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RING-NECKED PHEASANT*(Phasianus colchicus)* HABITAT MANAGEMENT

Enclosed is a copy of the *Ring-necked Pheasant* ***(Phasianus colchicus)*** *Fish and Wildlife Habitat Management Leaflet*. This publication was prepared by the NRCS Wildlife Habitat Management Institute and the Wildlife Habitat Council. The range of the ring-necked pheasant extends across the entire state of Nebraska. The leaflet provides an introduction to the habitat requirements of the species, specifications for habitat improvement, and programs that might assist land users in applying beneficial practices. Also included are recommendations for minimizing brood destruction during haying and selection and application of herbicides to maintain important pheasant food plants.

This fish and wildlife habitat leaflet is posted on the WHMI homepage http://www.whmi.iastate.edu/
Additional copies may be downloaded as needed.

Enclosure

Wildlife Habitat Management Institute

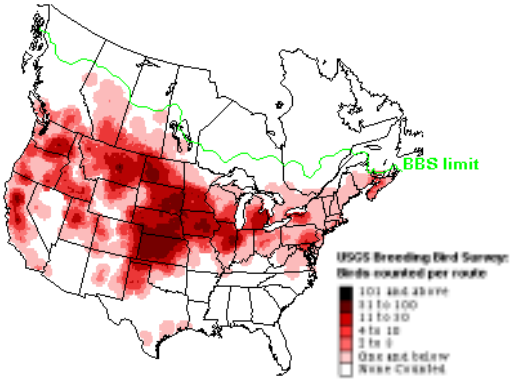
Ring-necked Pheasant
(Phasianus colchicus)

October 1999 *Fish and Wildlife Habitat Management Leaflet* *Number 10*

General Information

The ring-necked pheasant is a ground-dwelling, gallinaceous (chicken-like) bird of Asia first introduced into the United States prior to the 1800s. By the 1880s, wild ring-necked pheasants had become established in sustainable breeding populations within the United States and have remained one of the most popular and sought after upland game birds in central and northern regions of the country. The ring-neck's exceptional quality as table fare, coupled with its high resistance to parasites and diseases common in ground-feeding birds, makes this colorful game bird both highly desirable and very manageable. Also characteristic of the ring-neck is its ability to share similar niches with many native grassland and farmland community wildlife species. One exception has been its interaction with native prairie chickens – pheasant males can disrupt prairie chicken leks and hens may lay eggs in prairie chicken nests. Consequently, efforts to repatriate prairie chickens in some areas may require prior removal of pheasants.

The ring-neck is highly dependent on habitats in and around croplands and agricultural landscapes. Significant changes in farming practices within the last half of the twentieth century have had detrimental effects on ring-necked pheasant populations. Removal of overgrown hedgerows and fencerows from agricultural fields, other "clean farming" practices, and the conversion of open, native grasslands and other idle habitat to introduced grasses and developed lands have contributed to a loss of nesting and protective cover resulting in population declines. The accelerated use of agri-chemicals, increased grazing pressure, intensive fire control, and the spraying and mowing of highway and utility rights-of-way have contributed to reducing ring-neck populations as well. However, intensive habitat management and conservation programs that improve pheasant habitat like the USDA Conservation Reserve Program have greatly improved pheasant populations in many areas in recent years. Continued efforts to increase pheasant populations on private lands may help to secure a stable future for this valued game bird.



Ring-necked Pheasant Breeding Range

This leaflet is designed to serve as an introduction to the habitat requirements of the ring-necked pheasant and to assist landowners and managers in the development of a comprehensive pheasant management plan. The success of any species management plan depends on targeting the specific needs of the desired species and analyzing the designated habitat area as a whole to ensure that all required habitat elements are present. This leaflet provides a

number of practical habitat management activities that can be conducted on private lands to boost local ring-neck populations and encourages involving fish and wildlife professionals in program planning to identify additional management actions needed over time.

