UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

UPLAND WILDLIFE HABITAT MANAGEMENT

(Acre)

CODE 645

DEFINITION

Provide and manage upland habitats and connectivity within the landscape for wildlife.

PURPOSE

Treating upland wildlife habitat concerns identified during the conservation planning process that enable movement, or provide shelter, cover, food in proper amounts, locations and times to sustain wild animals that inhabit uplands during a portion of their life cycle.

CONDITIONS WHERE PRACTICE APPLIES

Land where the decision maker has identified an objective for conserving a wild animal species, guild, suite or ecosystem.

Land within the range of targeted wildlife species and capable of supporting the desired habitat.

CRITERIA

Criteria Applicable to all Purposes

Habitat development and management necessary, to achieve the purpose(s), shall be based on a wildlife habitat appraisal or suitable habitat evaluation. The appraisal or evaluation procedure shall be used to determine a habitat evaluation. The appraisal or evaluation procedure shall be used to determine a habitat suitability for either individual fields, home range areas, habitat type, or natural community as well as to provide an overall evaluation for the entire property or operating unit.

Control of all undesirable pest species shall be implemented where feasible. Control of highly aggressive pest species, such as cogongrass, kudzu, or feral hogs may be essential to the success of this practice.

Criteria Applicable to Habitat Appraisal or Habitat Evaluation

The evaluation shall result in a quality rating or habitat suitability index (hsi). This will consider the type, amount, and distribution of habitat elements required. The quality rating or hsi shall be compared to the quality criteria in Section III of the Alabama NRCS FOTG.

If the evaluation indicates a level below the acceptable quality, alternatives shall be recommended that will result in the necessary changes in habitat elements or their management to bring the rating up to the minimal acceptable or above.

If the evaluation is at the minimum or above, alternatives shall be recommended that will result in the necessary management to preserve, maintain or improve the existing habitat in its present state or toward optimum conditions

Criteria Applicable to Habitat Elements

The following habitat elements are to be considered when assessing wildlife habitat. Not all will apply to every habitat type.

1. Food
   a. Type
   b. Amount
   c. Seasonal availability
2. Cover
   a. Type
   b. Amount
3. Interspersion and Distance to
   a. crops
   b. grasses and or legumes
   c. shrubs
   d. trees
   e. openings

Criteria Applicable to the Development and Management of All Upland Wildlife Habitat

1. As indicated by the wildlife habitat evaluation, certain habitat elements may be weak or missing. For the desired species, identify the

types, amount, and distribution of habitat elements and management actions necessary to achieve the management objectives.
2. The amount and kinds of habitat elements planned their location and management shall be identified in a management plan.
3. The use of native plant materials shall be encouraged.
4. Vegetative manipulations to restore plant and/or animal diversity shall be accomplished by prescribed burning or mechanical, biological or chemical methods, or a combination of the four.
5. Where feasible, herbicides or prescribed burning shall be utilized instead of mowing.
6. Livestock grazing or haying shall maintain or improve vegetation structure and composition so as to improve the desired wildlife habitat.
7. Management measures shall be provided to control invasive species and noxious weeds.
8. Spraying or other control of noxious weeds shall be done on a "spot" basis to improve native wildlife habitat.

Criteria Applicable to the Development and Management of Selected Species for Upland Wildlife Habitat

I. Birds, Non-Game

A. Retaining habitat - Retain a variety of trees, shrubs, vines, and other plants on 1/8 acre or more. Plants, which provide food and trees that contain suitable nesting cavities, are recommended.

B. Creating habitat

1. Cover

a. On open land - Either plant varieties of adapted trees, shrubs, vines, and other plants on 1/8 acre or more, or allow natural plant succession to vegetate the area. Such areas should be well distributed. Whenever practical, they should contain plants which produce food for birds.

b. On woodland - Either open the tree canopy or create openings. Opening the tree canopy on 1/4 acre or more creates underbrush and makes woodland attractive to a wider variety of birds.

Openings in woodland should be 1 acre or more in size and at least 100 feet wide. A few food-producing trees, shrubs, and vines may be left within the openings. Brush should be piled in small, well-distributed piles. One opening (1/8 acre or more) for every 5 acres of woodland supports a variety of birds.

