

Mourning Dove Management for Landowners



Natural Resource Enterprises

Wildlife and Recreation

For landowners interested in starting a natural resource-based alternative enterprise in the Southeast, managing fields planted with food plots for use by mourning doves (*Zenaida macroura*) and other wildlife species can be an attractive option.

One reason this is an attractive option is that it is not necessary to require large land areas to have a successful dove field. Other positive aspects include the small financial investment required, the direct and indirect benefits to other wildlife species, and the high level of social interaction and tradition associated with dove hunting.

The mourning dove is the most popular game bird in the United States, with an annual harvest greater than all other game birds combined. In Mississippi, the mourning dove annual harvest is greater than any other game bird species. It is the second most hunted small game species, second only to squirrels in numbers of hunters. Its quick flight, erratic movement, and quality for eating make it popular among both hunters and wildlife enthusiasts.

Managing for doves can provide landowners with enjoyment and an alternative source of income during the fall and winter.

Life History

Mourning doves are medium-sized migratory birds that range from Alaska to most of South America. Recent surveys estimate their population in the United States

at approximately 500 million. Their song is a low-toned, mournful *cooah, coo, coo, coo*. The call of doves is a common sound in rural and suburban backyards, although it often goes unnoticed. While mourning doves are migratory, they may remain year-round in warm climates such as Mississippi. Whether they migrate or stay depends on habitat and forage availability, as well as the severity of early winter conditions.

Doves return to their breeding grounds in late winter. Heavy snowfall or temperatures near zero can result in many birds dying from exposure or an inability to find food. In Mississippi, early migrants may begin nesting as early as late February, with nesting activity increasing through April. Clutch sizes average two eggs per cycle but can include up to four. For the first three days after hatching, parents feed their young crop milk, a highly nutritious liquid, followed by seeds.



The mourning dove nesting cycle lasts approximately 33 days, from nest building and incubation to fledglings leaving the nest. To maintain population levels, pairs typically attempt five or six nestings per year, producing three or four broods in three to six nesting cycles. On average, five or six young are raised per pair annually.

Mourning doves have a short lifespan, averaging just over one year. First-year doves face a mortality rate of 60–75 percent, while adults have an average mortality rate of 50–60 percent. These rates are similar to those of rabbits, quail, and other small game species. Due to their high natural mortality rate, many doves not harvested by hunters will die over the winter from exposure, disease, or starvation. Hunters can sustainably harvest up to 15 percent of the mourning dove population each fall without negatively affecting overall numbers.

Other dove species found in managed dove fields in the southeastern United States include the Eurasian collared-dove (*Streptopelia decaocto*) and the ringed turtle-dove (*Streptopelia risoria*). The Eurasian collared-dove, considered an exotic species, has rapidly colonized parts of North America and is becoming increasingly common in some areas. The domesticated ringed turtle-dove is less common and appears less capable of sustaining wild populations. Both species are typically observed in urban or suburban areas,

though the Eurasian collared-dove has recently been spotted in rural hunting areas.

State regulations on hunting exotic dove species during migratory bird seasons vary. Always check your state wildlife agency's regulations before harvesting these birds. In Mississippi (as of 2025), hunters may harvest Eurasian collared-doves during dove seasons, and these do not count toward the mourning dove bag limit.

The Eurasian collared-dove is noticeably larger than the native mourning dove, with squared tail feathers and a paler overall coloration. When seen flying together, the two species are easy to distinguish. The ringed turtle-dove is smaller than the Eurasian collared-dove but slightly larger than the mourning dove. This domesticated dove varies in color but is generally pale, almost white, and distinctly different from the mourning dove. Despite differences in size, color, and flight patterns, the Eurasian collared-dove has a similar taste to the mourning dove when prepared for the table.

For information on the proper care of harvested doves in the field, as well as preparation for freezing and cooking, contact the [MSU Extension Wildlife, Fisheries, and Aquaculture department](#) at (662) 325-3133.



