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SUBJECT: Plant Materials for the Wildlife Habitat
Incentives Program (WHIP)

DATE: June 2, 1998

TO ALL OFFICES

The NRCS Plant Materials Centers and Plant Materials Specialists in the Southeast Region have prepared a description of plant materials that should be considered for WHIP. The plant materials technology includes information on native grasses, introduced grasses, native and introduced legumes, trees, shrubs and vines that are recommended for WHIP.

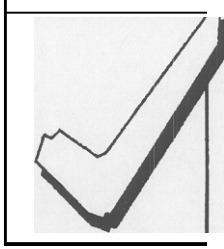
This information is intended to be used by NRCS field offices to supplement the field office technical guide (FOTG) on plants that are suitable for the Wildlife Habitat Incentive Program (WHIP). It was extremely difficult to develop this information in a way for it to be a valuable resource for the entire region. It is recommended that the user(s) refer to the Field Office Technical Guides for more specific details.

A hard copy is provided for your use to transmit this document to the field offices. For specific details contact the Technical Support Team and/or the Plant Materials Team Leader.

✓ EARLCOSBY
State Conservationist

cc: Richard Oliver, ASTC, Athens, GA
Jim Dial, Team Leader, Athens, GA

Plant Materials for Wildlife



...Just in Time for WHTIP
Wildlife Habitat Incentives Program

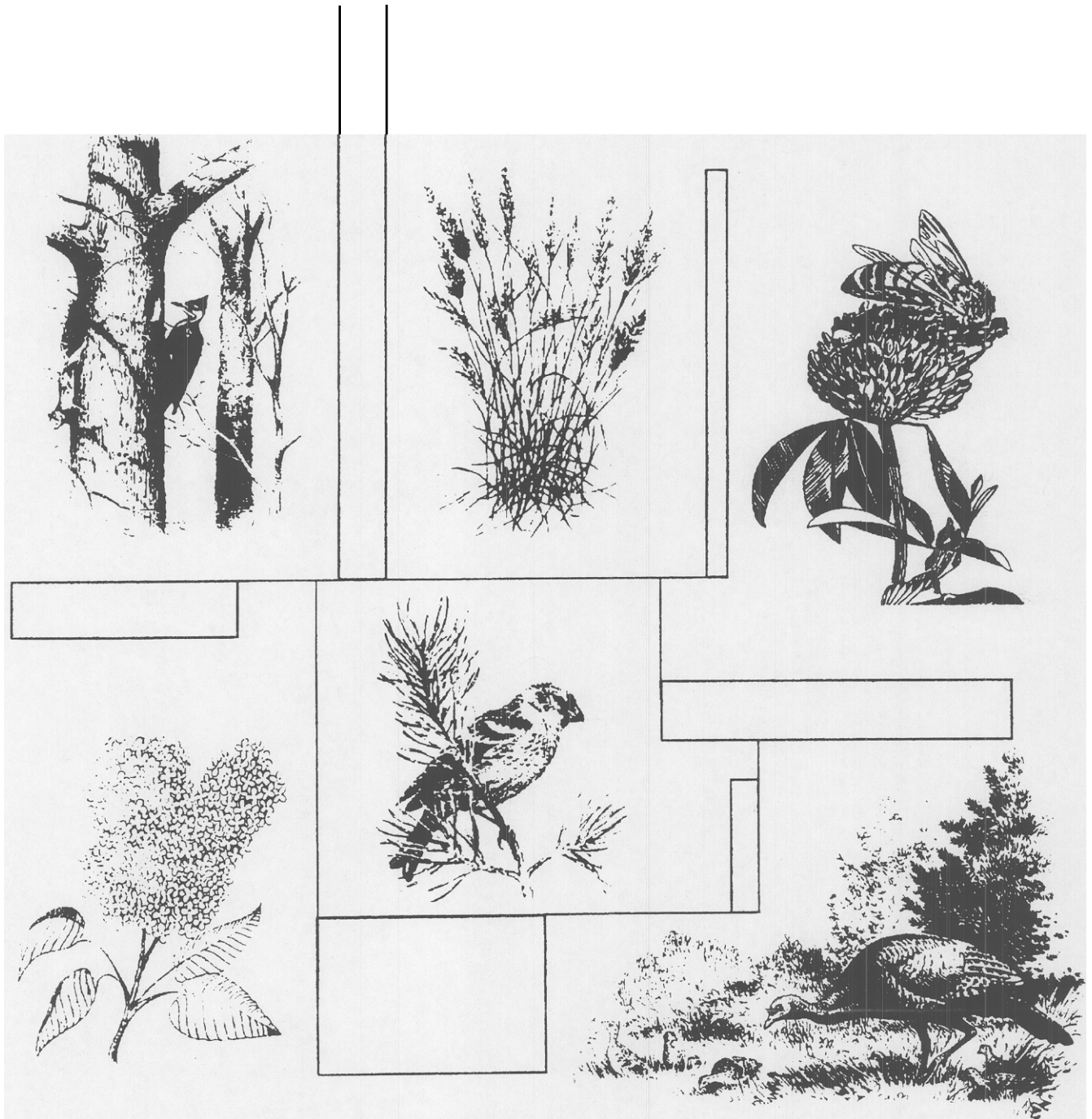


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This plant material technical reference for WHIP was developed by the **USDA-NRCS** plant materials program. The plant materials centers that participated in assembling and developing this information are listed below:

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INTRODUCTION

The Wildlife Habitat Incentives Program (WHIP) **was** created by the **1996** Farm Bill, the Federal Agriculture Improvement and Reform Act (FAIR Act). WHIP will provide technical and financial assistance to landowners to apply and maintain wildlife conservation practices. Enhancement, creation, or restoration of habitats for upland and wetland wildlife species, threatened and endangered species, fish and other types of wildlife are the program's primary purposes.

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This information is intended to be used by NRCS field offices to supplement the field office technical guide (FOTG) on plants that are suitable for the Wildlife Habitat Incentive Program (WHIP). It **was** extremely difficult to develop this information in a way for it to be a valuable resource for the entire region. It **will** be necessary to tailor **this** information to fit the needs in each state. Therefore, it is recommended that the user(s) refer to the Field Office Technical Guides in their state for more specific details. In addition, **this** information is provided on a diskette for the state specialist to customize, simply by adding plant materials listed that are adapted and recommended for WHIP in their state. Also contact the state resource specialist (i.e. biologist, plant materials personnel, etc.).

QUICK PICK

PLANT MATERIALS	USE
Aeschynomene	Deer, Duck, Quail, Dove
Alfagraze Alfalfa	Deer, Rabbit, Turkey
Benne or Sesame	Quail, Game Birds, Dove
Pensacola or Tifton 9 Bahiagrass	Quail, Turkey
Birdsfoot Trefoil	Quail, Dove, Duck, Rabbit, Deer
Buckwheat	Quail, Pheasant, Dove, Turkey, Duck, Deer
Chufa	Deer, Turkey, Hogs, Rabbit
Alyce Clover	Deer, Turkey, Rabbit
Bigbee Berseem Clover	Deer, Turkey, Rabbit
Cherokee Red Clover	Deer, Turkey, Rabbit
Osceola Ladino Clover	Deer, Turkey, Rabbit
Redland II Red Clover	Deer, Turkey, Rabbit
Regal Ladino Clover	Deer, Turkey, Rabbit
White Clover	Deer, Turkey, Rabbit
Yuchi Arrowleaf Clover	Deer, Turkey, Rabbit
Burclover	Quail, Turkey
Button Clover	Quail, Turkey, Deer
'Au Ground Cover' Caley Pea	Deer
Egyptian Wheat	Songbirds, Quail
Bicolor Lespedeza	Songbirds, Quail, Game Birds
Kobe Lespedeza	Songbirds, Quail
'Amquail' Lespedeza	Quail, Game Birds, Songbirds
Korean Lespedeza	Songbirds, Quail
Maidencane (Halifax)	Duck, Geese
Marshhay Cordgrass	Quail, Turkey
Brown top Millet	Songbirds, Quail, Dove, Duck, Deer
Dove Proso Millet	Songbirds, Quail, Dove, Duck
Partridge Pea	Songbirds, Quail, Game Birds
Sesbania	Duck, Quail, Game Birds
Switchgrass	Quail (Cover and Nesting Areas) and food
Eastern Gamagrass	Quail (Cover), Turkey
Big Bluestem	Quail (Cover and Nesting Areas)
Yellow Indiangrass	Quail (Cover and Nesting Areas)
Little Bluestem	Rabbit, Quail and Turkey (cover)
Virginia Wildrye	Deer, Quail, Turkey (cover, escape and food)

