



North Dakota Forest Health Highlights 2025

THIS REPORT SUMMARIZES OBSERVATIONS AND ACTIVITIES OF THE FOREST HEALTH PROGRAM IN NORTH DAKOTA FOR 2025 AND INCLUDES AN OVERVIEW OF NOTABLE FOREST HEALTH ISSUES. FOREST HEALTH SURVEYS AND REPORTS, SICK TREE ASSISTANCE REQUESTS, AND PERSONAL COMMUNICATION WITH NATURAL RESOURCE AND COMMUNITY FORESTRY PROFESSIONALS FORM THE BASIS OF THE INFORMATION DISCLOSED IN THIS REPORT.

Martin Shervey



NDSU NORTH DAKOTA
STATE UNIVERSITY

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This report was written by Martin Shervey, ND Forest Health Manager.

North Dakota's Forests

North Dakota's tree-covered landscape is made up of native forests, conservation plantings, and community forests producing a myriad of environmental and economic benefits to its' residents. With a total estimate of 1,556,184 acres, this landscape can be divided into 796,878 acres of forestland and 759,306 acres of trees outside of forest (TOF). The definition of forest, according to the USDA Forest Service requires "an area of trees at least one acre in size with a minimum dimension of 120 feet by 363 feet and 10% live canopy cover." This definition frequently excludes two important forest components in the plains states - conservation plantings and many of the riparian forests. These two components are both frequently found to be too narrow to satisfy the USDA definition.



A map of North Dakota with the green representing treed land cover

Trees outside of forest, which could be argued to have made living and farming on the plains possible, contain approximately 29,000 miles of windbreaks found in North Dakota. Preventing soil erosion, increasing crop yields, and protecting homesteads and roadways, 470,766 acres of windbreaks, as determined through the Great Plains Initiative 2 (GPI2) project, perform innumerable benefits. Until the publication of these findings, little had been quantified about their distribution and current state of health. GPI2 raised the importance of the health of the trees in these landscape components,

motivating management to improve their condition.

In both forestland and TOF, green ash is the dominant species. In natural forests this is often due to the lack of natural disturbance disrupting a slow transition towards the more shade tolerant ash. In TOF components, this dominance of planting ash stems from a misunderstanding of the ecological trajectory towards diverse conditions. The other prominent species on the North Dakota landscape are, by volume, cottonwood, bur oak, quaking aspen, and Rocky Mountain juniper. Maintaining the health and sustainability of our forest resources is fundamental to the social and economic health of North Dakota. Programs like GPI 2, the annual measurements done through Forest Inventory and Analysis, and community inventories and assessments guide the approaches and designations intended to address our resource needs.

Sick Tree Assistance Requests

The Forest Health program aids those experiencing tree health issues in their forests, landscapes, or windbreaks. During 2025, the program consulted with private and public landowners regarding an assortment of biotic and abiotic issues that range from animal and insect damage to the extremes of moisture availability and chemical damage.

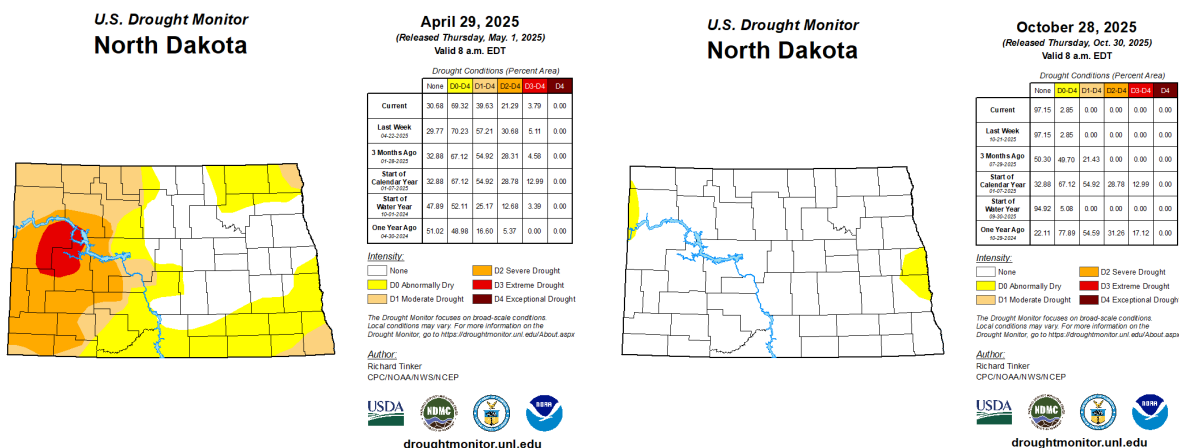
Lack of moisture can lead to loss of vigor. This loss of vigor leads to reduced resistance to damaging agents and often leads to the presence of secondary insect and disease issues. In a general sense, the loss of vigor is often caused by multiple stressors, having additive impacts that are not equal in their consequence. As such, trees experience a loss in vigor from a stressor, but can recover should the growing conditions permit adequate productivity for recovery. If there is no opportunity for recovery, then there is a steady state of decline and often compounding stressors.