Habitat and Food

Mourning doves primarily eat seeds and plants, though they occasionally consume insects. Their diet consists mainly of seeds from agricultural crops (grains), native grasses, and weeds. Mourning doves are poor scratchers and do not forage for seeds by scratching. Instead, they feed primarily on open ground.

Fields prepared for doves should include disked open areas to prevent weeds from establishing and going to seed. When managing land for mourning doves, ensure foraging habitats are located near nesting sites. While doves will travel for food, they prefer local food sources.

In Mississippi, nesting space is generally not a limiting factor. Mourning doves prefer nesting in trees or tall shrubs averaging 15 feet above the ground. Nesting sites should provide cover from predators, protection from the summer sun, and insulation against cold in late winter or early spring. During late winter, early-nesting doves often choose coniferous trees for added concealment from predators.

Mourning doves require fresh water daily, ideally in the morning and evening. A nearby pond, puddle, or stream is essential for drinking. The water source should have minimal surrounding vegetation to allow easy access to the water's edge and clear visibility for watching predators while drinking.

Mourning doves prefer seeds from the following plant species:

American sweetgum	Japanese millet
barley	Johnsongrass
barnyard grass	lespedeza
bristlegrass	pine seed
browntop millet	poke weed
buckwheat	primrose millet
Carolina cranebill	rye
common ragweed	sedges
corn	sesame
cowpeas	soybean
croton	Sudan grass
crowfoot	sunflower
dove proso millet	wheat
Egyptian wheat	wild peas
grain sorghum	



Planting and Harvesting

Begin preparing a field to provide food for doves and other wildlife species in early spring. By late summer, some grains will have started to shatter, offering food for returning doves flocking to available food sources.

Plant a variety of grains, such as sunflower, browntop millet, and sorghum, to increase seed availability for doves from early fall through winter. For example, in 2003, the Mississippi Department of Wildlife, Fisheries, and Parks, in partnership with the Mississippi State University Extension Service, planted a demonstration field. The field alternated rows of browntop millet, sunflower, and bare ground. Two weeks before dove season, the rows between the millet and sunflower were disked to create bare ground, removing weeds that had grown since planting. This provided open areas for doves to alight for feeding and find grit. Additionally, the bare ground between rows made it easier for hunters to locate downed birds.

A suggested planting sequence for mourning doves is as follows: Plant two strips of browntop millet, disk one strip for bare ground, plant one strip of sunflower, disk another strip for bare ground, and repeat this pattern throughout the field.

If you plan to harvest grain crops, leave several rows unharvested to provide seed through the winter for birds and other wildlife. Browntop millet will reseed naturally if undisturbed and allowed to mature. To prepare for the next season, lightly disk the field in spring and fertilize. The remaining millet seed will germinate, producing a healthy stand and significantly reducing second-year planting costs. Leaving unharvested strips of millet and sunflower provides both food and cover for returning doves, aligning with the second and third split hunting seasons.



Disk unplanted strips two to three weeks before dove season to create the open ground doves prefer for alighting and walking. This practice also exposes shattered seed on the ground near the planted strips, making it accessible to doves. Disking at least two weeks in advance gives the birds time to adjust to the habitat disturbance. For more information on feeding preferences and planting recommendations for mourning doves and other Southeast wildlife species, refer to [Publication 2111 *Supplemental Wildlife Food Planting Manual for the Southeast*](#).

If you prefer not to use sunflower, either due to competing wildlife (such as deer consuming the sunflower) or for other reasons, substitute a non-bird-resistant variety of grain sorghum, milo, or Egyptian wheat. To address significant weed issues before planting, refer to Extension herbicide recommendations for selective species control provided in [Publication 1532 *Weed Control Guidelines for Mississippi*](#).

Estimated Costs

The costs of preparing a dove food plot as a wildlife enterprise can vary significantly. Factors include the type of seed planted, management of the standing crop, whether amenities like cold drinks, water, flagged stands, meals, or lodging are provided, and any other services for hunters.