2. Food

a. As part of the landscape pattern - Establish a variety of food-producing trees, shrubs, vines, and other plants on 1/8 acre or more. These plants include, but are not limited to, American beautyberry, native blueberries, dogwoods, elderberry, honeysuckle, holly, huckleberries, sumac, native plum and viburnums.

Blackberry, grape, muscadine, Japanese honeysuckle, raspberry, and Virginia creeper are the vines recommended.

Trumpet creeper, cardinal flower, jewelweed, Indian pink, Canada lily, red columbine, and red buckeye are recommended for hummingbirds. Select plants that ripen their fruits or seeds at different times.

b. Food plots - Plant 1/8 acre or more in corn, browntop millet, dove proso, grain sorghum, sunflower. See Alabama Planting Guide below for seeding dates, seeding rates, and other information. Plots should be well distributed and located near suitable cover. One plot (1/8 acre or more) for every 5 acres usually supports a variety of birds. Food plots may be difficult to establish and maintain on abandoned mined land.

C. Managing habitat - Protect from wildfire and harmful grazing. Maintain woodland openings in early stages of succession by disking, mowing, prescribed burning, or by other means. Manage woodland in such a way that an uneven-aged stand of many species of trees, shrubs, vines, and other plants are maintained. Maintain an open canopy over parts of the woodland. Replant food plots as needed.

II. Bobwhite Quail

A. Retaining habitat

1. Cover - Retain 1/8 acre or more of thickets, briar patches, Japanese honeysuckle, weeds, grasses, brush, broomsedge, idle crop fields, wooded areas, ditch banks, fence rows, or other natural quail cover. Retain near suitable quail food. One acre of such cover for every 12 acres usually supports high quail populations.

2. Food - Retain 1/8 acre or more of annual lespedezas, butterfly peas, common ragweed, Florida beggarweed, milkpeas, oaks (old enough to bear acorns), partridge peas, or tickclover. Retain near suitable quail cover. One acre of such food for every 12 acres can help

increase quail populations, but managing natural habitat is a key component.

B. Creating habitat

1. Cover

a. Plantings - For fall and winter cover, plant wild plum and wax myrtle. Plant native plum in clumps 20 ft or more in diameter. Plant near suitable quail food.

For nesting cover on the edges of crop fields, plant native warm season grasses or mixtures of native warm season grasses and legumes. Select from those listed in the Alabama Planting Guide below. Plant and manage according to specifications for those practices. Planting must be at least 15 feet wide and at least 1/8 acre in size. Nesting cover can often be achieved without planting through natural succession. Often broomsedge bluestem will seed into an area left fallow on its own.

b. Creating woodland openings - Openings must be 1 acre or more in size and at least 200 feet wide. One opening (1 acre or more) for every 12 acres of woodland is usually sufficient for quail, especially in rather open woodland having trees of uneven age.

c. Creating natural cover - On open land, allow natural plant succession to vegetate ½ acre or more. Such vegetated areas should be well distributed and located near suitable quail food.

2. Food

a. Planting food plots - Plant food plots to browntop millet, common lespedeza, corn, cowpeas (combine and hard-seeded varieties are recommended), dove proso, Florida beggarweed, grain sorghum, Kobe lespedeza, Korean lespedeza, partridge peas, vetch, soybeans, or any plant provided through the plant materials program and being evaluated as a quail food. See Alabama Planting Guide below for planting dates, seeding rates, and other information. Florida beggarweed can be interplanted with a row crop, preferably corn. Plots must be at least 15 feet wide. All should be 1/4 acre or more in size. Locate plots near suitable quail cover. Plots may be difficult to establish and maintain on abandoned mined land.

b. Leaving agricultural crops unharvested - Leave 1/4 acre or more of browntop millet, corn, cowpeas, grain sorghum, Japanese millet, annual lespedezas, vetch, wheat, soybeans, or sunflower. Leave these crops unharvested and located near suitable quail cover.

c. Creating natural foods - Establish 1/4 acre or more of butterfly peas, lespedezas (annual, wild), milk-peas, partridge peas, tickclover (beggarlice), common ragweed, or Florida beggarweed. Their stand must be good. Such food must be located near suitable quail cover. Disking or prescribed burning will create good natural quail habitat when used properly.

