Planting a mixture of trees and shrubs on your property will attract a variety of different wildlife species. Shrubs, especially dogwoods and hazelnut, provide browse and cover for white-tailed deer. Shrubs and hardwood flowers provide an important food source for a variety of insect pollinators. The fruit from prairie crab, American plum, highbush cranberry, juneberry and cothysprium havehorns are excellent sources for birds and small mammals. Conifers, such as white spruce or white pine, can be nesting and roosting areas, concealment for small mammals and a windbreak for cold protection in winter. Large hardwoods such as oaks, black cherry, hickory and aspen provide a food source consumed by many wildlife species.

Planting a mixture of shrubs, conifers and hardwoods provide a diverse habitat, from food to shelter, that will attract and hold wildlife. Establishing different types of woody vegetation can be a rewarding and challenging undertaking; successfully establishing wildlife habitat on your land will create a legacy for the future.

### Recommended Species And Spacing For Woody Cover Wildlife Plantings

**Shrubs:** Space plants 4 feet apart in rows and 6 feet apart between rows. American hazelnut, American highbush cranberry, dogwood and ninebark

**Small Trees:** Space plants 8 feet apart in rows and 10 feet apart between rows. Hawthorn, juneberry, hackberry, crabapple and wild plum

**Conifers/Hardwoods:** Space plants 12 feet apart in rows and 15 feet apart between rows. American basswood, aspen, spruce, white cedar, white oak and white pine

### Planting Time and Technique

Tree planting time in Wisconsin is April and May. Plant after the frost has left the ground, but before bud break and shoot elongation (late May). Before planting, it is best to mark the rows as a reminder of where the trees are planted for future weed control.

During planting, keep the roots moist. However, do not soak them in a bucket of water. Weet gunny sack laid over the roots in a bucket or a bucket is sufficient. In Wisconsin, tree planting machines are available (at a nominal fee) in most counties from the County Land Conservation Department or the Wisconsin DNR. These planters have a large plow-like shoe that penetrates the soil and forms a narrow trench. The roots are placed in the trench and as the trench closes, the tree is held firm by parking wheels. It usually takes a 40-50 h.p. tractor to pull these planters, plus a three-person crew. The great advantage is that this system can plant 500-800 trees per hour.

Hand planting can be accomplished using a spade, #2 round shovel or planting bar. The planting hole should be deep enough to keep the roots from curling and the tree should be planted at the same depth as it was growing in the nursery. Pack the soil firmly so that there is no air space around the roots.

### Planting With A Spade

1. Insert a spade vertically into soil.
2. Insert spade at an angle to create a wedge of soil.
3. Lift out the wedge of soil.
4. Place seedling against vertical side of hole. Replace soil wedge then step on wedge to firm.

### Planting With a Planting Bar

1. Insert planting bar at an angle, then push forward to an upright position.
2. Place spade at correct depth. Vertically insert 2 inches from seedling. Pull bar back, firming soil at bottom of hole.
3. Push bar forward,firming the remainder of the hole.
4. Fill remaining hold. Step on soil around seedling to firm.
POST-PLANTING MAINTENANCE

Woody cover plantings require nurturing and maintenance, especially in the early years. Protect your planting from livestock and fire. These young plants are especially attractive to cattles. Your investment of time and money is worth protecting with a fence.

Weed control in the first three years after establishment is very important. Within the first year, invading white grasses and weeds can threaten a young planting. This weed pressure can reduce survival and impede establishment of the planted species. It is important to control weeds in order to conserve your investment in the planted species.

Weeds can occur in two different fashions. They can be species that are naturally present in the site and are thus often quite difficult to control. Woody cover plantings require cultivation, mowing, herbicides, but cultivation, mowing, and animals. Perch poles can be used to encourage raptors that will feed on voles and mice. Deer damage may also be a concern in the early years; repellents, bud caps, fencing, tree shelters and hunting are options for limiting this damage.

Replace dead trees and shrubs every spring until you have 100 percent survival (especially when using the recommended spacing). Normally, replacement is made the following season and requires hand planting.

Newly planted wildlife plantings are subject to invasion by many undesirable species such as willow, box elder, elm, honey suckle and buckthorn. Hand removal in the seedling stage with a sharp grub hoe is the most efficient way to remove them.