During 2025, trees were still dealing with drought damage from the previous dry fall and little snow cover during the winter. But ample rains during the summer of 2025 helped trees recover from drought stress the previous year.

Abiotic Tree Health Issues

2025 Weather trends

2025 precipitation started off dry but eventually received above average amounts, bring most of the state out of drought. The 2025 summer temps were below average but with some days still reaching around 100 degrees Fahrenheit. North Dakota also had active severe weather, with intense storms bringing high winds, tornados and damaging hail. This information is important, because these extremes on their own are both challenging for tree growth, but together they create a scenario that has the potential to cause severe and potentially long-term challenges to tree health.



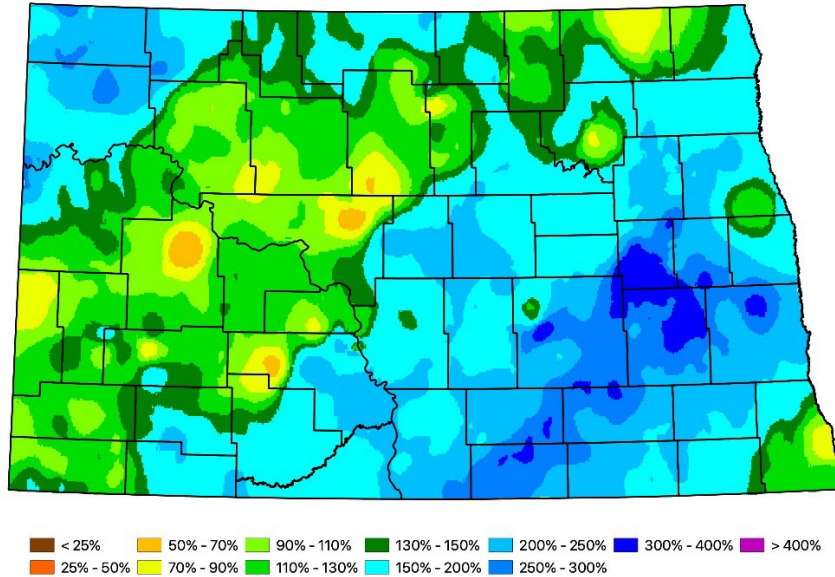
The Drought Monitor map for North Dakota from April to October 2025.

The difference in rainfall across the state can create challenges in tree health. In the western part of the state, controlling water loss under these conditions reduces leaf moisture, increases leaf temperature and consequently limits carbon dioxide uptake. The prevention of water loss and carbon dioxide uptake

reduces photosynthetic production of carbohydrates, the fundamental component that allows the tree to produce new tissues and maintain processes that help protect it from various types of damage or injury. If the tree cannot transpire water, the leaf will eventually wilt and start to dry at the margins, which presents as red-brown discoloration that moves inward from the outer edge. In the eastern part of the state, more moisture can result in more fungal diseases.