C. Managing quail habitat

1. Cover - Protect from wildfire and harmful grazing. Replant as needed. Keep most of the cover open enough that quail can walk freely through it. Maintain woodland openings in low-growing vegetation, preferably annuals.

2. Food

a. Managing food plots - Plant legumes such as annual lespedezas, beggarweed, caley peas, cowpeas, partridge pea, and wild reseeding soybeans for brood rearing habitat. Light seeding rates (1/2 of normal) should be used to allow bare ground for chick access. For winter food, plant legumes at standard planting rates or traditional plants such as corn, millet, Egyptian wheat or grain sorghum. Rotate location of food plots each year to create fallow ground. For successful reseeding of legumes, lightly disk or burn in late winter. Protect from grazing.

b. Managing natural foods - Prescribe burn butterfly peas, lespedezas (annual, wild), milkpeas, partridge peas, and tickclover (beggarlice) in late winter. Burn all acreage at least every two years on a rotational basis. Open lands should be set up in a 3-year strip disking rotation to provide nesting habitat, brood rearing areas, and winter food in close proximity. Lightly disk annual lespedezas and partridge peas in late winter and common ragweed in mid-winter. Either disk Florida beggarweed lightly in late May or "lay by" row crop by June 1. Lime can be applied to enhance the growth of natural quail foods.

III. Cottontail Rabbit

A. Retaining habitat - Retain 1/8 acre or more of thickets, briar patches, Japanese honeysuckle, grasses, legumes, weeds, brush, broomsedge, wooded areas, ditch banks, fence rows, and other natural rabbit habitat.

B. Creating habitat

1. Cover

a. Planting - Plant 1/8 acre or more of any plant provided through the plant materials program and being evaluated as rabbit cover. See Plant Guides for planting dates, seeding rates, and other information. Plantings must be at least 12 feet wide. Plant near suitable rabbit food, preferably with green winter forage. One planting (1/8 acre or more) for every 5 acres is usually sufficient for high rabbit populations.

b. Creating woodland openings - Openings must be 1 acre or more in size and at least 50 feet wide. One opening (1 acre or more) for every 10 acres of woodland is usually sufficient for rather high rabbit populations.

c. Creating natural cover - On open land, allow natural plant succession to vegetate ½ acre or more. Blackberries are preferred cover that will generally move into a disked area if left alone for 2 years. When woody vegetation begins to dominate, redisk or use herbicides to remove this vegetation. Such cover should be well distributed and located near suitable rabbit food.

2. Food - Plant 1/8 of an acre or more in barley, clover, corn, oats, rye, vetch, wheat, or any plant provided through the plant materials program and being evaluated as a rabbit food. See Plant Guides for planting dates, seeding rates, and other information. One plot (1/8 of an acre or more) for every 5 acres is usually sufficient for high rabbit populations. Plots on abandoned mined land may be more difficult to establish.

C. Managing habitat

1. Cover - Protect from harmful grazing. Keep most of the cover open at the rabbit's level. Prescribed burning, herbicides, and disking can all be useful tools to maintain early successional habitat for rabbits.

2. Food

a. Managing food plots - Protect from heavy grazing. Fertilize and replant food plots as needed.

b. Managing natural foods - Maintain in early stages of succession.

IV. Gray Squirrel

A. Creating habitat – If hardwood mast is lacking, plant a variety of hard and soft mast species. Species such as beech, blackgum, chinkapin, flowering dogwood, hickories, magnolias, oaks, pecan, walnut, black cherry, grape, muscadine, huckleberry, mulberry, crabapple, or native blueberries. A wide spacing, such as 12 by 12 feet, is preferred for fastest growth.

Larger plantings (2 acres or more) are recommended on areas with dense populations of deer, raccoon, and wild turkey. Plant near suitable squirrel cover.

B. Retaining habitat - Retain 1 acre or more of mostly mature hardwoods, primarily oaks, hickories, and beech. Trees should be dense enough that squirrels can easily travel through their crowns.

Retain several different species of oaks, hickories, gums, and other mast-producing trees. Then, if one species fails to produce mast, others will likely succeed. Other trees to favor are red maple, elm, and a variety of native hardwoods, primarily for spring and summer food. An understory of smaller trees and shrubs is recommended particularly those that bear fruit or nuts. Three or more suitable den trees should be retained per acre.

