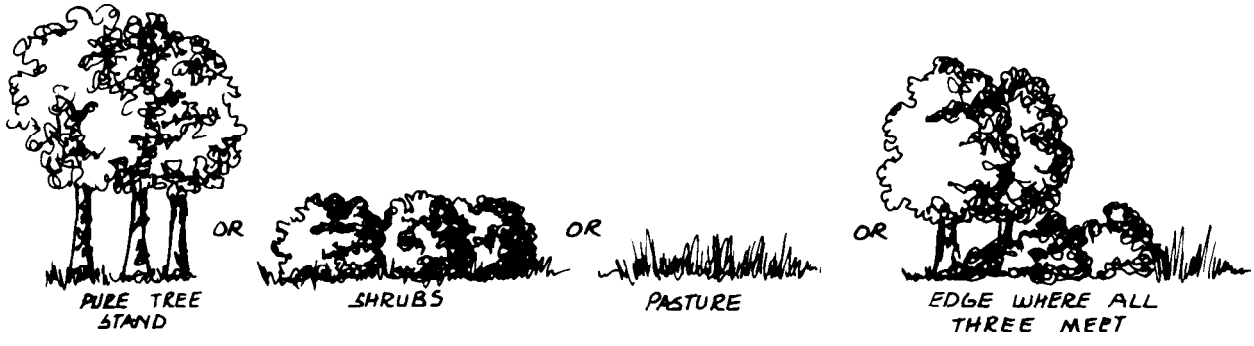
Selected Practices and Plantings for Wildlife

PLANTING FOR WILDLIFE

Wildlife, game and non-game, has certain basic requirements. Three of the most important are food, water, and shelter.

Changing wildlife numbers in an area is primarily a matter of altering the amount of food, water, or shelter.

Generally wildlife is found where two or more kinds of vegetation meet. At an "edge," variety of plants is greatest, so a much broader range of food items and cover materials is available.



Lack of adequate cover may limit wildlife numbers. Therefore, whenever possible preserve such sites as bays, heads, fence rows, hedge rows and old house sites. Although wildlife cover can be planted, it is much easier and cheaper to preserve natural cover.

Water seldom limits wildlife populations in Georgia. For that reason, there is little need to manage water except to attract waterfowl. However, water is necessary, so food and cover should be located near it.

In many areas, food is the principal factor limiting wildlife numbers. Under most circumstances, native vegetation provides both cover and the best foods for our native wildlife. Every attempt should be made to preserve and encourage native food plants.

Table 1 lists some native plants important to wildlife.

TABLE 1. NATIVE PLANTS USEFUL TO WILDLIFE

TREES AND SHRUBS

1. **Bicolor lespedeza** (***Lespedeza bicolor*** Turcz) - Not native, but naturalized over large area. Excellent quail food.
2. **Blackberry** (***Rubus*** spp.) - Berries eaten by most wildlife.
3. **Cherry, black** (*Prunus* ***serotina*** Ehrh.) - Fruits taken by quail, turkey, grouse and particularly raccoon.
4. **Dogwood,** flowering (***Cornus florida*** L) - This plus various other dogwoods taken avidly by turkey, grouse, quail, squirrel and a host of small birds.
5. **Grape,** muscadine and other species (Vitis spp.) - Fruits quite palatable and preferred by a number of species including deer, turkey, quail, grouse and raccoon.
6. **Hickory** (*Carya* spp.) Nuts eaten by squirrel. Shells usually too hard for other species.
7. **Honeysuckle, Japanese** (***Lonicera japonica*** Thunb) - Outstanding winter deer browse. (Large and healthy deer herds in Georgia Piedmont may be result of this plant.) Utilized by rabbits. Fruits eaten by quail and songbirds. Excellent cover for numerous species.
8. **Mountain laurel** (*Kalmialatifolia* L) - Leaves eaten by grouse and deer. One of the most important winter foods of ruffed grouse.
9. **Oaks (Quercus** spp.) - Acorns utilized by most game except dove. Very important for food and cover. Sawtooth oak (***Quercus acutissima*** Carruthers.) is planted extensively as an almost fail-proof source of acorns. The acorns seem to be as readily utilized as those of native species.
10. **Persimmon** (***Diospyros. cirginiana*** L) Fruits eaten by deer, raccoon, opossum and turkey.