Kleingrass	Quail (cover and escape)
Rye, Wheat, Oats	Quail, Dove, Turkey, Deer, Rabbit
Janese Millet	Duck, All birds
Gain Sorghum	Quail, Turkey, Songbirds
Partridge Pea (Lark Selection)	Quail, Turkey, Songbirds
Hopefield selection trailing wild bean	Quail, Turkey, Songbirds
'Lathco' Flatpea	Quail, Pigeon, Dove, Grouse, Turkey, Pheasant, Deer, Small game specie
Perennial Peanut	Deer, Turkey, Rabbit
Hairy Vetch, Common	Turkey, Quail
Velvetbean	Deer
Austrian Winter Pea	Quail, Deer
Big O Crabapple	Deer, Small mammals
'Gobbler' Sawtooth Oak	Deer, Squirrel, Quail, Turkey, Grouse
'Ellagood' Autumn Olive	Songbirds, Quail, Turkey (food and cover)
'Quail Haven' Soybean	Quail
'Northpa' and 'Southpa' Bitter Panicum	Dove, Songbirds
Oaks, All	Deer, Turkey
Wild Pear	Deer, Turkey
Wild Persimmon	Deer
Plums	Quail, Turkey, Deer
Eastern Red Cedar	Cover, Hedgerow, Blackland Prairie only
Hawthorne	Turkey, Quail, Songbirds
Black Cherry	Quail, Songbirds
Huckleberry	Quail, Deer, Songbirds
Red Mulberry	Songbirds, Quail, Deer, Squirrel
Flowering Dogwood	Songbirds, Deer, Squirrel, Turkey
Sweetgum	Songbirds, Quail
American Beech	Squirrel
Sugarberry	Quail
Chestnut	Deer, Turkey
Mayhaw	Waterfowl, Turkey, Quail, Songbirds
Wax Myrtle	Quail, Turkey, Songbirds
Black Locust	Deer, Quail, Turkey
Honey Locust	Deer
Hickories, All	Squirrel, Deer, Turkey, Quail
Wild Grapes	Songbirds, Quail, Turkey, Deer
Honeysuckle	Deer, Songbirds
Virginia Creeper	Quail, Turkey, Songbirds
Green Brier	Deer, Quail, Turkey
Beggerweed or Tickclover	Quail, Deer
Coastal panicgrass	Dove, Quail

Quail haven reseeding soybeans	Quail
White Sweetclover	Quail, Dove, Mallard duck
Sunflower (common Aztec)	Quail, Dove
Black gum	Turkey, Quail, Songbirds
Iron Clay Pea	Deer, Turkey, Quail, Songbirds
Dwarf Live Oak	Deer, Quail, Small Mammals
Running Oak	Deer, Quail, Small Mammals
Corn	Deer, Turkey, Quail, Dove
Beggerweed or Tickclover	Quail, Turkey, Deer
Subterranean clover	Quail, Turkey, Deer
Brown top millet	Quail, Deer, Duck
Annual Lespedeza	Quail
Sesame	Quail, Songbirds, Dove
Dwarf Live Oak	Deer, Turkey
Dunstan/Douglas Chestnut	Deer, Squirrel, Turkey
Chinese Chestnut	Deer, Squirrel
Allegheny Chinkapin	Deer, Squirrel, Turkey
Sand Pear	Deer
Hackberry	Turkey, Songbirds, Quail
Blackgum	Turkey, Wood ducks

FOR OAKS ONLY

Oaks, All	Squirrel, Deer, Turkey, Quail
Gobbler Sawtooth	Squirrel, Deer, Turkey, Quail
Dwarf live oak	Squirrel, Deer, Turkey, Quail
Running oak	Squirrel, Deer, Turkey, Quail
Southern red	Squirrel, Deer, Turkey, Quail
Northern red	Squirrel, Deer, Turkey, Quail
Willow oak	Squirrel, Deer, Turkey, Quail
Laurel oak	Squirrel, Deer, Turkey, Quail
Over cup oak	Squirrel, Deer, Turkey, Quail
etc.	Squirrel, Deer, Turkey, Quail
Hickories, All	
Bitternut	Squirrel, Deer, Turkey, Quail
Mockernut	Squirrel, Deer, Turkey, Quail
Shagbark	Squirrel, Deer, Turkey, Quail
Pignut	Squirrel, Deer, Turkey, Quail

NATIVE WARM-SEASON GRASSES

Big Bluestem - (*Andropogon gerardii*)

Big bluestem is a warm season, rhizomatous, perennial bunch grass 4 to 6 feet tall. Leaf blades are long and flat. Seedheads consist of 2 to 3 distinct racemes on top of the stem and resemble the toes of a turkey's foot which suggests another common name, turkeyfootgrass. Livestock prefer it to most associated grasses during early stages of growth. The large amount of top growth makes it ideal as a cover and nesting areas for small game and birds. Recommended varieties are: 'KAW', and 'ROUNDTREE'.

Coastal Panicgrass - (*Panicum amarum or amarulum*)

Coastal panicgrass is a warm season grass that is rhizomatous, perennial and salt spray tolerant. It has numerous medium textured, erect stems 3 to 7 feet in height. Foliage is primarily green but it will have a bluish color on the leaves that will be 3/4 to 1 inch wide and 12 to 20 inches in length. Fair quantities of firm, good seed are produced and are eagerly sought by doves and quail. The somewhat open nature of the foliage lends itself to nesting cover for some bird species. Recommended variety is: 'ATLANTIC'.

Eastern Gamagrass - (*Tripsucum dactyloides*)

Eastern gamagrass is a robust warm-season, rhizomatous perennial grass that grows from 5 to 9 feet in height. Leafblades are 12 to 24 inches long and 3/8 to 1/2 wide, flat and have a pronounced midrib. The robust vegetation makes a very good habitat for several wildlife species. Recommended varieties are: 'PETE' and 'IUKA'.

Little Bluestem - (*Schizachyrium scoparium*)

Little bluestem is a warm season bunch grass that is perennial and grows between 2 and 4 feet in height. Leaf blades are flat and are from 6 to 10 inches long and 1/8 to 1/4 inch wide. It is an important forage grass that is grazed readily by livestock, deer. Small game such as rabbit and quail can be found in stands of this grass. This grass is sometimes misidentified as *Andropogon virginicus*, broomsedge. Recommended variety is: 'CIMARRON'.

Maidencane - (*Panicum hemitomon*)

Maidencane is a rhizomatous, perennial, warm season, grass that grows 2 to 6 feet tall. Leaf blades are 8 to 12 inches long and approximately 1/2 inch wide. Rhizomes are thick, 1/8 - 1/4 inch in diameter. Deer will eat the foliage especially in the early spring when it is just emerging and is tender. The thickness of the vegetative top growth makes it a very

good escape cover for small game animals. Livestock will readily graze the plant when they have access to it. Recommended variety is: 'HALIFAX'.

Marshhay Cordgrass - (*Spartina patens*)

Marshhay cordgrass is a rhizomatous perennial, warm season **grass** that is from 1 to 4 feet tall. The leaf blades are long, narrow and usually rolled inward, giving the plant a **wiry** appearance. Mature plants turn a grayish color. Grows best on **firm** mineral **soils**. Tolerates moderate salinity. Marshhay cordgrass is the most important forage plant on adapted sites. It provides forage for cattle, muskrats, and wild geese. Recommended varieties are: 'FLAGEO', '*SHARP*' and 'AVALON'.

'Northpa' and 'Southpa' Bitter Panicum - (*Panicum amarum*)

Northpa and Southpa Panicum varieties were released by the Brooksville Plant Materials Center in Brooksville, Florida. These two varieties are primarily for erosion control on the dunes along the Atlantic and Gulf Coast. Seed is readily used by song birds and dove in coastal areas and upland areas where these plants are used for gully erosion.

