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Creating Pheasent Habitat

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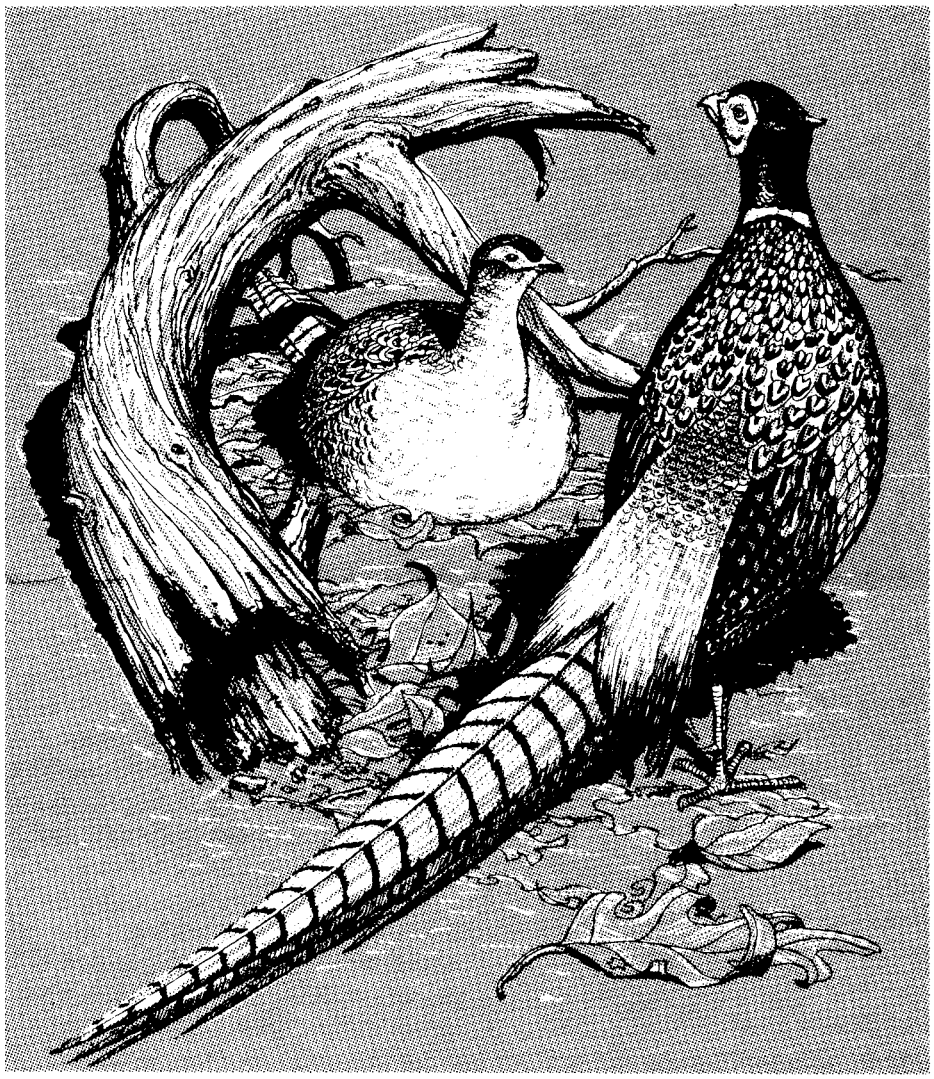

Creating pheasant habitat

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South Dakota's pheasant population that was 16 million birds 40 years ago is now barely over 2 million birds.

We could be in danger of losing the pheasants and the recreation they provide. With the birds will go the $40 million in direct economic benefits that pheasant hunters put into the economy each year.

More than anybody else, farmers will determine the ultimate fate of ring-necked pheasants as recreation and income. We saw this illustrated in the 1970s and 80s.

Under the intensive farming practices of this period, good pheasant habitat was destroyed. So was the land. Long-term agricultural productivity itself is at risk when intensive farming increase the potential for soil erosion and water pollution.

On the other hand, management practices that benefit wildlife can also conserve the land for crop production. "Farming for pheasants" does not automatically reduce farm income, either in the short or long term. Farming for pheasants is one way to practice soil and water conservation. It does require some planning.