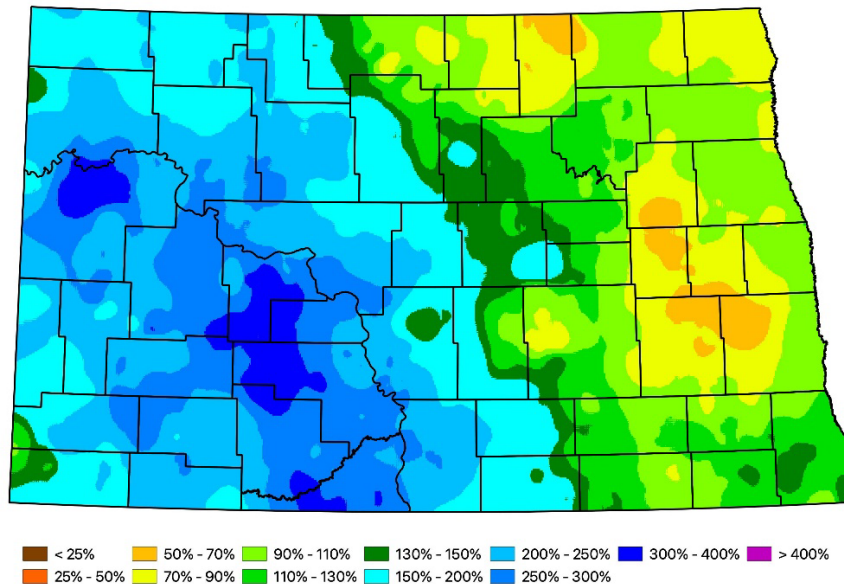
April 2025 Percent of Normal Rainfall

Source: NDARB Cooperative Observer Network



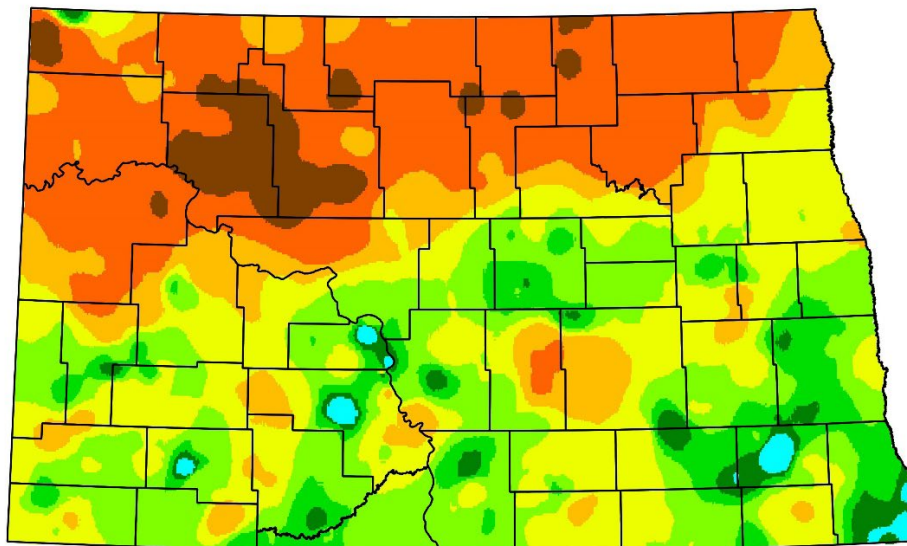
May 2025 Percent of Normal Rainfall

Source: NDARB Cooperative Observer Network



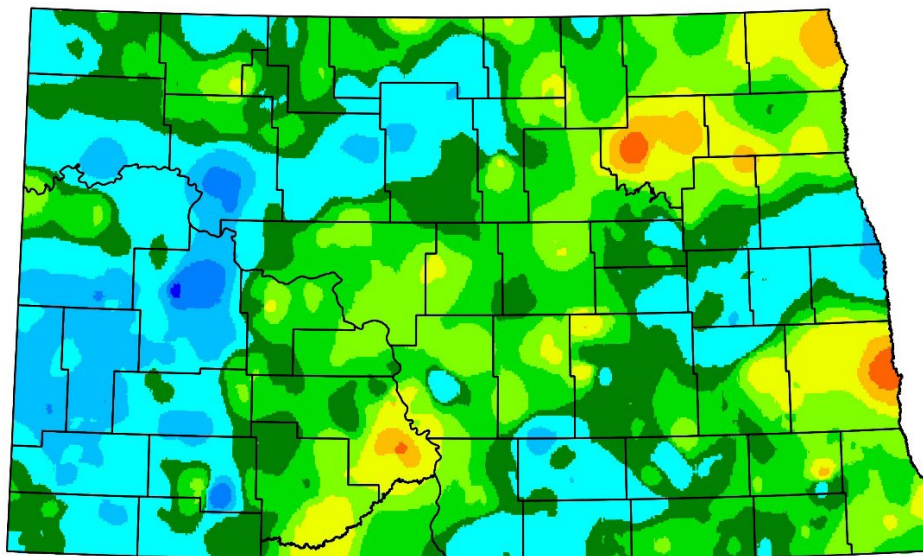
June 2025 Percent of Normal Rainfall

Source: NDARB Cooperative Observer Network



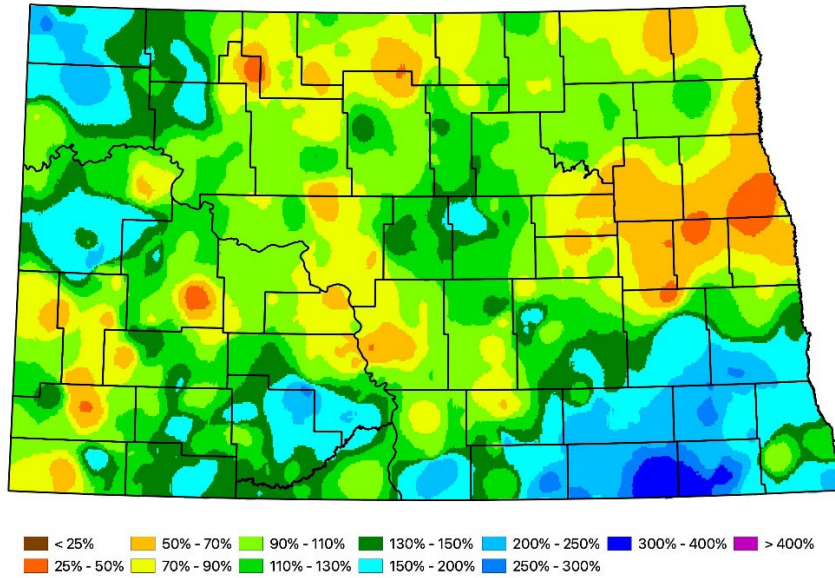
July 2025 Percent of Normal Rainfall

Source: NDARB Cooperative Observer Network



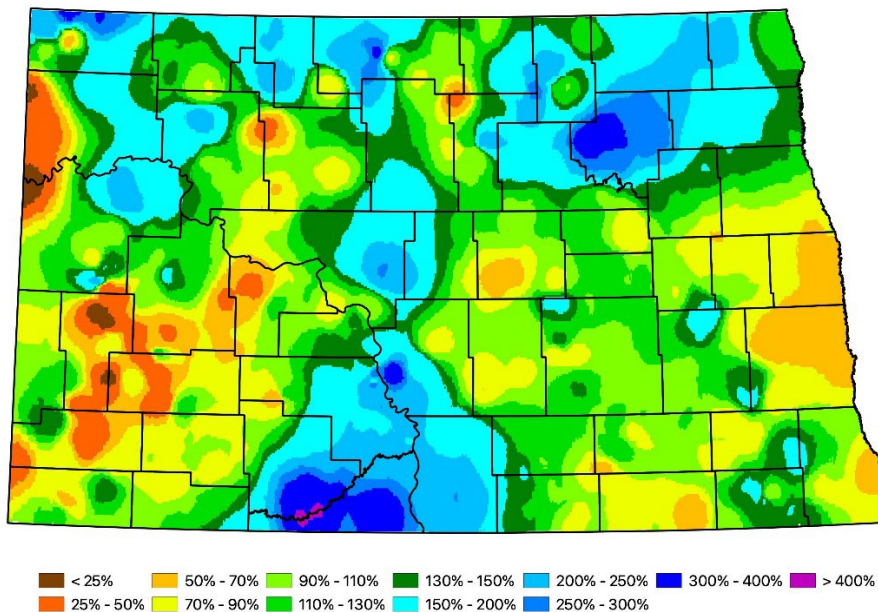
August 2025 Percent of Normal Rainfall

Source: NDDWR ARB Cooperative Observer Network



September 2025 Percent of Normal Rainfall

Source: NDDWR ARB Cooperative Observer Network



The percentage of observed April to October 2025 rainfall for as compared to the 30 year average (1997-2006).

As dry and warm conditions persist, trees become more and more vulnerable, increasing their susceptibility to insect and disease issues. Generally, dry periods cause the sap within the whole tree to become more sugar rich (Ryhti et al 2022), which is more productive to wood and bark boring insects that feed and develop in these tissues. Wet periods, on the other hand, are conducive to causing the

spread of most disease, since the moisture encourages fungal sporulation to occur and raindrop impact to spread spores.

North Dakota experienced two severe summer weather events in 2025. The first was in mid-June, which caused tornados in Cass, Ransom, Stutsman, Barnes, Foster, and Morton counties. There was even an F5 tornado that went from Cass into Ransom County, which damaged many trees. The second event occurred in September, which caused tornados in Emmons, Sheridan, Burleigh, and McLean counties. The total damage has yet to be determined.

Planting and tree care issues