TABLE 1 (cont.)

11. Pines *(Pinus* spp.) - Pine mast used by quail, squirrel, turkey, and songbirds. **Five to 15-year-old** plantations can provide bedding area for **deer. Clear-cut, site-prepared areas provide nesting and food for** quail to about the second or third year following preparation.

12. **Plums, wild** *(Prunus* spp.) - Fruits utilized by deer, turkey, bear and raccoon. Provide excellent cover.

13. **Viburnums** *(Viburnum* spp.) - Fruits eaten by deer, raccoon, opossum, turkeys, squirrels and songbirds.

14. **Waxmyrtle** *(Myrica cerifera* L) - Fruits eaten by deer, quail, turkey and songbirds.

15. **Yaupon (Ilex** *vomitoria* Ait.) - Excellent deer browse, and fruits taken by quail, turkey, raccoon and songbirds.

UPLAND WEEDS AND HERBS

1. **Bahiagrass** *(Paspalum notatum* Flugge) - Excellent for turkey. Lightly mowed fields or openings provide excellent turkey brood, range. Seed heads avidly stripped.

2. Beggarweed, Florida and perennial *(Desmodium tortuosum* Schub and *Desmodium* spp.) - Seeds are quail food.

3. **Greenbriar** *(Smilax* spp.) - Vines serve as palatable deer browse. Fruit used by turkey, grouse, bear and raccoon.

4. Lespedeza, common *(Lespedeza striata* (Thunb.)H. and A.) - Probably best quail food in Georgia.

5. **Lespedeza, other native species** *(Lespedeza* spp.) - Seeds are quail food.

6. **Milkpea** *(Galactia* spp.) - A highly palatable quail food.

7. Partridge pea *(Cassiu fasciculuta* Michx and *Cassiu nictitans* L) Seeds are quail food.

8. **Pokeweed** *(Phytolacca americana* L) - Seeds highly palatable food for dove, songbirds, raccoon and bear.

9. **Ragweed** *(Ambrosia artemisiijoliu* L) - Seeds eaten by dove, quail, and songbirds. A very important species.

AQUATIC AND MARSH PLANTS

1. **Arrow-arum** *(Peltandra virginica* (L) Schotts and Endl.) Important for wood duck, especially in beaver ponds.

2. **Asiatic dayflower** *(Aneilema keisak* Hossk.) - Perhaps one of the most important duck food plants for the larger dabbling ducks — mallard and black — particularly in beaver ponds.

3. **Barnyard grass (Echinochloa** *crusgalli* (L) Beauv.) - Duck and quail food.

4. **Bulrush, saltmarsh** (*Scirpus robustus* L) - Outstanding duck food plant in brackish water.

5. **Bulrush, soft-stem** (*Scirpus validus* Vahl) - Highly palatable duck food.

6. **Pondweed, sago and other species** *(Potamogeton* spp.) - Utilized by ducks.

7. **Smartweed, Pennsylvania** *(Polygonum pensylvanicum* L) - Used by ducks, to some extent by doves.

8. **Smartweed, swamp** *(Polygonum hydropiperoides* (Michx. Small) - Excellent duck food plant, particularly in beaver ponds.

9. **Spikerush, dwarf** *(Eleocharis parvula* (R. and S.) Link) - Very good duck food in brackish water.

10. **Tearthumb** *(Polygonum sagittatum* L and *Polygonum arijolium* L) - Important duck food in beaver swamps.

11. **Watershield** *(Brasenia schreberi* Gmel.) - Good duck food, particularly for ring-neck ducks.

Although mention is made that these plants serve as food for one species or another, most also provide cover for many wildlife species.

Under certain circumstances it may not be possible to manage native food plants. In these cases, use locally available domesticated plant materials. There are a number of different plantings which can be used for wildlife. See Table 2 pages 4-7. Although plants are generally listed singly, you may want to plant several different ones. If you can only plant one kind, try to stagger planting dates. Either technique-mixing varieties or staggering planting dates-will provide a longer period of food availability.