Range

Ring-necked pheasants are non-migratory, year-round residents of primarily agricultural landscapes. The greatest concentration of ring-necks in North America exists within the central Great Plains region of the United States, but pheasants are found across much of the northern two-thirds of the country. Ring-necks range from southern British Columbia south through Washington, Oregon, western and southern Idaho to the lowlands of California and in Utah, except in mountainous and desert regions. Ring-necks occur from south-central Saskatchewan, southern Manitoba, Minnesota, Wisconsin, southern Michigan and Ontario, New York, southern Quebec and Vermont, south-central Maine, New Brunswick, within parts of Nova Scotia south to northern Arizona, New Mexico, northern Texas, northwest Oklahoma, Kansas, northern Missouri, southern Illinois, Indiana, Ohio and Pennsylvania to the northern edge of Delaware, Maryland and West Virginia.

Habitat Requirements

General

Crop fields of corn, sorghum, oats, wheat and barley stubble, unmowed wild haylands, and native grasslands of big and little bluestem, Indiangrass, sideoats grama and switchgrass with a healthy forb component are common habitats used by ring-necked pheasants. Grassy roadside ditches and field drainage channels; dense vegetation growing along overgrown fencerows; windbreaks; shelterbelts; woodlots; abandoned grassy farmsteads and grassy/shrub-mixed odd areas and field corners are ring-neck habitat as well. Adequate winter cover of shrubs and dense grasses that provide overhead protection from wind and snow, and nesting cover of grasses and stubble high enough to conceal nests but allow for easy ground travel, are the two most important habitat components needed for an area to support ring-neck populations. Loss of overgrown field borders, fencerows, and pastures of native warm-season grasses to development and clean farming agricultural practices remains a major threat to the future of ring-necked pheasant populations nationwide. Preserving and properly managing grasslands, agricultural lands, and other rural open areas can help landowners boost local ring-necked pheasant populations and populations of other species that rely on similar habitat.

Food

Ring-necks rely most heavily on plant foods such as waste grains from crop fields, wild and cultivated forb and grass seeds, fruits, and leaves. Insects are consumed by adult pheasants in spring and summer months, and comprise nearly the entire diet of pheasant chicks for the first five weeks after hatching. Waste corn, wheat, grain sorghum, barley, oats, buckwheat, and sunflowers are consumed in harvested crop fields. Seeds of legumes, ragweed, smartweed, crotons, burdock, and other forbs are consumed in old fields, field borders, odd areas, and other natural areas. Hard and soft mast such as acorns, pine seeds, and various wild berries are consumed in summer and autumn months. Grasshoppers, crickets, potato beetles, caterpillars of gypsy moths and browntail moths, tent caterpillars, cutworms, and others are common insects and invertebrates eaten by ring-necks in spring and summer, as well as in autumn months in warmer regions. Snail shells commonly comprise a valuable calcium component of the diet.

Nesting Cover

Pheasants select areas of dense herbaceous ground cover with good overhead concealment in which to nest. If left undisturbed, pheasants can successfully nest in alfalfa haylands, wheat stubble, winter wheat, cool season grasslands, and native and tame pastures. Dense cover on set-aside lands (e.g., Conservation Reserve Program lands), grassy field corners and odd areas, overgrown hedgerows, shelterbelts, fencerows, roadsides, and field borders are frequently used for nesting. Residual cover (vegetation left standing from the previous growing season) that provides overhead concealment and ground litter are essential elements of high quality nesting habitat.

Brood-rearing Cover

Pheasant brood cover consists of vegetation that is relatively open near the ground to allow easy travel by chicks while providing some degree of overhead concealment from avian and other predators. Chicks are also able to capture insects more easily in cover that is open near the ground. Expanses of native prairie bunch grasses such as big and little bluestem, sideoats grama, switchgrass, tall and intermediate wheat grasses, and Indiangrass provide excellent brood-rearing cover. The bunchgrass growth characteristics of these grasses provide open, passable travel lanes for foraging pheasant chicks. Mixed grasses, forbs, and other vegetation communities that support insects and enable free movement of pheasant chicks are used as brood-rearing habitat as well.

Roosting and Escape Cover

Ring-necks roost in trees and tall shrubs and hedges or on the ground in weedy ditches, marshes, small cattail swales, weed-grown fence corners, brush heaps, briar patches and in small farmland woodlots. These areas of dense vegetation provide necessary escape cover when located near foraging cover as well.