Switchgrass - (*Panicum virgatum*)

Switchgrass is a **warm** season, rhizomatous, perennial grass that **ranges** in height from 3 to 6 feet. It is a bunch **grass** with flat leaf blades about ½ inch wide and 30 inches in length. It is a good cover plant for birds and some small game. Birds will eat the seeds, which are produced on an open panicle that is about 10 inches long. The following varieties **are** recommended: 'ALAMO', 'BLACKWELL', 'CAVE-IN-ROCK', 'KANLOW', 'MIAMI', '**STUART**', 'WABASSO', and 'SHELTER. (CAVE-IN-ROCK IS BEST FOR WILDLIFE).

Virginia Wildrye - (*Elymus virginicus*)

Virginia Wildrye is a cool season perennial bunch **grass** that **grows** from 3 ½ to 4 feet **tall**. Leaf blades are wide and flat while the leafsheath is rounded and smooth and almost **as** long **as** the internodes. Plants grow principally on moist soils in woodlands and along drainageways that **overflow** occasionally. It does well on light textured soils that have good internal drainage. Virginia **wildrye** is readily grazed by all livestock and deer, particularly during fall, winter, and **spring**.

Yellow Indiangrass - (*Sorghastrum nutans*)

Yellow indiangrass is a rhizomatous, perennial warm season grass. It attains heights of 3 to 7 feet. Flat, narrow (at the base), sometimes hairy leaf blades are 10 to 24 inches long. It is relished by all livestock and provides high quality forage when green. Seedhead is a panicle of 6 to 12 inches in length with golden bronze to yellow **seed**. The tall growth

and high seed production of this grass make it good for wildlife food and cover. Recommended varieties are: 'LOMETA', 'CHEYENNE', and 'RUMSEY'.

INTRODUCED GRASSES

'Chapingo' Mexican Teosinte - (*Zea mexicana var. mays*)

'Chapingo' is an **annual** warm season grass species native to Mexico, and similar to corn in general vegetative appearance. Stands 10 to 15 feet in height, coarse, branching at base, leaf blades sword shaped (long-pointed). Clusters of slender "ears" (seed pods), containing **3-8** very **firm** seed, are produced in the upper leaf axils. Shattered seed will voluntarily germinate the following year. The germ plasm of this plant was released by the Brooksville, FL Plant Materials Center. Mexican teosinte provides food and habitat for wildlife such as quail, dove, turkey and deer. The shattered hard seed provides late season food for the wildlife.

Chufa - (*Cyperus esculentus*)

Chufa is a type of giant nutsedge, a variety of yellow nutgrass. It is widely adapted in the South and is easy to grow. It is best suited for use in soils which are sandy or loamy. Wildlife do not eat chufa leaves, but they relish the nutlets which grow on chufa roots. Chufa is planted primarily for turkeys.

Corn - (*Zea mays*)

Maize or Indian corn is an annual, erect plant having a thick stem leaf, 8 to 10 feet tall. Forage digestibility is high. Major uses **are** silage and grain. Turkey, deer, blackbird, **bear**, squirrel, and raccoon eat the **seeds**. Seed are drilled in wide rows at **12 to 20 lb/A** in March-May.

Egyptian Wheat - (*Sorghum bicolor*)

Egyptian wheat is a **type** of grain sorghum. It is not an outstanding **grain** yielder, but it has loose heads, which allow birds easy access to the grain. Egyptian wheat is an especially good choice for quail. The seed shatter over a fairly long period of time, thus providing an extended period of food availability. Furthermore, the **6 to 10 foot stalks** tend to lodge easily, therefore, providing cover for quail while they **are** feeding. **This** gives the birds a sense of security and protection from avian predators. Deer will not consume large quantities of Egyptian wheat.

'Dove Proso Millet' - (*Panicum miliaceum*)

Dove Proso Millet is a quick maturing, summer annual upright grass. This millet grows up to **4** feet tall and the seed matures in about 90 days from time of planting. Dove proso millet is primarily a dove with potential for bob-white quail. It was released by the Jimmy Carter Plant Materials Center. Seeds are commercially available.

Brown top Millet " (*Panicum ramosum*)

Brown top millet is an extremely valuable plant for attracting doves, **quail**, or ducks. Timing of planting can be an **important** consideration with brown top millet because seed mature about 60 days after **germination**. Brown top is a heavy seed producer. Its uses **are:** quail and dove food when planted on upland or duck food when planted where it can be flooded.

Grain Sorghum - (*Sorghum vulgare*)

Grain sorghum is used in wildlife food plots. Most modern sorghum hybrids will provide excellent high energy food quail and doves. If sorghum is planted over a large area, strips should be mowed for food patches at one-month intervals during fall and winter to give the birds access **to** the grain. Sorghum is quite sensitive to soil acidity. If the **pH** is lower than 5.6, lime should applied and worked into the soil before planting.

Japanese Millet " (*Echinochloa frumentacea*)

Japanese millet can be grown for all birds, but it is especially well suited for ducks. It can be grown successfully on well - drained soil in all **zones**, but it can **also** tolerate flooded soil **as long as** part of the plant is protruding from the water. Most varieties mature within 80 to 90 days, but it is possible to **use** varieties which mature in 120 days.

Kleingrass " (*Panicum coloratum*)

Kleingrass is a perennial, warm season bunch grass. This grass **is** very cold **tolerant** and will remain green until the temperature reaches about **23 ° F**. The seed of this plant is a preferred dove and quail food. The forage is eaten by deer in late fall and winter.

'Pensacola' bahiagrass " (*Paspalum notatum*)

Pensacola bahiagrass was released by the Jimmy Carter Plant Materials Center in Americus, Georgia. It is a perennial **warm** season **grass** that is used primarily for pasture, wildlife, hay and erosion control. **The** seed are eaten by turkey.

SMALL GRAINS

Rye - (*Secale cereale*)
Oats - (*Avena sativa*)
Wheat - (*Triticum aestivum*)

Small grains (rye, wheat and oats) are **annual** cool season bunchgrasses with shiny, dark green smooth leaves, which grows **2 to 4** feet tall. Rye is more tolerant of soil acidity than wheat or oats. Although varieties differ, oats generally are more cold sensitive *than* other small grains and can be winter killed some years. Wildlife species such as deer and rabbits will eat the young foliage. Dove, **quail** and turkey will utilize the seed.

HERB

Sesame - (*Sesamum indicum*)

Sesame (Benne) is a tall **annual** herb, growing from **4 to 6** feet tall. After blooming the seed pods shatter oily seeds in great quantities. The **seeds** are eaten by all **game** birds, especially quail. The seed produced is available in great quantities during September throughout the South. It is a source of food for both game and non-game birds.

NATIVE LEGUMES

Aeschynomene - (*Aeschynomene americana*)

Aeschynomene also **known as** American jointvetch or deervetch. It is a reseeding **annual** legume. Most suitable for moist fertile soil, it is more tolerant of extremely wet conditions than drought. **Plants are 3 to 5** feet **high** when mature and have an extremely **high** nutritive value. Aeschynomene can be planted for deer, ducks, **quail**, and dove. Suited for deep south.

Beggarweed or Tickclover - (*Desmodium paniculatum*)

Beggarweed is an erect, perennial legume. Stems are **woody** at maturity, but die back to the ground each fall. The seeds are borne on terminal panicles late in the summer. Seed mature in jointed pods in mid-fall. Seed production averages 400-600 pounds per acre.

The plant is adapted climatically to most of the Southeastern States except the high mountains, lower Peninsula Florida and the drier regions to the **west**.

It is best suited to moderately fertile soils with good internal drainage but good water holding capacity. Uses include seed production for quail food and deer browse.

Hopefield Selection Trailing Wildbean - (*Strophastyles helvula*)

Hopefield Selection is an annual trailing native legume similar to 'Quail Haven' but is adapted to a wider range of soils and foliage is not **as** palatable to deer. Hopefield Selection provide a food source for turkey and quail during the winter. It was developed at the Jamie L. Whitten PMC in Coffeerville, Mississippi

Partridge Peas - (*Chamaecrista fasciculata*)

Partridge Pea is an excellent quail feed. It is an annual reseeding legume. Provides cover for quail and other small wildlife. Partridge pea produces a large quantity of hard seed, and once a stand has **been** established in an area there will usually be a good deal of reseeding year **after** year. The soil must be disturbed in late spring to promote reseeding. **The** area should be disked or burned in late winter **or** early spring. Because of its hard, durable seed, partridge pea provides food for quail over a long period of time.