Starting a habitat improvement program

Planning is essential in any habitat improvement program. You need to know what a wildlife species needs to survive and increase, how many of those needs you and your land already meet, and what you can do to provide the rest.

For the pheasant, as with most wildlife, variety is the key. The ringneck usually spends its entire life in an area of about 1,280 acres (two sections) or less. A mixture of small areas that supply each basic need is better than one large area of each type.

You can get planning assistance from the South Dakota Department of Game, Fish and Parks (GFP), the U.S. Soil Conservation Service (SCS), the U.S. Fish and Wildlife Service (FWS), the state forester, and your county Extension agent. Once you have a plan you should regularly evaluate your progress and update the plan as needed.

Pheasant needs

As with all animals, pheasants have four basic habitat requirements: space, water, food, and cover. If even one is missing on a given area, there will be no permanent resident pheasants.

"Limiting factor" is the term for the requirement in shortest supply in any one area. You get the greatest and most immediate return in pheasant populations by increasing the most severe limiting factor first.

Space is not limiting in South Dakota. Neither is water in years of nor-

mal precipitation. Food and cover are typically the main limiting factors; and, of the two, cover is more frequently missing.

The cover requirement is divided into four types: nesting, brood rearing, roosting, and escape/winter. If one of the four cover types is missing from an area, or if they are not advantageously arranged, then pheasant population expansion is limited.

Nesting cover. Nesting cover is often in shortest supply. Hens will nest in moderately dense grass and/or weeds, or in grass/legume mixtures that are at least 6 to 8 inches tall, but ideally they prefer the cover to be at least 12 inches high.

Nesting cover must be available from mid-April through mid-July, the primary nesting and renesting period. In mid-April, this means that hens are choosing dead, residual vegetation from the previous year's growth. Later in the spring, hens select nest sites in new growth, mainly alfalfa, grasses, and sweetclover.

Alfalfa, small grains, and roadside ditches provide much of the nesting cover and are heavily used. However, haying starts in many fields by early June before many eggs can hatch. Early harvesting not only destroys established nests; the cut areas are eliminated as possible renesting sites. Since hens are very reluctant to abandon their nests, many are often killed.

Brood-rearing cover. The same field can be used for both nesting and brood rearing. Brood cover should provide overhead shade and shelter and an abundance of insects and green plants. Brood cover should not be so dense that it prohibits chick movements.

Later in the season, brood cover should provide a good seed crop because chicks switch from an insect diet to one of wild seeds and agricultural grains as they mature. Patches of annual weeds and wetland edges are excellent brood cover.

Escape/winter cover. This is tall, dense, herbaceous or woody cover that can provide shelter from weather extremes and predators. In winter it becomes a critical limiting factor.

Odd areas overrun with weeds or shrubs and trees, wetlands, and wide shelter belts provide excellent winter cover. However, their value is directly related to their condition and proximity to other useful habitat components, especially feeding areas. Old and dying or overgrazed woody areas have little value as either escape or winter cover.

Winter cover areas must be large enough so that they do not completely drift in with snow.

Roosting cover. Usually, the need for this nighttime cover is provided by the other three types of cover on an area.

Food. Well-farmed land provides the wide variety of foods pheasants need; these foods should be in or close to cover so that the birds can be safe from weather and predators while foraging.

Although a large portion of the pheasant's diet is agricultural grains, these grains are usually deficient in some essential nutrients. Birds must supplement their grain diet with insects, green leaves, fruits, and seeds of wild plants.

Insects are especially important to laying hens and young, growing birds. All insecticides and many herbicides should be used sparingly and only as needed in areas in which you want pheasants. These chemicals reduce cover, food, and, in some cases, may directly kill the birds.

Establishing or improving habitat

Many habitat improvement techniques are also both excellent land conservation measures and cost effective agricultural practices. Contact your local SCS, GFP, Agricultural Stabilization and Conservation Service (ASCS), county Extension agent, or state forester for more information.

Nesting cover. Roadsides, alfalfa, and other hay fields provide good, attractive nesting cover for South Dakota pheasants. You can alter your harvesting operations of these areas to make them safer for the birds.

Delaying haying or mowing 1 or 2 weeks, until after hatching is completed (mid-July), will save a considerable number of nests at some sacrifice to the value of the crop.