Winter Cover

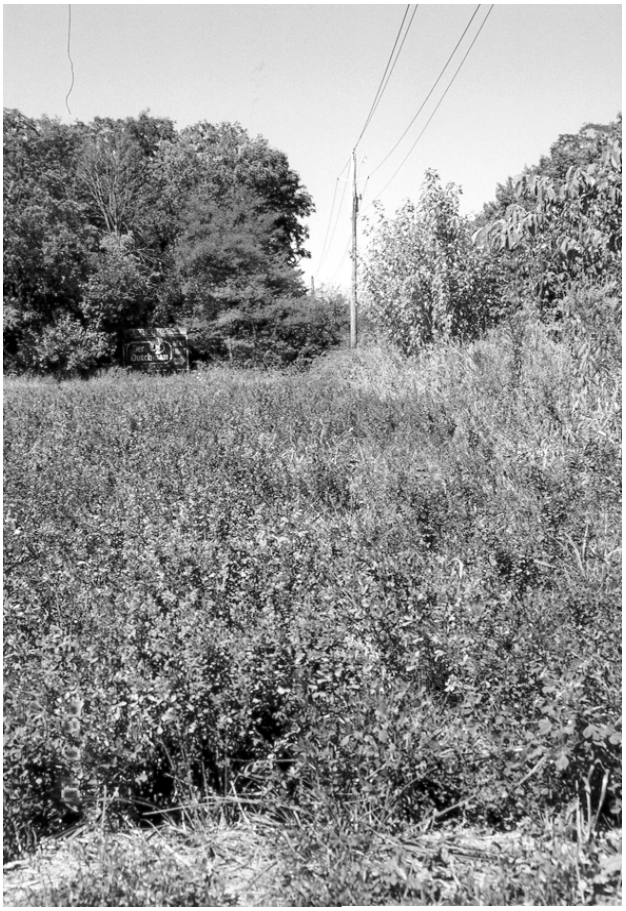
Areas of dense herbaceous and woody vegetation are required for thermal and protective cover during winter months. This is particularly important in northern regions. Weedy fencerows and field borders, dense, upright grasslands, abandoned farmsteads, weedy playa lake bottoms, cattail marshes, low-growing evergreen and hardwood windbreaks and shelterbelts, and low-growing grassy and shrubby habitats near crop fields and other foraging sites are typical winter habitat areas.

Water

Foods eaten provide pheasants with an adequate amount of water.

Interspersion of Habitat Components

A critical aspect of ring-necked pheasant management is creating good interspersion or mixture of different habitat types. Suitable foraging areas and nesting, brood-rearing, roosting, winter, and escape



John Mueller photo

Hedgerows, brushy cover, and grassy field borders can provide nesting, roosting, and winter cover adjacent to crop fields.

cover located within close proximity to one another is essential to attract ring-necks to and maintain existing populations in an area. A complex of corn, sorghum, and small grain crop fields; unmowed haylands; native prairie grasslands and other dense vegetation cover; overgrown field borders and other edge habitats and grassy or shrubby odd areas and field corners create an interspersion of habitats that provide food and cover needs for ring-necked pheasants. Cattail marshes, briar patches, woodlots, old fields, windbreaks, and shelterbelts provide valuable cover as well when combined with other preferred pheasant habitat components. Linear corridors in the form of windbreaks; shelterbelts; overgrown hedgerows and fencerows; service roads and weedy roadsides, filter strips, and field borders that connect the various types of cover maximize the overall habitat quality of an area for ring-necked pheasants.

Ring-necked Pheasant Habitat Requirements Summary Table.