TABLE 2. PLANTS FOR WILDLIFE FOOD PLANTINGS

Plant[1]	Used[2] by	Soil[3]	pH[3]	Rate	Planting Dates	lime to Maturity	Other
Annual Game-Bird Mix: Korean lespedeza, rape, milo, browntop, peas, soybeans	Do, Q R, T	All	6.0-6.5	Broadcast: 25 lb/acre	May-June		Seeds available as food from Sept. to March. Mix equal parts of each. Annual.
Asiatic dayflower	Du	Wet pond soils		Broadcast seed or push plants into bottom about 12" apart	May-July		No commercial source; seed or plants collected in wild and planted. Perennial.
Bahiagrass	R, T	All	6.0	Broadcast: 15 lb/acre	Feb. I-Apr. 1		S. Ga. only. Occasional mowing until July 1 will improve use as brood range. Perennial.
Beggarweed, Florida	Q	Fertile, moist sandy soils		Broadcast: 10 Ibs/acre	No later than June 1	150-l 80 days	Use scarified seed; S. Ga. only. Seed available as food from Nov. through Feb. Annual.
Chufa	T	Well-drained sandy or sandy loam	6.0	Broadcast: 50 I bs/acre. 18" or 24" rows: 25-35 Ibs/acre	May-July		Rotate after 2-3 years. Annual.
Clover, Crimson	D, R T	All except poor	6.0-6.5	Broadcast: hulled-l 5 to 20 I bs/acre unhulled-45-60 I bs/acre	Sept. 1 - Oct. 1		Inoculate seed. Use reseeding variety. Winter annual.

Plant[1]	Used[2] by	Soil[3]	pH[3]	Rate	Planting Dates	Time to Maturity	Other
Clover, White	D, R T	Moist clays or loams	6.5-7.0	Broadcast: 2-3 lbs/acre	For winter: Sept. 1 - Oct. 1		Good for winter greens. Inoculate seed. Use scarified seed. Perennial May die in summer.
Clover and grass mixture	D, P, T	All	6.5	Drill: 8 lbs. of mixture per acre	Mix 1: Sept. Oct.; Mix 2: Sept.; Mix 3: Feb.-March		Scarify clover and inoculate. Mix 1. White clover and fescue, 1:3. (N. Ga.); Mix 2. White clover and bludgrass, 1:2 (N. Ga.); Mix 3. White clover and dallisgrass, 1:3 (S. Ga.)
Corn	D, Do, Du, Q S, T	Fertile, well-drained loam	6.0-6.8	Space at 8"-10" in 36" rows (ca. 7 lbs./acre)	March 15-June 1	80-1 00 days	Can be flooded for waterfowl. Plant to mature before frost. Annual.
Corn and Soybean Mixture	D, Do, Du, Q, R S, T	All, best on fertile loam	6.0-6.8	Alternate rows & plant as for individual crops or 4 lbs corn & 25 lbs in soybeans in 36" rows	March 15-June 1	80-1 00 days	Annual
Lespedeza, Annual: Korean Kobe, common	Q	All except sand	6.0-6.5	Broadcast: 30-35 lbs. acre	Feb. l-March 1		Seed generally available after first frost. Annual. Will reseed.
Iespedeza, bicolor	Q	All except deep sands or poorly drained	6.0-6.5	Plants: 24" apart in 36" to 48" rows Seed: 36" rows 12-1 4 lbs/acre	Nov. l-April 1 for plants March l-April 15 for seed		Use scarified seed. Seeds available as food beginning in Sept. Use a o-20-20 fertilizer for maximum seed production. Perennial.

TABLE 2 (cont.)