Health issues resulting from vegetation management can usually be summed up as pruning and injuries that are associated with pruning. Creating a wound on a tree can cause the spread of disease, so the timing of pruning and careful consideration to cleaning pruning tools between cuts are methods to remedy this concern. Poor pruning can also lead to structural damage as trees increase in size, cracking or bending because of unbalanced loads.

Planting of landscape trees and conservation plantings in North Dakota account for a significant portion of our tree cover. Any tree that is planted has the potential to be challenged by less-than-ideal placement in the soil and position in the landscape. Planting a tree in a poor site or placing it too shallow or deep can create challenges that would not exist if the tree had established naturally. Therefore, health issues of planted trees should always consider the possibility of having been planted improperly. It may seem likely that a planted tree that has appeared to establish successfully has made it through the vulnerable period, but a poorly planted root system can eventually infringe on its own growing space as roots begin to cut off stem tissue of neighboring roots and stems.

Herbicide issues

Herbicide damage is a looming presence in North Dakota and plays a role in both urban and rural environments. Damage to trees and shrubs due to the improper or careless selection and/or application of pesticides make up a consistent number of annual homeowner inquiries regarding tree and shrub health. In most circumstances, herbicide injury to urban and rural trees is a consequence of indirect application targeted at neighboring agricultural vegetation. Instances of chemical volatilization, drift, and overspray should be thoroughly considered in accordance with herbicide labeling. No herbicide intended for agricultural use should ever be used otherwise. It is vital that the application of herbicides strictly follows the manufacturers labeled recommendations. Another major issue has been damage caused by commercial weed-n-feed products, where the owner does not follow label directions.