To recover costs and ensure profitability, consider all these factors when determining hunting fees.

Use the following figures to estimate the cost of preparing a dove field:

- Plant browntop millet at a rate of 8 pounds per acre if drilled or 10 pounds per acre if broadcast.
- Conduct a soil test before planting to determine the appropriate fertilizer and lime needs.
- Without a soil test, apply 300 pounds per acre of 6-12-12 fertilizer for browntop millet and 13-13-13 for sunflower.

For a 10-acre field of browntop millet and sunflower planted in strips, the estimated costs are:

- Seed: \$10–\$12 per acre (varies based on purchase timing, variety, and brand).
- Fertilizer: \$350–\$400, depending on soil fertility.
- Lime: \$45–\$60 per ton (a soil test is recommended to determine exact needs).
- Equipment and Labor: \$30 per hour for 8 hours of preparation, planting, and disking (\$240 total).

Estimated Total Cost: \$700 (likely a higher-than-average estimate). Herbicide application costs, if necessary, would be additional.

Liability Insurance

Liability is a significant concern for landowners providing access to their land, especially when charging a fee. Fee-based access increases the need for protection for both landowners and recreational users. If there is uncertainty about the risk of litigation from fee access for dove hunting or other recreational activities, consult an attorney.

Options for liability coverage include purchasing standalone insurance or adding a rider to an existing policy. Consider creating a waiver or release agreement for all hunters to sign. Address and inform users of any potential hazards, such as old wells, downed power lines, or dead trees, to mitigate risks, or correct issues before granting property access.

Liability insurance typically covers losses caused by negligence but not those resulting from willful actions by the insured. Negligence risks can often be minimized on private land through effective risk planning.

Anyone allowing public recreational use of their land, with or without a fee, should obtain adequate liability insurance. Note that most policies limit the insurer's liability to a specific amount per occurrence, which may be less than the actual liability incurred. However, insurance can significantly reduce the overall risk of loss.

If you already have property insurance, consult your insurer about adding a rider to ensure sufficient liability coverage. Landowners leasing their land to individuals or groups may require lessees to obtain liability insurance as part of the lease agreement.

Many insurance companies offer riders for public recreational use or hunting clubs. For specific questions about liability insurance for your natural resource enterprise, consult an attorney.

Regulations

The mourning dove is a federally regulated migratory bird and a widely hunted game species, subject to specific hunting restrictions. Hunters may use shotguns with a maximum bore size of 10 gauge, limited to holding no more

than three shells at a time. Using bait or live decoys to attract doves is illegal.

Federal regulations specify that grains used to attract doves must be planted in a standard agricultural manner. Altering a field after the grain has matured—such as through disking or bush hogging—is allowed, provided no additional grain is added. Piling or adding grain in the field is strictly prohibited. For clarification on field manipulation, contact the U.S. Fish and Wildlife Service or Mississippi Department of Wildlife, Fisheries, and Parks for a preseason field check to ensure compliance.

All hunters accessing your land must understand and follow the applicable rules and regulations. Schedule a meeting before the hunt where hunters gather at a designated time and location to review expectations and guidelines.

1. Discuss shooting hours, typically 30 minutes before sunrise until sunset. Limit hunts to either morning or afternoon on the first day to prevent birds from leaving the field prematurely. To encourage their return, schedule hunts once or twice weekly, avoiding consecutive days. Alternating between morning and afternoon hunts each week is an effective strategy.
2. To prevent confusion and overharvesting, hunters who finish shooting or reach their bag limit should leave the field promptly. In Mississippi, the daily bag limit is 15 mourning doves, with a possession limit of 30. However, possession limits do not apply on the first day of any hunting season.
3. Shotguns used for dove hunting must not hold more than three shells at any time (one in the chamber and two in the magazine). For pump-action and semi-automatic shotguns, hunters must use a plug to limit the magazine capacity to two shells. Side-by-side, over-and-under, or single-shot shotguns are exempt from this requirement.
4. Hunters must carry a valid, signed state hunting license or qualify for an exemption as specified by the Mississippi Department of Wildlife, Fisheries, and Parks.

