

Branching Out

Volume I, Issue I December, 2007

Pine Trees - A Hard Sell These Days

Selling many pine trees lately? Are your customers gun shy at the mention of pines because “all the pine trees are dying”?

A recent article (9-13-07) in The Kansas City Star surveyed the loss of Scots pines and the fungal damage to Austrian pines in the metropolitan area. The overall tone of the article was very pessimistic, and concluded that we could pretty much forget about trying to grow pine trees altogether.

As a nurseryman and retailer, I found this disheartening. Educating and informing the gardening public is an important part of our work, and the notion that we'll never grow pine trees in Kansas again is just plain wrong.

Fortunately, a response appeared in the Star a few weeks later (10-18-07). Randall James, an arborist in Manhattan, Kansas presented an excellent overview of the outlook for pines in Kansas, which, with his permission, is reprinted here:

It was good to see the recent article highlighting the damage to pines throughout the city this year.

Pines are a majestic tree with a profound impact on the urban landscape, and recent declines have many residents rightly concerned.


While most points were accurate in that such “exotic” pines are not native, often stressed in the Midwest landscape, and are challenged by fungal pathogens and a


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KNLA at the WESTERN

Come see us at the WESTERN Trade Show, January 6 - 8, 2008 at the Overland Park Convention Center. KNLA will be in booth #1518, located on the Lower Level of the Convention Center. I still have not met many of you so please stop and say hi. We have new KNLA hats and shirts available and will also take orders for the Woody and Perennial Plant Guides for spring delivery. **The Certification Exam** will be held on Sunday, January 6 from 8 am to 12 Noon in Room #4 on the Lower Level. See page 4 for details. **The KNLA Business Meeting** will be held at 11 a.m. on Monday, January 7th in Room #3 on the Lower Level. We hope to see many of you there. More information on the show is located at www.wnla.org

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c/o Patricia McCaffrey,
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1604 Beechwood Terr
Manhattan, KS 66502
785-313-3973
kansasnla@sbcglobal.net

Emerald Ash Borer Update

The emerald ash borer (*Agrilus planipennis*), an Asian-borne insect pest that has killed an estimated 25 million ash trees since arriving in Michigan five years ago, is now present in the following states: Michigan, Illinois, Ohio, Indiana, Pennsylvania, Maryland, and West Virginia. In addition, it is established in Canada. The presence of emerald ash borer has impacted the future planting of ash trees in landscapes. First of all, ash trees have been the staple of the nursery industry for decades because they are able to survive in a wide variety of soil types and site conditions. Second, ash trees are easy to propagate and are an inexpensive landscape tree. As a result, ash trees have been extensively planted within municipalities and urban environments. However, this has led to the practice of over-planting with one particular tree species. Historically (and we should learn from the past), problems have been encountered through wide-scale use of one plant type (=monoculture), which has resulted in the demise of some of our most beautiful trees. For example, monoculture plantings of the American elm (*Ulmus americana*) led to these trees succumbing to attack from the Dutch elm disease (*Ophiostoma ulmi*). Recently, honeylocust trees, which (again) have been extensively planted throughout the United States, are experiencing problems associated with certain diseases.

The bottom line is that it is important to plant a diverse assortment of plant material to increase genetic diversity, as opposed to switching from one monoculture to another. A mixture of plant species is much more restrictive to the natural spread of insect and disease pests because tree species vary in their susceptibility to different pest complexes. The emerald ash borer has the capacity to move on its own approximately 1/2-mile per year, although it is capable of flying up to 5 miles. At that rate, it would take an extended period of time for the insect to move into the state, even if regulatory control measures were not effective. However, the emerald ash borer is more likely to move long distances via people. The movement of firewood appears to be primary factor responsible for long-distance spread of emerald ash borer.

An item to consider is the preventative treatment of ash trees. Applications of imidacloprid (Merit) into the soil within 2 feet of the trunk have been found to provide protection of ash trees for approximately one year after application. However, protection is improved with two successive years of treatment. Higher levels of control have been obtained with the IMA-jet formulation of imidacloprid by Arborjet. It is likely that an infestation will be present in ash trees for a couple of years before symptoms including branch dieback and emergence holes are evident. A synopsis of emerald ash borer treatment options is available at the following website:

<http://ashalert.osu.edu/latestnews.asp?id+497>.