Habitat Component	Habitat Requirements
General	• Crop fields of corn, sorghum, oats, wheat, barley and other small grains. • Wild haylands, big and little bluestem, Indiangrass, sideoats grama, switchgrass, native forbs. • Dense vegetation growing along or in the form of overgrown fencerows, windbreaks, shelterbelts, roadsides and field ditches, small woodlots, old fields, and grassy or shrubby odd areas and field corners.
Food – young	• Insects: grasshoppers, crickets, potato beetles, caterpillars of gypsy moths and browntail moths, tent caterpillars, cutworms and others.
Food – adult	• Forb seeds: legumes, ragweeds, smartweed, crotons, burdocks, others. • Cultivated crops: corn, milo, wheat, grain sorghum, barley, oats, buckwheat, sunflowers. • Mast: acorns, pine seeds, various berries. • Insects: grasshoppers, crickets, potato beetles, caterpillars of gypsy moths and browntail moths, tent caterpillars, cutworms and others.
Cover - nesting	• Wheat stubble, winter wheat, undisturbed grasslands and pastures, unmowed native and alfalfa haylands, grassy field corners and odd areas, overgrown hedgerows and fencerows. • Alfalfa, vetch, sweet clover, and cool season grasses and forbs providing residual cover and ground litter.
Cover- brood-rearing	• Mixture of grasses and forbs with overhead cover that allows movement of foraging chicks along the ground. • Big and little bluestems, sideoats grama, switchgrass, tall and intermediate wheat grasses, smooth brome, wildrye, Indian grass and mixed grasses and forbs.
Cover – winter	• Weedy fencerows, dense, undisturbed grasslands, old fields. • Weedy playa lake bottoms, cattail marshes. • Low-growing evergreen/hardwood windbreaks and shelterbelts, low-growing grassy and shrubby habitats.
Cover – roosting and escape	• Trees, tall shrubs, hedges, weedy field borders, ditch banks, and fence corners. • Cattail marshes, brush heaps, briar patches, small farmland woodlots and thickets.
Water	• Daily foods eaten provide an adequate amount of water.
Interspersion	Complex of : • Cropfields of corn, sorghum, oats, wheat and barley stubble. • Wild haylands, big and little bluestems, Indiangrass, sideoats grama, switchgrass, tall and intermediate wheat grasses, smooth brome, wildrye, alfalfa, vetch, sweet clover. • Grassy roadsides, field borders, filter strips and ditch banks; cattail marshes; abandoned farmsteads; grass/shrub-mixed odd areas and field corners. • Brush heaps, briar patches, small farmland woodlots, and travel corridors consisting of hedgerows, overgrown fence-rows, field borders, grassed waterways, windbreaks, and shelterbelts.
Minimum Habitat Size	• 15,000 acres to support a healthy population. • Individuals typically range within one square mile or less under optimal habitat conditions.

Minimum Habitat Area

Although the minimum area required to support a vigorous pheasant population has been estimated at approximately 15,000 acres, daily activities of individuals are typically conducted on one square mile or less under optimal habitat conditions. Therefore, managers of smaller tracts should not be discouraged from managing for ring-necks; smaller tracts that contain a mixture of the necessary habitat components may support ring-necks before larger areas that lack one or more of the needed habitat components. For this reason, lands outside the immediate planning area should be considered when making the determination of minimum habitat size, as smaller parcels of land may support ring-necks when they possess or are adjacent to lands that possess necessary habitat components.

Habitat Management

The following management practices disturb soil and vegetation communities in order to promote new growth of plants and attract insects. More than one practice may be beneficial in an area depending on the primary land use. An area's size, management goals, vegetation composition, and geographic region may dictate which management practices are most appropriate. Consultation with and assistance from federal, state, or local fish and wildlife and land management agencies can be helpful in identifying appropriate management actions.

Disking: Disking strips in dense vegetation removes thick, matted grasses, creates more open travel areas, and promotes growth of native annuals and other pheasant food plants. Adjacent strips 10 to 20 feet wide and no less than 100 feet long should be disked rotationally along woodlot, grassy field, fencerow, and hedgerow edges. Adjacent strips should be disked on a two to three year rotational basis from January through March. June disking can be done to promote growth of vegetation and attract insects; however, it should be conducted only on small areas late in the month to minimize disturbance of nesting pheasants and other ground-nesting birds. Disking, plowing, or harrowing to a depth of four to six inches is sufficient to promote vegetation regeneration. Studies have found that disking wheat stubble in the summer or fall can decrease soil moisture storage capacity and reduce crop yields. Thus, avoid disking and plowing harvested wheat fields and leave stubble to provide residual nesting cover when possible.