Biotic tree health issues

Spruce disorders

Disorders of spruce trees are a consistent issue in North Dakota, since spruce trees are planted and not native to our state. Blue spruce, the most widely planted of the spruce species, evolved on porous soils in a cool climate with wet summers. Although being relatively drought tolerant, the minimum annual precipitation in its native range is equivalent to the highest average rainfall found in North Dakota.

Planting spruce in North Dakota's fine textured soils and dry climate creates a scenario that frequently causes stress, leading to the persistence of a few tree health issues.

North Dakota spruce are frequently plagued with three particular fungal diseases that are complicated by conditions that exacerbate their stress, like drought or flooding. The three predominant diseases are spread most effectively when trees are stressed and experiencing moist and cool spring growing conditions, much like those experienced during the spring of 2022. High relative humidity encourages fungi to sporulate, allowing spores to be dispersed by wind and rain drop impact. Two of these fungal diseases are needle casts *Stigmina lautii* and *Rhizosphaera kalkhoffii*, which cause needles to be prematurely shed. The third is a canker disease *Cytospora kunzei*, which causes a canker to form that disrupts the conductive tissues of stems.

Stigmina needle cast was first identified on our landscape in 2006 and has since become more common



than its *Rhizosphaera* counterpart. Both of these diseases continue to be very important agents degrading the quality of often densely planted conservation and landscape plantings. The physical form of spruce is the reason it is valued, since it becomes a densely planted natural barrier, which is precisely the situation where needle cast disease can take hold. A lack of space and air movement between the trees and limbs is what encourages the presence of needle casts. Consequently, under most circumstances these diseases naturally work to remedy this situation by removing foliage and increasing air movement within and between crowns.

Rhizosphaera Needle Cast courtesy of UMass Extension

The third spruce disease affecting spruce is *Cytospora kunzei*, a canker disease in spruce that causes a loss of needles on a branch. The most distinguishing characteristic that sets this disease apart from the

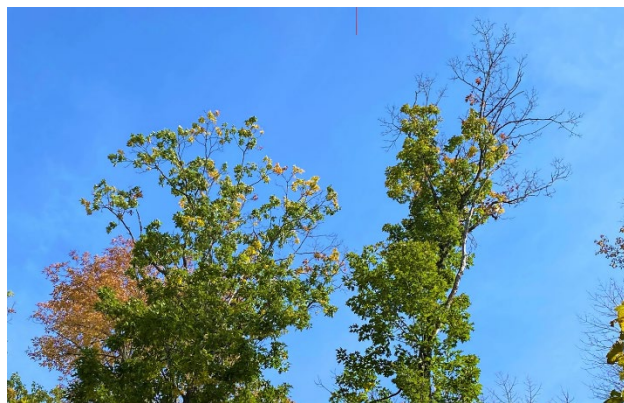


Cytospora canker courtesy of Missouri Botanical Garden

needle casts is that affected branches are frequently distributed unevenly throughout the tree crown. This contrasts with the two needle casts, which tend to establish first nearer the ground and move up the tree causing the loss of needles.

Bur oak disorders

Bur oak, *Quercus macrocarpa*, is the only native oak found throughout all of the North Dakota landscape. This upland forest species is commonly found in natural forest stands growing in the varied topography in dry sites adjacent to river floodplains. Historically, it grew in low density stands that experienced frequent fire disturbance. Since the settlement of the plains, recurring natural fires have been excluded from the landscape, leading these forests to become dense with species that can establish and grow under the crowns of oak. Most oak stands now contain species like green ash, hackberry, and elm. This increased density creates a scenario where light, water, and nutrients become limited, preventing vigorous growth.



Two-lined Chestnut Borer courtesy of Wisconsin DNR

During 2025, there was less damage caused by the two-lined chestnut borer (TLCB), *Agrilus bilineatus*, a native beetle that attacks bur oak. More moisture reduced the stress on the oaks, increasing vigor. Always present in ND's oak forests, this beetle often first infests the upper branches by laying eggs in bark crevices of highly stressed trees. When the eggs hatch in late July, the larvae bore into the bark and begin tunneling through the cambium, slowly killing the branch. By the following summer, the larvae, which will grow for two years under the bark, cause the foliage to die on the branch in the late growing season. By

the following season, those upper branches will be completely dead, producing no foliage.

The cool, moist conditions during the spring of 2025 spread fungal diseases that affect new growing tissues or wounds. By mid-July, dead and dying foliage could be found in oak crowns in most natural forest settings. Botryosphaeria canker, *Botryosphaeriaceae spp.*, is a general reference to one of the genera of canker-causing fungi from the order Botryosphaeriales. Botryosphaeria infects the cambium of sapwood of weakened trees, which eventually leads to browning of leaves on the branch. The level of browning will depend on the severity of the stress or injury and can range from whole branches to branch tips. In 2022 the most prevalent browning occurred on the branch tips where the bark is thin and the new growing tissues are vulnerable. Weather related injuries, like strong wind and hail can cause

small bark injuries that allow penetration into the bark. Botryosphaeria symptoms presented as foliar browning of intermittent branch tips in August of 2022.