Raymond A. Cloyd

Associate Professor and Extension Specialist in Ornamental Entomology/Integrated Pest Management

Department of Entomology

Kansas State University

PLACE YOUR AD HERE!

1/4 Page = \$50

1/2 Page = \$100

Job Postings = Free for
KNLA Members Only!

Contact: Patricia at kansasnla@sbcglobal.net

Positions Available:

Landscape Manager &
Landscape Designer
(Both positions are full-time)

For more information contact:

Theodore Thompson
Anthan's Services LLC
1435 NE Eugene
Topeka, KS 66608
785-232-1558

Pine Trees - A Hard Sell These Days....continued

nematode-induced wilt disease, I do not agree that all such pines are no longer an option in Kansas.

I also disagree with the suggestion that all those present in the landscape are doomed. I feel the article did not offer enough information from a research or management perspective, but rather relied on anecdotal evidence and random observation (from a small window of time) to reach and communicate a one-sided, somewhat misleading verdict.

*It is true that Scots pine (*Pinus sylvestris*) is dealing with a deadly wilt-type disease that should limit/eliminate its use. However, the occurrence of this disease in Austrian and Ponderosa pines remains relatively rare.*

Also, the pine wilt nematode is not an introduced pathogen, so it is reasonable to expect (and supported by research) that some natural resistance exists. This resistance, along with now available and promising preventive trunk injections, should allow many to survive.

*Regarding the long-present fungal tip blight of Austrian (*Pinus nigra*) and Ponderosa pines (*Pinus ponderosa*), it should be considered that this was an exceptional year that provided a "perfect storm" in terms of disease impact.*

Previous drought stress, a hard freeze at candle expansion, and excessive moisture during spring fungal spore dispersion all presumably resulted in severely blighted trees. Epidemiology in plants can be complex, so an exceptional year does not necessarily warrant eliminating them from planting lists.

Homeowners should be made aware of plant health risks to a particular species and given the information to minimize them. If people want to find a tree species with no plant health challenges in the Midwest, they will be working from a very short list, if one exists at all.

A drive through many areas of Kansas and Missouri shows thousands of pines over 30 years of age that are performing just as designed: screening, accenting, protecting, et., all without a hint of decline.

If additional cultural and protective care is given by educated homeowners and/or qualified arborists, it is reasonable to think most will survive the punches nature is currently throwing, outliving me and many of those reading this article.

I was very gratified to see this article by Mr. James. He presented in a reasonable and thoughtful manner most of the facts about pines that I've been trying to get across to my customers for years. I haven't offered Scots pines for sale for nearly 10 years. It does look like they will go the way of American elms. But I firmly believe other pine species still have a place in our landscapes, for those reasons outlined in the above article.

Brian Boyce
Vice-President, KNLA

E-mail.....

In an effort to be more efficient and cost effective, we have begun emailing the KNLA Membership newsletters, workshop information and other pertinent information that may arise, to registered members. Don't be left out. Please keep us up to date with address changes at: kansasnla@sbcglobal.net

Membership forms are available at our website.



Pine Wilt: Preventative Injections and Preventing Spread in Western Kansas

Pine wilt was discovered in Kansas for the first time in 1979 in the southeastern corner of the state. Pine wilt is caused by the pinewood nematode. The nematode is spread by the pine sawyer beetle, a long-horned borer. The nematode feeds and multiplies in the tree's resin canals, causing wilting and death in several weeks to several months. The nematode and beetles spend the winter in the infected tree. In spring, the beetles emerge around May 1, carrying nematodes to new trees and continuing the cycle of infection.

The disease is common in the eastern half of the state, and it is spreading west naturally around 10 miles per year. Scots pines are particularly susceptible, and many Scots pine in eastern Kansas have been killed. Austrian and mugo pines are also susceptible. Western Kansas is not yet infested. In the past 1-2 years there have been a few sporadic findings (Colby, Dodge City, Garden City, Hays) of pine wilt, sometimes affiliated with infested fire wood coming from the east. Those introductions have been eradicated through sanitation and scouting. K-State, the Kansas Forest Service, and the Kansas Department of Agriculture are working to monitor western Kansas for further infestations.

