

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

**UPLAND WILDLIFE HABITAT MANAGEMENT
(Ac.)**

Code 645

Texas Supplement, Zone 3

Mourning Dove

HABITAT REQUIREMENTS

FOOD

The mourning dove is the most widely distributed and ecologically tolerant of the North American doves. This species has greatly benefited from the patchwork conversion of native vegetation into cultivated areas. Mourning doves prefer hard-coated seeds which make up approximately 99% of their diet with insects and mast amounting to 1% or less. A dove will consume approximately 1 ounce of seeds per day. Doves search for food by picking for seeds rather than scratching so feeding areas must have bare ground and/or lightly vegetated areas. Doves are tolerant of overhead canopy within feeding areas. Seeds chosen include those from grasses, forbs, woody and agricultural crop and weed seeds. The ideal food supply for mourning doves comes from an early successional plant community. See Table 1 for important food plants.

COVER

Mourning doves preferred habitat is one in which there is a large interspersion of brush, open grassland and cropland. Preferred nesting habitat includes urban shade trees, brushy rangeland, shelterbelts, woody fencerows and isolated rural trees. Trees with at least eight inch trunk diameter and ten to thirty feet in height are preferred for nesting. Some preferred species are mesquite, hackberry, elm, and juniper. Research indicates doves prefer to nest in the outer edges of large brush tracts. Doves will also nest on the ground. Research suggests, in

south Texas, that ground nesting sites are associated with prickly pear cactus, mesquite sprouts or fallen mesquite limbs. Large areas of bare ground with less litter seem to be preferred for ground nesting.

WATER

Mourning doves require water daily and usually drink twice a day. Normal times are mid-morning and late evening. They prefer watering sites that are open and free of vegetation.

Stock ponds and lakes are preferred watering sites provided there is a gentle sloping band of bare soil adjacent to the waters edge. Doves will also drink from livestock or wildlife water troughs, irrigation canals, tail water pits and rain puddles. Water is seldom a limiting factor for doves due to their high mobility. Permanent water sources should be no more than 4 miles apart to maximize use by doves.

HABITAT ARRANGEMENT

Rangeland and cropland areas can be managed to better provide the four components needed for survival: food, cover, water and space. Brush management should consider retaining trees with lateral limbs and dense, open canopies to encourage nesting. Motts of mixed brush species should be retained to provide adequate roosting and nesting cover. Trees along fence lines adjacent to feeding sites should be retained for roosting and staging areas. To improve ground nesting opportunities leave areas of prickly pear and low growing brush mixed with the larger brush mottes.

HABITAT SIZE

Mourning doves are able to fly great distances during migration and to find their daily needs. Daily travels taking the birds over ten to twenty thousand acres are possible. Therefore, habitat components do not all have to be found on the same farm or ranch to have doves but dove numbers will be greater on land where all of the habitat requirements are met. Interspersion of habitat components across the landscape will provide the greatest increase in dove numbers.

HABITAT MANAGEMENT TECHNIQUES

FOOD

Mourning dove food supply can effectively be increased on both cropland and rangeland by promoting early succession plant growth. This can be accomplished by several methods.

Crop Residue Management: After grain crops are harvested residues should be left on the soil surface during the fall and early winter period. Leave 10-20 feet of grain unharvested around perimeter of fields for food source.

Disking: Soil disturbances created by disking will reduce existing vegetation and promote lower successional plant production. Disking is generally done in late winter and early fall. Disking should be done in strips on one to five percent of the habitat. Do not disk the same strips each year. For best results, have strips that are disked in present year and strips that were disked the previous year.

Grazing Management: Grazing can be used to promote lower successional plants and increase the food supply for doves. This practice must be carried out carefully so the quality of the habitat for livestock and other wildlife species do not degrade. The objective

is to heavily graze small areas while lightly to moderately grazing the remainder of the pasture. This can be accomplished by herding, placement of watering facilities and feeding to concentrate grazing.

Prescribed Burning: Fire can be used to remove or reduce excessive grass growth and encourage lower successional plant growth. Early winter burns promote cool season forbs. Late winter or early spring burns promote warm season forbs. Prescribed burning must be in accordance to a written burn plan and carried out under the supervision of an experienced burner. An ideal burn would be a mosaic burn, where the fire does not burn completely but leaves unburned areas interspersed with burned areas. Burning that creates a cooler fire, or by using internal firebreaks will help ensure a mosaic burn. Fire and grazing in combination can be used to develop plots with lower successional plants. This can be done by burning several two to five acre plots within larger pastures. When the pasture is grazed, livestock will graze the burned plots heavily and favor the growth of lower successional plants.

Annual Food Plots: To achieve desired results food plots must be planned, planted and managed properly. A good seedbed must be prepared and the seeds planted using a drill or planter, if possible. The food plot may need fertilized and unwanted weeds controlled. See Table 2 for species, seeding rates and dates. Mixtures of species are more likely to provide food for an extended period. Food plots must be protected from livestock. Where deer numbers are high, they may overuse the food plot. All Federal and State “Baiting Laws” must be observed when hunting over food plots.