Plant[1]	Used[2] by	Soil[3]	PH[3]	Rate	Planting Dates	lime to Maturity	Other
Millet, Browntop	Do, Du, Q, T	Well-drained	6.0	Broadcast: 20 lbs/acre	April l-July 1	60 days	Can be planted in dewatered ponds for ducks. Annual.
Millet, Japanese	Du	Wet soils		Broadcast: 20 lbs/acre	July l-Aug. 1	75 days (up to 110 days for late varieties)	Keep water off until 10" high. Light grazing may improve seed yield. Annual.
Millet, Pros0	Do, Q	Well-drained	6.0	Broadcast: 20 lbs/acre Drill: 15 lbs per acre	April l-July 1	75 days	Can be used in duck ponds: dewater, plant by June 15 and flood in Sept. Annual
Brown-top millet-grain sorghum mixture	Do, Du, Q, T	All	5.8-6.2	Drill: 10 lbs brown-top & 15 lbs sorghum/acre	April l-July 15		Can be planted in dewatered ponds for ducks. Annual
Nilo Food Patch Mixture	Do, Q	All	6.0-6.5	10-15 lbs/ acre	April l-July 15		Equal parts black amber cane, orange amber cane, atlas sorghum, dwarf kaffir, sudangrass, alta fescue-omit fescue in S. Ga. and substitute Napiergrass. Annual
Oats	D, R, T	All	6.0	Broadcast or drill: 2-2% bushel/acre	Aug. 15-Oct. 15		Annual
Pea, Partridge	Do, Q	Moist sites preferred but will produce on all	6.0-6.5	Broadcast: 15 lbs/acre. Rows 30", 7 lbs/acre	March l-April 15	150 days	Seed available as food beginning in Nov. Annual
Rye	D, R	Loam	6.0	2-2½ bushels/ acre	N. Ga. Aug. 15 through Sept. 15. S. Ga. Sept. 15-Oct. 15		

Plant[1]	Used[2] by	Soil[3]	pH[3]	Rate	Planting Dates	lime to Maturity	Other
Ryegrass, Winter	D, R, T	Best on fertile soils	6.0	Broadcast: 40 lbs/acre	N. Ga. Aug. 15 through Sept. 15 S. Ga.: Sept. 15-Oct. 15		Very useful on areas bared in the fall. Will provide winter greenery. Annual.
Sesame	Do, Q	Well-drained	6.5-7.0	Broadcast: 10 lbs/acre Drill: 4-5 lbs in 36" rows	After soil temperature reaches 75°F (Ca. July 1)	85-100 days	S. Ga. Do not plant on same site 2 years in row due to wilt Annual.
Sorghum, grain	D, Do, Q, T	All	5.8-6.2	36"-44" rows, 2-8" between plants Broadcast: 30 lbs/acre	March 15-July 1	95-130 days	Plant as late as possible and still have grain before frost. Bird-resistant strains have durable grain that may last all winter.
Stoddard Winter Mixture	Do, Q	All	6.0-6.5	Broadcast: 25 lbs/acre	Sept. 1-Oct. 15	Late spring for seed	Vetch, 60 lbs; Caley peas, 30 lbs; Rye, 7 lbs; Oats, 7 lbs; Wheat, 7 lbs. Annual.
Sunflower	Do, Q, S, T	All, but best on fertile loams		Broadcast: 5 lbs/acre Rows: 36" 12" apart in row	June I-June 30		Annual.
Vetch	D, R						
Wheat	D, Do R, T	Well-drained heavy	6.0	Drill: 2 bushels/acre	N. Ga.: Oct. 15 through Nov. 1 S. Ga.: Nov. 1	180 days	Available as food beginning about May. Annual.

[1]Use varieties recommended for local use.

[2]D - Deer
Do - Dove
Du - Duck - may also include other waterfowl
Q - Bobwhite quail
R - Cottontail
S - Squirrel
T - Turkey

[3]Soil test to determine fertilizer and lime needs as for other crops.

Since wildlife is mostly a product of "edge," management should provide maximum "edge." Plots should be relatively small, long and narrow. Avoid extremely large plantings because the central part may never receive *use*. Table 3 shows how plot shape affects the number of feet of edge.

TABLE 3. RELATIONSHIP BETWEEN SHAPE AND PERIMETER OF 1 ACRE PLOTS

	CIRCLE	SQUARE	RECTANGLES		
	117.8' radius	208.7	147x295	100x436	50x871
Feet of Perimeter (edge)	740'	835'	889'	1072'	1842'

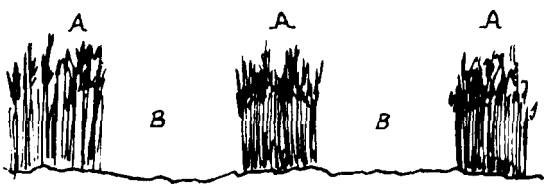
MANAGEMENT SUGGESTIONS FOR SELECTED GAME SPECIES

Dove, Mourning

In most areas, the principal management for doves is planting fields for dove shooting. Fields should be 5-10 acres. Large acreages can be planted if the field is long and relatively narrow. If hunters will be posted on both sides, it is best for the field to be at least 100 yards wide.

