

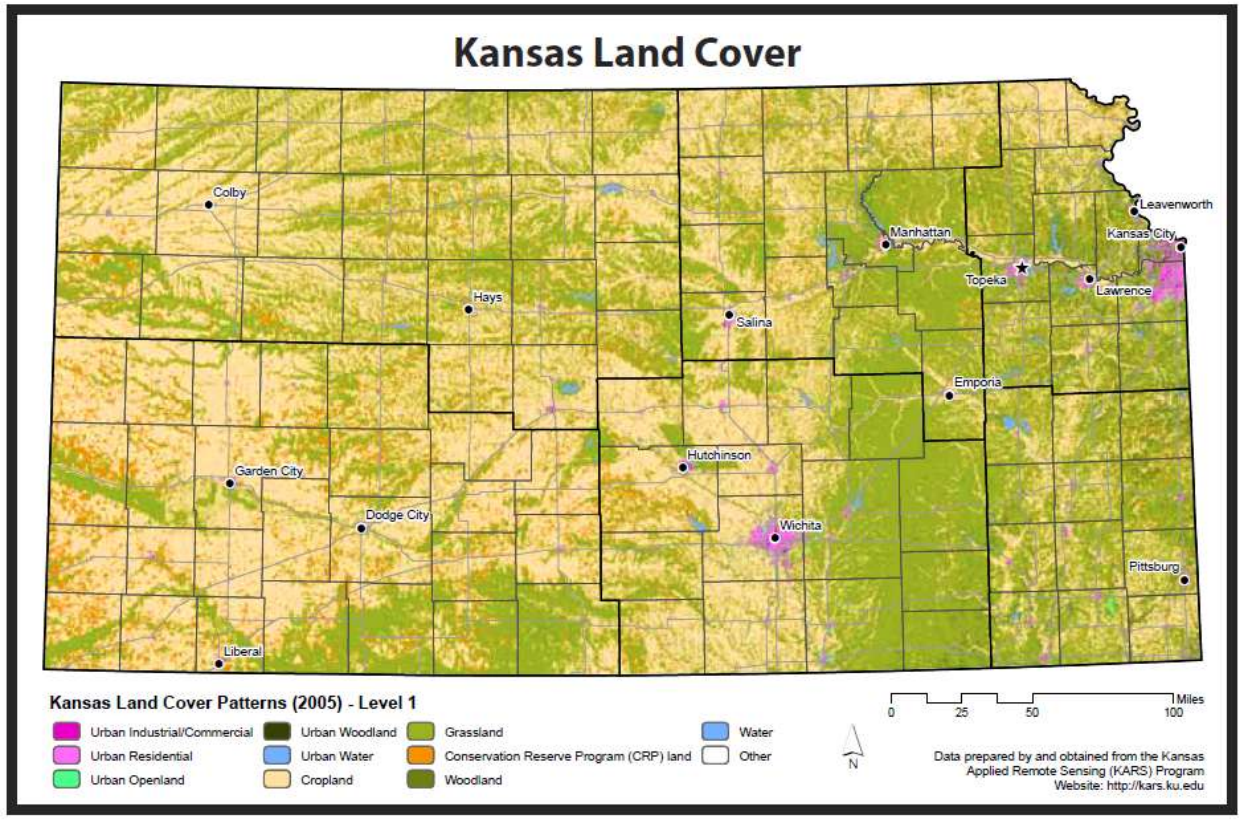
Kansas Forest Health Highlights 2010



Forested land in Kansas comprises just 10% of the states total land area. Using FIA and Great Plains Initiative forest inventories, 5.2 million acres of forests, woodlands, and trees are supported, mostly on private land (95%). Most of the contiguous forestland is located in the far eastern portion of our state, which frequently contain hackberry, oaks, and other hardwood species. The state of Kansas is located in an ecotone where the central hardwoods of the United States transition into the grasslands of the Great Plains. The majority of wooded areas tend to be linear and follow water features along the landscape. Since the first official survey, Kansas forests have increased by 3.9 million acres (GPI & FIA data). Much of this could be due to the rise in eastern red cedar volume (~23,000%) over the past 40 years. Overall Kansas forests are increasing in size but decreasing in preferred timber species.



Photo by USDA NRCS



Special Issues

PINE WILT

Bursaphelenchus xylophilus & *Monochamus* spp.