C. Managing habitat

1. Cover - Protect from fire at all times. Protect from grazing by hogs and other livestock.

2. Food

a. Managing natural foods in woodland - Manage woodland to favor beech, blackgum, chinkapin, flowering dogwood, hickories, magnolias, oaks, pecan, walnut, black cherry, elm, grapes, huckleberry, mulberry, and other natural squirrel foods. Woodland treatment may include brush control, release cutting, thinning, and other woodland practices, except prescribed burning.

b. Managing food plots –Where hard mast is lacking, corn or other high energy foods such as grain sorghum can be planted.

V. Mourning Dove

A. Retaining habitat - Retain 1 acre or more of barnyard grass, bristle grasses, bull paspalum, common ragweed, cranesbill, crotons (woolly and others), pokeberry, Texas millet, primroses, and other dove foods. Seeds of these plants must fall onto bare ground and be plainly visible.

B. Creating habitat

1. Creating natural foods - Establish 2 acres or more of barnyard grass, common

ragweed, crotons (woolly and others), pokeberry, partridge pea, or foxtail grass by disking.

2. Planting dove fields - Plant 2 acres or more of brown-top millet, corn, dove proso, grain sorghum, sunflower, wheat, or any plant provided through the plant materials program and being evaluated as a dove food. More than one of these may be planted in the same field, but usually not on the same plot. See Plant Guides for planting dates, seeding rates, and other information. Fields may be more difficult to establish on abandoned mined land.

C. Managing habitat

1. Managing natural foods - Disk ragweed during winter. Heavily graze pasture areas that contain good stands of woolly croton. Management of the many other natural foods is not understood.

2. Managing dove fields - Federal regulations on managing agricultural crops must be observed in fields where hunting occurs. These regulations are subject to change from year to year. The following specifications do not violate regulations in effect at the time of this writing. If in doubt, hunters should ask either an Alabama Conservation Enforcement Officer or a Federal Game Management Agent.

a. Browntop millet - If planted in either continuous or skip rows, control grasses and weeds in the skips and between the rows. If broadcast, allow the seed to mature, mow the entire field, and allow the mowed plants to dry thoroughly. Then, rake the plants and bale them. A side delivery rake is recommended.

b. Dove proso - Same as for browntop millet (above).

c. Sunflower - Control weeds and grasses in the skips and between the rows. As a rule, it is best to leave sunflowers standing to provide cover for hunters and to extend the life of the crop. Check the field frequently. If enough seed are not on the ground to attract doves, shred a few strips throughout the field, preferably with a rotary mower.

d. Wheat - Mow about one-third, but no more than 2 acres, of the field in June after the seed have fully matured. Allow the mowed plants to dry thoroughly. Then, rake the plants and bale them. A side delivery rake is recommended. In late July or early August, mow another one-third of the field. Again, rake the plants and bale them. Mow the remainder of the field a few days before hunting is to start and bale the plants. Mow dense growths of weeds, especially ragweed, which volunteer in the wheat stubble and remove them from the field.

e. Corn - Control grasses and weeds. Two weeks before hunting is to start in the field, partly harvest the entire field by either mechanical means or livestock. But remove no more than one-third of the crop. Such harvesting shatters many kernels onto bare ground where they are available to doves. Check the field frequently, especially if it has been partly harvested by livestock. If enough seed are not on the ground to attract doves, shred a few strips throughout the field, preferably with a rotary mower.

f. Grain sorghum - Control weeds between the rows and in the skips. As soon as the seed are fully mature in a broadcast stand; shred a few strips throughout the field; preferably with a rotary mower. Doves usually start congregating and feeding upon seed in the shredded strips.

Two weeks before hunting is to start in the field, either partly combine the entire field or mow it with a rotary mower. If partly combined, remove no more than one-third of the grain crop-leave the rest on the ground for doves. The residue from either partly combining or mowing with a rotary mower should be raked and removed from the field.

