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How to Design A Pheasant Management Area

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Escape, Travel and Displaying Cover

- Woody draws and small shrub plantings provide escape and loafing cover. They can also be used to provide connectivity between habitat for travel corridors.
- Shrubs such as wild plum, choke cherry, willows and silver buffalo berry are excellent natives that provide escape cover.
- Cattail sloughs and tall grasses often make excellent escape cover.
- Rooster pheasants prefer to display against a backdrop from which they can be easily seen by other pheasants and can escape predators. Shrub plantings can be strategically placed throughout a management area to provide displaying areas for roosters, which may influence reproductive activity and even hen survival.

Pheasant nest (Courtesy SD Game, Fish and Parks Department).

Minimizing Predator Problems with Habitat

- Avoid narrow, linear strips of habitat (those that are less than 50 feet wide); they are easy for predators to hunt.
- If a site is easy for people to hunt, it is probably easy for predators to hunt as well.
- Tall deciduous trees (i.e. cottonwood and green ash) may increase the ability of raptors to successfully hunt pheasants, and they provide den sites for mammalian predators.
- Row crop food plots (which often provide poor protection from above) placed next to tall deciduous trees (which often provide good perch sites for raptors) should be used with caution in pheasant habitat areas.
- Remove predator habitat, like junk piles and old buildings.

General Rules of Thumb

- Increasing the diversity of habitats tends to improve conditions for pheasants.
- Providing various blocks of different grassy plant mixtures and using generous mixtures of grasses and forbs is generally a good idea.
- To maximize winter cover values, heavy cover and topography should be used to best distribute snow so that sufficient grassy cover is left snow-free for roosting and escape cover.
- Food plots of 2 acres or more help to concentrate birds, especially during periods of snow cover greater than 6 inches, and can be used to draw them into high-quality cover. The location of food plots is very important to how much they will be used. Do not plant narrow, linear food plots if they are isolated from heavy cover.
- Considering the topography, soils, existing land features and surrounding land uses in your plan area will help maximize the potential of your management practices. It may also help to minimize costs by not implementing unnecessary practices.
- Increasing the number of species in a planting increases diversity on the site and helps provide a little insurance against diseases or die-offs that might impact a single species—use natives when possible.
- Irregularly shaped plantings provide added "edge" to a management area—pheasants are an "edge" species. Irregularly shaped plantings can also be used to follow landscape contours or a change in soil types to maximize a planting's habitat value.
- Knowing soil types and their capabilities is critical in planning for pheasants. Matching seed mixtures and tree/shrub species with appropriate soil types/conditions is a must.
- Grassy cover, tree/shrub belts and food plot plantings that approximate 1 X 1 to 2 X 3 dimensions are normally most effective.
- Just because something is good for pheasants does not make it good for other wildlife. If your objective is to maximize production for a number of species, you will need additional assistance from a professional wildlife manager.
- Connecting nonadjacent habitats with vegetated corridors is a very important management option.

Putting It All Together

First, assess the strengths and weaknesses of habitat available to pheasants on your land and in the surrounding area.

Second, try to enhance what is already there (i.e. add a few rows of shrubs to existing woody cover, alter a grazing system, or restore a wetland).

Third, create new habitat features that will enhance those already available on the landscape.