For detailed regulations on mourning doves in Mississippi, contact the Wildlife Division, Mississippi Department of Wildlife, Fisheries, and Parks, 1505 Eastover Drive, Jackson, MS 39211, or visit www.mdwfp.com.

Safety

Safety is the key to ensuring a successful and enjoyable dove hunt. Nothing can dampen enthusiasm faster than a citation for a hunting violation or an injury caused by shooting at low-flying birds.

The following simple rules will help your hunt go smoothly and safely:

- Keep hunters separated a safe distance, which is at least 100 yards between hunters.
- Remind hunters never to shoot at low-flying birds or birds that land in the field to avoid the risk of injuring others.
- Encourage all hunters to wear protective eyewear for added safety.
- Prohibit alcohol consumption or possession in the field during shooting hours to maintain focus and safety.



Other Considerations

Properly managing a dove field ensures hours of enjoyable shooting and provides doves for the grill or skillet. As part of your management plan, post small signs with station numbers and request that hunters remain near their designated posts. This helps prevent clustering in areas where birds frequently enter the field, reducing the risk of accidents.

Establish clear starting and ending times for both morning and evening shoots, and ensure hunters adhere to them. The earlier hunters leave the field, the more likely doves will return to feed as long as food remains available. For instance, hunters who begin shooting 30 minutes before sunrise and leave by 9:30 a.m. or earlier allow doves to return to the field. However, if hunting continues until noon, many birds will relocate to other feeding areas. The longer hunters remain in the field, the lower the likelihood of birds returning. The same

principle applies to afternoon hunts—although doves may fly later on hot days, it is still best to leave the field as soon as possible to allow birds to return before sunset. Once a hunter reaches their bag limit, invite another shooter to take their place at the empty station to increase their chances for shots.

If you plan to shoot your dove field twice a week, space the hunts apart, such as on Saturdays and either Tuesdays or Wednesdays. Keeping hunts at least three days apart and limiting the number of hours spent hunting will encourage birds to keep returning throughout the season.

Finding Downed Birds

Proper dove management and good sportsmanship require making every effort to retrieve downed birds. If you have a retriever, this task becomes easier—let the dog do the work. Without a dog, however, more effort is necessary. One effective strategy is to stop after every shot, remove your shells, and refrain from reloading until the downed bird is located. This prevents the temptation to shoot another bird and potentially have two downed in different areas. Disking strips in the field can also help by clearing the vegetation and allowing better visibility, making it easier to locate the downed birds.

Advice for Hunters

Be prepared to answer questions from novice hunters regarding the basics of hunting. When advising an inexperienced hunter, recommend aiming for birds within 20 to 30 yards and selecting shots based on their skill level. The hunter's ability will influence the time spent in the field and the number of shots needed to reach their bag limit. On average, a hunter may use around 7.5 shells to reach a 15-bird bag limit, though this can vary significantly depending on experience and shooting skill. A skilled wing-shooter might use as few as 25 shells to bag their limit.

Shot size, shotgun action type, and gauge are primarily personal preferences. Most hunters opt for smaller shot sizes, such as 7.5 to 9. The key takeaway is that doves do not require magnum loads or large shot sizes. Additionally, using a light-recoiling shotgun will significantly improve comfort, especially for new hunters, by the end of the hunt.

For the average hunter, shotgun choke is also a matter of personal preference. A skeet or improved cylinder choke is typically sufficient for dove hunting, while a double-barrel shotgun benefits from improved cylinder and modified chokes.