Burning: Prescribed burning is used to maintain grassland communities in various stages of growth and vegetative diversity. Burning returns valuable nutrients to the soil and maintains grasslands as open habitat while promoting new growth of shrub, forb, and grass species preferred by ring-necks. Although beneficial, prescribed burning is a highly regulated technique and should only be conducted in cooperation with state fish and wildlife agencies and with assistance from licensed burners. These agencies and individuals can help in the development of a burn plan, provide necessary tools, equipment, and supervision, and assist in obtaining required permits. Prescribed burning of pasture and open fields should be conducted on a four- to five-year rotational basis in late winter or early spring (February-April, depending on the region). Dividing the burn area into strips or plots similar to the field shown in Figure 1 is important to leave undisturbed escape and nesting cover adjacent to burned plots. Odd areas and field corners can be burned every five to ten years to prevent these areas from reverting to woodlands.

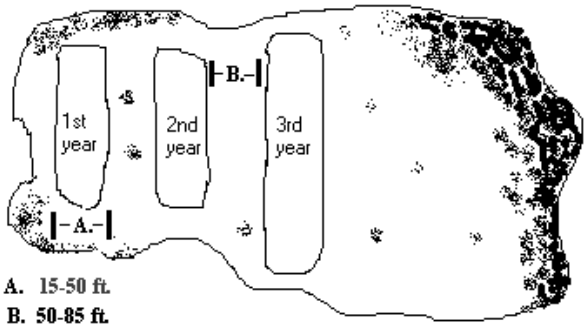


Fig. 1. Rotational mowing configuration to provide various stages of growth and vegetation diversity.

Disked firebreaks should be created around burn areas to maintain control of prescribed burns.

***Mowing*:** Rotational mowing can also be used to maintain grassland communities in various stages of growth and vegetative diversity. Rotational mowing is conducted by dividing an area into 15 to 50-foot wide strips (depending on the area's size) that are separated from one another by 50 to 85 feet (see Fig. 1). A single strip is mown to a height of six to 12 inches either once or twice a year. Areas managed for ring-necked pheasants where mowing is used primarily for weed control should be mowed one time at a height of eight to 12 inches between August 1 and 15. Smaller areas can be divided into three strips; mow one strip in early spring (mid-March to mid-April, depending on the region) before grassland nesting birds and mammals commence nesting activities, and again in late summer after nesting activities are completed. The following year, the second strip would be mowed in the same months. The third strip would be mowed in year three, and the process begins again in year four. Larger areas evenly divided into six or more strips can be rotationally mown in pairs, so that strip one is worked with strip four, strip two with strip five, strip three with strip six, and so forth. Note: Landowners should work closely with local NRCS field officers, state department of natural resource officers, and other wildlife professionals when planning grassland management to determine mowing dates and techniques that minimize impacts to nesting birds and mammals.

Mowing Hay Fields: Ideally, hay mowing activities should be delayed until mid-July or early August to allow pheasants to complete nesting activities. However, in production agriculture hayfields, this is frequently incompatible with harvesting the highest quality forage. These fields may become ecological traps for pheasants in these circumstances by providing attractive nesting cover that is likely to be disturbed during the nesting cycle. However, the following measures can be taken to minimize impacts on pheasants nesting in production hay fields.

1) Hay fields should be mowed from the field center outward to provide cover that allows fledgling birds to escape to the edge of the field (Fig. 2).
2) Fields can be broken into sub-units and mowed on a rotational basis to allow for some refugia habitat to be available at all times.
3) Adult birds are less likely to flush from nests during the night. Therefore, night mowing should be avoided to prevent adult mortality.
4) Flushing bars should be mounted on harvesting equipment to minimize bird mortality during mowing operations.
5) Strip cover and similar herbaceous cover should be left undisturbed until well after the nesting season (mid to late August). This provides an opportunity for pheasants that failed the first nesting attempt due to mowing disturbance to re-nest in these alternative adjacent habitats.