Larke Selection Partridge Pea - (*Chamaecrista fasciculata*)

Larke Selection Partridge Pea is an **annual** native legume that originated from collections made in the Arkansas Delta. Larke Selection's advantage **over** 'Comanche' partridge pea is later seed maturity. It's seed matures in late summer making it available for quail and turkey over winter. Reseeding is enhanced with a light disking in the spring. It is adapted to a wide range of soils.

INTRODUCED LEGUMES

LEGUMES SHOULD BE INOCULATED WITH APPROPRIATE INOCULANT AND LIMED TO PH OF 6.0.

'Alfagraze' Alfalfa - (*Medicago sativa*)

Alfagraze is a grazing type alfalfa for *the Southeast*. It was released **by** the University of Georgia Agricultural Experiment Stations. Alfalfa is **an** erect **growing** perennial legume with many leafy stems growing from large crowns at the soil surface. It can grow to **3'** tall **or more**, under proper conditions. It **has** compound leaves with **three** leaflets. Flowers are normally purple. Alfalfa should be **grown** in well **drained** soil. It **can tolerate** some

drought conditions. *Alfagraz*e can provide summer long forage for deer, turkey, and rabbits.

Alyce Clover - (*Alysicarpus vaginalis*)

Alyce clover is a warm season annual legume from the tropics of the old world. It can grow 1 - 2' tall. It has unifoliolate leaves and pink flowers. It is adapted to well drained sandy soils. It grows best in the gulf coast area. Alyce clover is slow to establish, however, it is utilized by deer, turkey, and rabbits in late summer and early fall. It is recommended for coastal counties in Georgia, Alabama and Mississippi only.

'Amquail' Thunberg Lespedeza - (*Lespedeza thunbergii*)

Amquail is a perennial warm ~~season~~ shrub legume that spreads from seed. It was released in 1987 by ~~the~~ NRCS Jimmy Carter Plant Materials Center. Amquail has multiple stems that rise from a crown-like stump. Mature specimens can reach 7-10' tall. Flowers are rose-purple in color. Amquail has higher deer browse resistance than bicolor ~~lespedeza~~. Amquail is adapted to well drained to somewhat poorly drained soils. Amquail can be planted from seed or seedlings in a manner similar to bicolor. Amquail is primarily a seed producer for bobwhite quail.

Arrowleaf Clover - (*Trifolium vesiculosum*)

Arrowleaf clover grows to a height of 24 to 60 inches. Hollow stems are purple and become very hairy and fibrous near maturity. Flowering normally occurs from late May to July.

Commercially Available Varieties: Amclo, Meechee, Yuchi

Austrian Winter Pea - (*Pisum sativum subsp. arvense*)

Austrian winter pea or winter pea is a cool season annual legume. It has glabrous viney stems from 2 to 4' long. Blooms are rose to purple colored. It is adapted to well drained loam or sandy loam soil.

'AUGroundCover' Caley Pea - (*Lathyrus hirsutus*)

'AUGroundCover' is a cool season annual legume. It was developed by the NRCS Jimmy Carter PMC and Auburn University. It produces winged viney stems up to 4 or 5' long. It has pairs of linear shaped leaves and bluish-purple blooms. Seed pods are rough and hairy. It is normally grown in wet clay soils and loams. It does best in Coastal Plain

and Blackbelt regions. Caley pea can be utilized **as** a food source by wildlife. Also it can attract insects which **are** subsequently utilized by wild birds.

'Aztec' Maximilian Sunflower - (*Helianthus maximiliani*)

'Aztec' **was** developed by the Knox City Plant Materials Center, Knox City, TX. Aztec is **a** warm season native perennial forb **from** 3' to 9' tall with one to several stems. Leaves are alternate, lanceolate in shape and grow to 6 - 11" long. Flowers are showy yellow in late summer. It is adapted to most well to moderately well drained upland soils. However, it does not do well in wet sites. Aztec is used for both wildlife food and cover. Several species of birds use the seed for food and the stemmy growth for cover. Deer and livestock, especially sheep and goats, consume the forage.

Birdsfoot Trefoil - (*Lotus corniculatus*)

Birdsfoot Trefoil is a perennial legume that offers foliage and seed for quail, dove, ducks, rabbits and deer. It will grow under a variety of soil conditions including poorly drained, lowland or acid sites. It is drought resistant, salt tolerant, and very slow to establish, usually, taking a full year. It is not **well** adapted to the Coastal Plains.

Commercially Available Varieties: Georgia One, Cascade, Mackinaw and Kafo

Bicolor Lespedeza - (*Lespedeza bicolor*)

Bicolor is a perennial legume shrub. Bicolor was introduced **as** an ornamental from Japan and was first noted **as** a quail food around **1943**. It usually grows 5-10' **high**. It is called bicolor because its flowers are mostly colored white and purple. Bicolor produces more seed when planted on fertile sites; however, it grows well on infertile **soils**, that have been limed and fertilized. Bicolor can be planted **from** seed or seedlings. Planting **rates for** inoculated seed are about 10 lbs./Ac or 1/2 lbs. per 1,000 square feet in game plots. Seed should be covered to a depth of **1/2-3/4"**. Seedlings can be spaced two feet apart in three feet rows. About 1,000 seedlings are required to plant a plot (**15' X 330'**). Bicolor produces an abundance of **hard-coated** seed which are consumed by bobwhite quail. Varieties: 'Bicolor 101'.

Button Clover - (*Medicago orbicularis*)

Button clover is a cool season annual legume. It produces fine stems from 2 to 5' long which grow very close to the ground. It has small yellow flowers which develop into a coiled spineless seed **pod**. Once seeds have matured, button clover will volunteer for several years. Button clover has a wide soil adaptation and can grow on loam or clays in most upland sites. Inoculated seed should be planted at a rate of 15-20 lbs./Ac to a depth

of 1/4 - 1/2". Button clover seeds are utilized by wildlife and the plant attracts insects which can be consumed by wild turkey and other birds.

Burclover - (*Medicago polymorpha*)

Burclover is a cool season annual legume. Its prostrate stems grow to about 2' long. Small yellow flowers develop into spiny burs. Burclover is adapted to the upland soils of the Piedmont and Coastal Plain. Burclover attracts insects which can be consumed by wild turkey and other birds. Varieties: 'Serena' and 'Circle Valley'.

Crimson Clover - (*Trifolium incarnatum*)

Crimson clover is a native to southern Europe. It is grown as a winter annual from the Gulf Coast region, except the peninsular of Florida, as far north as Maryland, southern Ohio, and Illinois. Crimson clover is regarded as one of the most important winter annual legumes for the South. It will grow under a wide range of climatic and soil conditions and has many uses. Crimson clover is tolerant of medium soil acidity and will thrive on both sandy and clay soils. It does not tolerate calcareous soils and those with poor drainage.

Commercially available varieties: Tibbee, Dixie, Au Robin, and Au Sunrise

Common Vetch - (*Vicia saliva*)

Common vetch is a cool season annual legume. It has pinnately compound leaves and produces long viney stems. Common vetch usually produces purple or white blooms. It is adapted to upland well drained soils. It does best in lower Coastal Plain areas. Common vetch can provide a food source for bobwhite quail, turkey, and rabbit. It also attracts insects which are subsequently utilized by many types of wildlife. Varieties: 'Cahaba White'.

Hairy Vetch - (*Vicia villosa*)

Hairy vetch is a cool season annual legume. 'Americus' and 'AU EarlyCover' were released from the NRCS Jimmy Carter PMC in cooperation with the University of Georgia and Auburn University, respectively. Hairy vetch has pinnately compound leaves. It produces viney stems over 4' in length. Hairy vetch normally produces a dense cluster of purple blooms. Americus is a late maturing variety while AU Early Cover can bloom 3 weeks before other hairy vetches. It is adapted to upland well drained soils. Hairy vetch can provide a food source for bobwhite quail, turkey, and rabbit. Also it attracts insects which are subsequently utilized by many types of wildlife.