Bur Oak Blight (BOB), *Tubakia iowensis* was only found only on one tree in the Devil's Lake area during 2025. There was also some oak anthracnose earlier in the year.



Browning on Bur Oak leaf caused by BOB

This disease causes browning in leaves and a loss of productivity. Damage from BOB is distinct, causing necrosis of leaf vein and interveinal tissues. Despite the visible damage that becomes apparent in the later growing season, it rarely causes enough damage to kill the tree. Although several successive seasons of damage can kill a tree, the necessary growing conditions rarely persist long enough to reach this outcome.

Another very common issue with oak is the presence of sap-feeding insects that pierce and suck sap from branches and leaves, producing

honeydew, an excrement that will frequently coat surfaces below the tree. There are several species of these insects that can commonly be found in oak, as well as many other trees in ND. Despite the damage caused by sap feeding insects, only the TLCB can cause sufficient damage to kill an oak. Each of these disturbances becomes present only when growing conditions for the tree are difficult enough to cause stress. Therefore, the best management approach is to take actions that improve the availability of water to the trees. In a landscaped site, this usually means watering, while in a natural forest the best approach is to manage tree density with removals.

Lilac Pseudocercospora Leaf Spot

Lilac Pseudocercospora Leaf Spot is a fungal disease caused by a Pseudocercospora species on common lilacs. Lilacs become defoliated by late summer and may even put out a second flush of flowers in the fall. This disease loves cool, wet weather to spread and with the second year of defoliation to the lilacs, some plants may become stressed in the third year if weather conditions preferable to the disease persist.



Common Lilacs in September

Insect issues

In 2024 Emerald Ash Borer (EAB) was found in LaMoure county at the Edgeley Rest Area. All the ash trees at the rest area were removed and further trapping was performed in the area in 2025 season when more adults were found. In mid-January 2026, EAB was found in downtown Fargo. This find was expected since EAB is found just across the Red River in Moorhead, MN.

EAB is a significant pest as there are roughly 83 million ash trees in North Dakota. Ash has been an important tree to North Dakota because it is adapted to grow well in our conditions and has been a major component in wind breaks and shelter belts throughout the state.

Previous findings show that EAB is often present in a location for 5-7 years before a positive detection occurs. This happens because the population takes a period of time to grow to the point that enough damage occurs to become noticeable. In North Dakota, the damage from EAB is confounded by the presence of several endemic beetles of ash that cause similar damage. Care should be given to identify unhealthy ash and EAB damaged ash for removal in order to reduce the number of ash on our landscape. EAB can kill even healthy ash trees, which makes removals and planting of a group of diverse trees necessary to combat the potential loss of trees to EAB in the future. The movement of firewood poses the greatest risk to spreading EAB.

There was a high infestation of Kermes Scale on young bur oak in north Fargo which was causing stunted growth. Further observance of the extent of trees affects will be assessed the spring of 2026.



Kermes Scale causing stunted growth on Bur Oak

present in the North Dakota landscape. By maintaining its presence, storm events can cause damage to tree crowns, allowing for circumstances that exacerbate infections. Small wounds from hail and wind damage create ideal circumstances for spores to enter the conductive tissues, causing a canker to form, cutting off any conductance to the distal end of a branch.

On July 5th 2022 at approximately 10am, a storm with heavy hail passed through one of the very few natural pine stands in North Dakota. The storm's hail damage helped to paint a swath of Diplodia through roughly 1200 acres of ponderosa pine trees. The vast majority of the damage could be seen on the outer small branches, mostly on the windward side from which the storm approached. This is a relatively common

Disease Issues

Diplodia pinea (= *Sphaeropsis sapinea*), is a fungal disease that causes pine shoot blight and cankers on stems that can be found on all size classes of pines in all growing circumstances. Like any insect or disease issue, this fungus establishes when stress from any number of variables causes a tree to be weakened, becoming vulnerable to infection. The fungal bodies of this disease can be found near the base of needles and on second year cone scales, maintaining a consistent presence in pine crowns and canopies. The fungus is passive until moist weather and decreased tree health allow the infection of recently developed tissues. High humidity and rain events allow it to spread readily to pine tissues, causing short needle growth and browning.

Diplodia pinea can be found at persistent, but low levels, in many pine plantings across the state, but with extremes in drought and precipitation this disease will always be



Tip death from Diplodia courtesy of Ohio State University

series of events, causing damage that may take a few growing seasons to fade from the forest canopy, while causing only subtle mortality to already severely weakened trees. The site was visited August of 2025 and showed vast tree improvement resulting from both thinning and increased precipitation.