You can also save nests by the way you cut fields. Most nests are probably closer to field edges than the center. If you start cutting in the middle and work outward concentrically, leaving one or two uncut strips at the field edge, broods can move out and away from the machinery. The remaining strips can be harvested after hatching.

Many roadside nests can be saved by mowing only the crown of ditches (most nests are located on the backslope) and waiting to harvest the rest until after July 15.

Roadsides are narrow strips of habitat which are easily patrolled by predators. Adding a field border to the adjacent crop field can effectively increase the width of a roadside and make it harder for predators to find nests.

Small-grain fields are not preferred nesting cover. However, their frequency and large size make it difficult for predators to find any nests hidden in them. Also, after they are planted they usually remain undisturbed through the nesting season. These two factors combine to make small grain some of the safest nesting habitat.

The best small grain for nesting is winter wheat because it usually provides some cover when pheasants begin nesting in April and requires no spring tillage.

Additional, safe nesting cover can be provided by planting small fields of grasses, an alfalfa-grass mixture, or small grains. Letting them stand idle will provide both nesting and brood-rearing cover and a future food source. It will also tie down your soil against wind and water erosion.

There are two primary types of grassland cover to plant for wildlife habitat: mixtures of introduced cool-season grasses and legumes and native warm-season grasses.

Cool-season grass and legume mixes typically contain bromegrass, tall or intermediate wheatgrasses, and alfalfa and/or sweet clover. These mixes are readily available and easily established with conventional farm machinery. Cool-season mixes provide early green-up and production of nesting cover and develop vigorous stands in the first year. However, they tend to flatten under heavy snows, leaving little residual standing cover for early spring (before green-up) nesting. Wheatgrasses often stand up better than brome under the weight of snow.

Cool-season grasses must be rejuvenated at 3- to 5-year intervals to maintain vigor and quality (height and density).

Introduced cool-season mixes should be planted before May 15, or between August 10 and September 10 if moisture conditions are adequate, or after October 20 as a dormant planting.

Warm-season natives (switchgrass, big bluestem, Indiangrass) are expensive, more difficult to acquire, require special planting equipment, and do not develop good stands as rapidly as cool-season mixes. Switchgrass is excellent pheasant cover. It stands up better than the others under heavy snow cover, and is more easily established than other warm-season grasses.

Warm-season grasses should be planted between June 1 and June 15 or as a dormant seeding in November. Warm-season grasses usually do not respond until the second year and are very susceptible to competition. Weeds should be controlled during the first year by periodic mowing to 6 inches.

Even after well established, a warm-season grass should never be mowed or grazed to less than 6 inches of stubble. Shorter stubble increases the risks of injuring the stand and inviting weeds.

Proper seedbed preparation is absolutely essential. Competition from crop and weed species must be controlled before and just after planting, through normal fallowing or by mechanical or chemical techniques. Companion or nurse crops are not recommended, but seeding into the stubble of a previous crop (excluding rye) is feasible.

Once a clean seedbed is available the soil should be compacted to the point that a man standing on the soil leaves a footprint less than 1/2 inch deep. Drill the seed (broadcasting is not as efficient or cost effective) to 1/4-3/4 inch deep at a rate of 20-40 pure live seeds (PLS) per square foot.

Once established, your grassland cannot be ignored. It will require rejuvenation on a 3-5 year schedule. Burning and mechanical scarification are the most commonly used methods.

Introduced cool-season mixes can be burned from March to late May. Native warm-season grasses should be burned between May 15 and June 15. Mechanical tilling (spiking or chiseling followed by light discing or harrowing to smooth the surface) is also useful for cool-season mixes. Weed control in any established grassland should be limited to spot control of noxious weeds.

Brood-rearing cover. Broods need good stands of upright grasses and forbs without a thick ground mat of dead vegetation that would restrict chick movements. These stands must provide a good insect crop, succulent vegetation, and, later, a good seed crop.

The guidelines for establishing nesting cover will meet these needs in most cases. However, hay-type alfalfa varieties are better than the pasture types for brood cover because they stand up better.

Broadcast spraying to control weeds or insects in brood cover risks the killing of both chicks and their food base. Noxious weeds should be controlled on a spot basis.

The same fields used for nesting cover can be left for brood-rearing cover if they are not too dense. Brood cover should also be located near good escape cover.