Comfort and Fees Charged

The first season (Sept. 1–21) is typically quite hot, so it is advisable for hunters to wear either camouflage or dull-colored clothing. In addition to dressing lightly, you may want to carry a small cooler filled with cold water and sodas to stay hydrated while in the field.

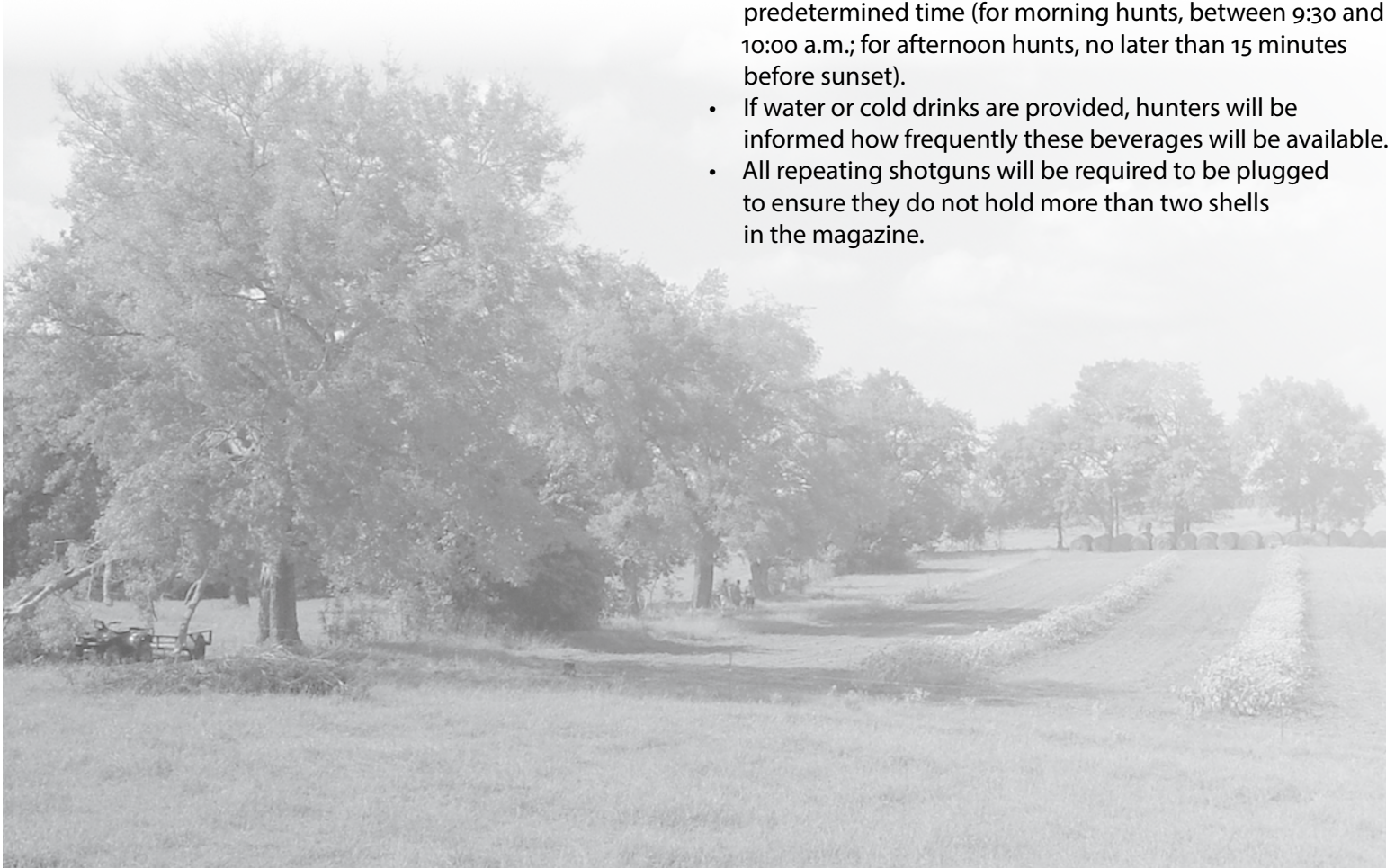
Depending on the facilities and fees charged, some landowners choose to provide water, soda, and/or a meal for the hunters. The cost to hunters can vary from as low as \$10 per shooter per hunt to more than \$100, depending on the costs and amenities the landowner provides. To recover the costs of preparing a dove field, landowners must understand those expenses. Some landowners with lodging and dining facilities offer package hunts for corporate groups or others, which may cost more than \$250 per hunter and could include facilities for a morning fishing trip followed by an afternoon hunt.