VI. White-Tailed Deer

A. Retaining habitat

1. Cover - Retain 1 acre or more of woodland. An abundance of undergrowth within 4½ feet of the ground is recommended.

2. Food - Retain 1 acre or more of trees (mostly hardwoods), shrubs, vines, grasses, legumes, or weeds.

On each acre of woodland, retain at least five mastbearing oaks, preferably with diameters of 16 in. or more. Retain on hardwood sites if possible. Retain several different species from both the white oak and the red oak groups. Then, if one species fails to produce mast, other will likely succeed.

B. Creating habitat

1. Creating natural foods in woodland

a. Opening the tree canopy - Open the tree canopy on 1 acre or more of woodland and allow sunshine to hit the forest floor. Any woodland practice, including prescribed burning, which opens the canopy and either creates or maintains

desirable undergrowth within 4½ feet of the ground is satisfactory.

b. Creating woodland openings - Openings must be 1 acre or more in size and at least 200 feet wide. They should be well distributed. One opening (1 acre or more) for every 20 acres of woodland is usually enough for high deer populations.

2. Planting food plots - Plant 1 acre or more of barley, clovers (arrow leaf, ball, bur, crimson, white), corn, Japanese honeysuckle, oats, orchardgrass, rye, vetch, wheat. There are several new varieties of white clover available that are resistant to heavy grazing. These are Resolute and Durana white clovers.

See Plant Guides for planting dates, seeding rates, and other information. Perennials should be planted on steep slopes to protect the land from erosion. Plots on abandoned mined land may be difficult to establish except those planted in Japanese honeysuckle. Honeysuckle plots may need to be protected for the first two years with fencing in areas with high deer populations.

3. Leaving farm crops unharvested - Leave 1 acre or more of corn, grain sorghum, or soybeans. Leave these crops unharvested and located near suitable deer cover. One acre or more for every 25 acres of woodland usually supports high deer populations.

C. Managing habitat

1. Cover - Protect from wildfire and harmful grazing by livestock.

2. Food

a. Managing natural food in woodland Protect hard and soft mast producing trees and shrubs. Fertilize and lime native herbaceous vegetation such as honeysuckle or greenbriar, per soil test. Always treat blocks that are at least ¼ to ½ acre in size to prevent overbrowsing. If high deer densities are present, it may be best to avoid fertilization to prevent severe overbrowsing of fertilized areas. Fertilize and lime hard and soft mast producing trees and shrubs per soil test regardless of deer density. It is best to fertilize clumps of mast producers, although large crowned individual trees can produce large mast crops.

b. Managing woodland openings - Maintain low-growing vegetation in woodland openings by mowing, disking, burning, or by other means.

c. Managing food plots - Protect from harmful grazing by livestock. Lime and fertilize per soil test before replanting food plots.

VII. Wild Turkey

A. Retaining habitat - Retain 1 acre or more of woodland with a variety of timber types, one-half of which should be mature hardwoods--predominantly oaks. Retain several different species of mast-bearing oaks and pines. Then, if one species fails to produce mast, others will likely succeed. The forest understory should be open.

B. Creating habitat

1. Planting food plots - Plant 1 acre or more of barley, browntop millet, chufa, clovers (arrow leaf, ball, bur, crimson, white), corn, dove proso, oats, orchardgrass, rye, soybeans, vetch, wheat. See Alabama Planting Guide below for seeding rates, planting dates, and other information. Larger plantings (2 acres or more) are recommended for chufa and for areas with dense deer populations. Plots should be well distributed and located near suitable turkey cover. One plot (1 acre or more) for every 20 acres of woodland is usually enough for moderate turkey populations. Plots may be more difficult to establish on abandoned mined land.

2. Creating woodland openings - Openings must be 1 acre or more in size and at least 200 feet wide. They should be well distributed. One opening (1 acre or more) for every 20 acres of woodland is usually sufficient for moderate turkey populations.

C. Managing habitat

1. Cover - Protect from wildfire and harmful grazing. Keep disturbances to a minimum, especially from March through June. Maintain an open understory.

2. Food

a. Managing natural foods in woodland - Manage woodland in such a way that no more than 90 percent of the area is covered by trees. Wild turkeys do best in areas with 25 to 50 percent open grassy habitat. One-half of the woodland should be hardwoods - predominantly mast-bearing oaks. Other plants to favor are the beech, blackgum, flowering dogwood, mulberry, pines, blackberry, wild grapes, and numerous grasses and weeds.

b. Managing food plots - Protect from heavy grazing by livestock. Fertilize and replant plots as needed.

c. Managing woodland openings - Maintain in early stages of succession by mowing, disking, prescribed burning, or by other means. Vegetation in openings should be no higher than 1 foot.