Fields near a good water supply are more successful than those far from water. This is especially true during dry years.

When planting in rows or with a drill, alternate planted and bare areas. During the shooting period, bare areas should be disked or plowed. When broadcast planting, disc strips prior to the season. Mechanically harvested, hogged-off or mowed fields are attractive to doves. Whenever possible, stagger these practices to extend the time the field is attractive.



A. PLANTED FOOD
B. STRIPS LEFT BARE, DISKED, HARVESTED, OR BUSH-HOGGED

Limit shooting to once or twice a week.

Plants which may be used in dove fields are: an annual game-bird mixture, corn, corn and soybean mixture, brown-top millet, proso millet (one of the best overall), brown-top millet-grain sorghum mixture, the various peas, sesame (one of the best in south Georgia), and sorghum-soybean-millet mixtures.

Deer, White-Tailed

One of the most important aspects of deer management is regulated harvest. Food is generally no problem except in areas where deer are underharvested. Once an area's capacity to support animals has been reached, it is essential to remove the excess deer to prevent damage to the habitat.

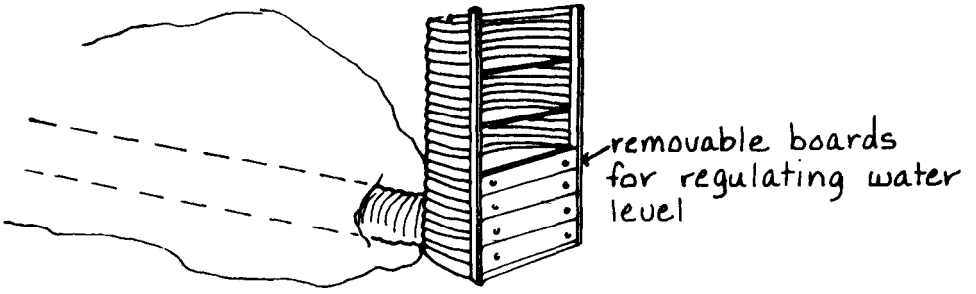
Woodland can be managed for deer by prescribed burning at 3-5 year intervals and by timber harvest. When cuttings are made, openings should be large enough to encourage growth of young tender plants which deer eat. When possible, leave mast trees and favor food species preferred by deer.

Food plots should be no less than 1 acre and may be 3-5 acres or more. Suggested plantings are: clovers, clover-grass mixtures, corn, corn-soybean mixtures, oats, winter ryegrass, soybeans, and wheat.

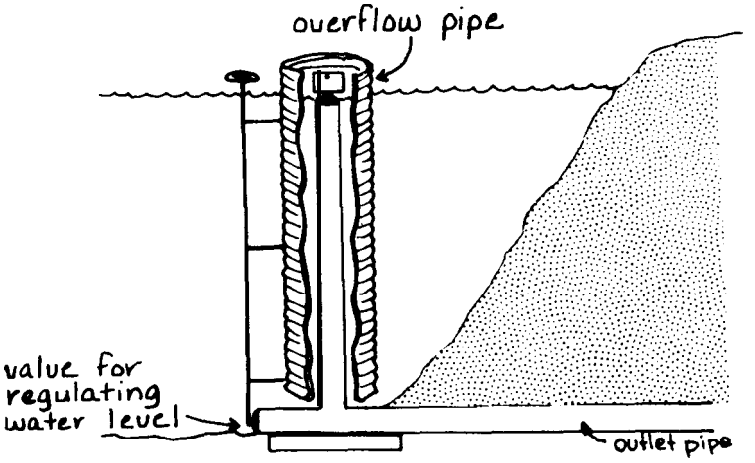
Ducks

Ponds used for duck production should be 3-5 acres. Leave up to 1/3 of the flooded area in trees, especially oaks, for mast, cover and nesting. In general, farm ponds cannot be managed intensively for fish and ducks, since duck food plants interfere with fish production. With closed raceways it may be possible, and even desirable, to plant duck foods in the holding reservoir. Duck food plants help take up excess nutrients furnished by feed and fecal material produced by fish. Plants should be harvested by ducks and/or man to remove nutrients.