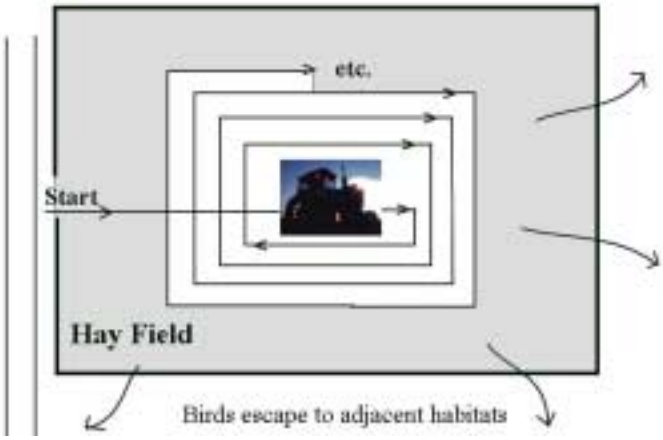


Fig. 2. Hay fields should be mowed from the center outward to allow young pheasants to escape to adjacent habitats.

***Plantings* –** Planting native trees, shrubs, grasses, and forbs in odd areas and along woodlots or fencerows can create both food and cover for ring-necked pheasants. Cover plantings in these areas should be done in strips of two to five rows with a 15- to 20-foot herbaceous border. Tree and shrub rows are most beneficial when trees are planted 10 to 15 feet apart in the center rows with surrounding shrubs spaced four to six feet apart. Shelterbelts or windbreaks can be planted with common ninebark, common lilac, red osier dogwood, viburnums, American plum, common chokecherry, wild cherry, crabapples, black walnut, green and white ash, oaks, eastern red cedar, northern white cedar, Douglas fir, Jack pine, white spruce, Rocky Mountain juniper, and Norway spruce. Food plots may be beneficial in years of low food availability. One-acre food plots per 10-25 acres is suitable for large areas, but four or five smaller food plots with irregular

edges planted adjacent to fencerows, field borders, and woodlot edges will bring food and cover habitat closer together. Food plants to include in pheasant food plots are corn, wheat, grain sorghum, alfalfa, barley, oats, buckwheat, sunflowers, sweetclovers, prairie clover, bundleflower, partridge pea and other small grain crops, legumes, and forbs. In many situations, several crop rows may be left standing along field borders in lieu of planting food plots.

Strip Cropping and Contour Grass Strips – Planting strips of green wheat within fallow stubble increases the amount of nesting and brood-rearing edge habitat available for ring-necks within a crop field. Strip cropping can also reduce soil erosion. Grass, legume, and forb strips planted 20-30 feet wide along terrace ridges or the contour of unterraced crop fields provide nesting, brood-rearing, and escape cover for ring-necks while providing agronomic advantages. Switchgrass, grazer alfalfa, sweetclover, purple prairie clover, and sunflower are recommended for grass strips within crop fields, although other native legumes and forbs can be included in the seed mix as well.

Herbicide Application – Herbicides are commonly used to control weeds in crop fields. Application procedures that are compatible with wildlife should be used wherever possible to maximize ring-necked pheasant use of agricultural fields. Spring spraying of wheat-fallow stubble fields following the commencement of weed growth with a non-persistent herbicide such as Roundup® or Landmaster® reduces undesirable weed competition while leaving a maximum amount of erect stubble to collect moisture. Spraying in lieu of spring tillage is recommended. Undercutting with wide blade sweeps (no treaders) is the best alternative for spring stubble if spraying is not preferred. Avoid using broadleaf herbicides such as Amber® and Finesse® on green wheat as it tends to reduce native warm-season broadleaf plants like sunflower and encourages less desirable grass weed species. However, if control of cool-season broadleaves such as mustard is necessary, 2,4-D® can be applied in February or March. If bindweed control is necessary following harvest, application of 2,4-D plus Tordon® or Landmaster plus Tordon is recommended in early fall. Research shows an 80% decrease in adult pheasant numbers and reduced chick survival in fields unnecessarily sprayed after harvest. Likewise, unnecessary tillage of wheat stubble in the summer or fall can reduce moisture storage, reduce yields, and cut profits when compared to simply letting weeds grow.

Limiting Factors

For planning purposes, use the table below to subjectively rate the availability and quality of pheasant habitat within a planning area, based on the above habitat requirements descriptions. Habitat communities and components that are absent or rated low are likely limiting ring-necked pheasant habitat quality.

