building larger tree pits (a pit 4 feet deept will drain 1 inch of rain water).

Below: Bioswales in New York City. All pictures from the presenter.

The tree pit includes the standard tree, shrubs, flowers and guard.
There is also a stone buffer on the soil and a curb inlet with apron for water overflow.



PRUNING DEMONSTRATION



Above: Dr. Ed Gilman took participants to a near-by lot for pruning of mature trees.
Dr. Gilman does extensive research on pruning (http://hort.ifas.ufl.edu/people/gillman.shtml).
"Structural Pruning Using ANSI Pruning Methods" was attended by about 100 persons.

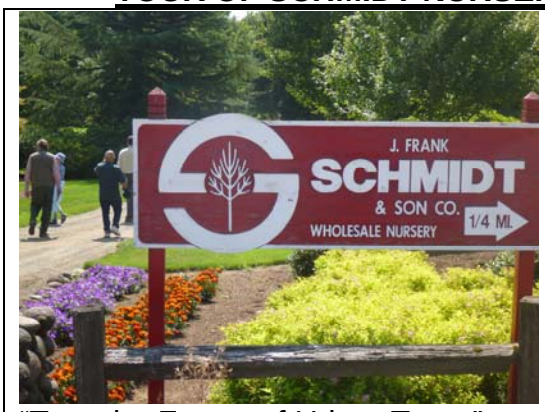
"Structural pruning to guide and manage tree architecture should be the primary goal each time a tree is pruned."

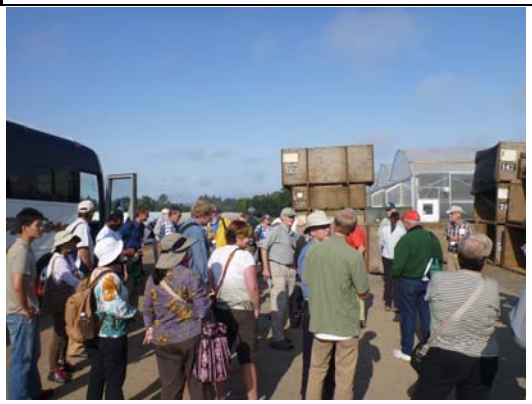
Two important practices for pruning mature trees:

1) Develop and maintain a single dominant trunk with smaller branches distributed;
2) Reduce the likelihood of tree failure caused by defects in structure and poor weight.

A climbing arborist was in the tree and directed by persons on the ground
This tree was pruned for structure – reduce the occurrence of upright stems competing with the leader, and reduce the growth rate of lower branches.
Left: Before pruning. The arborist was asked to removed an upright branch to the right.
Right: After pruning. The faulty branch is gone and the tree still has good appearance.

TOUR OF SCHMIDT NURSERY



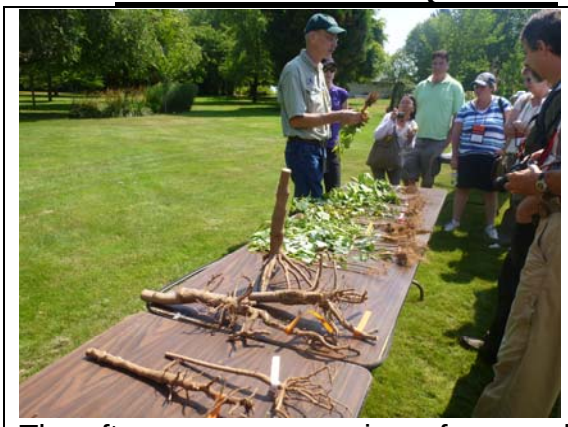
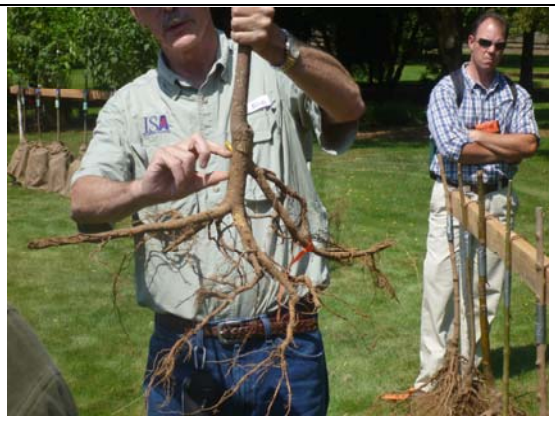


"Tour the Future of Urban Trees" was an all-day event at J. Frank Schmidt Nursery.
The morning was a tour of production facilities where tree are propagated.
The nursery sells 1.5 million trees per year, mostly for municipal use, also 25% for retail.

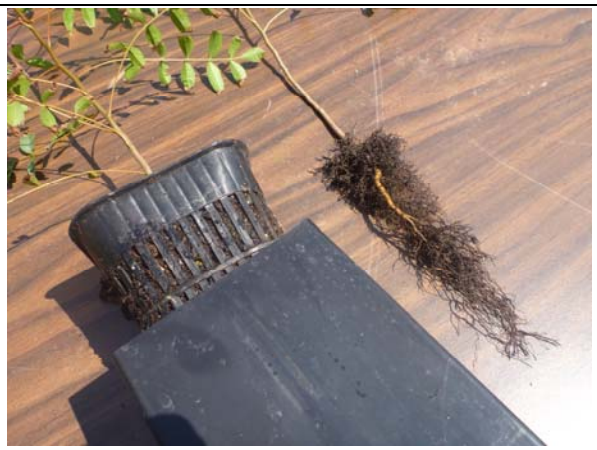
Left: Tissue culture of *Syringa* Ivory Silk grown in containers with holes on all sides.
Right: Cuttings of *Ulmus* are grown in covered beds (bark + soil) inside a polyhouse.

Left: Tree production in large paper bags (picture shows *Acer t.* Crimson Sunset)
Right: Tree production in containers with holes (brand name "RediRoot").
Frank Schmidt said: "*Quercus and Acer are undercut 2 times during field production*".

TRIALS FOR ROOT QUALITY

The afternoon was a review of research work at the nursery on different containers.
Left: Gary Watson, The Morton Arboretum (Illinois) visits twice per year for the research.
Right: "*Plant so the root flare (top roots) is within 2 inches of the original soil line*".

Left: Dr. Ed Gilman shared his latest research. "*Either you worry about the container (use one with more air spaces) or you worry about the roots (prune at each repotting).*"
Right: Roots from Pioneer container. "*So far it is the best container but still not ideal*".


Left: "RediRoot" container vs standard. Holes displace the circling roots to the inside.
Right: Dr. Gilman said: "*The worst root grows up then around and circles the trunk*".