Fire Blight is an infection most commonly seen on apple trees in the North Dakota landscape that is caused by the bacterium *Erwinia amylovora*. The bacteria overwinter in cankers under the bark until warm moist conditions permit bacteria growth, causing the cankers to ooze and become susceptible to spread from rain or insects to the apple blossoms. The young growing tissues of blossoms are susceptible and become an excellent vector for spreading by foraging insects, such as bees. Other damage to the bark and tissues from freezing, wind, or hail also create vectors into the conductive tissues that can easily be invaded by this bacterium.

Portions of eastern North Dakota experienced extensive fire blight infection on damaged tissues and new succulent growing shoots, like blossoms. Fire blight causes the distal end of the branch to die,



Fire blight crook courtesy of Purdue University

eventually forming the crook where the bacteria overwinter. The infected newly growing shoots eventually form a distinctive black crook at the end that can be visible randomly throughout the tree crown.

Cankers that become established on larger stems will spread towards distal tissues until the infected wood eventually dies. This damage can be managed using sanitation efforts that remove infected wood and cankers through sound pruning practices done during the growing or dormant seasons.

Black rot (*Diplodia seriata*), a fungus that also infects apple trees and has symptoms similar to fire blight was present in the North Dakota landscape during 2025 as a result of our weather extremes. In fact, black rot canker can easily infect the cankers and dead wood that forms because of fire blight infections. Overwintering of this fungus occurs in infected dead wood and mummified fruit, so, like fire blight, proper

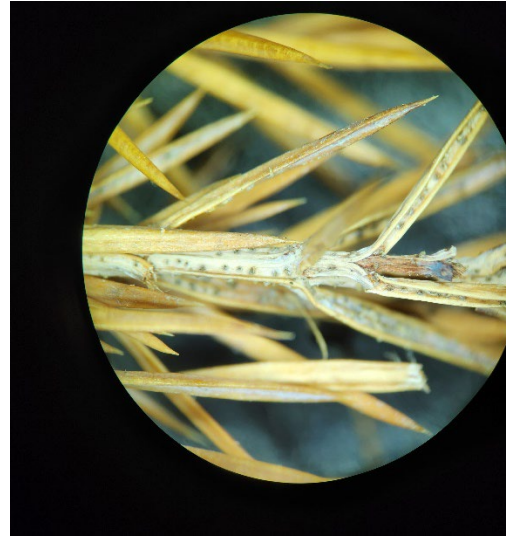
sanitation can reduce and control its presence. Pruning should be done during the growing season or dormant season with 10% bleach solution used to clean tools between cuts that are made at least 12 inches below (medial) the canker margin.

Dutch elm disease (DED), *Ophiostoma novo-ulmi*, is a consistent issue with all North Dakota elm species Ulmaceae, with native elm being most susceptible. There is an annual level of loss in communities where elm is still persistent as part of the forest canopy. In natural stands, elm continues to regenerate and is often attacked by elm beetles before the trees reach maturity. The combination of elm beetles and DED is endemic on our landscape and will always limit the health and distribution of naturally occurring and planted elm. High value elm trees in landscaped sites should be managed by maintaining tree vigor with good growing conditions and by recurring treatments of systemic fungicides.

Phomopsis was found at the Towner Nursery site in 2024 in the juniper transplants. As a result, the infected junipers were culled, reducing the amount available for sale in 2025. Phomopsis is a fungus that can cause cankers on stems and branches, causing the plant wilt and have dieback. It can be controlled with regular pruning and fungicide treatments in the spring.



Phomopsis at the Towner Nursery site.



Tree Issues on the Horizon

Thousand cankers disease complex (TCD) is a symbiotic relationship between the walnut twig beetle, *Pityophthorus juglandis*, and the fungus, *Geosmithia morbida*, that primarily affects black walnut, *Juglans nigra*. The fungus from this complex has not yet been detected in North Dakota, but during 2021, the walnut twig beetle was trapped in Ransom county. The beetle's life cycle is likely to be limited by the cold climatic conditions experienced in North Dakota, but the consequence of this complex is yet to be understood in our land-scape.

A more concerning health issue for landscaped pine in North Dakota is the presence of pine wilt disease, which disrupts the flow of water in the tree's conductive tissues. Pine wilt causes a relatively rapid browning of foliage in the crowns of scotch pine (*Pinus sylvestris*), Austrian pine (*Pinus nigra*), and other non-native pines. This wilt disease is caused by the pinewood nematode, *Bursaphelenchus xylophilus*, which reproduces rapidly, clogging the xylem tissue. The nematode is a microscopic worm that is transferred from tree to tree by feeding pine sawyer beetles, *Monochamus spp.*. This wilt is very likely already present in North Dakota, but has yet to be identified. It has been identified in northern South Dakota, very close to the ND border. There is no effective method of protecting non-native pine once this nematode is present.