Annual Lespedeza

Annual lespedeza (Korean and Striate) includes Korean lespedeza, of which these **are** several varieties, and striate lespedeza. Korean is best adapted in the upper part of zone 2 and in zone 3, while striate lespedeza is the best choice for the lower part of zone 2 and for most of zone 1. Annual lespedeza is an extremely useful species to plant for quail food.

Kobe Lespedeza - (*Lespedeza striata*)

Kobe is an annual warm season legume. Kobe was introduced from Japan in 1919. It branches freely, attaining a height of 1-2', with blue-purple flowers. Kobe **has** long narrow leaflets. The growth habit of Kobe is more erect than Korean. It is larger and coarser than common lespedeza. Kobe is well adapted to upland loams, including sandy loams, and low-lying more poorly drained soils of the Coastal Plain and Piedmont. In the mountain areas, it is often killed by frost before seeds mature. Kobe can supply cover and food (seed) for bobwhite quail.

Korean Lespedeza - (*Lespedeza stipulacea*)

Korean lespedezas are **annual** warm season legumes. Korean **was** brought to America from Korea in 1919. The leaves have three broadly obovate leaflets, and the small flowers are bluish-purple. At maturity the leaves **turn** forward so the tips of the branches resemble small cones. Korean has broad leaflets and smaller stems and seed **than** Kobe. The growing habit of Korean is prostrate to erect. Korean varieties **often** attain more height than Kobe lespedeza. Korean is the earliest maturing **annual** lespedeza. Korean is mostly adapted to the northern 2/3 of the southeast. Korean lespedeza can provide food (seed) for turkey and bobwhite quail. Commercial varieties are: 'Climax', 'Summitt', 'Yadkin' and 'Rowan'.

'Lathco' Flatpea - (*Lathyrus sylvestris*)

Lathco was developed by the Big Flats Plant Materials Center, Big **Flats**, New York. Flatpea closely resembles the perennial sweetpea and is related to the common garden **pea**. It is a climbing, perennial, warm **season** herbaceous legume that will **attain** a height of **6** to **7'** if support is available. Flatpea is drought tolerant, and **does** well on **low** fertility sites. It is not adapted to wet sites. The seed must be inoculated with legume **inoculant**. Lathco provides good cover for deer, and small **game** species. Quail, pigeons, doves, grouse, pheasant, and turkey are **known** to utilize the seed. **Lathco** is adapted to the cooler regions of the area.

Perennial Peanut - (*Arachis glabrata*)

Perennial peanut is a perennial warm season legume. It produces leafy foliage from 1 to 2' tall. It spreads and propagates by elongated rhizomes. Perennial peanut produces attractive yellow blooms. It grows best on well drained sandy soils of the lower part of the Coastal Plain. Cold temperatures can destroy the stand. Calcium application may be required for *best* growth. Deer and other browsers can obtain a high protein feed **by** foraging perennial peanut., Varieties are: 'Arbrook', 'Arblick'

'Quail Haven' reseeded soybean - (*Glycine soja*)

Quail Haven reseeded **soybean** (*Glycine soja*) is a **vining**, annual legume that was released by the Jamie L. Whitten Plant Materials Center **as** a food for upland game birds. It produces an abundance of small seed that are eaten by quail and dove. It has **many** hard seed that remain on the soil throughout the winter and germinate the following spring. Quail Haven is adapted to the Coastal Plain. **Not** recommended for use **in heavy** deer areas.

'Cherokee' Red Clover - (*Trifolium pratense*)

'Cherokee' Red Clover **is** the **first** clover adapted to the Coastal Plains area of the Southeast. Cherokee provides abundant high quality grazing for deer and rabbits **from** early spring to early summer.

Wildlife small use are deer, turkey, rabbits.

Ladino Clover - (*Trifolium repens*)

Ladino clovers are perennial herbaceous legumes that **are** selected varieties of white clover. They have good cold tolerance. Ladino clovers requires **soil** with good water holding capacity, thus **performs** better than most clovers on wet sites. They can be planted with small **grains** and other clovers.

Varieties adapted to the southeast are: Osceola and Regal

Regal Ladino Clover - (*Trifolium repens*)

Regal has **excelled** or exceeded all commercial white clover varieties in yield, disease resistance, **drought** tolerance and longevity.

Wildlife use are deer and turkey.

Osceola Ladino Clover - (*Trifolium repens*)

Osceola Ladino clover is well suited for small acreages of intensively managed crops. Osceola grows best when planted with small grains or ryegrass, but it can be planted alone. Osceola tolerates sandier soils **than** other Ladinos.

Wildlife use are deer, turkey and quail.

Sunflower - (*Helianthus spp.*)

Sunflowers are a warm season annual forbs with an extensive taproots. Sunflowers have both opposite and alternate leaf arrangement. Sunflowers can grow to 9' tall and produce very large seed heads. They **are** adapted to most upland soil sites. Fertilization is required for optimum growth of stems and seeds. Sunflower seeds are readily consumed by quail, dove, and many wild bird species. Black seeded varieties are best.

Subterranean Clover - (*Trifolium subterraneum*)

Sub clover is a cool season **annual** legume. It is very low growing with procumbent or stoloniferous stems. The leaf pattern is similar to other true clovers. Most sub clovers are prolific reseeder. It is adapted to moderately well to well drained upland soils. It does best in the lower Coastal Plain and lower Piedmont areas. **The** seed should be inoculated with legume inoculant. Sub clover can tolerate some shading. It can benefit insects for wildlife utilization. 'Mt. Barker' is adapted to the southeast. Not recommended for wildlife that are browsers.

White Clover - (*Trifolium repens*)

White clover provides palatable, nutritious grazing and is used by deer and other wildlife needing high protein forage.

White Sweetclover - (*Melilotus alba*)

Sweetclover is a **tri-foliolate** biennial herbaceous legume. It has white blossoms **and** grows to 10' **tall**. It is a **low seed** producer and the seed shatter readily. White sweetclover does best on **well drained**, deep to moderately deep, fine and medium textured soils. It **can also** tolerate drought conditions. Optimum soil pH is **6.5** to 7.5. Sweetclover seed must be inoculated **and** scarified before planting. Sweetclover **seed** is utilized by bobwhite **quail**, mourning dove, and mallard ducks.

Velvetbean - (*Stizolobium deeringianum*)

Velvetbean is a warm season annual legume. It produces viney stems up to **40'** long. Hairy fruit pods are usually **2 to 6"** long. It is adapted to sandy soils primarily in the Coastal Plain. Velvetbean is tolerant of soil acidity and low fertility. Velvetbean provides wildlife a food.

TREES AND SHRUBS

'Big O' Crabapple - (*Malus cornaria*)

Big O was developed by the Jimmy Carter Plant Materials Center, Americus, Georgia, for wildlife food, cover, windbreaks, screens, hedgerows and beautification of landscapes. Billy Thomlinson, District Conservationist in Rome, Georgia, collected this wild crabapple accession in **1974** from a native wild stand in Floyd county. Big O is a small deciduous tree that grows from **20** to 30 feet tall.

'Ellagood' Autumn Olive - (*Elaeagnus umbellata*)

Ellagood autumn olive is a spreading, upright, perennial shrub that is utilized by upland game birds, two migratory birds, twenty non game birds, **and four mammals**. Autumn olive **is** used for a variety of purposes. They include wildlife food **and/or** cover, screens, barriers, informal hedges, and windbreaks. The wildlife food value of Ellagood is enhanced by the late maturing fruit. At Americus, GA, Cardinal' autumn olive matures in August while Ellagood matures after October **15**.

Ellagood was released in 1986 by the NRCS Jimmy Carter Plant Materials Center in Americus, GA and the Jamie L. Whitten Plant Materials Center in Coffeeville, MS.

Oak - (*Quercus spp.*)

Oaks are probably **themost** important and widespread hardwood **most** -producing trees in the whitetail's range. There **are** more than 80 species of **oaks** found in the south. They **are** divided into two basic groups: red **oaks** and white oaks. Red **oak** acorns take **two** years to mature, while white **oak** acorns **take** only a single **year**. White oak acorns

generally have a lower tannin content and are more palatable for wildlife. Generally a mix of red and white oaks is more productive than having only one **type**.

