



Shrub Thicket Establishment and Management

February 2022

Establishing and Managing Shrub Thickets for Wildlife

Shrubby cover is an essential part of the habitat planning process for bobwhite quail, but can also be a useful addition for prairie grouse, pheasants, deer, or even non-game species such as songbirds or pollinators. Because of their small acre requirement, shrubs are a minimal impact habitat addition that can find a place on any farm or ranch.

Species Selection

Native shrubs such as American plum, chokecherry, elderberry, dogwood, sand cherry, silver buffaloberry, skunkbush sumac, common snowberry and Wood’s rose are the most common selections. Consider planting tall, suckering species (American plum, chokecherry, etc.) for upland bird species like ring-necked pheasants and northern bobwhite quail. For grouse species, choose lower growing shrubs such as Wood’s rose and common snowberry. Your local wildlife biologist or Natural Resource District will be a helpful resource in determining what native shrub species are best suited for your area.

Size

The overall goal of a shrub thicket is to provide an additional food source and escape cover from predators and severe weather. To accomplish this, the shrub thicket should be a minimum size of 1500 ft² (30’ x 50’ block). To ensure the

thicket is dense enough to provide adequate protection a 3’ x 3’ spacing is recommended. Avoid using multiple species within a thicket. Instead plant multiple thickets each with a different species.

Location

Consider locations in which you could imagine a natural thicket establishing: drainages, low areas and valleys are ideal. These lower areas tend to collect additional water and can help keep thickets thriving during periods of low rainfall. Avoid hilltops and potential lekking sites for prairie grouse.

Some species require more shrubby cover than others. Plant one shrub thicket per five acres if northern bobwhite quail are the target species and one thicket per twenty acres for greater prairie chickens. If planting along a field border consider one thicket every 1/8th of a mile. The CP-33 and CP-38 programs through the Conservation Reserve Program (CRP) allow shrub thicket planting and reimbursement on a portion of the establishment costs.

Site Preparation

Shrub sites should have the vegetation completely killed in the fall or at the very least shredded to reduce the thatch and make tillage easier. Tilling once in the fall helps break down the soil. Follow up in



The average shrub thicket planting is planted in a 30’ x 50’ block . Each shrub is planted on 3’x3’ spacing providing adequate density for escape cover once established.



Bobwhite quail rely heavily on shrubby cover not only as a covey headquarters but also as escape cover from predators and severe weather.

INTERESTING FACT

70ft Distance bobwhite quail spend most of their time in relation to shrubby cover.



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An American plum shrub thicket planting after 6 years. Most shrubs are now producing fruit!

Management Considerations

For a shrub thicket to be beneficial to a host of wildlife species it needs to provide the following:

- **Escape cover.** Escape cover must be large enough and dense enough that ground and avian predators can't penetrate the shrub thicket. For bobwhites, this escape cover will function as the covey headquarters. Larger, suckering shrubs fill this role best.



Bare ground under a thicket. By having bare ground, foraging for insects and escaping predators is much easier for young quail.

- **Bare ground.** Species such as bobwhite quail need lots of bare ground. Bare ground will enhance escape cover by making movement at ground level easier. It will also increase foraging efficiency. Especially for young quail which can seldom fly, the majority of their energy expenditure is moving back and forth from covey headquarters to the adjacent food source. Shrub thickets that have no vegetation under them make foraging more efficient because less energy is expended to maneuver around thick heavy grass.

To ensure bare soils, activities such as prescribed fire, chemical application, and mechanical weed control are all viable options. These methods can reduce competition for shrubs and encourage suckering.

- **Thermal Protection.** An established shrub thicket should be large enough to help provide protection from blowing snow. Drifting snow might occur around the outside edge, but the middle area should remain open. The snow drifting around the outside will help provide a wind barrier for future winter weather events.

Thickets also provide shade in the heat of summer. Research suggests that bobwhite quail have a hard time maintaining their body temperature above 102.2°F. At these temperatures, a bobwhite's ability to dissipate heat cannot keep pace with heat gain, and body temperature will begin to rise above normal. As much as 8 to 10 degrees of relief from the hot sun can be found in the shade.

the spring with multiple disking activities or a roto-tiller before planting, but do not work soil to the point it becomes dried out. Before planting, make sure your soil has adequate moisture or water the shrubs directly after planting. Stepping around the shrub a few times to ensure the roots have good soil contact and no air pockets will help them establish more quickly.

Weed Control

One of the most important but often overlooked parts of successful shrub establishment is weed control in the first three years of establishment. This can be accomplished with pre- or post-emergent chemicals, mowing, or other mechanical weeding activities.

Options for Shrub Management:

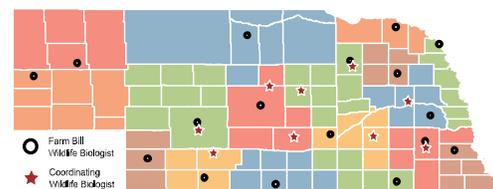
- Prescribed Burning
- Chemical Application
- Mechanical Weeding

Keys to Ensure Shrub Thicket Survival

- Site selection and preparation
- Additional packing around shrubs
- Adequate water
- Weed control (mechanical and/or chemical)



FOR MORE INFORMATION



Through a partnership with Pheasants Forever and Quail Forever, Nebraska Game & Parks Commission and the Natural Resources Conservation Service, wildlife biologist are available to help provide wildlife habitat guidance, technical assistance on the available conservation programs and design seeding mixtures.

For further information visit NebraskaPF.com