VIII. Other Upland Species – Obtain specifications from an NRCS or other qualified biologist.

CONSIDERATIONS

Wildlife population control (hunting to reduce numbers, which is the responsibility of state and federal wildlife agencies and the landowner) may be necessary to protect and maintain certain habitats.

Consider that manipulations of habitat can impact more than the desired kinds of wildlife. These possible effects shall be evaluated and taken into consideration during the planning process.

This practice may be used to promote the conservation of declining species, including threatened and endangered species.

Consider the problems of habitat fragmentation when using this practice; create large blocks of habitat verses increased edge that leads to predation and parasitism by some species such as cowbirds.

Consider habitat linkages and habitat corridors when developing upland wildlife habitat.

Consider effects on cultural resources. This practice has the potential to adversely affect cultural resources and compliance with GM 420; Part 401 during the planning process is necessary. Where appropriate, local cultural values shall be incorporated into a practice design in a technically sound manner. Compliance with all applicable federal, state, and local laws and regulations, permits, permissions, or notifications is required.

Other AL NRCS conservation practice standards that may be utilized in conjunction with this practice to create a wildlife management plan include:

Pasture & Hay Planting – Code 512

Wildlife Watering Facility – Code 648

Early Successional Habitat Development/ Management – Code 647

Restoration and Management of Rare or Declining Habitats – Code 643

Tree/Shrub Establishment – Code 612

Range Planting – Code 550

Prescribed Grazing – Code 528

Prescribed Burning – Code 338

Forage Harvest Management – Code 511

Use Exclusion – Code 472

Riparian Forest Buffer – Code 391

Riparian Herbaceous Cover – Code 390

Forest Stand Improvement – Code 666

PLANS AND SPECIFICATIONS

Plans and specifications for this practice shall be prepared for each site. Plans and specifications shall be recorded using approved specification sheets, guide sheets, technical notes, or narrative documentation in the conservation plan, or other acceptable documentation.

OPERATION AND MAINTENANCE

The purpose of operation, maintenance, and management is to ensure that the practice functions as intended over time.

A plan for operation and maintenance of upland wildlife habitat at a minimum shall include monitoring and management of structural and vegetative measures.

Timing of haying and livestock grazing shall avoid periods when upland wildlife are nesting, fawning, etc. and will allow the establishment, development, and management of upland vegetation for the intended purpose.

Biological control (e.g., using predator or parasitic species) of pest species should be used whenever possible.

REFERENCES

USDA NRCS General Manual 420, Part 401, Cultural Resources (Archeological and Historic Properties)

The Wild Turkey in Alabama. Alabama Department of Conservation and Freshwater Fisheries, Steven W. Barnett and Victoria S. Barnett, Wildlife Biologists. September 2008.

Effective Food Plots for White-Tailed Deer in Alabama. Alabama Department of Conservation and Natural Resources, Division of Wildlife and Freshwater Fisheries, Chris Cook and Bill Gray, Wildlife Biologists, September 2005, and the Wildlife Federation.

Ecology and Management of the Bobwhite Quail in Alabama. Alabama Department of Conservation and Freshwater Fisheries. Stan Stewart, Wildlife Biologist. January 2005

Biology and Management of White-Tailed Deer in Alabama. Chris Cook and Bill Gray, Wildlife Biologists, September 2003.

Cottontail Rabbit Management. ANR-636, Alabama Cooperative Extension System. H. Lee Stribling, Extension Wildlife Professor and Associate Professor,Zoology and Wildlife Science, Auburn University, Auburn, Alabama. Reprinted November 1996.

Gray Squirrel Management. ANR-768, Reprinted November 1996. Alabama Cooperative Extension System. Adapted from "Gray Squirrel Management in Alabama" by James R. Davis, Alabama Department of Conservation and Natural Resources, Division of Game and Fish, Special Report No. 7, 1978, and "Easter Gray Squirrel: by James W. Teaford, Waterways Experiment Station US Army Corp of Engineers, Technical Report EL-86-6, 1986. Recommended for Extension Use by Lee Stribling, Extension Wildlife Scientist, Associate Professor, Zoology and Wildlife Science, Auburn University.