Some oaks include (running oak, live oak, dwarf live oak, diamond - leaf oak, post oak, dwarf post oak, southern red oak, northern red oak, bluff oak, bear oak, burr oak, willow oak, laurel oak, bluejack oak, overcup oak, northern red oak, black oak, turkey oak, Chapman oak, ...) With the wide selection, **you** can pick the oak(s) adapted to a particular site.

'Gobbler' Sawtooth Oak - (*Quercus acutissima*)

Gobbler sawtooth oak is a large round-headed tree with chestnut like foliage. It produces acorns that are an excellent source of food for wildlife during the fall and winter. The acorns are eaten by squirrels, deer, grouse, bobwhite quail and turkeys. Gobbler was released by the Quicksand, Kentucky Plant Materials Center in Quicksand, KY.

'Golden' Chinquepin - (*Castanea pumila*)

Golden chinquepin is a **small** tree with an irregular growth form. It produces nuts that **are** an excellent source of food for wildlife during fall and winter. The nuts are eaten by squirrel, deer, grouse, bobwhite, and wild turkey. Golden was released by the Quicksand, Kentucky Plant Materials Center.

Dwarf Live Oak - (*Quercus minima*)

Evergreen shrub forming extensive thickets from 1-1/2 to 12 feet high. Forms a thick, protective cover that is good escape habitat for many birds and **small** mammals, including bobwhite quail. Produces heavy to light acorn yields at good heights for turkey, white-tailed deer. Plants begin acorn production **as** early **as** 4 years **of** age.

Running Oak - (*Quercus pumila*)

Deciduous shrub that forms thickets from 1-1/2 to 6 feet high. Acorns **are** available in **early** September within reach of white-tailed deer and wild turkey. Shrubs begin producing acorns **as** early **as** 4 years of age.

Dunstan and Douglas Chestnut - (*Castanea dentata* *mollissima*)

These are two of the best crosses between American and Chinese chestnuts that retain most of the growth form and nut sweetness of American chestnut and have the blight resistance of Chinese chestnuts. These small trees produce nuts that ripen in September and October and then fall from their burs. The sweet nuts are relished by deer, squirrels, and other wildlife. Trees begin producing fruit at 3 to 5 years of age.

Chinese Chestnut - (*Castanea mollissima*)

This deciduous small tree produces large, sweet nuts that ripen in September through October and fall from their spiny burs. The nuts are heavily used by many species of wildlife including, white-tailed deer, wild hogs, black bear, and squirrels.

Allegheny chinkapin - (*Castanea pumila*)

This is a deciduous large shrub to small tree closely related to American chestnut, It is susceptible to chestnut blight. The spiny bur opens to drop a sweet nut in September to October. It grows best in well drained, loamy soil in full sun.

Sand Pear - (*Pyrus pyrifolia*)

This large shrub to small tree produces small, hard, gritty, sweet pears that are heavily used by white-tailed deer and other wildlife species.

American Persimmon - (*Diospyros virginiana*)

This deciduous large tree produce sweet fruits that are relished by white-tailed deer, wild turkey, wild hogs, raccoons, and other wildlife. Persimmons are astringent until they ripen. Persimmon trees are both male and female, therefore, a number of them should be planted within several hundred yards of each other to help ensure future fertilization.

Mayhaw - (*Crateagres aestivalis*)

This large shrub to small tree grows in moist areas of the southeastern coastal plain. Blooms in early spring and produces red apple like fruit in May. The fruit are readily eaten by wild turkey, wood duck, white tailed deer, birds, and small mammals.

Chickasaw Plum - (*Prunus angustifolia*)

This deciduous shrub grows 5 to 15 feet tall, spreads by root suckering to form dense thickets that provide escape thickets and loafing cover. Good for travel corridors and hedges. They produce red or yellow, sweet plums in the summer that are used by a number of wildlife species.

Hackberry - (*Celtis laevigata*)

This medium sized, deciduous tree produces berries that are used by birds.

Flowering Dogwood - (*Cornus florida*)

This is a deciduous, small tree that has attractive white flowers in the spring. It produces red fruits from August to October that are eaten by wild turkey, wood ducks, other birds, and small mammals.

Blackgum - (*Nyssa sylvatica*)

Blackgum is a large, deciduous tree that grows on a wide variety of sites. It produces blue fruit in the fall that are attractive to many songbirds and small mammals. The fruit are used by wild turkey, and wood ducks, if planted near water.

Eastern Red Cedar - (*Juniperus virginiana*)

This is an evergreen conifer that provides important shelter from winds and rain and snow storms. The fruit is an important food for birds, including cedar wax wings and American robins. It is recommended for the Blackland Prairie regions for cover for quail, roosting for dove, and thermal cover for deer.

PLANTING GUIDE FOR WHIP

NAME	ANIMALS ATTRACTED	TYPE	PLANTING DATE			RATE IN LBS.		DEPTH INCHES
			ZONE 1	ZONE 2	ZONE 3	ACRE	1000 FT	
Aeschynomene "Deer Vetch"	Deer, Ducks, Quail, Dove	Annual Legume	March to August	May to June	X	20	1	1/2
Alyce Clover	Deer, Turkey	Annual Legume	May to June	June to July	X	20	1	1/2
Benne or Sesame	Quail, Game Birds, Dove	Annual Herb	March	April	May	6	1	1
Buckwheat	Quail, Dove, Duck, Deer, Turkey	Annual Grass	March	April	May	50	3	1
Chufas	Deer, Turkey	Sedge	March to July	April to June	April to July	20	1-1/2	2
Egyptian Wheat	Quail	Annual grass	March to July	April to July	May to July	10	1/2	1
Bicolor Lespedeza Seed	Quail	Perennial Bush	April to July	April to July	May to July	16	1/2	1/2
Bicolor Lespedeza Plants	Quail	Perennial Bush	January	January	January	1,000	330	
Kobe Lespedeza	Quail	Annual Legume	March to June	April to June	X	30	1-1/2	1/2
Korean Lespedeza	Quail	Annual Legume	March to June	April to June	April to June	30	1-1/2	1/2
Brown Top Millet	Quail, Dove, Duck, Deer	Annual Grass	Early spring to late summer			10	2	1/2
Dove Proso Millet	Quail, Dove, Duck	Annual Grass	Early spring to late summer			10	2	1/2
Japanese Millet	Quail, Dove, Duck	Annual Grass	Early spring to late summer			10	2	1/2
Georgia One Birdsfoot Trefoil	Deer, Turkey, Rabbit, quail, Dove	Perennial Legume	X	September Planted in fall grows to spring	August 15	8	1/2	1/2
Alfagraze Alfalfa	Deer, Turkey, Rabbit	Perennial Legume	October	September	August	10	1	1/4
			Planted in fall grows in spring & summer					

NAME	ANIMALS ATTRACTED	TYPE	PLANTING DATE			RATE IN LBS.		DEPTH INCHES
			ZONE 1	ZONE 2	ZONE 3	ACRE	1000 FT	
Bigbee Berseem Clover	Deer, Turkey, Rabbit	Annual Legume	October	September	August	10	1/2	1/4
Cherokee Red Clover	Deer, Turkey, Rabbit	Perennial Legume	October	September	August/February	8	1/4	1/4
Crimson Clover	Deer, Turkey, Rabbit	Annual Legume	October	September	August	10	1	1/4
Osceola Ladino Clover	Deer, Turkey, Rabbit	Perennial Legume	October	September	August	5	1/2	1/4
Regal Ladino Clover	Deer, Turkey, Rabbit	Perennial Legume	October	September	August	5	1/2	1/4
White Clover	Deer, Turkey, Rabbit	Annual Legume	October	September	August	5		
Yuchi Arrowleaf Clover	Deer, Turkey, Rabbit	Annual Legume	October	September	August	5		
Wrenns Abruzzi Rye	Deer, Turkey, Rabbit	Annual Small grain	October	September	August	100		1/2
Peas, Combine Peas	Quail, Duck	Annual Legume	March to August	April to July	April to July	40		
Iron Clay Peas	Quail, Deer	Annual Legume	March to September	April to September	April to September	30		
Lathco Flat Pea	Quail, Game Birds	Perennial Legume	March	April	April	13	3/4	1/2
Sesbania	Duck, Upland Birds	Annual Legume	March	April	May	10	1-1/2	1/2
Switchgrass	Quail (cover & nesting)	Perennial Grass	January to July	February to May	March to May	4		very shallow 1/8"
Big Bluestem	Quail (cover & nesting)	Perennial Grass	January to July	February to May	March to May	4	-	very shallow
Little Bluestem	Quail (cover & nesting)	Perennial Grass	January to July	February to May	March to May	2	-	very shallow
Eastern Gamagrass	Turkey, Quail (cover)	Perennial Grass	January to July	February to May	March to May	8	-	1/2"
Yellow Indiangrass	Quail (cover & nesting)	Perennial Grass	January to July	February to May	March to May	2-4	-	shallow