COVER

Management of cover for mourning doves should be targeted to providing quality nesting cover. Brush management should be planned that leaves isolated motts of mixed species. These areas should include mature trees with lateral limbs and rounded dense canopies. Ground nesting habitat can be provided during brush management by leaving areas with prickly pear, small multi-stem mesquite or fallen mesquite branches. Prescribed burning can improve areas for ground nesting by opening up the canopy and reducing litter. Studies have shown that on the High and Rolling Plains taller herbaceous vegetation that is sparse may increase ground nesting success. This is important in areas where few trees are present. Prescribed burning, in the spring, followed by one to two years of rest can help achieve this type cover. Scattered trees in fence rows, trees around old farmsteads and shelterbelts are frequently used for nesting. These type areas should be protected. Brush should be protected around ponds and lakes to benefit all wildlife species. Several large trees spaced around a pond can be chemically treated to produce staging “trees” or areas for doves to fly into prior to landing to water.

WATER

Where surface water such as ponds or streams is not present, surface water should be provided. Pond modifications to provide doves up to 10 yards of open access to the water

along one or more sides will enhance utilization for drinking. Overflow areas from livestock water facilities, ground level watering devices or modifications of livestock water facilities can be used to provide surface water. Water troughs should be modified to include a floating platform or ramp in the water to allow the birds to drink and a means to escape drowning.

REFERENCES

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- Roberson, J. 1998. Habitat management for mourning doves. *Texas Wildlife Magazine*. Texas Wildlife Association, San Antonio. pp. 19-23.
- Taylor, B. et.al. 2006. Dove management in Texas. Texas Cooperative Extension. B-6185.
- Sontiere, E.C. and E.G. Bolen. 1976. Mourning dove nesting on tobosa grass mesquite rangeland sprayed with herbicides and burned. *Journal of Range Management* 29(3): 226-231.

Table 1. Important Food Plants for mourning dove in south Texas

Forbs	Grasses	Woody
American basketflower	Hall's panicum	Algerita
Annual broomweed	Hurrah grass	Bumelia
Bladderpods	Kleingrass	Catclaw acacia
Bundleflower spp.	Paspalum spp.	Catclaw mimosa
Buffalobur	Plains bristlegrass	Elbowbush
Catclaw sensitivebriar	Sorghum alnum	Ephedra
Carolina geranium	Texas panicum	Flameleaf sumac
Croton spp.	Vine mesquite	Hackberry
Curlycup gumweed		Juniper
Erect dayflower		Littleleaf sumac
Flax		Lotebush
Giant ragweed		Mesquite
Indian mallow		Pricklyash
Mentzelia spp.		Skunkbush sumac
Nuttall peavine		White honeysuckle
Partridgepea		Wolfberry
Plantains		
Pricklypoppy		
Russian thistle		
Sawleaf daisy		
Snow-on the-mountain		
Perennial broomweed		
Pigweed		
Prairie acacia		
Queens delight		
Sida		
Sunflower spp.		
Western ragweed		
Wildbean		

Table 2. Planting recommendations for dove food plots in south Texas

Species	Seeding rate		Planting dates	Planting depth (in)
	Broadcast or drilled ¹	Planted in rows ²		

Perennials

Bundleflower, Illinois 'Sabine' ³	13.6	4.5	12/1 - 4/15	1/4
Bundleflower, Velvet 'Hondo' ³	4.5	4.5	12/1 - 4/15	1/4
Johnsongrass ⁴	10	4	12/1 - 4/15	1/4 - 1/2
Plains bristlegrass	3	1	12/1 - 4/15	1/4 - 1/2
Sorghum alum	12 CS	7 CS	12/1 - 4/15	1/4 - 1/2
Sunflower, Maximillian	3	1	12/1 - 4/15	1/4 - 1/2
Western ragweed	7.5	2.5	12/1 - 4/15	1/4 - 1/2

Annuals, warm season

Browntop millet ⁴	15	NR	4/1 - 5/31	1/2 - 1
Cowpea ³	30	15	4/1 - 5/31	1 - 2
Dove proso millet	15	NR	4/1 - 5/31	1/2 - 1
Egyptian wheat	5	NR	4/1 - 5/31	1/4 - 1/2
Forage soybean 'Laredo'	40	20	4/1 - 5/31	1/2 - 3/4
Foxtail millet	15	NR	4/1 - 5/31	1/2 - 1
Grain sorghum ⁵	12	4	4/1 - 5/31	1 - 2
Hybrid pearl millet	15	NR	4/1 - 5/31	1/2 - 1
Partridge pea 'Comanche' ³	13.4	5	4/1 - 5/31	1/2 - 1
Pigweed	1.5	NR	4/1 - 5/31	1/4
Texas panicum ⁴	6	NR	4/1 - 5/31	1/2 - 1
Sunflower, native	5	NR	9/1 - 2/28	1/2 - 1
Sunflower, black oil	15	5	4/1 - 5/31	1 - 2

Annuals, cool season

Oats	60	20	9/1 - 11/30	1 - 2
Rye	60	20	9/1 - 11/30	1 - 2
Triticale	60	20	9/1 - 11/30	1 - 2
Wheat	60	20	9/1 - 11/30	1 - 2

Footnotes:

- 1 Seeding rates based on the use of PLS (Pure Live Seed) when available; otherwise use good quality commercial seed.
- 2 Row planting (20-40 inch rows) can be used to allow native food plants to establish between rows.
NR = not recommended
- 3 All legumes should be inoculated with the proper strain of Rhizobium for best production.
- 4 These species are also important agricultural weeds and should not be used in farming areas.
- 5 White or yellow seeded varieties with lower tannin content are preferred.