	Availability/Quality			
Habitat Component	**High**	**Medium**	**Low**	**Absent**
Food				
Nesting cover				
Brood-rearing cover				
Roosting and escape cover				
Winter cover				
Interspersion of habitat components				
Minimum habitat size				

Management Prescriptions

Management treatments should address the habitat components that are determined to be limiting ring-necked pheasant habitat potential. For planning purposes, select among the possible action items listed below to raise the quality or availability of each habitat component determined to be limiting. NRCS conservation practices and various programs that may provide financial or technical assistance to carry out specific management practices are listed where applicable.

Habitat Component	Management Options for Increasing Habitat Quality or Availability	Conservation Practices and Assistance Programs
Food	• Plant native warm season grasses such as big bluestem, little bluestem, switchgrass, sideoats grama and Indiangrass, as well as legumes, sunflowers, and a variety of other native forbs.	327, 386, 390, 393A, 645, 647 WHIP, EQIP, PFW, CRP
	• Preserve and maintain grassland/forb communities and edge habitat by conducting strip disking, prescribed rotational burning, and rotational mowing when and where appropriate.	338, 528A, 645, 647 WHIP, EQIP, PFW, CRP
	• Leave several rows of standing crops along the edges of cropfields and leave waste grain on the ground following harvest activities.	329
	• Preserve fencerows, treerows, and hedgerows growing along field edges and within grassy habitat that provide a diversity of plant and insect life and wild fruits and seeds.	380, 386, 422, 650
	• Plant corn, milo, wheat, grain sorghum, alfalfa, barley, oats, buckwheat and other small grain crops, sunflowers, sweetclovers, prairie clover, bundleflower, partridge pea and other legumes in food plots near winter roosting cover.	645 WHIP, EQIP, PFW, CRP
	• Limit herbicide and insecticide use on grassland and forb communities to small areas or use mechanical means so as to minimize loss of forbs and invertebrates used as food.	
Nesting and brood-rearing cover	• Cut wheat and hayfields at the highest possible height (12-24 inches), or use a stripper header, and delay cutting until after primary nesting months (late March-mid July). Use flushing bars, avoid night mowing, and mow hay fields from the center outward.	
	• Plant a mixture of native warm season grasses and forbs consisting of big bluestem, little bluestem, switchgrass, sideoats grama, Indiangrass sunflowers, bundleflower and prairie clover.	386, 390, 393A, 647 WHIP, EQIP, PFW, CRP
	• Preserve and maintain grassland/forb communities, odd areas, field corners and edge habitat by conducting strip disking, prescribed rotational burning, and rotational mowing when and where appropriate.	338, 528A, 645, 647 WHIP, EQIP, PFW, CRP
	• Avoid pre-harvest application of broadleaf herbicides such as Amber and Finesse. • Avoid post-harvest herbicide application and tillage to leave residual stubble cover. • Avoid mowing roadside and field drainage ditches, or mow after the peak nesting season between August 1 and 15 to provide residual cover. • Avoid planting crops, mowing grassy vegetation, or harvesting planted crops within 25 feet of fencerows and woodlot edges.	386
	• Reduce herbicide use when application results in loss of nesting cover.	
	• Preserve brush heaps, briar and brush thickets and farmland woodlots adjacent to grassland nesting habitat.	
	• Practice conservation tillage, prepare cropfields in early spring (March-late April) before peak nesting season, and plow fields to be left idle for a growing season in late June after nesting activities have ceased.	329
Winter cover	• Preserve weedy fencerows; dense, undisturbed grasslands; abandoned farmsteads; and low-growing grassy and shrubby habitats. • Fence livestock from weedy playa lake bottoms and cattail marshes. • Preserve and plant evergreen/hardwood windbreaks and shelterbelts. • Restore hydrology and vegetation in degraded herbaceous wetlands.	380, 386, 390, 391, 422, 650, 657 WHIP, EQIP, PFW, CRP, WRP
Roosting & escape cover	• Preserve shrubby and woody cover, brush heaps, briar and brush thickets and farmland woodlots adjacent to nesting habitat.	
Interspersion & minimum habitat size	• Combine above prescriptions to increase interspersion of habitat components and amount of suitable ring-necked pheasant habitat.	

NRCS Conservation Practices that may be useful in undertaking the above management actions.