Duck production ponds must have water control devices to allow dewatering during the growing season and flooding prior to hunting season. The pond should be reflooded by the latter part of October. Ponds without water control can be "managed" for ducks by planting edges with smartweeds or millet and deeper waters with pondweeds, naiads or muskgrass. Remember these plants could become a nuisance depending upon the primary use of the pond. Best results can be expected in ponds with "feathered" edges.

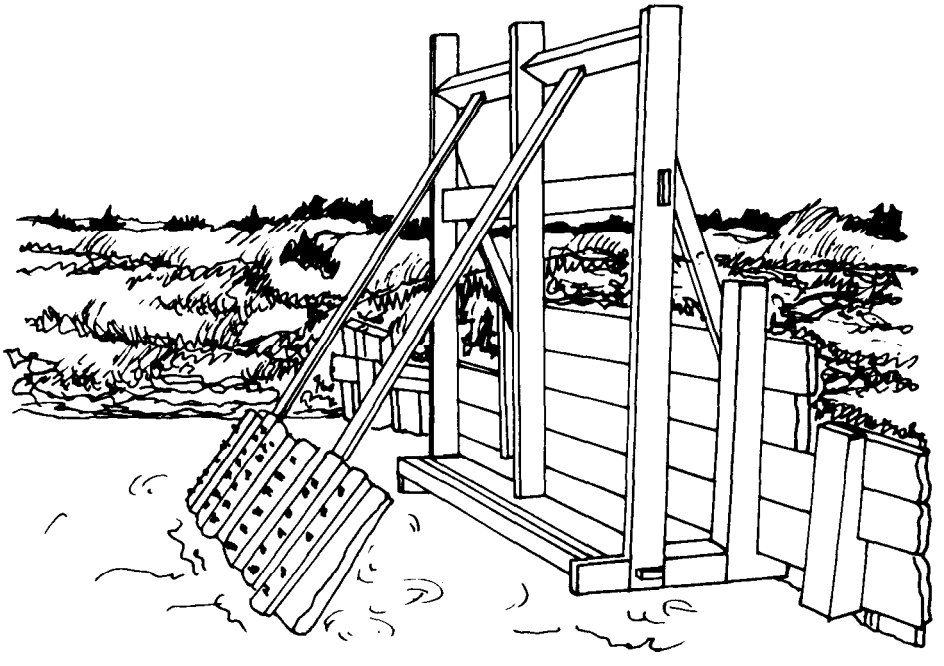


flashboard riser



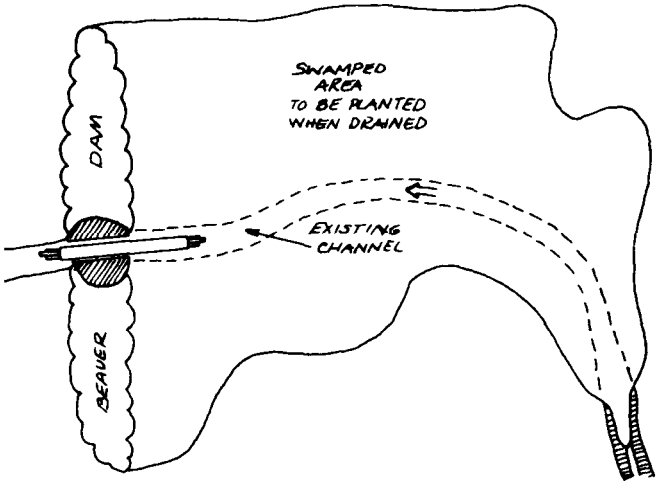
trickle tube with bottom draw

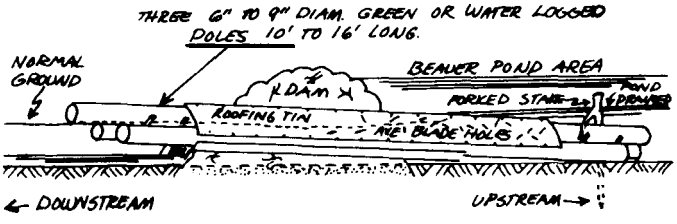
Water Control Devices



flap gate for use on tidal creeks

It is possible to manage natural bodies of water for ducks, particularly beaver ponds. In early July, drain the pond. Use a three-log drain. Plant Japanese millet. Remove drain and reflood in October.