Mourning Dove Management in Alabama. ANR-513, Alabama Cooperative Extension System. H. Lee Stribling, Extension Wildlife Professor and Associate Professor,Zoology and Wildlife Science, Auburn University, Auburn, Alabama. October 1998.

Alabama Planting Guide[1]

Crops	Area [2]	Planting Dates	Seeding Rates per acre	Fertilizer[3&5] Minimum	Perennial or Annual
Aeschynomene (Joint Vetch)	South AL only	May 1 – July 1	10 lb	300 lbs 0-20-20	P
Alfalfa	N C	Aug. 25 - Oct. 1 Sept. 1 - Oct. 15	30 lb.	500 lbs 0-20-20	P
Arrowleaf clover	N C S	Sept. 1 - Nov.1 Sept. 1 - Nov.1 Sept. 1 - Nov.1	6 lb.	300 lbs 0-20-20	A
Austrian winter pea	N C S	Sept. 1 - Oct. 15 Sept. 1 - Oct. 15 Sept. 1 - Oct. 15	40 lb.	300 lbs 0-20-20	A
Ball clover	N C S	Aug. 25 - Oct. 1 Sept. 1 - Oct. 30 Sept. 1 - Oct. 30	4 lb.	300 lbs 0-20-20	A
Barley	N C S	Sept. 1 - Oct. 15 Sept. 1 - Oct. 30 Sept. 1 - Oct. 30	1-1/2 bu.	400 lbs 13-13-13	A
Bluestem (big)[6&7]	N C S	April 1 – July 1 March 15 – July 15 March 1 – July 15	7 lb. (pure live seed)	300 lbs 0-20-20	P
Bluestem (little)[6&7]	N C S	April 1 – July 1 March 15 – July 15 March 1 – July 15	4 lb. (pure live seed)	300 lbs 0-20-20	P
Brown-top millet	N C S	May 1 - Aug. 1 April 1 - Aug. 15 April 1 - Aug. 15	8 lb. (30-inch rows) 20 lb. (broadcast)	400 lbs 13-13-13	A
Bur clover	N C S	Sept. 1 - Sept. 30 Sept. 1 - Oct. 15 Sept. 1 - Oct. 15	20 lb. (hulled seed) 125 lb. (burs)	300 lbs 0-20-20	A
Button clover	N C S	Sept. 1 - Sept. 30 Sept. 1 - Oct. 15 Sept. 1 - Oct. 15	20 lb.	300 lbs 0-20-20	A
Caley peas	N C S	Sept. 1 - Oct. 30 Sept. 1 - Oct. 30 Sept. 1 - Oct. 30	50 lb.	300 lbs 0-20-20	A
Chufa	N C S	May 1 - June 30 May 1 - June 30 May 1 - June 30	40 lb.	400 lbs 13-13-13	p
Cowpeas (combine)	N C S	July 15 - Aug. 15 July 15 - Aug. 15 July 15 - Aug. 15	30 lb.	300 lbs 0-20-20	A
Crimson clover	N C S	Sept. 1 - Sept. 30 Sept. 1 - Sept. 30 Sept. 1 - Oct. 30	20 lb.	300 lbs 0-20-20	A
Dove proso millet	N C S	May 1 - June 15 May 1 - June 15 May 1 - June 15	8 lb. (36-inch rows) 20 lb. (broadcast)	400 lbs 13-13-13	A