Conservation Practice	Code	Conservation Practice	Code
Conservation Cover	327	Filter Strip	393A
Residue Management	329	Hedgerow Planting	422
Prescribed Burning	338	Prescribed Grazing	528A
Windbreak/Shelterbelt Establishment	380	Upland Wildlife Management	645
Field Border	386	Early Successional Habitat Development	647
Riparian Herbaceous Cover	390	Windbreak/Shelterbelt Renovation	650
Riparian Forest Buffer	391	Wetland Restoration	657

Field Border Management – Vegetation management through plantings or disturbance along field borders and odd areas can significantly improve ring-necked pheasant habitat quality in agricultural landscapes. A vegetative border at least 35 feet wide between cropfields and along hayfield, pasture, fallow field, and woodland edges can provide food, travel lanes, nesting, brood-rearing, loafing, and escape cover. Leaving several standing rows of unharvested crop along field borders near cover or a 15-30 foot wide unplanted grassy strip along cropfield edges and unmowed strips around pastures, meadows, and woodlands can benefit ring-necks as well as a multitude of other wildlife. Occasional disturbance (once or twice annually) in early spring and late fall (so long as adequate residual cover remains over winter) via disking or mowing may be beneficial to promote regeneration of forb seeds and attract insects along field borders.

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Roadside vegetation can provide valuable nesting and escape cover for ring-necks when left undisturbed during peak nesting months (April-August). This grassy ditch line acts as a protective buffer between the road and crop field and can provide nesting cover for ring-necks and other grassland nesting birds.

Available Assistance

Landowners interested in making their individual efforts more valuable to the community can work with the Wildlife Habitat Council and NRCS to involve school, scout, and community groups and their families, as well as state and federal fish and wildlife agency personnel, in habitat projects when possible. On-site education programs demonstrating the necessity of ring-necked pheasant habitat management can greatly increase the value of an individual management project as well. Corporate landowners should encourage interested employees to become involved. Involving federal, state and non-profit conservation agencies and organizations in development and implementation of a ring-necked pheasant management plan can greatly improve the project's success. Assistance programs available through various sources are listed below.

Programs that provide technical and financial assistance to develop fish and wildlife habitat on private lands.

Program	Land Eligibility	Type of Assistance	Contact
Conservation Reserve Program (CRP)	Highly erodible land, wetland, and certain other lands with cropping history. Stream-side areas in pasture land	50% cost-share for establishing permanent cover and conservation practices, and annual rental payments for land enrolled in 10 to 15-year contracts. Additional financial incentives are available for some practices	NRCS or FSA State or local Office
Environmental Quality Incentives Program (EQIP)	Cropland, range, grazing land & other agricultural land in need of treatment	Up to 75% cost-share for conservation practices in accordance with 5 to 10-year contracts. Incentive payments for certain management practices	NRCS State or local Office
Partners for Fish and Wildlife Program (PFW)	Most degraded fish and/or wildlife habitat	Up to 100% financial and technical assistance to restore wildlife habitat under minimum 10-year cooperative agreements	Local office of the U.S. Fish and Wildlife Service
Waterways for Wildlife	Private land	Technical and program development assistance to coalesce habitat efforts of corporations and private landowners to meet common watershed level goals	Wildlife Habitat Council (301-588-8994)
Wetlands Reserve Program (WRP)	Previously degraded wetland and adjacent upland buffer, with limited amount of natural wetland, and existing or restorable riparian areas.	75% cost-share for wetland restoration under 10-year contracts and 30-year easements, and 100% cost share on restoration under permanent easements. Payments for purchase of 30-year or permanent conservation easements.	NRCS State or local Office
Wildlife at Work	Corporate land	Technical assistance on developing habitat projects into a program that will allow companies to involve employees and the community	Wildlife Habitat Council (301-588-8994)
Wildlife Habitat Incentives Program (WHIP)	High-priority fish and wildlife habitats	Up to 75% cost-share for conservation practices under 5 to 10-year contracts	NRCS State or local Office
State fish and wildlife agencies and private groups such as Pheasants Forever may have assistance programs or other useful tools in your state.			State or local contacts

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In cooperation with partners, the mission of the Wildlife Habitat Management Institute is to develop and disseminate scientifically based technical materials that will assist NRCS field staffs and others to promote conservation stewardship of fish and wildlife and deliver sound habitat management principles and practices to America's land users.

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