NAME	ANIMALS ATTRACTED	TYPE	PLANTING DATE			RATE IN LBS.		DEPTH INCHES
			ZONE 1	ZONE 2	ZONE 3	ACRE	1000 FT	
Maidencane	Wetland area, escape cover for Duck	(vegetatively propagated) Perennial Grass	March to July Plants or Rhizomes	February to June Plants or Rhizomes	March to June Plants or Rhizomes	10-15,000 acre	-	3-6"
Virginia Wildrye	Upland Game Buds, Deer	Perennial Grass	March to July	February to May September 1 to October 1	March to May	5		1/4-1/2
Kleingrass	Cover and nesting. Dove, Quail	Perennial Grass	March to July	February to May	March to May	10		1/4"
Rye	Small grain	Annual Grass	August 25 to October 1	September 1 to October 15	September 15 to November 1	10-20		1-2"
Wheat	Turkey, Dove, Deer, Rabbit, Quail	Annual Grass	August 25 to October 1	September 1 to October 15	September 15 to November 1	1 bu.		1-2"
Corn	Turkey, Deer, Bear, Squirrel, Raccoon, Quail	grain cmp	April 1 to May 10	May 1 to July 1	May 1 to August 1	Rows: 5	46"	1-2"
Chapin go Mexican Teosinte	Deer, Turkey, Quail, Dove	Annual Grass	March to June	March to May	not adapted	5		1/4-1/2
Grain Sorghum	Deer, Turkey, Quail	Annual Grass	Early spring to late Summer			3/4-1 bu.		
Sesame	Quail, Turkey, Songbirds	Annual Herb	March	April	May	6	1	1
Northpa, Southpa Bitter Panicum	Dove, Songbirds	Perennial Grass	March - June (vegetative propagation only)		April - June (vegetative propagation only)	15-20,000 plants/ ac		6-7"
Perennial Peanut	Deer, Turkey	Perennial Grass	January	January to February	X	60-80 bu		2"

X - Not Adapted or Not Recommend

TRESS AND SHRUBS, VINES

NAME	ANIMALS ATTRACTED	TYPE	PLANTING DATE			SPACING
			ZONE 1	ZONE 2	ZONE 3	FEET
Chinquapin Oak	Deer, Turkey, Squirrel	Shrub	January to February	January to March	December to April	20'-50'
Sawtooth <i>ak</i>	Deer, Turkey, Squirrel	Tree	January to February	January to March	December to April	20'-50'
Wild Pear	Deer, Turkey	Shrub	January to February	January to March	December to April	20'-50'
Wild Persimmon	Deer	Small tree	January to February	January to March	December to April	20'-50'
Wild Plum	Deer, Quail, Turkey	Shrub	January to February	January to March	December to April	10'-20'
Eastern Red Cedar	Deer (thermal cover) Quail (cover) Dove (roosting)	Tree		January to March Blackland Prairie Region Only Hedgerow and cover	-	30'
Hawthorn	Turkey, Quail	Tree	January to February	January to March	December to April	20'-50'
Black Cherry	Songbirds, Quail, Deer, Turkey, Grouse	Tree	January to February	January to March	December to April	30'-50'
Huckleberry	Quail, Deer, Turkey	Tree	January to February	January to March	December to April	30'-50'
Red Mulberry	Songbirds, Quail, Deer, Turkey	Tree	January to February	January to March	December to April	30'-50'
Flowering dogwood	Quail, Turkey, Squirrel	Tree	January to February	January to March	December to April	30'-50'
Sweetgum	Quail	Tree	January to February	January to March	December to April	30'-50'
American Beech	Squiml, Turkey, Grouse	Tree	January to February	January to March	December to April	30'-50'
Sugarberry	Quail	Tree	January to February	January to March	December to April	30'-50'
Big O Crabapple	Deer, Turkey	Small tree	January to February	January to March	December to April	30'-50'
Gobbler sawtooth <i>oak</i>	Squirrel, Deer, Turkey	Tree	January to February	January to March	December to April	30'-50'

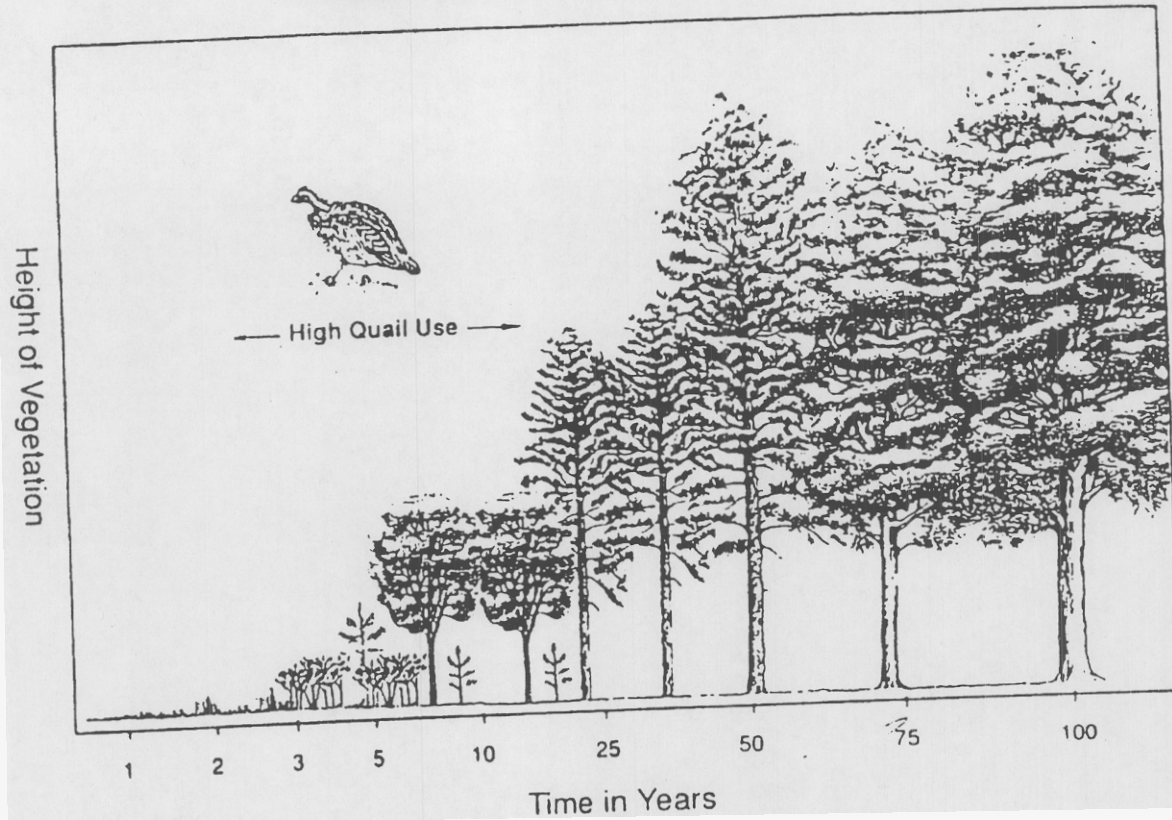
X - Do not plant more than 150 trees/acres.