Scots (most susceptible), Mugo, Austrian, and White pines



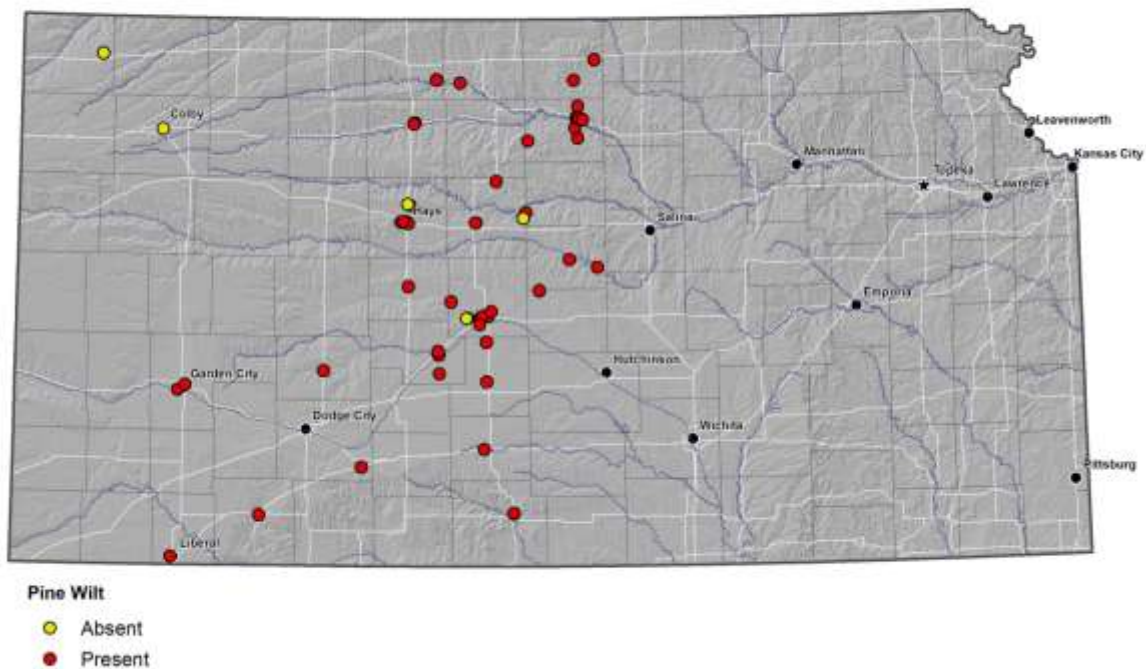
New detections of pine wilt have been reported in 11 counties in western Kansas during 2010. Pine wilt is caused by a plant parasitic nematode called the pine wood nematode, *Bursaphelenchus xylophilus*. The nematode is vectored by a long-horned borer, called a pine sawyer beetle. These beetles are of the genus *Monochamus*. The nematodes kill pine trees by feeding and reproducing in the resin canals of the branch and trunk. This disease is continuing to spread westward. Since most pines are planted in the state, windbreaks and conservation plantings are often damaged.

WESTWARD MOVEMENT OF PINE WILT

Map by Robert Daniels – Kansas State University, Department of Geography

Observations by Kansas Forest Service – SW District Forester John Klempa and NW District Forester Jim Strine

Surveyed Pine Wilt in Kansas
(2010)