Escape/winter cover. Probably the best winter cover is a large, densely vegetated wetland. The next best thing is a good shelter belt or wooded draw.

A good shelter belt is at least 200 ft wide with at least 10 to 15 rows. The first two rows to the windward side should be shrubs. Next, for about 20 ft, should be about seven rows of deciduous trees, increasing in size toward the center of the belt. Behind these should be at least six rows of evergreens. Red cedar is an excellent choice. It is also good to have another row or odd area of shrubs about 20 ft behind the evergreens, because these will be used more by birds in severe weather than the actual shelter belt.

Choose species that will provide food as well as shelter (chokecherry, rose, etc).

Sometimes there is not enough room to plant a 200-ft-wide shelter belt. In this case, any belt you plant should have at least eight rows, with two rows of shrubs and two rows of evergreens or one row each of shrubs, deciduous trees, and evergreens. Decreasing row spacing down to a minimum of 12 ft will also help.

Shelter belts do more than benefit pheasants and wildlife. They protect your house, outbuildings, livestock, soil, and crops from wind, and they trap and distribute snow across fields.

Rows of shrubs, shrub-grass mixes, and trees in and between fields also provide some winter and nesting cover and good travel lanes while cutting down wind erosion and distributing snow evenly across the fields. Planting odd areas to trees and shrubs provides some escape/winter cover or roosting cover and also reduces erosion.

Shelter belts are **not** prime nesting cover since they make excellent travel lanes for predators.

All woody plantings should be cultivated through the first 5 years to reduce competition from grass and weeds. They should never be grazed. Grazing eliminates new tree and shrub growth and reduces the vigor of the remaining trees by compacting the soil.

Competition with crops can be reduced by root plowing along the edge of the woody plantings about every 10 years. Root plowing is used more often in other areas of the country. It consists of pulling a single ripper blade at a depth of 3 feet between the shelter belt and the adjacent crop field to cut the roots of the trees that may be reaching into the field. You will probably need a bulldozer or very large tractor.

Food. Adult pheasants primarily eat grains and lesser amounts of weed seeds, insects, and green vegetation. These last three categories are essential for young birds, because grain crops are not nutritionally complete. All of these foods may be available on agricultural lands during the growing season. Brood-rearing cover will usually supply summer foods.

It's a different story in winter when food may be under snow.

Winter feeding areas should be located no more than 1/4 mile from winter cover, preferably closer than 100 yards. Winter feeding areas can be grain or seed crops left unharvested. Plantings should be at least 1/2 acre in size, but need not be larger than 10 acres if they are well distributed.

Good food plantings include grain sorghum or milo, corn, small grains, and sunflower. An excellent strategy that has worked well is to plant milo or other short grain sorghum in alternating rows with a forage sorghum. This provides both winter cover and abundant food all in one plot--especially if planted on the downwind side of a good shelter belt or wetland.

Another option is to leave one or two strips of unharvested crops around field edges or adjacent to winter cover.

Feeding stations (wire feeders placed next to winter cover) will nurture a flock of "dependents." You will have to maintain the feed supply until natural food becomes available. Feeding stations also concentrate predator activity around them.

Any feeding area should be sheltered from the wind. Leave stubble or standing crops or use the lee of windbreaks or shelter belts. Delay plowing until spring and use conservation tillage techniques that will leave spilled grain on top of the soil. Conservation tillage will also leave stubble to protect birds and soil from wind and will help distribute snow evenly.

Help is available

Federal. The SCS and the ASCS administer a number of programs. The SCS provides assistance in planning conservation practices and developing a conservation plan for each farm or ranch. Cost-sharing for many of these practices is available through the ASCS.

The most effective program for pheasant habitat creation has been the Conservation Reserve Program (CRP) set up by the Food Securities Act of 1985 (1985 Farm Bill). The CRP program allows farmers to receive annual payments for removing highly erodible lands and wetlands from production and planting them to permanent cover for a 10-year period. ASCS shares the costs (up to 50%) of establishing cover on these acres.

Also available are Annual Crop Reduction (ACR), or set-aside, pro-

grams. These programs provide payments for taking land out of production for one year.