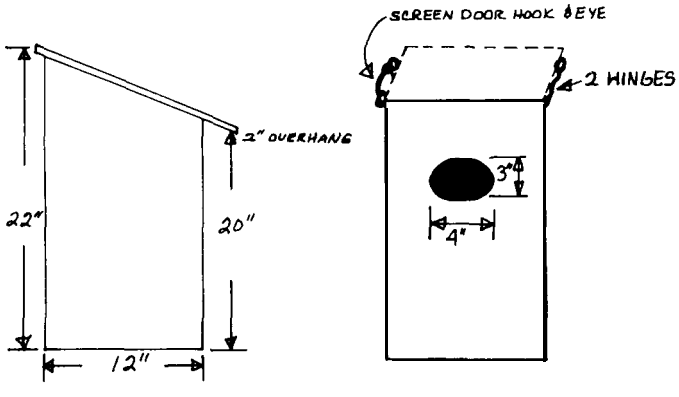




The Wood duck is the only duck which nests in any numbers in Georgia. Normally, it builds a nest in tree cavities. If cavities are absent, put up nest boxes. They should measure 12"x12"x20" with a 4"x3" entrance hole. See extension Bulletin 649, "Wanted: More Wood Ducks in Georgia". It is available from your county Extension office.

The shooting schedule depends on the size of the pond. However, rarely should there be more than 3 hunts per week. Schedule shoots for mornings only, so ducks will return for roosting and remain in the area longer.

Plants which can be used in duck ponds include asiatic dayflower, corn, corn-soybean mixtures, brown-top millet, Japanese millet, brown-top millet-grain sorghum mixtures, sago pondweed, and nodding smartweed.



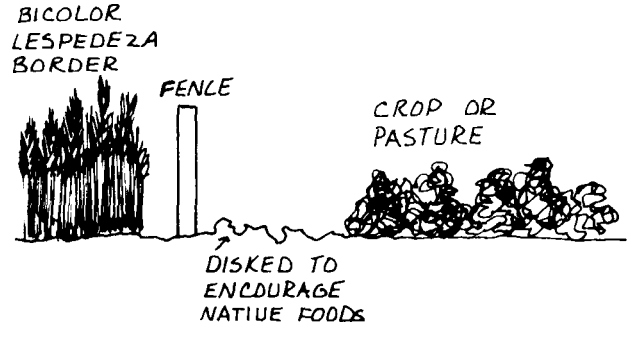
Quail, Bobwhite

A primary quail management technique is farming relatively small fields. The fields are separated by fence rows and are allowed to grow native vegetation. Even when fields are large and fence rows nonexistent, certain techniques will increase the number of quail. Field borders should be disked to encourage partridge pea and other native food plants. Corn and other row crops should be laid-by early to provide natural foods and brood cover. Pastures should have bicolor lespedeza borders outside the fences. If grazing pressure in a pasture is light, native lespedezas may invade and provide additional food.

Woodlots can be burned using Georgia Forestry Commission prescriptions. On fertile soils, burn annually during January to March. On infertile soils, it may be necessary to burn only every two years. If there is an annual burning regime on infertile soils, be sure to leave small patches unburned to provide nesting cover. Before burning, contact the local unit of the Georgia Forestry Commission and adjoining landowners.

It is possible to provide both food and cover in a naturalistic manner by surrounding low-growing shrubs such as plums, with bicolor lespedeza. Such plantings should be protected from burning.

If insufficient food is available, provide a ⅛ to ½ acre food plot for each covey. Make these plots long and narrow. Locate them adjacent to suitable cover.



Quail can also be increased by planting small patches of corn in woodlots and other large expanses of timber.

Plants that can be used in food plots for quail are: annual game-bird mixture, Florida beggar weed, corn, corn-soybean mixtures, annual lespedezas (Korean, Kobe, common), bicolor lespedeza, millets, peas, sorghum, soybeans, and vetch.