NAME	ANIMALS ATTRACTED	TYPE	PLANTING DATE			SPACING
			ZONE 1	ZONE 2	ZONE 3	FEET
Golden Chinquapin	Squirrel, Deer, Turkey	Small tree	January to February	January to March	December to April	30'-50'
Ellagood Autumn Olive	Songbirds, Quail, Turkey	Shrub	January to February	January to March	December to April	20'-30'
Chestnut var Edward	Deer, Turkey	Tree	January to February	January to March	December to April	25'-30'
Mayhaws	Turkey, Quail	Shrub	January to February	January to March	December to April	10'-20'
Wax myrtle	Quail, Turkey	Shrub	January to February	January to March	December to April	10'-20'
Black Locust	Quail, Turkey, Deer	Tree	January to February	January to March	December to April	50'
Honey Locust			January to February	January to March	December to April	50'
Bitternut Hickory			January to February	January to March	December to April	50'
Mockernut Hickory	Squirrel, Deer, Turkey, Quail	Tree	January to February	January to March	December to April	50'
Shagbark Hickory	Squirrel, Deer, Turkey, Quail	Tree	January to February	January to March	December to April	50'
Pignut Hickory	Squirrel, Deer, Turkey, Quail	Tree	January to February	January to March	December to April	50'
Blackgum	Turkey, Wood Duck	Tree	January to February	January to March	December to April	50'
Hackberry	Turkey	Tree	January to February	January to March	December to April	50'

VINES

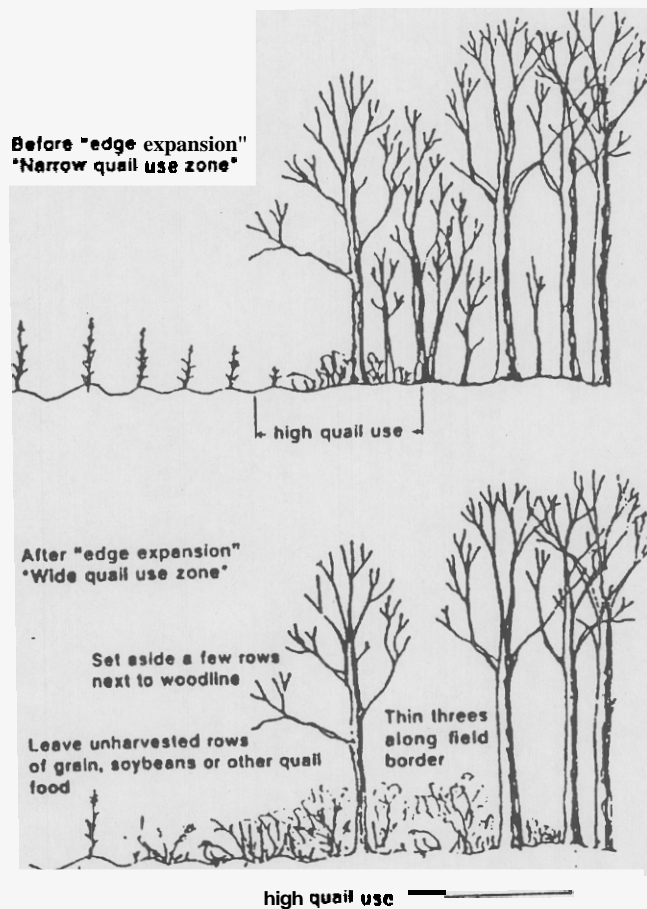
NAME	ANIMALS ATTRACTED	TYPE	PLANTING DATE			SPACING
			ZONE 1	ZONE 2	ZONE 3	FEET
Wild oranges	Songbirds, Quail, Turkey, Deer	Vine	January to February	January to March	December to April	2x2'
Honeysuckle	Deer, Quail (cover)	Vine	January to February	January to March	December to April	2x2'
Virginia creeper	Quail, Turkey	Vine	January to February	January to March	December to April	2x2'

Plant Succession and Quail



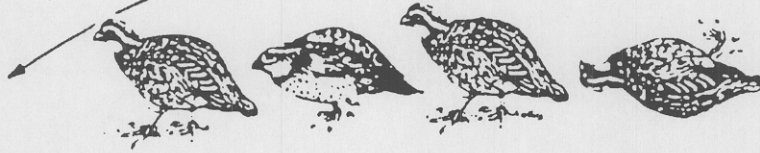
Forest Edges

Brushy forest edges are particularly important for quail. Quail use the dense edge cover to travel and exploit foods on both sides of the edge. The brushy edge is often good nesting and brood-rearing habitat. Broaden and improve the forest edge by thinning. Leave mast-bearing trees and leave a few rows of grain unharvested. In any adjoining fields along the expanded edge, an expanded forest edge may have double or triple the value for quail of an unimproved forest edge.



Expand forest edges to improve habitat for

WINTER



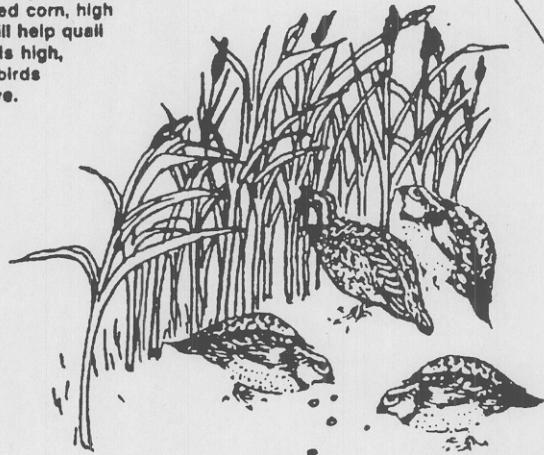
Food and cover become scarcer due to decomposition of seed, plowing, burning. Bicolor I, bush hogged corn, high tannin sorghums will help quail now. Mortality is high, but 20% of birds will survive.



Survivors pair up.



Quail like "clumpy" nesting cover best. Lay 14+ eggs. Late clutches have less. Peak nesting is in late May.



Wild seeds and cultivated crops are at peak. Living is easy for quail. Abundant food and habitat now do not guarantee high quail populations next year. Time to harvest is now.



SUMMER

Quail need brood rearing habitat—nearly bare ground with a canopy of corn, weeds, or other vegetation. Baby chicks need insects more than seed.

SPRING

FALL

Quail Needs through the Year.

Trees with Value for Quail

Species	Remarks
Beech, American	Fall food highly ranked as a food source (nuts, buds, catkins).
Cherry, Black	Summer fruit, important because of long ripening period and frequency of good seed years. Good for fencerows and field edges. Quail eat fallen fruit.
Dogwood	Fruit persists on tree into winter months. Quail eat fallen fruit.
Gum, Black	Fruit is important, but remains on the tree for only a short period after ripening. Good fall color.
Hickory, Bitternut Mockernut Shagbark Pignut	Nuts provide a food source from late summer to the next spring. Shagbark and mockernut are preferred mast producers for wildlife. Wildlife use only a small percent of the annual bitternut crop. Quail eat residue left by squirrels.
Red Maple	Produces food in early spring. Important because of its widespread occurrence.
Mulberry, Red	Good food source in mid spring, early summer. Quail and turkey eat fallen fruit.
Oak	Oaks rate at the top in value to wildlife. On drier sites, a good balance of species in the white and red oak groups will help maintain a consistent level of mast production. Quail peck at pieces of acorns left by squirrels, and other animals. These acorn fragments are often very abundant.
Persimmon, common	Ripened fruit are available to wildlife for a long period in the fall because they fall a few at a time over a long period.
Pine, Loblolly Longleaf Slash, Shortleaf	Seeds are especially good quail food for wildlife. Longleaf pine shortleaf is excellent. Pine types with associated hardwoods provide food sources for many wildlife species.
Sugarberry	Small berries are an important food source for many summer and wintering birds as well as quail.
Sweetgum	Produces abundant small seeds. A preferred quail food in late fall.
Yellow Poplar	Widespread on well-drained sites. A prolific seed bearer. Seed will persist on cone and can be used by many types of birds and some mammals through winter months.
Honey Locust	Fallen pods are a favorite deer food as are small trees and stump sprouts. Birds and rodents feed on pods.
Black Locust	seeds are good food source for quail.

Southeast Region Plant Adaptation Map