How To Design a Pheasant Management Area

Prepared by Steven P. Riley, Certified Wildlife Biologist

Nebraska Game and Parks Commission

Pheasant Habitat Basics

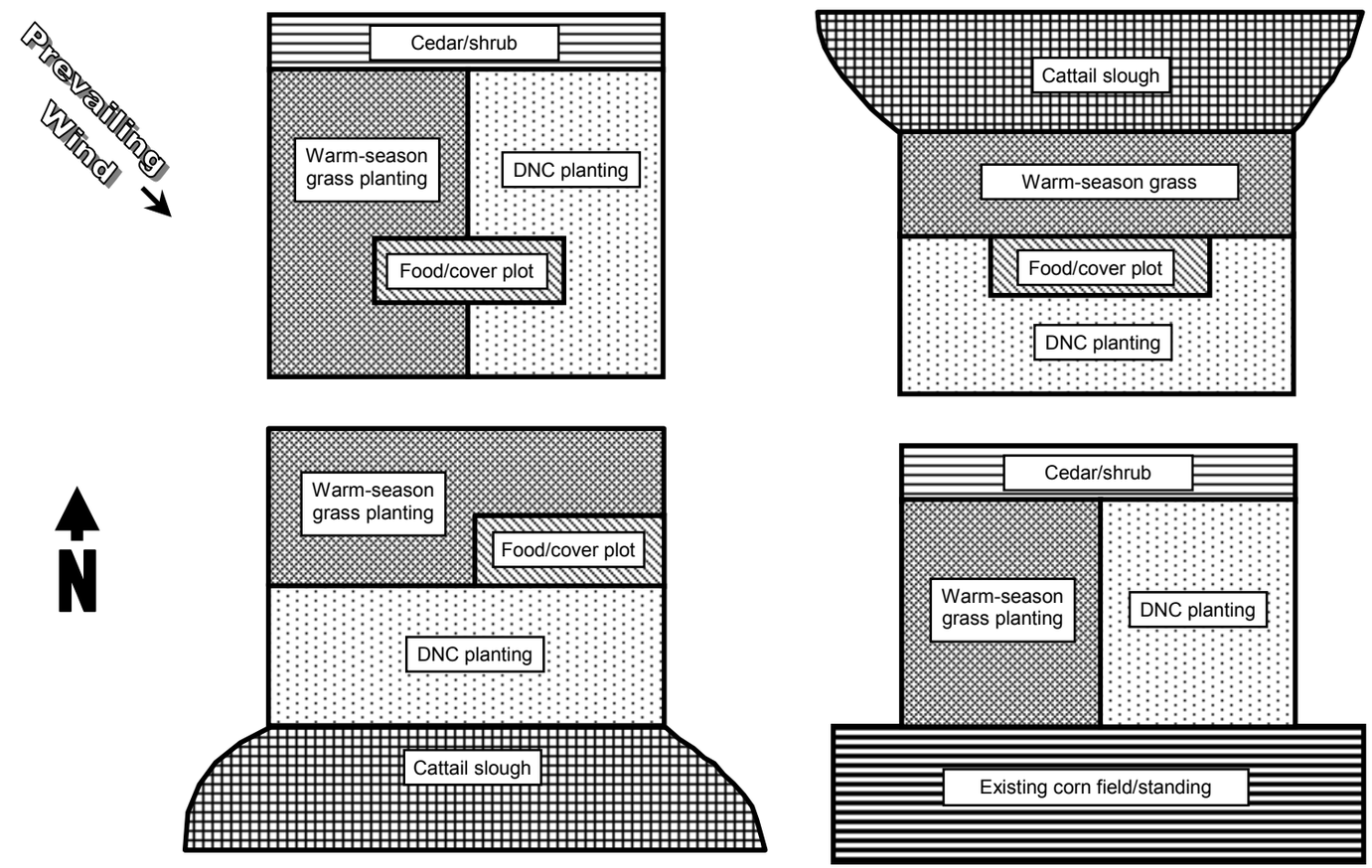
- Pheasants occur in two general landscapes based on land-use types: primarily cropland and primarily grassland. Undisturbed nesting and brood-rearing cover is commonly a population-limiting factor in cropland ecosystems. Pheasant populations in grassland systems may be limited by insufficient farming-related disturbances.
- The primary cover pheasants use consists of herbaceous plants (grasses and forbs), called grassy cover in the remainder of this document. This type of habitat is used for roosting, nesting, brood-rearing, feeding, loafing and escape cover.
- In Nebraska, pheasants often need some type of heavy cover that will capture snow (like a snow fence does) leaving areas of grassy cover open for winter roosting. Cattail sloughs, shelterbelts, native tall grasses, other grassy cover and even hills can serve the purpose of capturing snow.
- Pheasants do well in disturbed areas in which annual plants also flourish. The presence of annual plants is associated with very high productivity and high diversity of plant and animal species. Cover and food are abundant under these conditions, which are called "early successional." This is why pheasants are so often found in newly planted CRP, abandoned feed lots, weedy cornfields and food plots.
- Water is not normally directly important in pheasant management because most of a pheasant's water needs are met in its diet. Water does provide additional plant/habitat diversity on the site; the grassland-water edge is highly productive and is heavily used by pheasants.
- In order for pheasants to flourish, at least 15% of the agricultural landscapes should consist of undisturbed grass cover and no more than 15% should consist of forest cover.
- Moderate coyote populations are favorable to pheasants because coyotes discourage other, more damaging predators.

Nesting and Roosting Cover

- Pheasants normally nest, raise their broods and roost in grassy cover.
- DNC (Dense Nesting Cover) is a mixture of cool season grasses, like intermediate wheatgrass and forbs, like alfalfa and yellow sweet clover. It provides excellent nesting and brood-rearing cover by providing a dense canopy and abundant insects. DNC tends to break down under the weight of snow, though, so it has limited value as winter roosting cover.
- Native warm-season grasses, such as big bluestem, indiangrass and switchgrass, are excellent choices for winter roosting cover. These tall grasses have rigid stalks that tend to stand up in snow, and if they do bend, tend to lodge in such a way that they are still useful for roosting. They are also used—to some degree—as nesting cover.
- Grassy cover plantings (including DNC plantings) of less than 10 acres have limited value for pheasants. In research tests, 20-acre blocks were shown to be the optimum size for maximum nesting densities. However, this fact should not discourage larger acreage.
- Grassy plantings are cheaper—by far—than most other developments and should be considered the cornerstone of any pheasant management program.

Pheasant hen with brood (courtesy SD Game, Fish and Parks Department).

Winter Protective Cover

- Protecting roosting cover from filling up with snow and protecting pheasants from wind-chill are the main purpose of winter protective cover. Pheasants do not normally roost in or amongst large trees, although shrubby cover provides protection for pheasants.
- Cattails and slough grass normally provide excellent winter roosting cover.
- In some years, cattail sloughs fill up with snow and may need to be augmented by tree/shrub plantings on the windward side.
- Native warm-season tall-grass species, like switchgrass, indiangrass and big bluestem, make excellent winter-roosting cover, as long as they do not fill up with snow.
- Use topography to distribute snow and protect from wind-chill as much as possible. A large planting of native warm-season grasses on a south-facing slope will provide great winter roosting cover in most years.
- Tree and Shrub Planting Design Considerations:
  - When planting trees and shrubs for pheasant winter cover, orient them in such a way that adjacent grassy cover is on the lee side (south or southeast) of the planting.
  - Plantings on have flat terrain should contain a minimum of 10 rows (2 acres) are suggested; at least as much grass should be provided on the belt's lee side.
  - Cedars and junipers—native evergreens—make very good windbreaks; taller evergreens and deciduous trees are unnecessary.
  - Shrubs are essential to a good tree planting designs and are very hardy—stick with natives for best results.
  - Woody plantings for pheasants should contain at least 30% (50% recommended) cedars and/or junipers.

Examples: Based on 40-acre Blocks