Currently, the most common prices advertised for a half-day dove hunt in Mississippi range from \$10 to \$150 per hunter. Again, this varies depending on the services and amenities provided and whether the hunt takes place on land prepared by the landowner as a dove food plot or simply a harvested corn or wheat field.

Hunter Expectations

When paying to enter a dove field, hunters should expect the following:

- Everyone entering the field must adhere to safe hunting practices. This is especially important if you are unfamiliar with the other hunters unless they are experienced and ethical.
- The landowner, or someone in charge of the hunt, should provide clear ground rules, including field size limitations and the location of property lines.
- Alcoholic beverages are prohibited in the field during the hunt.
- All hunters will be informed not to shoot at low-flying birds or birds landing in the field due to the risk of shooting another hunter.
- Legal shooting hours will be strictly observed.
- All hunters will make every effort to recover downed birds.
- Bag limits will be strictly enforced.
- Harvested doves will not be cleaned in the field.
- Hunters will collect and remove spent shells from the field for proper disposal after shooting.
- Hunters will remain within the general area of their assigned stations, except when retrieving downed birds.
- Hunters are expected to leave the field once they have reached their bag limit, when they tire of shooting, or at a predetermined time (for morning hunts, between 9:30 and 10:00 a.m.; for afternoon hunts, no later than 15 minutes before sunset).
- If water or cold drinks are provided, hunters will be informed how frequently these beverages will be available.
- All repeating shotguns will be required to be plugged to ensure they do not hold more than two shells in the magazine.



This publication is provided as an educational tool and reference source and is not a substitute for individualized legal advice regarding liability for fee recreational use of private lands for hunting or other related purposes. Lease agreements for recreational use of private lands should be written documents that have been prepared or reviewed by an appropriate attorney. The use of the information provided in this publication by any person constitutes an agreement to hold harmless the authors, Mississippi State University Extension Service, and Mississippi Department of Wildlife, Fisheries, and Parks for any liability, claims, damages, or expenses that may be incurred as a result of reference to or reliance on the information contained in this publication.

Acknowledgments: We greatly appreciate the formal reviews of this publication and helpful suggestions provided by Dr. Greg K. Yarrow, Associate Professor of Wildlife, Clemson University; Dr. James Armstrong, Associate Professor & Extension Wildlife Specialist, Auburn University; and Dr. Rebecca Stout-McPeake, Extension Wildlife Specialist, University of Arkansas.

Publication 2335 (POD-10-24)

Reviewed by **Daryl Jones**, PhD, Extension Professor. Written by James E. Miller, former Professor Emeritus, Wildlife, Fisheries, and Aquaculture, and David K. Godwin, Landowner Coordinator, Mississippi Forestry Association.



Copyright 2024 by Mississippi State University. All rights reserved. This publication may be copied and distributed without alteration for nonprofit educational purposes provided that credit is given to the Mississippi State University Extension Service.

Produced by Agricultural Communications.

Mississippi State University is an equal opportunity institution. Discrimination in university employment, programs, or activities based on race, color, ethnicity, sex, pregnancy, religion, national origin, disability, age, sexual orientation, gender identity, genetic information, status as a U.S. veteran, or any other status protected by applicable law is prohibited.

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. ANGUS L. CATCHOT JR., Director