Crops	Area [2]	Planting Dates	Seeding Rates per acre	Fertilizer[3&5] Minimum	Perennial or Annual
Eastern gamagrass[7]	N C S	April 1 – July 1 March 15 – July 15 March 1 – July 15	5 lbs. (pure live seed)	300 lbs 0-20-20	P
Egyptian wheat	N C S	May 1 - July 15 April 15 - July 15 April 1 - July 30	10 lb. (36-inch rows)	400 lbs 13-13-13	A
Florida beggarweed	S	March 1- May 15	12 lb. (broadcast)[8]	300 lbs 0-20-20	A
Indiangrass[6&7]	N C S	April 1 – July 1 March 15 – July 15 March 1 – July 15	5 lbs pure live seed	300 lbs0-20-20	P
Lespedeza (striate, kobe, and common)	N C S	Feb. 15 - March 31 Feb. 15 - March 31 Feb. 15 - March 31	30 lb.[8]	300 lbs 0-20-20	A
Lespedeza, Korean	N C	Feb. 15 - March 31 Feb. 15 - March 31	25 lb.[8]	300 lbs 0-20-20	A
Millets (forage types)	N C S	April 1 - July 15 April 1 - July 15 April 1 - July 15	25 lb.	400 lbs 13-13-13	A
Oats	N C S	Aug. 25 - Oct. 1 Sept. 1 - Oct. 30 Sept. 1 - Oct. 30	2-1/2 bu.	400 lbs 13-13-13	A
Orchard grass	N	Aug. 15 - Nov. 1	15 lb.	400 lbs 13-13-13	P
Partridge pea	N C S	Feb. 15 - March 31 Feb. 15 - March 15 Feb. 1 - March 15	10 lb.[8]	300 lbs 0-20-20	A
Red clover	N C	Aug. 15 - Oct. 15 Aug. 15 - Oct. 15	10 lb.	300 lbs 0-20-20	P
Rye	N C S	Sept. 1 - Nov. 1 Sept. 15 - Nov. 15 Sept. 15 - Nov. 15	1-1/2 bu.	400 lbs 13-13-13	A
Sorghum (grain)	N C S	May 1 - Aug. 1 April 15 - Aug. 1 April 1 - Aug. 15	20 lb.	400 lbs 13-13-13	A
Soybeans	N C S	May 1 – June1 April 15 – June 1 April 15 – June 1	30 lbs in rows or 60 lbs broadcast	300 lbs 0-20-20	A
Soybeans (wild reseeding)	N C S	May 1 – June1 April 15 – June 1 April 15 – June 1	10 lbs in rows[8] or 20 lbs broadcast[8]	300 lbs 0-20-20	A
Sweet clover	N C	Sept. 1 - Oct. 30 Sept. 1 - Oct. 30	15 lb.	300 lbs 0-20-20	Biennial
Switchgrass[6&7]	N C S	April 1 – July 1 March 15 – July 15 March 1 – July 15	3 lbs pure live seed	300 lbs 0-20-20	P
Vetches	N C S	Sept. 1 - Oct. 15 Sept. 1 - Oct. 15 Sept. 15 - Nov. 1	30 lb.	300 lbs 0-20-20	A

Crops	Area [2]	Planting Dates	Seeding Rates per acre	Fertilizer[3&5] Minimum	Perennial or Annual
Wheat	N C S	Sept. 1 - Nov. 1 Sept. 15 - Nov. 15 Sept. 15 - Nov. 15	1-1/2 bu.	400 lbs 13-13-13	A
White clover[9]	N C S	Sept. 1 - Nov. 1 Feb. 1 - April 1 Sept. - Nov. 1 Feb. 1 – April 1 Sept. 15 - Nov. 15	3 lb.	300 lbs 0-20-20	P

1. This guide was adapted from Alabama Cooperative Extension publication ANR-485 and various NRCS in Alabama publications.
2. N = North Alabama; C = Central Alabama; S = South Alabama.
3. Soil should be tested for pH and fertilizer requirements for best results.
4. This plant can be invasive in certain situations.
5. Minimum Liming rates: Sandy soils = 1 ton/ac; Clay soils = 2 tons/ac; Prairie soils = No lime; Best results will be obtained by liming per soil test.
6. Native grass mixtures—For 2 grass mixtures, reduce seeding rate of each by 1/3; For 3+ grass mixtures, reduce seeding rate of each by ½.
7. Varieties adapted to Alabama: Big Bluestem – Kaw and Roundtree; Eastern gamagrass – Pete; Indiangrass – Lometa & Rumsey; Little Bluestem – Aldous, Cimmaron, & Pastura; Switchgrass – Cave-in-Rock.
8. Seeding rates can be cut to 25% of recommended rate if to be planted for quail in a strip disking rotation.
9. White clover plantings in south Alabama are limited to subclass w soils.