

Planting Trees in North Dakota Prairies

Trees are planted in North Dakota for many reasons including erosion control, aesthetics, and wildlife habitat. In recent years, we have experienced severe winters in North Dakota, and wildlife agencies are receiving frequent calls from landowners asking how to plant trees for winter cover. Is planting trees really the answer for sustaining wildlife populations? The simple answer is no. Some species use these areas for winter cover, but you may be doing more damage than good. There are several points to consider before planning your tree planting project.

North Dakota - A Prairie State

North Dakota is known for its rolling prairies and unique landscapes. As you travel across the State from east to west, you will encounter tallgrass prairie, mixed grass prairie, and short grass prairie. For thousands of years, plant and animal life thrived in this ecosystem. Now, however, the prairie of North Dakota is arguably the most endangered ecosystem in North America. Grassland nesting birds have declined due to agricultural development and ecosystem manipulation, such as planting trees. Since the last ice age, trees inhabited North Dakota, but these areas were mainly along riparian and river corridors. In many cases, planting trees in the prairie does more damage to wildlife populations than having no trees at all. Here is why.



Habitat Fragmentation

Trees are planted in North Dakota with good intentions, such as providing winter cover for wildlife. We need to remember that North Dakota is a prairie state. In fact, North Dakota has fewer trees than any of the other 49 states.

Wildlife is adapted to grasslands, and fragmenting habitat with trees brings in new dangers and consequences. Native bird species such as ducks show decreased nest success when trees are introduced into an area. Many grassland nesting song birds also decrease in abundance as woody species increase in density. There are areas in North Dakota where trees are native, and enhancing these areas provide benefits for wildlife and water quality.

Predation

Predators including raptors, crows, skunks, fox, and magpies thrive in areas where trees have been planted because hunting is easy. Fox travel up and down tree rows looking for species to feed on, and skunks gorge on nest eggs for the entire spring. Skunks and raccoons also use tree plantings as den sites and escape cover. Magpies are notorious for destroying nests of ducks and other species and will not leave an area once these nests are discovered. Hawks, owls, and other raptors use trees as hunting perches and nest sites. Crows use tall conifers as nest sites and forage on nests. This hunting pressure increases nest mortality adjacent to tree sites.



Although trees and shrubs provide excellent winter cover for wildlife, planting them in a prairie complex can cause problems for native grass nesting birds and ringneck pheasants. If you are determined to do a tree planting, here are some points to consider.

Never plant trees in native prairie. Our native prairies are an endangered ecosystem. Songbirds, sharp-tailed grouse, prairie chickens, and other species depend on native prairie for survival. Increasing woody vegetation decreases adequate nesting cover and causes pheasants, ducks, and some songbird species to avoid using the grassland habitat. Research shows that even sharp-tailed grouse will avoid grassland habitat once woody cover is greater than 50 percent.

Whenever possible, use native species to mimic natural woody areas and avoid invasive species such as Russian Olive.

Consider planting a warm-season grass mix for winter cover rather than trees. In a normal winter, these mixes provide adequate thermal cover for wildlife. Some warm-season grasses to consider include switch grass, big bluestem, little bluestem, and Indian grass.

Approximately 70 percent of pheasants will not live to be one year old. For this reason, pheasant numbers are more closely linked to yearly production than winter survival. So, be careful not to sacrifice nesting grassland habitat for woody habitat.

Do not plant trees in or around nesting cover. Research indicates that woody plantings can cause negative effect to grassland nesting songbirds up to 2,400 ft. away.

It is easy to overdo a tree planting. A good rule of thumb is to plant five acres of trees per every 100 acres of grassland habitat. Remember, planting trees comes at the expense of valuable nesting cover.

Species such as pheasants and deer use tree plantings during the winter, but so do unwanted predators.

Do not plant three-, four-, or five-row tree belts for the benefit of wildlife. They do nothing for wildlife and are usually filled with snow by December. Instead, plant a minimum of 15 rows or better yet, a block planting for winter cover. Keep in mind that winter pheasants prefer herbaceous vegetation such as cattails for wintering habitat. Don't fragment nesting cover with woody cover when preferred winter habitat may already be available.

Choose tree/shrub species that grow low to the ground and provide a food source. Species to consider include buffaloberry, chokecherry, and American plum.

Do not plant trees that grow higher than 15 ft. They become avian perches.

When planting woody cover, consider planting as close to a reliable food source as possible.

Consult the NRCS or wildlife agency in your area when designing a tree plan. These professionals know which species will grow best in your area and can design a plan to fit your needs.

All programs and services are offered on a non-discriminatory basis.