THOUSAND CANKERS DISEASE

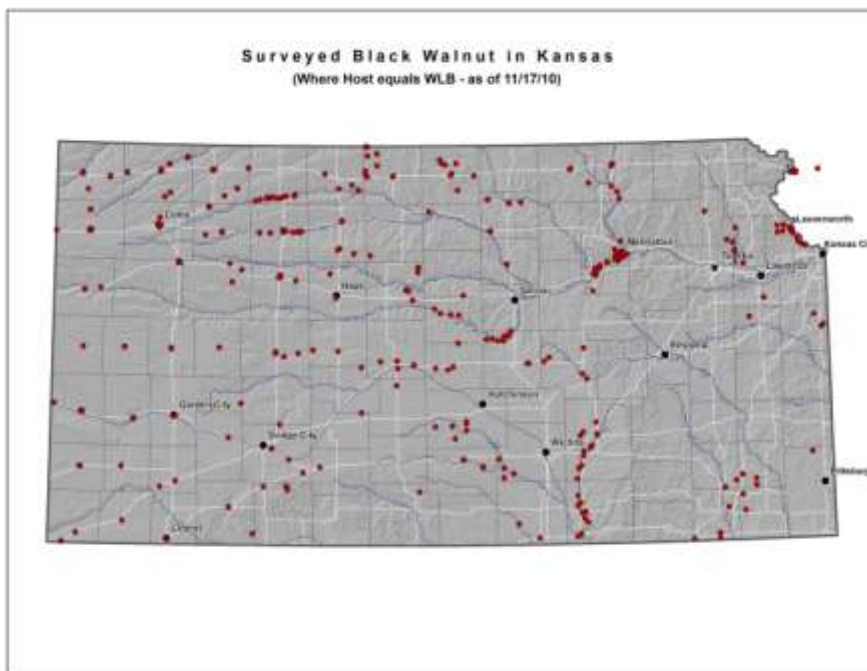
Geosmithia morbida & *Pityophthorous juglandis*

Black walnut most susceptible

This disease is recent phenomenon, having only been recognized in 2008 in Colorado, but may have been killing trees many years before that. For the past decade, Thousand Cankers disease has been infecting walnuts in many western states including: northern New Mexico, Colorado, Utah, Idaho, Oregon, California and Washington. The disease is caused by a fungus, *Geosmithia morbida* that is vectored by the walnut twig beetle (*Pityophthorous juglandis*). Other species of walnut such as Arizona walnut, English walnut, and California walnut have all shown varying degrees of susceptibility to this fungus, but the primary tree of concern in Kansas is black walnut. There is an estimated 26.2 million black walnut trees (35.3 million cubic feet) found in Kansas. Kansas Department of Agriculture and Kansas Forest Service are working together to monitor the condition of black walnut across the state. Currently as of December 2010, no detection of TCD has been reported. Using 2008 FIA data, there percent of standing dead black walnut trees is particularly high in certain counties. These are areas to keep in mind when surveying for TCD.



Black Walnut tree dying from
Thousand Canker Disease



EMERALD ASH BORER

Agrilus planipennis Fairmaire on ash trees
White, Green, and Blue ash

This exotic invasive insect has been found to our east in Missouri. Although it has not been found in Kansas, we have an estimated 56.1 million ash trees (60.8 million cubic feet) in both urban and rural landscapes. The potential damage to our states resources is extreme because of the heavy urban planting of ash species. Kansas Department of Agriculture is currently monitoring purple sticky traps during the summer field season.



CEDAR-APPLE RUST

Gymnosporangium juniperi-virginianae on juniper

A wet spring this year caused a much more severe outbreak of cedar-apple rust than in previous years. In early April, galls swell and produce orange, gelatinous tendrils that are approximately 1 inch long. The tendrils remain on the galls through the month of May. This rust has mostly been of aesthetic concern, but coupled with higher moisture levels earlier this year, the rust was more apparent to the public than in the past.

DUTCH ELM DISEASE

Ophiostoma ulmi on American Elm

American elms across the state are still being killed by the disease each year. The number of incidences has not risen, but it is still a concern within urban, riparian, natural forest settings in Kansas.

TIP BLIGHT

Sphaeropsis/Diplodia pinea

Austrian, Ponderosa, Scots, and Mugo pines

The disease is most severe on mature trees >20 years of age. Repeated infections over many years can kill large sections of trees or entire trees. This year's higher than normal precipitation levels have led to a higher number of reports of this disease across the state.

DOTHISTROMA NEEDLE BLIGHT

Mycosphaerella pini

Austrian, Ponderosa, and Mugo pines

This common but serious disease is an ever growing concern in windbreaks or landscapes. Scots pine is considered resistant. After years of infection, this can lead to tree mortality.

OTHER FOREST HEALTH DAMAGES OF CONCERN


Kansas weather fluctuations are stressful on any tree species in this state. Variations in both temperatures and precipitation levels across the state, along with high winds add more strain on our woody friends. It has been stated by NOAA that during this year the northwest is abnormally dry and the SW is moderately dry. Severe weather hit again in the south east and south central part of the state this spring and summer.

References provided upon request.

For Forest Health Assistance and further information on Forest Health in Kansas, please refer to the following contacts and links:



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www.fs.usda.gov/goto/r2/fh
(select Forest and Grassland Health on left menu)