American Hazelnut

Completely winter-hardy throughout Wisconsin; prefers full sun. Grows in clumps, to 8 feet tall, at a medium growth rate. Individual clones gradually become very dense with closely packed stems. Nuts are readily eaten by deer, squirrels, Jays, thrushes, woodpeckers and pheasants. Catkins are an important food for ruffed grouse.

Site Preference: Grows well on a variety of soils, but prefers loams.

American Highbush Cranberry

This moderately growing shrub is 10 to 15 feet tall at maturity. It produces attractive flower clusters in May and bright orange-red fruits in September. Prefers full sun to partial shade. The persistence of the fruit throughout the winter suggests it is not very palatable to most birds. However, the fact that it is persistent makes it a valuable emergency food source in severe winters.

Site Preference: Grows well on a variety of soils, but prefers moist conditions.

Dowdog (Red-osier & Silky)

These shrubs are winter-hardy throughout Wisconsin. They are multiple-stemmed, upright, fast-growing shrubs reaching 6 to 8 feet. Purple flowers in May provide insects a great source of nectar and pollen. While the fruit that follows after pollination produces small white berries (red-osier), and blue berries (silky) in August. Heavily browsed by deer. A preferred food of turkey, grouse, quail and a host of songbirds.

Site Preference: Grows well in most soils, Red-osier prefers wetter conditions; Silky more well-drained.

Niseneh

Niseneh develops into a multi-stemmed, arching shrub about 10 feet tall at maturity. This moderately growing shrub exists statewide and can grow in full sun to shade. The bark peels into papery strips. The numerous clusters of white flowers attract pollinators in late May. The capsules that form in September feed songbirds while the cutleaf roots feed on the buds.

Site Preference: Grows well on a variety of sites. One of the few shrubs that will tolerate very wet and very dry conditions.

Prairie Crabapple

A hardy southern Wisconsin tree with fruit, grows to 10 to 20 feet in height. The tree is likely to have thorns with pink flowers. Its fruit is utilized by many species of birds and animals.

Site Preference: Grows well in well-drained, loamy soils.

Hawthorn

A small tree, growing up to 24 feet tall. They prefer full sun. The white flowers appear in May and the small orange-red fruits mature in September. The branches can be covered heavily in sharp thorns. Ruffed grouse and numerous songbirds are attracted to the fruit.

Site Preference: Prefers moist conditions in low areas, but will grow well in uplands with heavier soils.

White Cedar

Cedar grows throughout the state and can be planted in full sun to partial shade. This moderately growing tree can reach 80 to 100 feet in height. Northern white cedar provides food and shelter for wildlife. White-tailed deer, snowshoe hares and porcupines heavily browse the foliage.

Site Preference: Prefers moist conditions in low areas, but will grow well in uplands with heavier soils.

Juneberry/Serviceberry

Juneberry occurs throughout the state. It is a multi-stemmed small tree, growing 20 to 30 feet in height. The flowers have bright white petals opening in May or early June, and producing numerous red or purple fleshy fruits. High-quality plant for wildlife cover and food. Stems, twigs and leaves are browsed by deer, and fruits are eaten by a variety of birds.

Site Preference: Grows best along stream banks, lakeshores or in a variety of moist, loamy soils.

Spruce (Block & White)

Found in northern Wisconsin, Black spruce produces short blue-green needles with sharp points. Cones are two inches long and fall soon after they ripen in autumn. Except in dense forests, twigs extend well down the trunk, forming excellent escape cover for birds and mammals. White spruce occurs throughout the state and is slightly faster growing than black. White spruce provide good nesting sites, and seeds are eaten by some songbirds.

Site Preference: White spruce prefers cool, moist soils with good drainage. Black spruce prefers cooler, treedland areas with wetter soils.

White Oak

Common on the better soils in the south half of the state. Grown in the forest it is tall and straight, but when grown in the open it is short, with a wide-spreading, rounded crown. The acorn matures the first year, is ½ to 1 inch long and to about ½, enclosed in its cap. Acorns are a valuable fall food source and deer and many other wildlife enjoy the white oak acorn one of the most highly sought.

Site Preference: Best growth on loamy, well-drained soil.

Good luck with your woody cover planting. Enjoy the wildlife that you will surely see using it in the years to come.

For additional information on the importance of woody cover plantings for wildlife, contact your local Wisconsin DNR forester or wildlife manager, or visit bit.ly/PlantForWildlifeHabitat.

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