

Downed Tree Structure Job Sheet

Natural Resources Conservation Service (NRCS)
Missouri Department of Conservation (MDC)
University of Missouri Extension – The School of Natural Resources

For:	County:
Field(s):	Farm #:
Date:	Tract #:
Designed By:	Contact Information:

DOWNED TREE STRUCTURES PROVIDE IMMEDIATE WOODY COVER FOR BOBWHITE QUAIL AND OTHER GRASSLAND BIRDS AND UPLAND WILDLIFE

PURPOSE:

Shrubby/woody escape cover is often the missing habitat component for bobwhite quail in fields managed for early successional wildlife. Downed tree structures (DTS) provide an immediate temporary source of woody cover in areas where shrubby cover is lacking. A longer lasting benefits of the DTS can be achieved by incorporating shrub plantings in conjunction with plantings of new shrubs. In the winter, quail rarely travel farther than 80 feet from shrubby cover. The location and quantity of shrubby cover can determine how much of an area will be available for use. By the addition and distribution of DTS throughout large grassland fields, the amount of available habitat for quail will increase. To be effective, place DTS within or adjacent to early-successional vegetation such as managed wildlife friendly grasses/legumes/forbs, field borders, food plots, or cropland.



GENERAL SPECIFICATIONS:

Create 0.1 acre to 1.0 acre of dense woody cover per 5-40 acres of wildlife friendly habitat. The minimum size of a downed tree structure is 30'X50' and a total of 1500 square feet in size. It takes three downed tree structures of this size to equal 0.1 acre. For optimal quail habitat, the downed tree structures should be no more than 150' apart and be placed next to early successional vegetation such as managed wildlife friendly grasses/legumes/forbs, field borders, food plots, or cropland. Choose a minimum of 8 well-branched, durable trees that are at least 20 feet in height (do not count the unbranched trunk), and have a trunk approximately 10 inches wide at breast height. When complete, the interlaced branches will cover at least 1500 square feet.

Downed trees should not be pushed into dense brush piles. These structures are intended to be “open” to allow space for the movement of quail and other upland wildlife within the structure. Simply drag the downed trees to the desired location and place in a loose arrangement. Oak, hickory, cedar, and Osage orange make good downed tree structures. Elm, cottonwood, and willow do not make good down tree structures.

Kill existing grass (regardless of type) with an approved herbicide before installing downed tree structures. This provides good growing conditions for annual food plants and shrubs and keeps the structure free of thick grasses that will impede movement of quail and other wildlife.

Downed tree structures should be used to enhance new shrub plantings or placed in large fields or field borders with inadequate shrubby cover. For additional benefits plant shrubs, such as shrub dogwoods, American plum, blackberry, indigo bush, or aromatic sumac, in and around structures. A mix of plants provides greater vegetative diversity.



RECOMMENDED ACTIONS:

- Establish 30'x50' Downed Tree Structures
- Kill existing grass with an approved herbicide before installing DTS.
- Supplement DTS with new felled trees when the existing downed material begins to deteriorate.
- Re-treat invasive grasses every 2-5 years to maintain open understory structure.
- Plant shrubs within or adjacent to DTS.
 - Use bare root seedlings adjacent to DTS. Refer to attached shrub planting plan for details.
 - Use container shrubs adjacent to DTS. Refer to attached shrub planting plan for details
 - Broadcast pounds of shrub seed on bare ground within DTS. Refer to attached planting plan for details.

MAINTENANCE:

- Exclude livestock from downed tree structures.
- Use herbicides to suppress invasive vegetation and to control noxious weeds.
- Over time downed trees will eventually deteriorate. Enhance each structure by periodically adding more downed trees.
- Protect downed tree structures from prescribed burning by diking firebreaks around each structure prior to the prescribed burn.

PRIMARY HABITAT CONSIDERATIONS:

- Provide a natural cover source for quail and other wildlife.

Consult with NRCS, MDC, or University Extension for additional recommendations.

Comment:



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