Pine Wilt courtesy of CSU Extension

Spongy Moth, *Lymantria dispar*, (formally known as gypsy moth) is a non-native insect that has been the most destructive pest of oak-dominated hardwood forest in the eastern North America. The larvae can defoliate hardwoods and if left unchecked, can kill the tree after years of defoliation. Spongy moth caterpillars are known to feed on a wide variety of trees and shrubs. Spongy Moth has been detected in North Dakota, but no established population have survived as of 2025.

Elm ZigZag Sawfly, *Aproceros leucopoda*, is another non-native insect native to Asia. It was first detected in North America in 2020 and has since spread from the east coast west to Ramsey County, Minnesota in 2024. The larvae eat in a zig zag pattern in elm leaves, which is their preferred food source. Large populations can defoliate trees, with multiple years of defoliation weakening elm

trees, opening them up to other infestations and disease.

One area of concern in North Dakota is in the Turtle Mountains. This past season, an aerial survey detected hardwood defoliation. While it is too early to make any conclusions, more monitoring and trapping will need to be done in the Turtle Mountain area in the coming 2026 season.

Forest Health Surveys and Assessments

Beetle Trapping

In a collaborative effort with the North Dakota Department of Agriculture (NDDA), the North Dakota Forest Service (NDFS) assists in monitoring for the presence of exotic and non-native wood borer and bark beetles in North Dakota using multi-funnel Lindgren traps. This trapping effort is funded through the USDA Animal and Plant Health Inspection Service's (APHIS) Cooperative Agricultural Pest Survey (CAPS) Program. Trapping is generally targeted on four economically important exotic wood boring insects that have become established in the United States and Canada, but is effective for an assortment of tree pests.



Beetle trapping

The CAPS program trapping has been focused on areas of high traffic, commerce, or ports-of-entry, sampling within ten counties statewide using a series of insect lures. For 2025, the North Dakota Forest Service will continue to implement an additional set of Lindgren trapping locations with three lures commonly used to encourage trap visitation by wood boring and bark beetles. The NDFS trapping was focused on expanding the survey to include sites that were considered to be closer to “natural” than the other CAPS locations. In this context, “natural” was considered to be sites that were in natural forest or planted stands of trees that exhibited growing circumstances that were closer to natural.

2025 Aerial Detection Survey

In 2025, the Minnesota Department of Natural Resources (MNDNR) was contracted to fly the Turtle Mountains area to assess the natural forest canopy. The assessment was focused on the detecting all potential damage agents. The long-term goal of aerial detection surveys (ADS) is to monitor the changing conditions of natural forests in order to address any possible occurrences that may have detrimental effects. One such example may be pockets of damage from the accidental introduction of a non-native beetle like the emerald ash borer.

The 2025 ADS detected significant dieback and defoliation in some areas of the Turtle Mountains. Damage that was identified during the survey was thought to be a foliar disease on aspen leaves. Human influence on historical fire and flood disturbance regimes often produces homogenous forest conditions

that become prone to age related decline. Future surveys to monitor these locations will help to predict trends in forest health issues throughout the North Dakota landscape.

Education and Outreach

The NDFS Forest Health program continues to be involved in education and outreach efforts to raise awareness of circumstances that shape the forested components of our landscape. During 2025 we used online resources and field experiences for outreach methods to engage a variety of audiences.

EAB awareness week - an annual collaboration with the NDDA and NDSU Extension, was focused on producing daily educational materials for social media. Materials were made available on all three agency's social media outlets simultaneously during the week of May 18-25 of 2025. Materials covered a range of topics to help North Dakotans understand EAB, its signs and symptoms, the importance of not moving firewood, and the importance of diversifying new and existing plantings. The goal of EAB awareness week is to continue to prepare communities and property owners for the eventual arrival of this invasive beetle.

Don't Move Firewood – a campaign to spread awareness about the dangers of moving firewood. NDFS provided North Dakota State Parks with signs to inform the public of the dangers of moving firewood and how it can quickly move pests and diseases.

Forestry Fridays - an online video presentation series produced by the NDFS Forest Stewardship and Forest Health programs, focused on educating soil conservation district employees and the interested public about the challenges of planting and growing trees in North Dakota's prairie landscape. Forest Health's role in this endeavor was to educate about maintaining tree vigor by managing site conditions that will give trees the best opportunity to avoid insect and disease issues. With a primary focus on conservation plantings, Forestry Fridays reached approximately 300 individuals associated with managing the planted half of North Dakota's forest resource.

<https://www.ag.ndsu.edu/ndfs/documents/forestry-friday-2022-final.pdf>

North Dakota Envirothon - Over the past couple years, the NDFS Forest Health program has been involved in the North Dakota Envirothon, which is an environmentally themed academic competition for high school students. Forest Health taught forestry and tree health topics in the past at three ND Envirothon competitions, educating approximately 300 students.

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Any inquiries about the North Dakota Forest Service insect trapping or the Forest Health Program in general can be directed to martin.shervey@ndsu.edu or (701) 231-5665.

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