Most require that some type of cover be established, but also that it be destroyed before it reaches the point the owner can use it for profit. Although this usually decreases the value of this cover for wildlife, careful timing of planting and knockdown operations will still allow you to provide for at least one cover need during the season.

Like the CRP program, these programs often provide for planting winter food plots.

Annual programs are not as effective for habitat management as long-term set-asides like CRP. However, annual set-asides have been in force in all but 3 years since 1935, which may allow multi-year habitat management.

By planning to rotate land taken from production for a number of years, you can utilize these ACR programs for long-term habitat projects. Check regularly with your local ASCS to find out what ACR guidelines are in force in your area, since they can change.

The ASCS also administers the Agricultural Conservation Program (ACP) in which costs of implementing conservation practices are shared. Projects covered through ACP include preserving and restoring wetlands and odd areas and conservation tillage practices.

Another ASCS program is the water bank program through which ASCS pays landowners to conserve wetlands and surrounding upland habitat.

The U.S. Fish and Wildlife Service (FWS) also provides financial incentive for wetland preservation through its wetland easement program. You will be paid a lump sum if you agree, in perpetuity, not to drain or fill a wetland. These wetlands can still be farmed when dry, but the easement payment is some compensation for the cover you are providing pheasants and other wildlife during years when they are too wet to plow.

The FWS will also pay the costs of rehabilitating drained wetlands on CRP acres or on other cropland. In South Dakota, offices that can explain these programs are the Madison Wetland Management District office in Madison, Lake Andes National Wildlife Refuge (NWR) near Lake Andes, Sand Lake NWR near Columbia, Waubay NWR near Waubay, and the Wetland Acquisition Offices in Aberdeen and Huron.

State. The South Dakota Department of Game, Fish and Parks (GFP) has several programs to assist landowners in developing habitat for pheasants and other wildlife.

The Pheasants For Everyone (PFE) Program combines aspects of other previously established programs such as the Wildlife Habitat Improvement Program (WHIP), Pheasant Restoration Program, and the Shelter Belt Incentive Program. PFE authorizes conservation officers to contract with landowners to perform habitat improvement projects on their land which will be partially funded or supported by PFE money.

Payments can be received for cultivation of newly planted shelter belts or areas of woody cover, renovating existing shelter belts, wetland restoration, planting food plots, establishing nesting cover, and building fences to exclude livestock from improved or newly established habitat. The maximum payment to any landowner is $1,500 per year per habitat improvement program. Many of these payments complement programs administered by ASCS. For example, you can get 75% cost-share from ASCS to plant a new shelter belt through ACP and then contract with GFP to cultivate that new belt during the 2nd, 3rd, and 4th seasons at a payment of $50 to $100 per acre per year. To be eligible, any new belts must be at least 8, but preferably 20, rows wide.

GFP will pay 50% of the costs to landowners who rejuvenate existing shelter belts and woody cover as long as that cover is maintained for 10 years. In addition, the South Dakota Department of Agriculture will also pay $5 per acre for 10 years for renovated or newly established belts planted after July 1, 1984.

GFP will also reimburse the cost of plugging ditches to restore drained wetlands. Landowners can receive free seed to plant winter food plots and get a $20 per acre payment for each acre planted. Payments for establishing nesting cover are available, but this program is not emphasized because of the success of the CRP.

Cooperative agreements allowing public hunting access to lands restored with PFE money are strongly suggested but are not required to enter the program. Local soil conservation districts can sometimes provide the specialized equipment to plant and maintain seeded grasslands, for root plowing, and for other conservation practices.

Private. There are a number of private organizations and local clubs, such as Pheasants Forever and Ducks Unlimited, interested in developing wildlife habitat. These organizations will often provide cost-sharing money or labor to accomplish habitat improvements. Usually this is done on the local level by local area chapters. Contact your nearest GFP office or wildlife conservation officer to find the

groups active in your area and what type of assistance they may provide.

The presence of wildlife is a measure of the health of the land. When the land is well managed and healthy, wild animals are abundant. Their presence indicates that a significant percentage of the land has soil-conserving cover and water-conserving wetlands.

Abundant pheasants and other wildlife not only provide autumn recreation and cash to state and local economies, but they enrich our lives in deeply personal ways. We will be infinitely poorer if an April comes when we cannot hear a cock pheasant crowing in the crisp morning.

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