Symptoms:

In Kansas, new pine wilt infections are most visible from August to December. Trees wilt and die in a short period of time, from several weeks to a few months. In the first stages, the needles turn grey or green, then yellow and brown. The discoloration sometimes occurs branch by branch, sometimes all at once. The brown needles stay on the tree for up to a year after the tree has died. Another key symptom is reduced resin. During part of their life, the nematodes feed on plant cells in the tree's resin canals, thus stopping the flow of resin. On a healthy tree, sticky resin bleeds from the site of a wound. In contrast, if a tree has pine wilt the resin is often reduced or absent, and branches become dry or brittle.

There is a website with color photos and descriptions at the following link:

<http://muextension.missouri.edu/explorepdf/miscpubs/mx0858.pdf>

So, what can we do?

1) Sanitation

The most important step is sanitation. If a tree is suspected to have pine wilt, send a sample to the K-State Plant Disease Diagnostic lab. If the test is positive, the tree should be cut down by May 1 *at the latest*, before the beetles emerge. In fact, **April 1** might be a better deadline just to make sure no beetles emerge. Cut the tree to the ground—don't leave a stump. Chip or burn the wood to destroy the beetles and nematodes.

2) Avoid stress

The beetles are attracted to drought-stressed trees. If possible, provide water during dry periods to prevent drought stress.

3) Preventative injections

There are two new products available for preventative injections. Greyhound (Arborsystems) and Aracinate (Rainbow Treecare) both have the active ingredient 2% abamectin. Both products only work preventatively—there is no curative activity.

Greyhound was tested recently by the Nebraska forest service. In a naturally infested area, trees with preventative injections had about an 80-90% survival rate compared to 40-50 % in untreated trees. So, it is not a 100% guarantee, but it did increase survival.

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Pine Wilt: Preventative Injections and Preventing Spread in Western Kansas.....continued

The label is available here:

http://www.arborsystems.com/chemicals_greyhound.html

The label for Aracinate is based on work by Ned Tisserat, Randy James, and Tim Todd a few years ago at K-State. In the K-State trials, preventative injections with 2% abamectin significantly increased the likelihood of a tree surviving pine wilt. Only about 5% of treated trees died compared to 60-70% of untreated trees. The researchers used an injection device called a STIT (systemic tree injection technology). Rainbow is working to develop a protocol/kit for tree care professionals to construct and use a STIT. The protocol will be placed online sometime in the future. The Aracinate label is available at: http://www.rainbowscivance.com/pdf/aa_Label.pdf

4) Prevent new infestations: (especially in western half of Kansas)

Don't import pine firewood from contaminated areas. Be wary of pine nursery stock from infested areas, and monitor nursery stock carefully. If pine wilt is introduced, remove the tree, and continue to monitor surrounding pines to make sure it has not spread. Careful scouting and sanitation can eliminate sporadic outbreaks before they get out of control. Contact K-State, the Kansas Forest Service, or Kansas Dept of Agriculture for assistance.

For more information on pine wilt, including photos, see:

http://www.ksda.gov/plant_protection/content/184/cid/1276

<http://www.hfrr.ksu.edu/DesktopModules/ViewDocument.aspx?DocumentID=1353>

http://www.na.fs.fed.us/spfo/pubs/howtos/ht_pinewilt/pinewilt.htm

<http://www.extension.iastate.edu/Publications/SUL9.pdf>

Megan Kennelly
Department of Plant Pathology
Kansas State University

The Kansas Certified Nurseryman Exam

will be given on Sunday, January 6, 2008 from 8 am to 12 noon at the Western Trade Show
Overland Park Convention Center, Lower Level, Room #4

Each person taking the exam must order their own Training Manual.

Test fee is: Members \$25, Non Members \$75.

***Pre-registration is recommended by calling Patricia at
785-313-3973 or email kansasnla@sbcglobal.net***

**If you have questions regarding the exam,
please contact Tim McDonnell at 316-788-0492 or tmcdonne@ksu.edu**

Kansas Nursery & Landscape
Association

1604 Beechwood Ter
Manhattan, KS 66502



Upcoming Events

- January 6-8** **WNLA, The WESTERN, Overland Park, KS.**
For more information please see their website at: www.wnla.org
- January 6** **KNLA Certified Nurseryman's Exam** at the WESTERN, Overland Park, KS,
8 am - 12 Noon. Contact Patricia at 785-313-3973 to register
- January 7** **KNLA Business Meeting** at the WESTERN, Overland Park, KS
11 am - 12 Noon, Room #3, Lower Level - Overland Park Convention Center