Rabbit

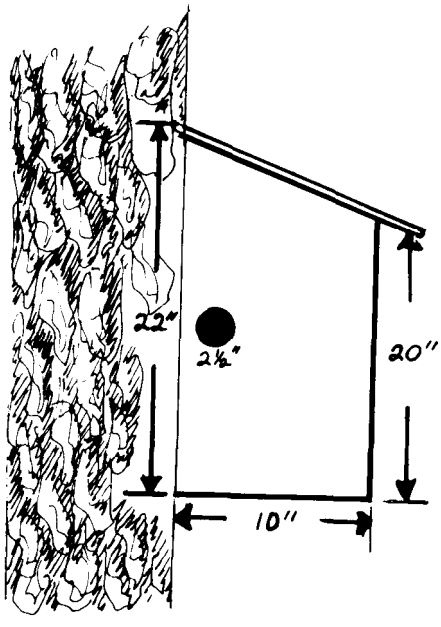
Factors limiting rabbit numbers are cover and late winter food. Given adequate food and cover, rabbits are able to maintain their numbers in spite of all their enemies, including man. Every attempt should be made to retain as much natural cover as possible-brambles, fence rows, abandoned house sites, etc. Loose brush piles 10'-15' in diameter and no more than 3'-4' high can be left to provide cover. Where winter food is a problem, food plots can be used. Plots should be ⅛ to ½ acre.

Some of the plants which can be used are annual game bird mixtures, clovers, clover and grass mixtures, oats, peas, rye, winter rye grass, vetch, and wheat.

Squirrels

The only squirrel management technique available to most landowners is to insure mature hardwoods, particularly oaks and hickorys, are left in the woodlot to provide food and dens. If the woodlot is adjacent to a field, plant corn along the border. Where den trees are absent or in short supply, artificial dens, "10"x10"x 20", with a 2½ inch diameter opening on the side, can be put up in the woodlot.

Plantings which could be used in openings or along field borders are: corn, corn-soybean mixtures, and sunflowers.



Turkey

Turkeys require a greater area than most landowners have under their control. However, you can provide key areas for food and shelter. Woodlands should have hardwoods on the bottom and a mixture of hardwood and pine in the uplands. Openings should be scattered throughout. Up to ⅔ of the area can be in openings — natural or man-made, permanent or short-term. If there are trails or roads through the woodlands, these should be seeded with grass or clover and grass mixtures.

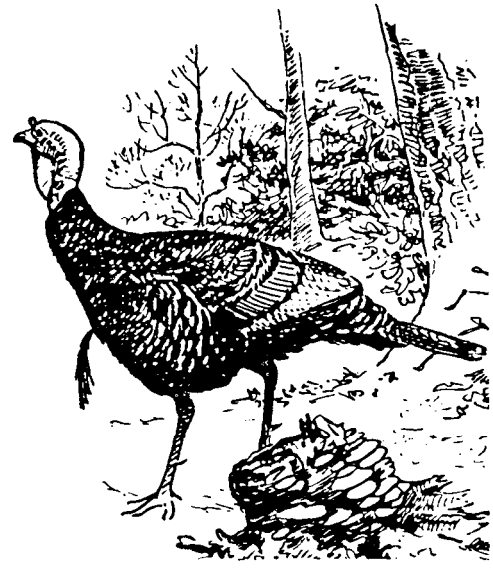
Prescribed burning can be used to help maintain a relatively open understory. Burning should be on a 3-5 year cycle with no burning after March 1.

Man-made openings and food plots should be a minimum of 1 acre and ideally 3-5 acres. If deer are present, it may be necessary to make food plots and openings 2-10 acres to prevent plots being "eaten out".

Domestic poultry, including turkeys, chickens, and farm-reared game birds, should be kept off wild turkey ranges. This prevents disease transmission to wild birds. Domestic turkeys will also interbeed with the wild turkeys. Interbreeding leads to deterioration in the quality, of the wild birds.

One of the major factors suppressing turkey numbers in Georgia is illegal hunting. Poaching must be controlled,

Plants suitable for turkey management are: annual game-bird mixture, Bahiagrass, chufa, clovers, clover grass mixtures, corn, corn-soybean mixtures, brown-top millet, millet-grain sorghum mixtures, oats, peas, winter rye grass, sunflowers, and wheat.



'Remember:

-All wildlife need food, water and shelter.

-These factors must be interspersed. Don't put all the food in one place and all the shelter in another.

When you determine which requirement is not being met, plan to supply that particular need. This is the essence of wildlife management.

If you have any problems selecting plants or meeting plant requirements, contact your Extension office.

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Wildlife 3

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